ARMY

Directorate Land Warfare
Operation HERRICK Campaign Study
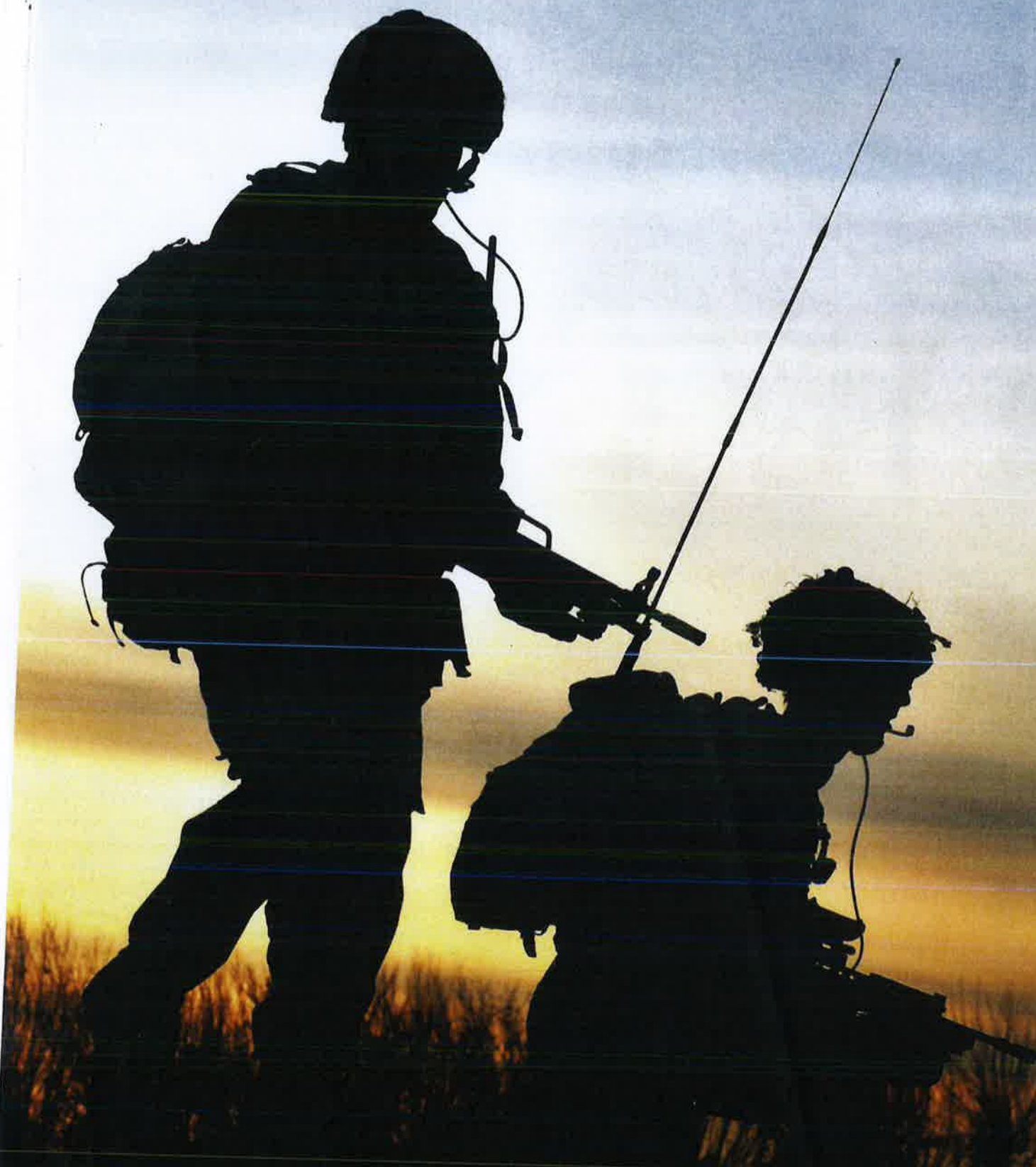
ARMY

Directorate Land Warfare
Lessons Exploitation Centre
Operation HERRICK
Campaign Study

Date: March 2015

HANDLING INSTRUCTIONS & CONDITIONS OF RELEASE

STATUS

This publication was produced under the direction and authority of the Director Force Development and Capability by Director Land Warfare in his capacity as owner of the Army Lessons Capability.

DISTRIBUTION

As directed by Commander Land Forces.

CONTACT DETAILS

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FOREWORD

The British Army's contribution to the campaign in southern Afghanistan was the longest overseas operation that those of us currently serving have been involved in. Op HERRICK was a searing and formative experience during which a myriad of important lessons were identified, learned and acted upon. The complex human and arduous geographic terrain of Helmand was a truly demanding environment in which to operate. In line with its best traditions, the Army collectively rose to meet this challenge. This study is an important document that encapsulates the Army's experience in Afghanistan between 2001-2014.

We are now rightly turning our attention to new operational challenges. However, it is critical that we do not lose sight of Op HERRICK for two reasons. First, much of what we learned in Helmand has assisted in the conceptual development of how we will operate now and in the immediate future. Second, history strongly suggests that this will not be the last counter-insurgency that the British Army conducts and, although the location and context will be different next time, it is our duty to ensure that our successors have the opportunity to rapidly refer to the base of knowledge acquired on Op HERRICK. This comprehensive study hits the mark commendably in both cases.

Virtually no area of Army activity was untouched by Op HERRICK, especially after a campaign footing was adopted with the initiation of Op ENTIRETY in 2009. It was at this point that Op HERRICK became an institutional main effort. Operations in Afghanistan had a profound impact on the Army's equipment, training and doctrine, and inculcated valuable and hard earned operational experience across a generation of leaders. The dramatic improvements in capability – for example, in ISTAR, C-IED and medical support – that occurred are captured well within this study. So too, is the contribution of the other Services; our US, Danish and Estonian allies; and the requirement for an integrated approach with other government departments. Perhaps most importantly, the study recognises the role of our partners within the Afghan National Security Forces and explains how the British Army learned to build their capacity and operate with them effectively.

The study does not shy away from highlighting areas that did not work as well, especially in the early years. As a professional Army, we must be willing to acknowledge and learn from deficiencies as well as laud our achievements. Critically we must always ensure that we get the command and control right at the start of an operation, and do all that we can to understand the environment in which we are operating. In future campaigns we cannot afford the luxury of taking time to get into our stride.

The lasting legacy of Op HERRICK in Afghanistan may not be known for years to come, but we can be extremely proud of the Army's role within the ISAF Coalition and the greatly improved security situation in Helmand that it contributed to. We must also never forget the sacrifice of the 453 servicemen and women who gave their lives during the campaign together with their families, and the many more who sustained injury. This study will be essential reading for all who seek to understand how the Army achieved what it did, and who wish to learn from it to ensure its continued operational effectiveness. Every unit library should have a copy in order that officers and NCOs can refer to it as they design training plans and prepare for future operations. Not all of what took place on Op HERRICK will be relevant in the future, but I think a surprising amount of what we did will be.

J R Everard CBE
Lieutenant General
Commander Land Forces
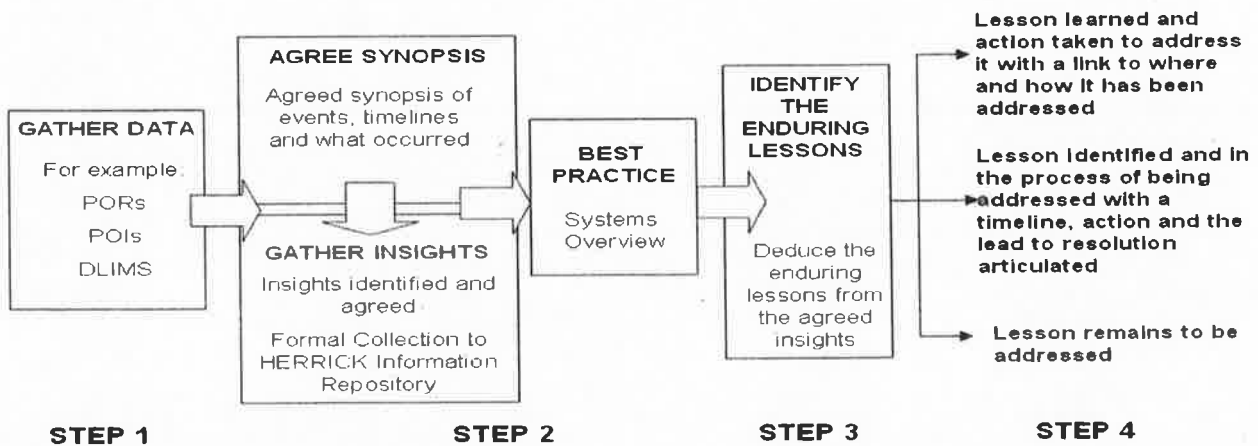
PREFACE

INTRODUCTION

1. Commander Force Development and Training tasked Director Land Warfare (DLW) to conduct the HERRICK Campaign Study (HCS) in July 2013 and the HCS team formed up in September 2013 from the Lessons eXploitation Centre (LXC). The study was initiated before the end of the Campaign in order to capture lessons and good practice up to and including Operation HERRICK 18, while individual and corporate memories were fresh and before capability and good practice 'high watermarks' became history. In doing so the HCS team recognised that capture of the final stage of transition to ANSF and redeployment and synchronisation with like coalition studies would need to follow in early 2015.[1] The study includes lessons from Operation ENTIRETY.

2. This study analyses the land environment tactical lessons from the Afghanistan campaign (Operation HERRICK) over the period April 2004 – October 2013 (Operation HERRICK 1-18). The study is pitched at Land tactical level lessons yet has identified a number of higher level issues which the Army may wish to take a position on. The Military Strategic or Operational levels fundamentally shaped the context in which those tactical actions were conducted.

3. The HCS aim is to:

   (1) Draw together, prioritise and bring order to the mass of tactical lessons from Operation HERRICK.

   (2) Capture and analyse enduring or transferable lessons and good practice to inform force development.

METHODOLOGY

4. The HCS team formed up in September 2013[2] and spent 2-3 months gathering and reading material from Post Operation Interviews, Post Operation Reports, Mission Exploitation Symposia, academic publications and conducting interviews.[3] Material was then sifted and run through a series of 30+ capability led MJPs, most of which were signed off by 1* chairs.[4] This has resulted in a top 'batting order' of lessons by functional/capability area, which will be taken forward through the extant tactical lessons process. The support from the wider Army has been excellent. There has also been input from the Royal Marines and the RAF. The methodology is visualised in the flow chart below;

   a. **Rationale.** The involvement of the DLOD leads and the capability directors ensures that the study has had input into and ownership of the lessons identified. It also ensured a degree of wider subject matter expertise and opinion was captured and assessed.

   b. **Assurance.** All lessons identified (over 700) within the study have been captured and entered into the Defense Lessons Information Management System (DLIMS). This will allow the HCS lessons to be managed, audited and assured under the extant Land lessons process.

STRUCTURE

5. The analysis comprises of two distinct parts;

| STEP 1 | STEP 2 | STEP 3 | STEP 4 |

PART ONE - THE CAMPAIGN

a. **Executive Summary.**

b. **Narrative.** An historical narrative to provide an agreed chronological history of the campaign (ie. what happened).

c. **Operation Entirety.** Delivering the Campaign.

PART TWO - CAPABILITY LESSONS

d. **Chapter 1 (Command)** looks at UK Command and Control, Coalition Operations and the importance of Science and Technology support to the deployed commander within a campaign and coalition environment.

e. **Chapter 2 (Combat)** identifies lessons learned from Combat and includes areas such as Combat Identification, Integrating Special Forces and Mentoring and advising indigenous security forces.

f. **Chapter 3 (Combat Support)** examines the supporting functions of the campaign from C4ISTAR, Air Land Integration through to Military Engineering.

g. **Chapter 4 (Combat Service Support)** examines the tactical impact of sustainment and the broad logistical areas of the campaign.

h. **Chapter 5 (Themes)** examines areas that do not neatly fit into the first four chapters but were critical for the delivery of tactical effect throughout the campaign. These include Training, Equipment, Information Activity and Outreach, Personnel, Operational Law and Detention.

i. **Chapter 6 (Good Practice)** A summary of key areas of good practice pitched at the BG/1* comd. This section details where good practice is, or should be, codified. This chapter is designed to act as a start point to signpost the reader to further information held electronically.

6. **Audience.** The intent is to publish the study electronically, hosted on the AKX. The study has wide utility and is aimed primarily at the brigade and below

7. **Vignettes.** Tactical vignettes are included throughout the different chapters, both to highlight aspects of operations in Afghanistan as well as testament to the courage, fortitude and professionalism of those deployed in harms way.

8. **Writing Team.** This report was produced by a small team drawn from across DLW and led by
The team included:

CONTENTS

SUBJECT   **PAGE**

REGIONAL COMMANDS - SOUTH AND SOUTH WEST

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REGIONAL COMMAND - SOUTH

WORLD BRIEFING MAPS

Series	GSGS 5865
Sheet	Regional Command - South
Edition	1-GSGS

Jawand · Khwazagak · Yakawlang · Bāmyān · Bamyan · Bamyan · Shaybar · Surkh · PARWAN

Chaghcharan · *Chakhcharan* · Dowlatyar · La'l wa Sar Jangal · Nayak · Sheber Too

Chaghcharān · Dowlatyār · La'l · Panjab · WARDAK · Gardan · Dewal · Hisar-e · Jalrayz

Hari Rod · GHOR · Do Lainah · Sang-e Takht · Qa'ah-ye Sang-e Takht · Panjāb · Markaz-e Behsud · Dāymirdād · Daymirdad

Masjid Nigar · Khedir · Shaykh Mirān · Ishtarlay · BAMYAN · Waras · Waras · Chak-e Wardak

Shahrak · DAYKUNDI · Khedir · Shahristan · Nawur · Jaghatu

Taywarah · Pasaband · Nili · Nill · Shahristān · Mir Amor · Wali Mohammed Shahid Kholyan · Rashidan · Ghazni

Taywarah · Pasāband · Pasaband · Gaytī · Gayti · Gizāb · Gizab · Ajristān · GHAZNI · Jaghtu · Waghaz · Andar

Pur Chaman · Baghran · Kajran · Kayrān · Chorah · Khas Uruzgan · Ajristan · Malistan · Mālistān · Jāghūri · Qarah Bāgh · Giro · Giro

Bāshleng · Baghrān · Shahid-e Hasas · Tarin Kot · Uruzgān · Jaghuri · Muqer · Ab Band · Zarnunshahr

Musa Qal'ah · Deh Rāwud · URUZGAN · Daychopan · Khak-e Afghan · Gēlān · PAKTIKA

Now Zad · Musa Qal'ah · Deh Rawud · Tereen · Daychōpān · Arghandāb · Shah Joy · Gelan · Dilah · Dilah wa Khoshamand · Jani Khel

Now Zad · Kajaki · Band-e Kajaki · Sardāgh · Ādem Tāmū · ZABUL · Shah Joy · Nawah · Wazah Khwah

Shēr Ghazay · Kajaki · Nesh · Mya Neshin · Qalat · Now Bahar · Nawah

Muhammadābād · Sangin · Shah Wali Kot · Mizan · Qalat · Shinkai · Shamulzai · Terwo

Sangīn · Ghōrak · Ghorak · Khakrez · Dahlah · Jaldak · Shinkai · Shamulzai · Qamruddin Karez

Shōraklān · Gereshk · Tarnek wa Jaldak · Arghistan · Atghar · Ghazluna

Yakhchāl · Nahr-e Saraj · Zharay · Arghandāb · Kandahar · Arghistān · Ma'rūf

Lashkar Gāh · Malwand · Senjaray · Kandahār · Ma'ruf · Kurduna · Anjanai

Lashkar Gah · Bost · Kandahar · Kandahar Airfield · Shegah

Qal'ah-ye Bost · Maiwand · Panjwā'i · Dōrī Rōd · Spin Bōldak · Chaman

HELMAND · Panjwa'i · Daman · Spin Boldak · Qila Abdullah

Rhino HLZ · KANDAHAR · Shorabak · Shōrābak

Garm Ser · Registan · Shaikh Wasil

Azam Khan · Nila · PAKISTAN

Height in metres above Sea Level

| 200 | 500 | 1000 | 1500 | 2000 | 4000+ |

International Boundary
Regional Command Boundary
Province Boundary
District Boundary
⊚ Provincial Capital
• Town
Main Road
Other Road
Track
Railway
Perennial Drainage
Seasonal Drainage
Marsh
✈ *Kandahar* — Airfield Hard Surface >3000 ft
✈ *Qalat* — Airfield Soft Surface > 3000 ft
■ *Kandahar Airfield* — Main Camps

Approx. Scale

0 10 20 30 40 50 Miles

0 25 50 75 100 Kms

LOCATION DIAGRAM

TURKMENISTAN · UZBEKISTAN · TAJIKISTAN

IRAN · AFGHANISTAN · REGIONAL COMMAND SOUTH · PAKISTAN

WORLD BRIEFING MAPS **REGIONAL COMMAND - SOUTH WEST**

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Sheet	Regional Command - South West
Edition	1-GSGS

LOCATION DIAGRAM

TURKMENISTAN   TAJIKISTAN

AFGHANISTAN

REGIONAL COMMAND SOUTH WEST

IRAN

PAKISTAN

Ghorian · Nazm-e Shahid (Guzarah) · Farsi · Tulak · Shahrak · Khedir · Nili

Adraskan · Saghar · GHOR · Pasaband · DAYKUNDI · Gayti · Gizab

HERAT · Taywarah · Kajran · Kapisan · Gizab

Yanun · Kalilah-ye Nazar Khan · Pishin Jan · Shindand · Shindand · Chah e Chahan · Pur Chamin · Pur Chaman · Baghran · Baghran · Shahid-e Hasas · Chorah

Anar Darah · FARAH · Bashleng · URUZGAN · Tarin Kot

Khak-e Safayd · Dowlatabad · Gulistan · Now Zad · Musa Qal'ah · Deh Rawud · Tarin Kot

Ander Darah · Khak-e Safayd · Farah Rod · Bala Boluk · Gulistan · Musa Qal'ah · Kajaki · Deh Rawud · Tereen

Pusht-e Rod · Chahar Deh · Bala Boluk · Bakwah · Now Zad · Kajaki · Nesh · Sardagh · Maya Heshmat

Darabad-e Bala · Farah · Sultan-e Bakwah · Washer · Band-e Kajaki · Shah Wali Kot

Qal'ah-ye Kah · Khormalq · Dilaram · Muhammadabad · Sangin · Ghorak · Khakrez

Chah-e Sagak · Shayb Koh · Do Qal'ah · Washer · Tati · Kala · Bastion · Sher Ghazay · Shorakian · Gereshk · Zharay · Kandahar

Lash-e Juwayn · Lash-e Juwayn · Khash Rod · Nad 'Ali · Bastion · Yakhchal Nahr-e Sarai · Malwand · Senjaray · Kandahar Airfield

NIMROZ · HELMAND · Nad 'Ali · Lashkar Gah · Lashkar Gah · Lashkar Gah · Maiwand · Panjwa'i · Kandahar · Arghistan

Loai · Marjah · Bost · Nawah-ye Barakzai · Panjwa'i · Daman · Spin Boldak

Kang · Dust Muhammad Khan · Chakhansur · Surkh Duz Darweshan · KANDAHAR

Zabol · Zaranj · Chakhansur · Dwyer · Kuchnay Darweshan · Kartakah

IRAN · Deh-e Nader Aghi · Zaranj · Reg-e Khan Neshin · Yasinzai Kalay · Laki

MARGO · Qal'ah-ye Now · Khan Neshin · Ser Banader · Rhino HLZ

DASHT-E · Taghaz · Almardan Khan-e Bagat

Qal'ah-ye Fatj · Haji Sarwar Khan Katay · Khwajah 'Ali 'Ulya · Garm Ser

Chahar Burjak · Khwajah 'Ali Sahyakah · Khwajah 'Ali Bala

Dashtak · Gowd-e Zerah · Dishu

Rubat-e Ja'il

Zahedan Intl · CHAH-GAY

Zahedan · Balramchah · CHAGAI · HILLS

PAKISTAN · CHAGAI · Amir Chah · Saindak

Height in metres above Sea Level

| 200 | 500 | 1000 | 1500 | 2000 | 4000+ |

International Boundary
Regional Command Boundary
Province Boundary
District Boundary
Temporary Boundary
◉ Provincial Capital
● Town
Main Road
Other Road
Track
Railway
Perennial Drainage
Seasonal Drainage
Marsh
✈ Bastion — Airfield Hard Surface > 3000 ft
✚ Rhino HLZ — Airfield Soft Surface > 3000 ft
Bastion — Main Camps

Approx. Scale
0 10 20 30 40 50 Miles
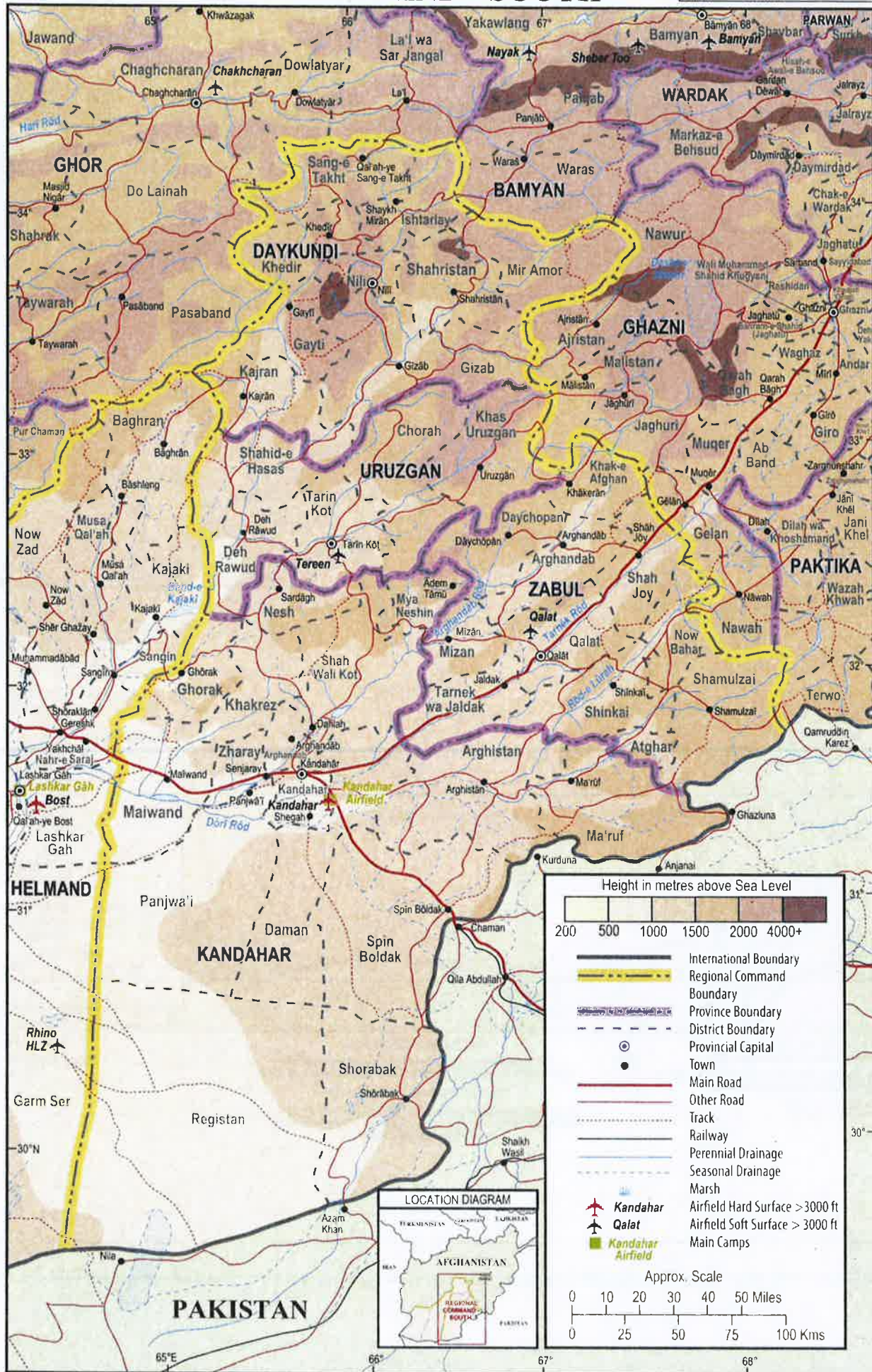0 25 50 75 100 Kms

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HELMAND PROVINCE
(AFGHANISTAN)

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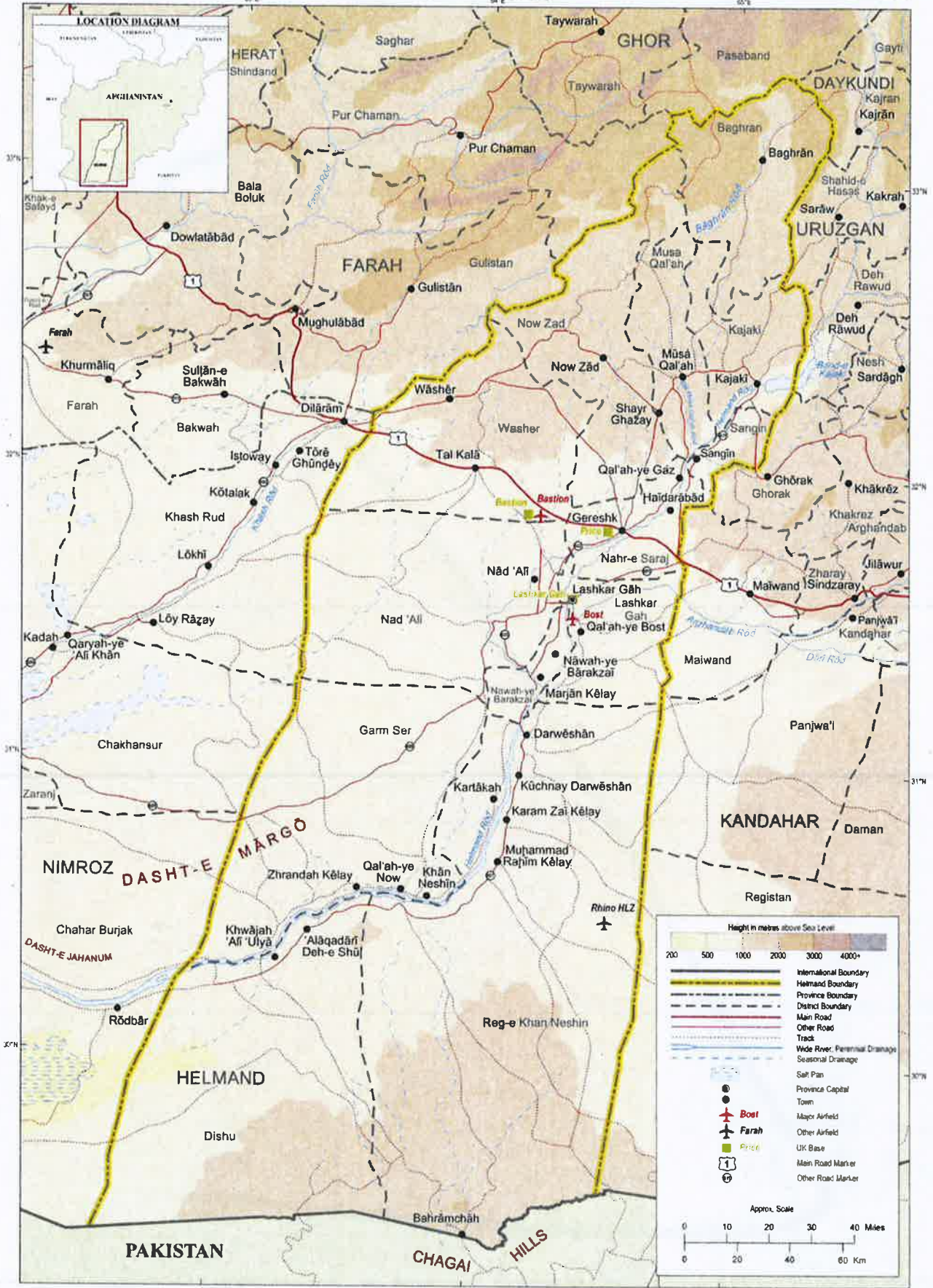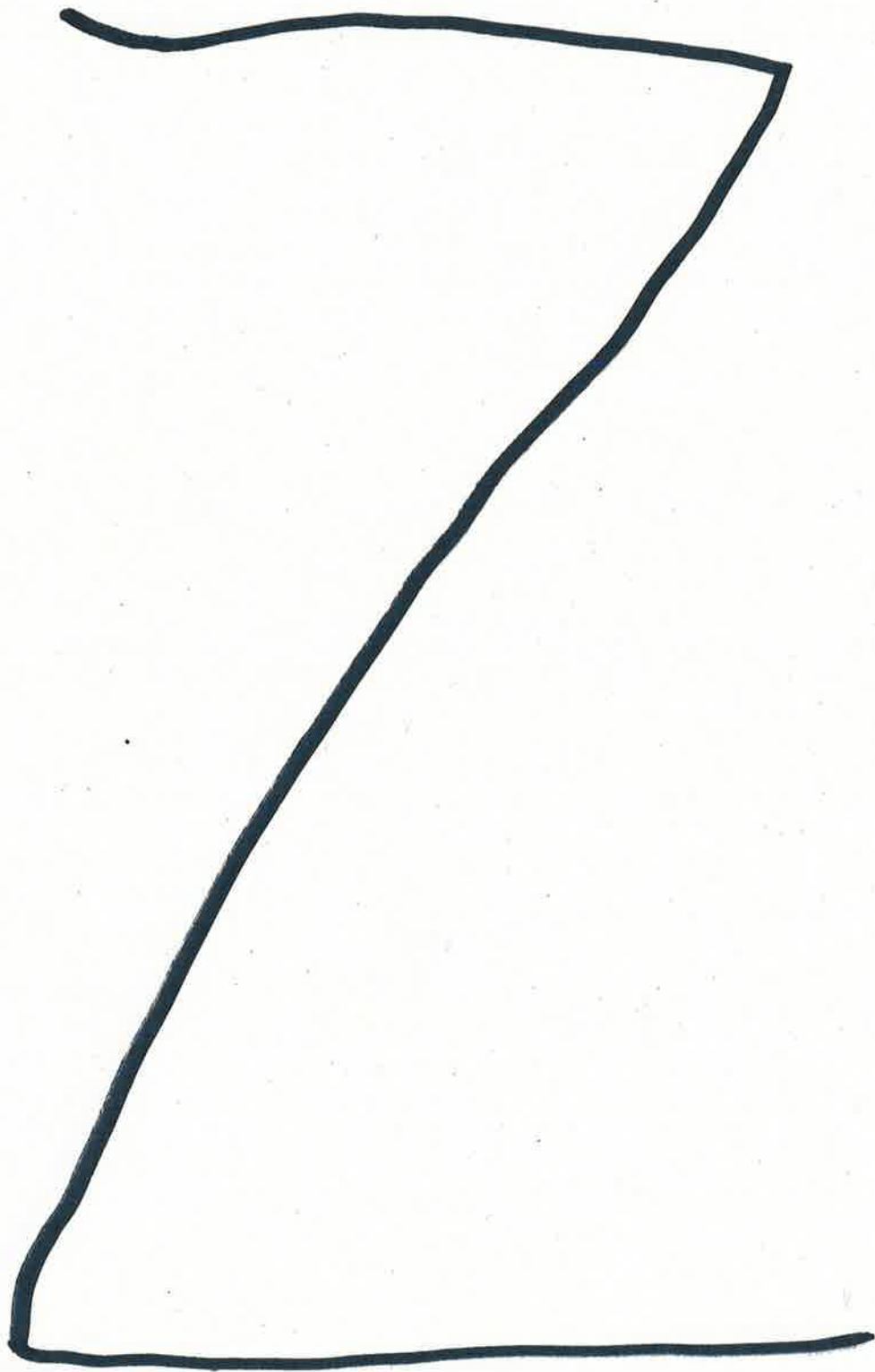
Series	GSGS 5865
Sheet	Helmand Province
Edition	7-GSGS

DGE 243 10/312

LOCATION DIAGRAM

AFGHANISTAN

HERAT · GHOR · DAYKUNDI · URUZGAN · FARAH · NIMROZ · HELMAND · KANDAHAR

Taywarah · Saghar · Pasaband · Gayti · Shindand · Pur Chaman · Pur Chaman · Taywarah · Baghran · Baghrān · Kajran · Kajrān · Shahid-e Hasas · Kakrah · Bala Boluk · Saraw · Dowlatābād · Gulistan · Musa Qal'ah · Deh Rawud · Gulistān · Now Zad · Musa Qal'ah · Kajaki · Deh Rāwud · Mughulābād · Now Zād · Kajaki · Nesh · Sardāgh · Khurmāliq · Sultān-e Bakwāh · Wāsher · Shayr Ghazay · Sangin · Dilārām · Washer · Qal'ah-ye Gāz · Sangin · Ghōrak · Khākrēz · Bakwah · Tal Kalā · Haidarābād · Ghorak · Khakrez/Arghandab · Istoway · Tōrē Ghūndēy · Bastion · Bastion · Gereshk · Kōtalak · Price · Khash Rud · Nahr-e Saraj · Zharay · Jilāwur · Lōkhī · Nād 'Alī · Lashkar Gāh · Maiwand · Sindzaray · Lashkar Gah · Bost · Loy Rāzay · Nad 'Ali · Qal'ah-ye Bost · Panjwā'ī · Kadah · Qaryah-ye 'Ali Khān · Nāwah-ye Bārakzaī · Maiwand · Kandahar · Nawah-ye Barakzaī · Marjān Kêlay · Panjwa'I · Chakhansur · Garm Ser · Darwēshān · Zaranj · Kartākah · Kūchnay Darwēshān · KANDAHAR · Karam Zai Kêlay · Daman · DASHT-E MĀRGŌ · Muhammad Rahīm Kêlay · NIMROZ · Qal'ah-ye Now · Khān Neshīn · Registan · Zhrandah Kêlay · Rhino HLZ · Chahar Burjak · Khwājah 'Alī 'Ulyā · 'Alāqadārī Deh-e Shū · DASHT-E JAHANUM · Rōdbār · Reg-e Khan Neshin · HELMAND · Dishu · Bahrāmchāh · PAKISTAN · CHAGAI HILLS

Height in metres above Sea Level

200 · 500 · 1000 · 2000 · 3000 · 4000+

International Boundary
Helmand Boundary
Province Boundary
District Boundary
Main Road
Other Road
Track
Wide River, Perennial Drainage
Seasonal Drainage
Salt Pan
Province Capital
Town
Bost — Major Airfield
Farah — Other Airfield
Price — UK Base
Main Road Marker
Other Road Marker

Approx. Scale

0 · 10 · 20 · 30 · 40 Miles
0 · 20 · 40 · 60 Km

PAGES XV & XVI

REMOVED

OPERATION HERRICK CAMPAIGN
COMMAND CHRONOLOGY 2004-2008

Top chart (NATO / UK):

	NATO				UK	
COM ISAF	Lt Gen Hillier (CA)	Lt Gen Py (FR)	Lt Gen Erdagi (TU)	Gen del Vecchio (IT)		

Year: 2004 | 2005 | 2006
Months: A M J J A S O N D J F M A M J J A S O N D J F M

Operation: OP HERRICK | OP HERRICK 1 | OP HERRICK 2 | OP HERRICK 3

Head Helmand PRT: US Establish and Head PRT

HQ TFH

Theatre Reserve Bn Deployed: 1 WFR | 2 RGR | 1 RGBW

Log HQ: NSC / HQ LFLogC / Brig Downes

ARIB: 1 GH | JFHQ TO KAF /HQ PRELIMS OPS

Rows (left labels): COM ISAF; DCOM ISAF (COMBRITFOR); COM RC(S); COM RC(SW); Year; Month; Operation; Head Helmand PRT; HQ TFH; Principle Manoeuvre Units; Theatre Reserve Bn Deployed; ANA Mentoring; ANP Mentoring; Log HQ; ARIB

Bottom chart (NATO / UK):

COM ISAF: Lt Gen Richards (UK) | Gen McNeill (US) | Gen McKiernan (US)
DCOM ISAF (COMBRITFOR): Maj Gen van Loon (NL) | Maj Gen Page (UK) | Lt Gen Riley (UK)
COM RC(S) / COM RC(SW): Maj Gen Lessard (CA)

Year: 2006 | 2007 | 2008
Months: A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O

Operation: OP HERRICK 4 | OP HERRICK 5 | OP HERRICK 6 | OP HERRICK 7 | OP HERRICK 8

Head Helmand PRT: 1* Civil servant FCO

HQ TFH: 16 AA Bde / Brig Butler | 3 Cdo Bde / Brig Thomas | 12 Mech Bde / Brig Lorimer | 52 Inf Bde / Brig McKay | 16 AA Bde / Brig Carleton-Smith

Principle Manoeuvre Units: 3 PARA | 45 CDO | GREN GDS | 2 YORKS | 1 R IRISH | PWRR

ANP Mentoring: Police Reform Cell / RMP PMT

Log HQ: NSE / Cdo Log Regt | 7 RHA | NSE/NSC Augmentee HQ | NSC(A) / HQ JFLogC / Air Cdre Howard | JFSp(A) / 102 Log Bde / Brig Henderson

ARIB: JFSp(A) 6

Log HQ (2006 start): NSC / HQ LFLogC / Brig Downes

OPERATION HERRICK CAMPAIGN
COMMAND CHRONOLOGY 2009-2013
PART 1

NATO

COM ISAF	Gen McKiernan (US) — Gen McChrystal (US) — Gen Petraeus (US)
DCOM ISAF (COMBRITFOR)	Lt Gen Dutton (UK) — Lt Gen Parker (UK) — Lt Gen Bucknall (UK)
COM RC(S)	Maj Gen de Kruif (NL) — Maj Gen Carter (UK)
COM RC(SW)	Maj Gen Mills USMC (US); TFH Transferred from RC(S) to RC(SW)
DComd RC(SW)	

UK

Year	2008	2009	2010	2011
Month	N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A
Operation	OP HERRICK 9	OP HERRICK 10	OP HERRICK 11 — OP HERRICK 12	OP HERRICK 13

Row	Content
Head Helmand PRT	Lindy Cameron
HQ TFH	3 Cdo Bde, Brig Messenger — 19 Lt Bde, Brig Radford — 11 Lt Bde, Brig Cowen — 4 Mech Bde, Brig Felton — 16 AA Bde, Brig Chiswell
Principle Manoeuvre Units	**H9:** IX GP, 42 CDO, 45 CDO, QDG, 2RGR / **H10:** LD, 1WG, 3 SCOTS, 2 RIFLES, 4 RIFLES(-), 2RRF / **H11:** HCR, 1 GREN GDS, 1 COLDM GDS, 3 RIFLES, 1 R WELSH / **H12:** QRL, 40 CDO, 1 RGR, 1 LANCS, 1 SG / **H13:** 2RTR, 2 PARA, 3 PARA, 1 R IRISH, 2 SCOTS
Theatre Reserve Bn Deployed	PWRR
ANA Mentoring	1 RIFLES — 2 MERCIAN — 2 YORKS — BAG 1 SCOTS — BAG 1 IG
ANP Mentoring	RMP/2RGR PMT — POMLT F Coy 2RGR — 1 R ANGLIAN — PMAG 1 MERCIAN — PMAG 5 SCOTS
Log HQ	Navy IA HQ, Brig Stearns RM / JFSp(A) 7, RAF IA HQ, Air Cdre O'Dea / JFSp(A) 8, 8 FEB, Brig Tickell / JFSp(A) 9, 102 log Bde, Brig Fay / JFSp (A) 10, 102 Log Bde, Brig Nitsch / JFSp(A) 11, 104 Log Bde, Brig Davies

OPERATION HERRICK CAMPAIGN
COMMAND CHRONOLOGY 2009-2013
PART 2

NATO

COM ISAF	Gen Allen USMC (US)		Gen Dunford USMC (US)
DCOM ISAF (COMBRITFOR)	Lt Gen Bucknall (UK)	Lt Gen Bradshaw (UK)	Lt Gen Carter (UK)
COM RC(S)	Maj Gen Toolan USMC (US)	Maj Gen Gurganus USMC (US)	Maj Gen Miller USMC (US)
COM RC(SW)		TFH Transferred from RC(S) to RC(SW)	
DComd RC(SW)	Brig Welch (UK)	Brig Skeates (UK)	Brig Nanson (UK)

UK

Year	2011	2012	2013
Month	M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O
Operation	OP HERRICK 14	OP HERRICK 15 / OP HERRICK 16	OP HERRICK 17 / OP HERRICK 18
Head Helmand PRT	Michael O'Neill		Catriona Laing

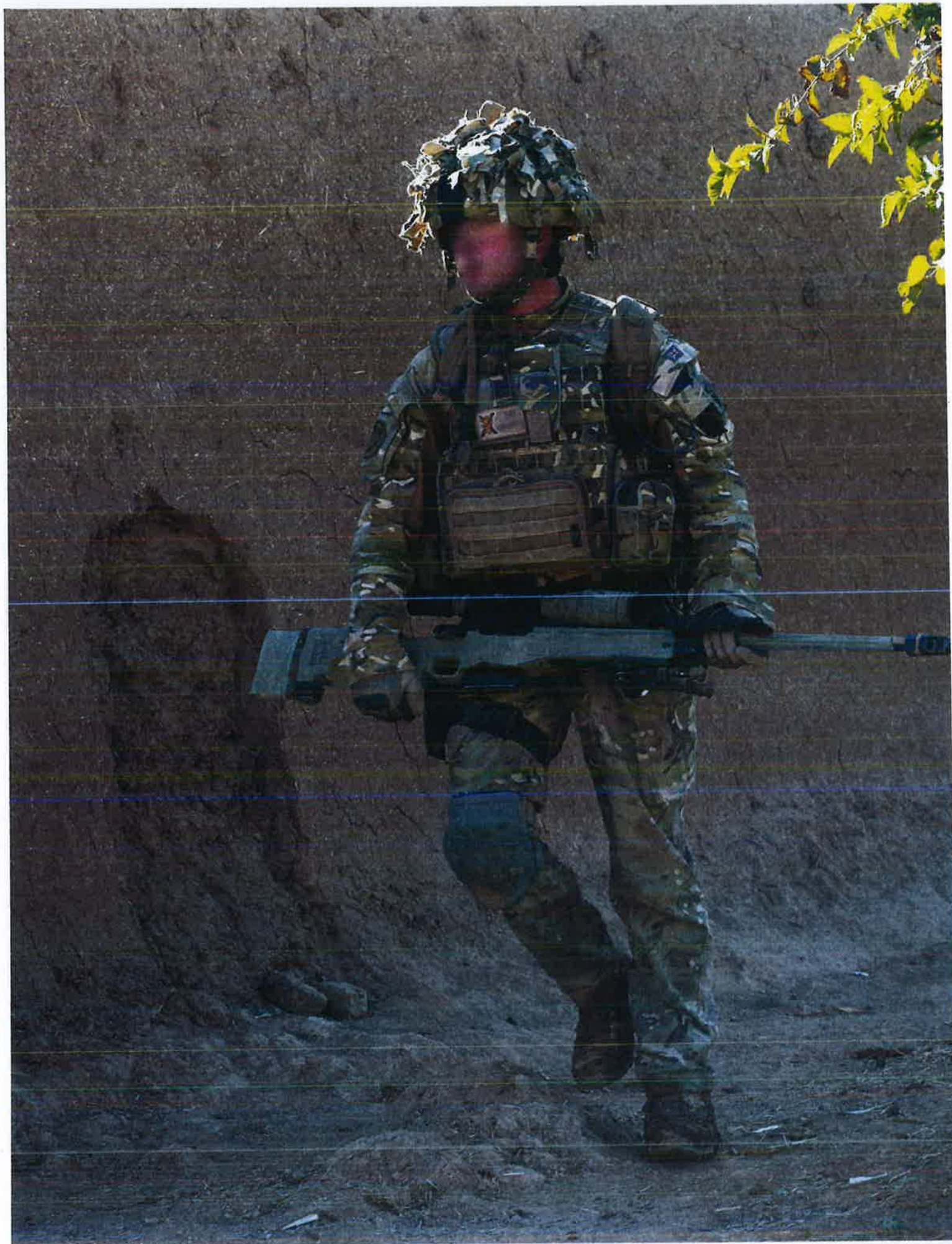|	OP HERRICK 14	OP HERRICK 15	OP HERRICK 16	OP HERRICK 17	OP HERRICK 18
HQ TFH	3 Cdo Bde, Brig Davis	20 Armd Bde, Brig Sanders	12 Mech Bde, Brig Chalmers	4 Mech Bde, Brig Bruce	1 Mech Bde, Brig Jones
Principle Manoeuvre Units	BRF, 1 RIFLES, 42 CDO, 45 CDO, 4 SCOTS	QRH, 5 RIFLES, 3 SCOTS, 1 GREN GDS, 2 MERCIAN	KRH, 1 R WELSH, 1 GREN GDS, 3 YORKS, 1 R ANGLIAN	QRL, 1 SG, 40 CDO, 1 MERCIAN, 1 LANCS	2 RTR, 2 LANCS, 1 RRF
Theatre Reserve Bn Deployed					
ANA Mentoring	BAG, 3 MERCIAN	BAG, 2 RIFLES	BAG, 3 RIFLES	BAG, 1 SCOTS	BAG, 4 RIFLES
ANP Mentoring	PMAG, 2 RGR	PMAG, 1 PWRR	PMAG, 1 WG	PMAG, RDG	PMAG, 2 SCOTS
Log HQ	JFSp(A) 12, Navy IA HQ, Cdre Walker	JFSp(A) 13, 101 Log Bde, Brig Mitchell	JFSp(A) 14, 102 Log Bde, Brig McLay	JFSp(A) 15, 104 Log Bde, Brig Capps	JFSp(A) 16, RAF IA HQ, Air Cdre Bessel

OPERATION HERRICK TIMELINE

			Pre 2004
	Oct		OP ENDURING FREEDOM begins
2001	Nov		Taliban flee Kabul. British Embassy reopens.
	Dec		Battle of Tora Bora Caves.
			Taliban lose stronghold in Kandahar UNSCR 1386 Establishes ISAF for 6 months to aid Afghan Interim Authority.
2002	May		OP JACANA begins RM deployed.
		23	UNSCR 1386 extends ISAF until Dec 02.
	Jun	01	Loya Jirga elects Hamid Karzai as Afghan president for a two year term.
	Nov	27	UNSCR 1444 extends mandate until Dec 03.
2003	Jan	01	UK Govt supports US OP IRAQI FREEDOM. Div and Bde elements deploy to Kuwait
	Mar	21	US and UK forces enter Iraq. OP TELIC begins.
		28	UNSCR 1471 authorises UNAMA until Mar 04. Reviewed annually in Mar.
	Oct		NATO takes over command ISAF UNSCR 1510 gives ISAF freedom of action over entire of Afghanistan and extension of mandate.
			2004
Apr	01		OP HERRICK 1: 1GH (ARIB) deploy to Mazar-e-Sharif and Kabul
Sep	01		US led PRT opens in Helmand
Oct	01		OP HERRICK 1: 1WFR (ARIB) deploy to Mazar-e-Sharif and Kabul
	07		6 x GR7 Harriers at FOC
Nov	01		Hamid Karzai elected as President of Afghanistan with 55% of vote.
			2005
Mar	15		PRT Mazar-e-Sharif handed over to Sweden
	29		OP HERRICK 2: 2RGR (ARIB) deploy to Mazar-e-Sharif and Kabul.
Sep	01		First Afghan parliamentary elections in 30 years.
Oct	03		OP HERRICK 3: 1RGBW (ARIB) deploy to Mazar-e-Sharif and Kabul.
Nov			PJHQ Prelim Ops arrive in Afghanistan
Dec	01		Mohammed Daoud becomes governor of Helmand Province.
			2006
Feb	01		NATO summit in London agrees Afghan Compact
Apr			OP HERRICK 4: 16 AA Bde (3150 - 4500 pax) deploy as Task Force Helmand (TFH). US Forces conduct OP MOUNTAIN THRUST.
			Theatre Reserve Battalion (TRB) deploys to Afghanistan

May		HQ ARRC assumed command of HQ ISAF IX. Lt General Richards, COM ARRC took on the role of COM ISAF IX.
		UK assumes lead of Helmand PRT from United States.
		Danish Battlegroup (Team 1) deploys
		Deployment of Estonian Company
Jul		Danish Team 1 Operational
Sep		Nimrod crash 14 personnel KIA
Oct		OP HERRICK 5: 3 Cdo Bde (5200 pax). TFH Bde HQ moves to Lashkar Gar (LKG)
		TRB deploys to Theatre
Nov		Assadullah Wafa becomes governor of Helmand Province
		RC(S) changed from a 1* to a 2 * HQ
Dec		OP HERRICK TAM first issued
		MASTIFF 1 arrives in theatre
2007		
Apr	08	OP HERRICK 6: 12 Mech Bde (6500 pax).
		OP SATYR BAAS: RC(S) Operation to secure Afghan Development Zone (ADZ) begins. Ends in Oct 07.
		OP SILICON. TFH operation to expand from Gereshk into the Lower Gereshk Valley
May	01	Maj Gen Page assumes command of UK led RC(S)
Jun	11	Establishment of Police Mentoring Groups from TFH Orbat.
Jul		Mr Gordon Brown takes over as Prime Minister.
Oct		OP HERRICK 7: 52 Inf Bde (7750 pax)
Nov	15	Jordanian Armed Forces arrive in theatre
	26	OP MAR KARADAD to retake Musah Qalah begins. Ends Jan 08.
Dec	01	Lt Gen Riley assumes post of Deputy Commander ISAF
2008		
Mar		Mohammed Gulab Mangal becomes governor of Helmand province
Apr		NATO Summit Bucharest launches ISAF strategic vision for Afghanistan.
	08	OP HERRICK 8: 16 A A Bde (8530 pax)
		OP AZADA WOSA – 24 MEU Forward Passage of Lines into Southern Helmand
May		OP EAGLES EYE disrupts Insurgents in the Upper Gereshk Valley (UGV). Ends late Jun 08.
		Burley and LAND EOD reviews as IED threat increases

Aug		OP OQAB TSUKA delivers turbine 2 to Kajaki Dam
Oct		OP HERRICK 9: 3 Cdo Bde (8300 pax)
		OP SAND CHARA to improve security in Babaji and Nad Ali. Ends Apr 09
Nov	01	Lt General Dutton assumes post of DCOM ISAF
2009		
Jan		OP SPEEN SARAMUS to support US expansion and FOB construction. Ends May 09
		Barack Obama inaugurated as President of the United States.
Apr	08	OP HERRICK 10: 19 Lt Bde (8300 pax)
	09	OP ENTIRETY FRAGO issued.
May		US Marine Corps Surge into Helmand. 24 Marine Expeditionary Unit (MEU) (10672 Pax)
Jun	19	OP PANCHAI PALANG to extend Secure Hold, Build in uncleared areas. Ends late Jul 09
		JOINT FORCE SUPPORT Afghanistan (JFSP(A)) 8. 8 Force Engr Bde deploy as first JFSP(A).
		Mastiff 2 arrives in theatre.
		Handover of GARMSIR AO from TFH to 24 MEU
Oct		OP HERRICK 11: 11 Lt Bde (9000 pax) C-IED Task Force reaches FOC over HERRICK 11.
		Hamid Karzai wins second term as President of GIRoA
		Prime Minister Gordon Brown announces troop uplift to 9500
Dec		JFSP(A) 9: 102 Log Bde.
		President Obama announces 30,000 extra US troops to deploy to Afghanistan. Total US forces now reaches 100,000.
2010		
Jan		Production and dissemination of AFM 1:10 Counter Insurgency
Feb		OP MOSHTARAK begins involving 15,000 ISAF and Afghan National Security Force (ANSF) troops
Mar		Handover of control of MUSA QALEH AO from TFH to 1 Marine Expeditionary Force (MEF)
Apr		OP HERRICK 12: 4 Mech Bde (9500 pax) Talisman EOD capability fielded to Joint Force Engineers over H12
May		HQ RC(SW) created by 1 MEF. TFH becomes OPCOM RC(SW)
		Mr David Cameron appointed Prime Minister.
Jun		JFSP(A) 10: 102 Log Bde
		Handover of control of the KAJAKI AO from TFH to 1 MEF
Jul		Kabul International Conference. President Karzai declares that ANSF must lead security operations across Afghanistan by Dec 14.
Sep		Handover control of the SANGIN AO from TFH to 1 MEF
Oct		OP HERRICK 13: 16 AA Bde (9500 pax) NIMROD withdrawn from theatre over HERRICK 13

Nov		NATO Summit in Lisbon agrees timetable for handover of security to the ANSF by Dec 14.
Dec		JFSP(A) 11: 104 Logistic Support Brigade
2011		
Apr	08	OP HERRICK 14: 3 Cdo Bde (10787 pax) RWMIK and Snatch Vixen + withdrawn over HERRICK 14. The UK's Protected Mobility (PM) capability deemed at Full Operating Capability (FOC) with the introduction into theatre of Mastiff 3, Enhanced Wolfhound and Ridgeback.
		UK Perineal protection (Tier 1-3) at FOC
May	01	OP QALAI SHARQAY: 3/215 planned TFH supported Transfer Lead Security Responsibility (TLSR) in LGK.
		The Helmand Plan (2011-2014) published by Provincial Governor, Head PRT and Commander RC(SW).
		Osama Bin Laden is killed in Pakistan by a US SOF.
Jun	01	JFSP(A): RN Individual Augmentee Headquarters.
	01	President Obama announces the withdrawal of 10,000 US troops from Afghanistan
		Canadian troops end combat operations in Kandahar
Jul	11	Lead security responsiblility for LKG handed to GIRoA control
Oct	08	OP HERRICK 15: 20 Armd Bde
Dec	01	JFSP(A) 13: 101 Log Bde
2012		
Apr	08	OP HERRICK 16: 12 Mech Bde.
May	02	US / Aghan Strategic Partnership Agreement signed.
Jun	01	JFSP(A) 14: 102 Log Bde.
	02	Transition to Lead Security Responsibility (TLSR) programme for Nahr E Saraj (NES) endorsed by Provincial Governor
Jul		Danish battlegroup reorganises to a Training and Advisor Battalion.
		The Netherlands ends its contributions to NATO operations in Afghanistan.
		Wiki leaks releases 92,000 US documents to the Internet
Sep	14	Insurgent attack on Camp Bastion
Oct	01	OP HERRICK 17: 4 Mech Bde MASTIFF 1 and JACKAL 1 withdrawn over HERRICK 17
Nov	01	Acceleration of Base Realignment, Closure and Transfer (BRAC/T) plan.
		The French withdraw all troops from Afghanistan.
Dec	01	JFSP(A) 15: 104 Logistic Support Brigade.
		Ground Lines of Communication with Pakistan closed
	03	Brigade Advisory Group lifts of mentoring at Tolay level.
	06	Brigade Reconnaissance Regiment reroled as force protection of Camp Bastion.
		Police Mentoring Advisory Group lifts off mentoring at precinct level.
	31	Multiple Launch Rocket System withdrawn from theatre

2013		
Jan	01	▬▬▬▬▬▬▬▬ newsletter issued.
	23	RC(SW) Issues Security Force Assistance FRAGO
Feb	02	TLSR of Route 611
	14	NES(S+N) and BURMA Areas of Operation (AOs) merge
Mar	31	RC(SW) issues OPORD STEEL EAGLE
Apr	01	Prison riots in LKG require national response from Kabul
	10	OP HERRICK 18: 1 Mech Bde EOD&S Task Force disbanded during HERRICK 18.
	31	MERLIN SH redeployed from theatre.
Jun	01	JFSP(A) 16: RAF Individual Augmentee Headquarters.
	18	Transfer of Lead Security Responsibility complete
Jul	01	ISAF Insider Threat Handbook issued. (Replaced UK OP CARDEL letter)
	15	BAG mentoring teams lift off from Kandak level.
Aug	09	TFH HQ moves from LKG to Camp Bastion
	28	FOB SHAWQAT closes and Transition Support Unit NAD ALI redeploys.
Sep	11	FOB OULETTE transferred to ANCOP
	16	PMAG lifts of district level mentoring / advising.
Oct	10	OP HERRICK 19: 7 Armd Bde.
2014		
Jan		HQ RC(SW) reduces from a 2* to a 1* HQ
Mar		Helmand PRT Closes
Apr	01	TFH Redeploy. 4 SCOTS Manoeuvre Battlegroup subordinated to RC(SW)
	05	Voting for Afghan Elections
Sep	19	Electoral Commission names Ashraf Ghani winner of Afghan presidential elections.

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PART 1 - THE CAMPAIGN
EXECUTIVE SUMMARY

'Some drink deeply from the river of knowledge. Others only gargle'.[1]

INTRODUCTION

1. Following the attacks of '9/11' and the collapse of the Taliban led regime in Afghanistan, British conventional forces, as part of a coalition, entered Afghanistan in 2001 under Operation VERITAS. The initial intervention centred on a stability operation in and around the capital, Kabul (Operation FINGAL)[2] and a counter-terrorism task force (Operation JACANA).[3][4] Operation HERRICK was the operational codename under which all British operations in Afghanistan have been conducted since 2002. In April 2004 the orientation of British ground based operations switched to delivery of the Provincial Reconstruction Team (PRT) based around Mazar-e-Sharif in the north of the country, and was generated though four six-month roulements by the Afghanistan Roulement Infantry Battalion (ARIB). Since 19 March 2003 British forces had been committed at medium scale on operations in Iraq (Operation TELIC) and any subsequent analysis of operations in Afghanistan must be conducted with the scale and nature of commitment in Iraq until the UK withdrawal in 2009 very much to the forefront.

2. The decision to switch British attention to Helmand in 2006 turned the "UK's commitment to Afghanistan from a 'military operation' into a 'war'".[5] The challenge of understanding what kind of war the British military was now in became the priority, set against a backdrop of depictions of small groups of soldiers from the 3 PARA Battlegroup fighting off an increasingly determined and capable adversary; a dysfunctional command structure; a campaign plan kicked way off course; and casualties at a level which increasingly disturbed both political and public opinion. Arguably it took until 2009-10 before the situation fully stabilised, coinciding with the implementation of Operation ENTIRETY in the home base,[6] the surge of 30,000 USMC personnel into Helmand, British forces reached a high watermark of 10,000 and the re-subordination of Task Force Helmand to a 2* Regional Command (South West) headquarters. How this initial situation came about is increasingly controversial and will be a leitmotif of many debates on the British military presence in Afghanistan beyond its final withdrawal.[7]

3. As this study goes to print British forces have redeployed from Helmand alongside coalition partners and all combat roles ceased at the end of 2014.[8] Afghan National Security Forces (ANSF) have assumed complete responsibility for security in Helmand and a much smaller training-based mission remains in Afghanistan, centred back on Kabul (Operation TORAL).[9] The longer term effectiveness of the ANSF in Helmand (primarily through 3/215 Corps ANA and the range of police capability) will prove the principal measure by which the legacy of the UK military presence on Operation HERRICK will most likely be judged. Under testing transitional conditions and an exacting redeployment timetable there should be measured acknowledgement of the huge and honourable achievements at the land tactical level of the formations, units, commanders, officers, sailors, marines, soldiers and airmen/women who all played their part in giving Afghanistan more than a fighting a chance of shedding the burden of its recent wretched history and achieving stability and development.

4. Afghanistan has dominated Land environmental resources for nearly a decade. It suffused concepts, doctrine, training and capabilities and obliged an economy of force everywhere else. From humble beginnings, mission specific training grew to a lengthy, highly engineered and highly centralised delivery pipeline. Significant investment, much of it funded by NACMO[10] and delivered through UORs, saw a massive uplift in capabilities from force protection platforms, through ISR to personal equipment. In-theatre architecture (buildings and CIS) became well found and resourced. Collectively, these developments allowed a range of complex capabilities (such as precision/strike) to be grouped or accessible at a lower tactical level than had previously been the case.

5. The operation saw also step change improvements in joint and coalition working: with partners across government (in such constructs as the PRT); with the joint community through air/land integration and ▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇: and with NATO, ranging from the improved subordination of UK forces to in-theatre C2 to combined operations alongside the USMC in Helmand. The British military approach adapted radically, from its approach to counter-insurgency (COIN), through its conduct of operations, to the

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1. Attributed to Woody Allen.
2. The NATO (initially British led) International Security Assistance Force (ISAF).
3. A 1700 strong 3 Cdo Bde based force as part of the US-led Operation Enduring Freedom (OEF), which ended in mid 2002.
4. Historically this was the fourth occasion British forces had intervened in Afghanistan. The three other occasions were the First Anglo-Afghan War (also known as 'Auckland's Folly' 1839-42; the Second Anglo-Afghan War 1878-80; and the Third Anglo-Afghan war of 1919.
5. Michael Clarke (Ed); The Afghan Papers: Committing Britain to War in Helmand, 2005-06, RUSI Whitehall Paper 77/ 201.
6. Putting the Army on a campaign footing.
7. See 'Our Failure in Afghanistan Must be Exposed' by Richard Williams; Times On-line 28 October 2014 http://www.thetimes.co.uk/tto/opinion/columnists/article4249666.ece?shareToken=3031d49ff1b2f0093214toc7d41ab0615 ; and BBC 'Afghanistan: The Lion's Last Roar' http://www.bbc.co.uk/search?q=afghanistan%3A%20The%20Lion%20s%20Last%20Roar.
8. 'Flag change' at Camp Bastion/Leatherneck took place on 26 Oct 14.
9. Part of the NATO (ISAF) Operation RESOLUTE SUPPORT.
10. NACMO – Net Additional Cost of Military Operations.

prioritisation and delivery of capacity building – where OMLTs, partnering and advisory groups (BAG and PMAG) and Security Force Assistance cumulatively set the conditions for transition in 2014.[11]

6. The transformational nature of Operation HERRICK on Land forces has been striking, accelerating capability delivery through UORs, up-skilling the force, and conditioning it to deliver integrated tactical operations in a complex context amongst the people of Afghanistan. CGS has observed that:

> '...never in history have we rolled out a force so specifically taut for a purpose... We came out of it with a modernised force'.[12]

By 2014, UK land forces had successfully transitioned security to Afghanistan forces, which themselves had been transformed by UK capacity building (the development of 3/215 Corps, ANA, over the course of the campaign has been impressive).[13] UK operations improved security within the Government Development Zone, enabled governance and civic infrastructure and wider improvements in health and education. They have been delivered despite a capable opponent, significant – at times, severe – resource constraints, an inhospitable climate and conditions of great adversity.[14]

7. It has come at some cost: a total of 453 British troops have been killed during the campaign and 615 have been seriously, or very seriously wounded and a total of 2187 were classified as 'wounded in action'.[15] As at 2014 the UK had spent £37 billion on the campaign and this is predicted to rise to £40 billion by 2020.[16] The fighting spirit of this generation of British forces was tested and proven. We have an Army which is resilient, combat hardened and self confident and in which many individuals have demonstrated both superb professionalism and conspicuous bravery (see Figure 1 below). Its collective and individual moral compass has held firm. It is comfortable with mission command, accomplished at COIN/stabilisation, a wide range of mounted and dismounted close combat skills (including combat medicine), aspects of air manoeuvre and adaptable. The challenge will be to sustain those and other strengths in an organisation, which has not always demonstrated an effective corporate memory or organisational learning after a long campaign.

Figure 1: Gallantry Awards for Operation HERRICK as at 31 October 2014.

8. More critical observers would point to serious shortcomings that undermined what was always going to be a wicked problem. Such shortcomings could include systemic weaknesses in understanding the scale, nature and complexity of Afghanistan; the scale of our ambitions unmatched by the ways and means; a parochial focus on a British solution in Helmand; lengthy periods when UK land operations seemed dangerously adrift of higher direction and out of balance in ways and means; short term tactical actions that generated longer term challenges; an institutional reluctance to comprehensively and quickly adjust to operational demands; and a failure to comprehend the sheer corruption and inefficiency of some Afghan leaders – the latter running the risk of linking British forces with predatory activity and thereby undermining the narrative they were fighting so hard to encourage.

9. The campaign also had a significant impact on the wider context in which land tactics are conducted. While admiration for the 'can do' mentality and courage of the military remained strong, the initial paucity of effective

11 OMLT – Operational Mentoring and Liaison Team; BAG – Brigade Advisory Group; PMAG – Police Mentoring and Advisory Group.
12 HCS Interview with CGS 2013.
13 3/215 Corps ANA was the principal ANA partner for TFH.
14 For a synopsis of achievements in Afghanistan see The Army's Experience in Afghanistan .
15 www.gov.uk/government/uploads/systems/uploads/attachment-data/file/355456/20140918_op_herrick_casualty_tables_upto_31_Aug_14.pdf accessed 31 Oct 14.
16 This figure includes development funding as well as military spending - www.telegraph.co.uk/news/worldnews/asia/afghanistan/11144612/Afghanistan accessed 07 Oct 14.

policy guidance frustrated the linking of tactical military objectives to political goals and led to a counter-insurgency approach being confused with a strategy. The conflict declined in popular support paradoxically as the campaign started to deliver tangible progress in ANSF capability. Yet Operation HERRICK saw public opinion begin to sentimentalise the role and loss of Service personnel while growing increasingly ambivalent of the cause for which they fought. These observations have important implications for the future utility of land power and are worthy of deeper reflection.

LEARNING LESSONS

10. On its conclusion an operation of the length and complexity of Operation HERRICK presents two challenges: first, how to identify and retain the enduring operational experience – from training, through capabilities to TTPs – realised after such effort and to understand how they can be integrated into future operations: and second, how to re-set a force that has become highly tuned and conditioned for a single and increasingly well understood campaign for other less certain, more austere, operational demands. Additionally, the Army must avoid the historical habit of having to re-learn old lessons when it next crosses the metaphorical Line of Departure. Catignani has observed that the British Army's tendency to promote informal learning systems (mainly focused on the short term, circumscribed and ad-hoc problem solving) makes it prone to 'organisational forgetting'.[17] To paraphrase the US Army's Commander TRADOC, General Perkins, it is not only important what to learn (and think) but also how to learn (and think). At some risk of sounding parochial the Army has come a long way since 2006 in this respect and is probably in the best position it has ever been at the end of a campaign to exploit its recent experience and put its learning culture on a more formal footing. Two factors are critical: firstly the Army must dispel any residual belief that it is inherently proficient at this form of soldiering (by virtue of its historical experience). COIN is not in its genes any more than other types of operation. It needs constant attention in the form of understanding, doctrine and investment in training and equipment. Secondly, the Army must do more to encourage the heterodox viewpoint, both internally and drawing on external sources. Undoubtedly, this will meet institutional barriers but these will need to challenged if physical and conceptual agility is truly to be achieved.

WHAT SHOULD ENDURE?

11. Operation HERRICK has seen the development of an impressive range of capabilities, which have been honed throughout the campaign. Not all will be needed at each stage of each future operation. Understanding which have relevance when, how they can be best optimised for different CONOPs and how to sustain or re-initiate the systems that generated them will be key. The challenge will be to determine how land forces integrate and use these capabilities in circumstances more dynamic and more austere than Operation HERRICK, against a potentially more capable combined arms adversary. Some capabilities may be required in a modified form during defence engagement; others during an initial intervention; and some in later phases where the path to full operating capability must be understood. Land commanders must re-acquaint themselves to operating in circumstances where the sophisticated command support and ISR systems delivered for Operation HERRICK are not immediately available.

12. Studies supporting this report indicate that land forces must retain:

    a. Flexibility. The ability to transition across the spectrum of conflict from major combat operations (MCO) to COIN and for this to be realised by foundation training and manoeuvre at scale.

    b. A Systems Approach. Many capabilities, such as C-IED, were the product of a systems approach: intelligence, science and technology, operational analysis, capability development, acquisition, supply and support, training, lessons and materiel and personnel exploitation. Elements of this system, such as Dstl and DE&S, lie beyond land forces. Land forces must retain linkages that allow capabilities to be developed at pace relevant to the next operation. Training and education must condition the force to understand and exploit capabilities that may not be routinely available in barracks but will be central to future operational success.

    c. Integrated Approach. Operation HERRICK saw the maturing of an integrated (CJIIM) approach. Each element of the integrated approach risks decay at varying 'half lives'. Institutionalising these connections in peacetime, but forged and fine-tuned on operations, is critical to delivering an appropriately enabled and connected land force on future operations. Consideration must be given to the training (or mitigation of risk) necessary for force wide CJIIM familiarity, given resource challenges for both the Army and its partners.

    d.

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17   Sergio Catignani, 'Coping with Knowledge: Organizational Learning in the British Army', Journal of Strategic Studies (published online 8 May 2013).

e. **Precision - A Holistic Approach.** A major transformational change through Operation HERRICK was the range of procedures and capabilities that collectively provided the means to understand the effect required and to deliver it with precision. This was most apparent in ISR and precision strike but it is relevant to other areas such as data and knowledge management through to logistic asset tracking.

f. **Soldier First.** Operation HERRICK experience served to stress the importance of a 'soldier first' approach. Dismounted close combat skills for all, which included weapon handling, an emphasis on fitness, a higher level of combat medicine skills and a basic level of urban combat competence acted to multiply the effectiveness and flexibility of the land force. Exploiting every soldier as a sensor and influencer requires continued and improved investment in professional military education, instructional techniques and information technology literacy.

g. **Working With Indigenous Forces - Security Force Assistance (SFA).** SFA was the ISAF term to explain the framework within which ISAF progressively handed over responsibility (transition) to the ANSF as lead security provider. The UK adopted a partner, mentor, advisor model which culminated in the unit based Brigade Advisory Group (BAG) and Police Mentoring and Advisory Group (PMAG), which was widely appreciated as best practice in ISAF. Institutionalising generic capacity building capability within units based on the principles which underpinned the BAG/PMAG models, and incorporating it into foundation training would build-in inherent agility to the Army on future intervention operations.

h. **Institutionalising Air/Land Integration (ALI).** In 2003 Project CONINGHAM-KEYES was instigated to address the ALI shortfalls exposed on the intervention into Iraq (Operation TELIC). It recognised tactical level execution weaknesses most notably in deployed C2 and airspace management for tactical air, incoherent joint doctrine and equipment programmes and ill defined ALI professional career paths. From the outset of Operation HERRICK air power was a major feature of the campaign, particularly in support of land forces, and after over ten years the military has emerged highly proficient at ALI (and arguably not at a level achieved since the final years of the campaign in World War Two). However, history relates the mistake in allowing the mutual understanding between air and land components to fade away in the absence of an operational imperative.[18]

WHAT DOES NOT ENDURE?

13. Land forces must be careful in acknowledging what Operation HERRICK was not – where context and TTPs have no or limited utility. Though a demanding COIN operation; Operation HERRICK presented no air threat, limited logistic risk, no threat to air lines of communication, no air deep battle, and an opponent, regardless of his agility and adaptability, offered no combat arms threat enabled by sophisticated capabilities. From a dynamic early stage, where land forces struggled to blend MCO drills with stabilisation, land force TTPs became bespoke to the specifics of the geography, the threat, and the discretionary nature of many of the operations. TTPs exploited dominance in ISR and fires were enabled by a network of well found infrastructure.

14. Indicatively, the study has highlighted the following areas with possible less enduring relevance:

a. An expectation of living and operating from a Main Operating Base/Forward Operating Base (MOB/FOB). The Camp Bastion/Leatherneck/Shorabak complex grew to 28,000 personnel (military, civilian and contractor) at its peak. Although the reasons for a fixed base laydown within a people-centric based campaign are understood it can engender predictability and constrain the manoeuvrist approach. A much smaller and agile support footprint and more austere facilities should be the model for future expeditionary deployments. There are good lessons to draw from French operations in Mali in 2013 (Operation SERVAL).

b. An expectation of operating in an environment where the adversary does not have air defence or lacks effective indirect fire capability.

c. An expectation of operating in circumstances where the adversary cannot manoeuvre with capable land platforms or use chemical weapons.

d. An expectation that unmanned aerial systems can be operated without being interdicted.

e. An expectation that soft skinned helicopters will be available or can safely operate to deliver combat support, combat service support and medical evacuation.

f. An expectation that the air bridge line of communication will not be interdicted.

g. An expectation that a largely civilian delivered strategic land line of communication will operate without considerably greater levels of interdiction than experienced on Operation HERRICK.

h. An expectation that the home base will not be subject to malign interference.

Even a cursory level of analysis of more recent fighting in eastern Ukraine, Syria and Iraq would indicate the need for careful discretion in drawing lessons from Afghanistan as a whole. The initial stage of operations in Afghanistan (pre Helmand) may be a surer guide to the next operation, where a combination of forward engagement and manoeuvre forces, heavily enabled by reach back and joint assets, operated in close cooperation with local forces. Significant caution must be exercised in drawing from the better resourced high water mark of the campaign, either in the capabilities available, the TTPs thus enabled, or the mental attitudes such an established campaign bred.

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18 SDC(A) speech to RCDS on ALI Lessons April 2013.

LESSON THEMES

15. The aggregation and analysis of lessons across the extent of the campaign and observation from a wide range of interviews has thrown up a number of themes. A number of these themes are being progressed through the likes of the Army 2020 project studies and related work but, in those areas which are not, the study recommends the Army takes a considered view. The main themes are:

a. Understanding. Land forces were slow in understanding and then adapting and resourcing to the Byzantine complexities of the environment they were operating in – that is understanding what war they were in. This situation was not helped by the lack of coherence in and integration of strategic planning, and a failure to apply some of the basic tenets of the Army's counterinsurgency doctrine as it existed at the time.[19] Yet given that similar difficulties were experienced on Operation TELIC, this has to remain a concern. The term 'understanding' encompasses a variety of conceptual and physical measures, including language and cultural capabilities. Yet just as important is, firstly, the need for the British Army to understand itself; secondly, to understand how others (potential adversaries and non adversarial actors) perceive the British Army; and thirdly, to understand how other actors interpret history. In future there is a need to mould the Army more quickly to the campaign, rather than try and engineer the reverse.

b. An Agile Army (Op ENTIRETY). There was a widespread view that the requirement to implement Operation ENTIRETY demonstrated the extent to which the Army fell short of a true learning and agile organisation, although this must be tempered by the prioritisation of Operation HERRICK across Defence at the time. Many of the signals for the need to change were present as early as 2006 but the Army did not have effective means to identify or act upon them. It took until 2009 to formally initiate Operation ENTIRETY and from 2009-11 to implement. The scale and scope of Operation ENTIRETY was impressive and the small 'tiger team' approach to its implementation worked well. During the campaign the Army got much better at capturing lessons and adaptation but there is still a measure of correcting the error rather than getting ahead of it.[20] There is wide recognition that the establishment of FDT (FD&Cap) should go some way to avoiding the need for an ENTIRETY-scale change programme in the future.[21] Historically the British Army is characterised by an informal approach to learning. The implementation of a formal experimentation programme (AGILE WARRIOR) and establishment of the capability directorates; Directorate of Force Development; the Land Intelligence Fusion Centre (LIFC); The Defence Cultural Specialist Unit (DCSU); the Lessons Exploitation Centre (LXC); Land Stabilisation and COIN Centre (LSCC); the Army Knowledge Exchange (AKX); and parts of the A2020 structure[22] provide some of the essential building blocks for improved formal institutional learning and adaptation. However, overcoming institutional inertia and maintaining the cultural appetite to learn remains an Army-wide enduring challenge and must be command led.

c. Command and Control. Initial command and control (C2) in Helmand was messy.[23] This was not properly addressed until the first deployment of 6 (UK) Div (HQ RC(S)) in 2007; the establishment of a UK DCOM ISAF (also UK NCC) in late 2007; and, arguably, the establishment of a USMC 2* led HQ RC(SW) in mid 2010, reinforced with 30,000 US Marines. C2 in a coalition will always be a challenge but there is a clear sense in which the UK took some time to get it right. The British approach to command has been subject also to some critical commentary. Our status as good coalition partners (the extent to which we leant into NATO/ISAF C2) was questioned on occasions, sometimes by British commanders themselves. This was compounded by some doctrine variance, periodic tensions over the influence of PJHQ alongside an ISAF chain of command, and the 'Helmandshire' mindset. There is no doubt that C2 relationships over the latter part of the campaign were more collaborative and better aligned to the integrated approach. Maintaining this latter approach from the outset for contingency will be operationally critical and fundamental to managing reputational risk to our relations with close allies.

d. Campaign Continuity. This relates to the relative veer and haul which characterised the earlier period in Helmand (up until 2009), the balance between brigade and unit cohesion, the length of operational tours and the integrated approach (and the tensions between military and non military tempo). Operation ENTIRETY identified key campaign continuity posts (9-12 months long) but there were some considered views that we could have switched to a 'standing' HQ TFH around HERRICK 15 (Nov 12). This would not be without impact on the Mission Specific Training (MST) training pipeline. Equally, understanding when one has switched to a campaign is key in driving a more integrated infrastructure plan, support structure (including strategic LoCs), relationship with OGDs/NGOs and enablement of indigenous forces. Tensions will always surface around this decisive point but the military 'can do' attitude can serve to work against effective implementation and future commanders must be alive to this.

e. Equipment. Operation HERRICK is a story of the successful delivery of extensive quantities of equipment delivered under UOR procedures with clear evidence that this saved lives and enhanced operational effectiveness. With a total UOR outlay of £5-6 billion (with an annual average spend of £800 million) some have argued that the core equipment programme failed, that predictions of equipment requirements were wrong, that sufficient breadth and

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19 It is instructive to note that British Army AFM 1-10 (Counterinsurgency, published in 2001, formed the basis to much of the material in the US FM 3-24 (Counterinsurgency), which then provided the basis for a refresh on AFM 1-10 in 2010. The principles of British Army counterinsurgency doctrine were not necessarily far off the mark in 2001-06 but it was not particularly well taught or applied.

20 The case history of C-IED capability development from Op BANNER, through Op TELIC to Op HERRICK is instructive in this sense.

21 Although the Org and Pers DLODs and Field Army would still need to integrated with FD&Cap to capitalise on post Operation ENTIRETY changes.

22 The Security Assistance Group (SAG) and ISR Brigade.

23 Paraphrasing a commentator – we have good and well understood C2 structures but then dismantle them and design something alien on crossing the LD.

depth of capability had not been preserved, and that it took time to realise that existing capabilities were not good enough. Operation HERRICK started light (with minimal protection, limited manoeuvre and standard firepower) and moved to a medium weight operation based on a family of theatre tailored protected mobility platforms. Up until then Operation HERRICK (and Operation TELIC before it) felt the impact of the absence of a medium weight platform in the core equipment programme, which was only partly addressed through the UOR process.

f. **Combat Identification (Combat ID).** Combat ID on Operation HERRICK was set against the background of National Audit Office (NAO) reports in 2002 and 2006, both of which were particularly critical of progress in the Land environment and this criticism was compounded in the Army Inspectorate report in 2013. For Operation HERRICK a number of Combat ID UOR were introduced, some in response to fratricide incidents and subsequent lessons learnt. Yet Planning Round 11 savings measures resulted in the removal of funding for all but UOR Combat ID measures. This impacts on the Army's ability to develop further its Combat ID capability until 2016 and limits the Army's ability to remain in interoperable step with close coalition partners. This represents a prominent risk to Army, and Defence, reputation.

g. **The UK Approach to Countering the IED.** The IED became a prominent threat in Afghanistan and UK forces became progressively fixed by the IED presence and the wider impact of growing casualties. Following extensive reviews in 2008-09 the whole approach to tackling the IED threat underwent extensive doctrinal and cross DLOD revision. This resulted in a more systematic C-IED strategy based on the 3 C-IED doctrinal lines of operation; Attack the Network (AtN), Defeat the Device (DtD), and Prepare the Force (PfP); and the formation of the C-IED Task Force from Operation HERRICK 11 (November 2009). The combination afforded a switch to a more offensive posture against the IED threat and restored an element of manoeuvre centred on securing the population. Yet the Force never quite broke free from the IED grip. Assuming the IED threat will continue to proliferate and become increasingly sophisticated this report invites the Army to conduct a debate on how it should approach the IED on reset to contingency.

h. **Detention of Capture Persons (CPers).** Throughout Operation HERRICK UK forces were required to conduct detention operations as part of the process of transferring CPers to Afghan criminal jurisdiction. Detention operation evolved continuously during the campaign and were vital also in terms of intelligence exploitation but were subject to increasing scrutiny and challenge, both international and national. Although this subject is much wider than the scope of this study, for contingency, a legally robust and simple to implement detention policy must be in place and resourced to support the tactical commander from the start of operations.

i. **Medical Support.** One of the unquestionable successes of Operation HERRICK was the development in medical support capability; from Team Medic, through MERT and Role 3 hospital to recovery and rehabilitation in the UK. Much of this system was truly groundbreaking and adopted into the NHS. In the course of the study, many have observed the challenge in managing future expectations that similar levels of support can be achieved; not just in the military but in society as a whole. For contingency, planning for similar levels of medical support (but under very different circumstances) may become a key factor in the decision to commit land forces. The Army should consider how to condition the internal and external debate well ahead of such committal.

j. **Support.** Support to tactical operations on Operation HERRICK became extensive and increasingly sophisticated. Most was delivered through the Joint Force Support (Afghanistan) (JFSp(A)) organisation, which also carried out its own enabling operations. The JFSp(A) model proved a success (and outside the timeframe of this study, has been critical in the redeployment of UK forces from Helmand). The importance of the close cooperation between the two 1* headquarters (TFH and JFSp(A)) cannot be stressed too highly and in particular the role JFSp(A) played in releasing enabling functions from Commander TFH leaving him to concentrate on tactical actions. Yet this model is unlikely to be suitable for contingency in exactly the same form (eg. contractor support for Operation HERRICK 15/JFSp(A) 13 peaked at 5453 personnel). A more agile support mechanism, with lower footprint in theatre, but leaving the tactical commander unencumbered with support tasks, and the restoration of 'logistic risk' in operational planning must be high priorities.

k. **People.** The People DLoD stood up to the demands of the campaign. The more centralised approach to matching manpower demand to supply (especially with pinch-point trades, gapping, and stabilising the training audience) became increasingly effective (although the MS system was not subject to the full Operation ENTIRETY overhaul). The challenge remains in creating effective career paths for niche but critical CEGs (eg. JTACs, CULADs). The implementation of a standardised means of measuring G1 operational readiness and health committees ensured much improved understanding of the condition of our people against the operational demand. The Operational Deployment Record (ODR) must be incorporated into JPA. The operational welfare package was well received but the need to re-set it to an austerity mindset has been widely observed. The Rear Operations Group (ROG) model was good practice, especially the importance of keeping some of the '1st XV' behind to make it work. R&R generated much debate, especially amongst unit and sub unit commanders. The dent in available combat (man) power caused by R&R (compounded by the fragility of the air bridge) was a constant frustration and a review of how R&R can be delivered in a more flexible manner for contingency would be welcomed. The importance and relevance of TRiM was stressed throughout but the longer term effects on a number of higher risk career groups will need careful monitoring and investment.[24]

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24   These may include high threat IED and search operators, medics, AH crew, SIB teams, and chaplains

l. **Training.** There is a need to incorporate training into operational design from the outset and to better articulate the training gap to improve understanding of operational and tactical risk for in-theatre commanders. For contingency, training needs to be conditioned to austerity in terms of capability and support. Driver training (particularly acquisition of licences) remained a constant planning headache and irritation for commanders and added considerably to the training bill. Everything must be done to ease this burden while complying with legal requirements. There is a requirement to improve the understanding of the Training DLOD in UOR delivery and improve how the CJIIM environment is incorporated into training. Land forces have become highly proficient in a range of capabilities which are likely to have direct relevance for contingency. These include C-IED operations targeting (hard and soft), advising and mentoring, ALI, air manoeuvre, combat medicine and ▬▬▬▬▬ ▬▬▬ integration. Retaining these capabilities beyond significant operational deployment, especially in training for them, represents a real challenge and a layered approach may be necessary, ie. train fully; train a 'seedcorn' with which to regenerate capability; or drop but archive the material with which to regenerate.

m. **Risk.** An understanding and management of risk was a key aspect of the campaign from authorisations for discrete operations, waivers for equipment, force protection measures, to actions to limit DNBI. While not in all cases linear, the risk cursor shifted during the campaign. From the acceptance – willing or otherwise – of significant risk in the early years, the strategic/operational risk appetite lowered as benefits of higher risk tactical activity became less attractive given the strategic impact of losses; the result was a tightening up of oversight and permissions. These resulted in a greater emphasis on force protection, very significant oversight over losses (such as insider attacks) and 'mission submission' for tactical activity and redeployments that would have been within the decision range of Comd TFH in early years. Risk appetite is linked intrinsically to the political context. On a future operation, with a different imperative to Operation HERRICK, the risk threshold will likely change. There is an important education challenge to ensure that the Army is not 'fixed' by the (later) Operation HERRICK approach to risk and understands how a different political context may drive a different appetite for risk which the Army has to be prepared to exploit.

WHAT THIS STUDY IS AND IS NOT

16. It is important to put this study into context and understand what it sets out to achieve and, just as critically, what it does not. This study was set at the tactical level, which was interpreted to range from the platoon level TTP to the TFH (brigade) level SOP. In doing so its aim was to:

    a. Draw together, prioritise, bring order to the mass of tactical lessons from Operation HERRICK, and;

    b. Capture and analyse enduring or transferable lessons and good practice to inform force development.

    In short hand this is, firstly, a piece of 'good house-keeping' by the Army, completed just as combat operations on Operation HERRICK end, and secondly, serves as the first collective body of evidence to confirm and/or shape force development. With regard to the latter point it is not expected to be the definitive and/or last.

17. In pitching the study at the tactical level the study was to avoid becoming drawn heavily into the operational and strategic levels. This has been a challenge on two fronts: first, because, to date there has been no operational level campaign study in which to nest this study; and second, setting the operational context has been necessary in order to understand many of the tactical deductions. Where comment has been drawn up into the operational level and higher it is done so to add value to tactical level understanding.

18. Being set within a coalition framework, an analysis of Operation HERRICK needs to conducted with the input from all major partners. In some cases this has been done to a degree (eg. with the Stabilisation Unit) but only partially and informally so with others. The timing of this study has pre-empted, by some margin, complementary studies by principle coalition partners such as the US Army, USMC, and Danish forces and sister Services. If and when produced, there is considerable value in revisiting this study. There is also scant input (because of lack of recorded material) of an ANSF viewpoint on UK land forces operations and this should be an objective of any future operational level study after a period of reflection.

19. There has been no attempt to examine ethical, legal or discipline issues in this study; primarily because there was no evidence in the research material which suggested that these were issues from which tactical lessons could be drawn, except that leadership has been consistently of a very high standard and the moral compass of UK forces has not waivered under considerable challenge. To our knowledge the Values and Standards of the British Army have not been found wanting and, where high profile cases of ill discipline have emerged, they have been in proportionally very small numbers against the scale of operations across the expanse of the campaign and/or do not indicate systemic flaws in those Values and Standards.

19. The primary target for this report is the Army and others engaged in conducting and/or supporting land operations.
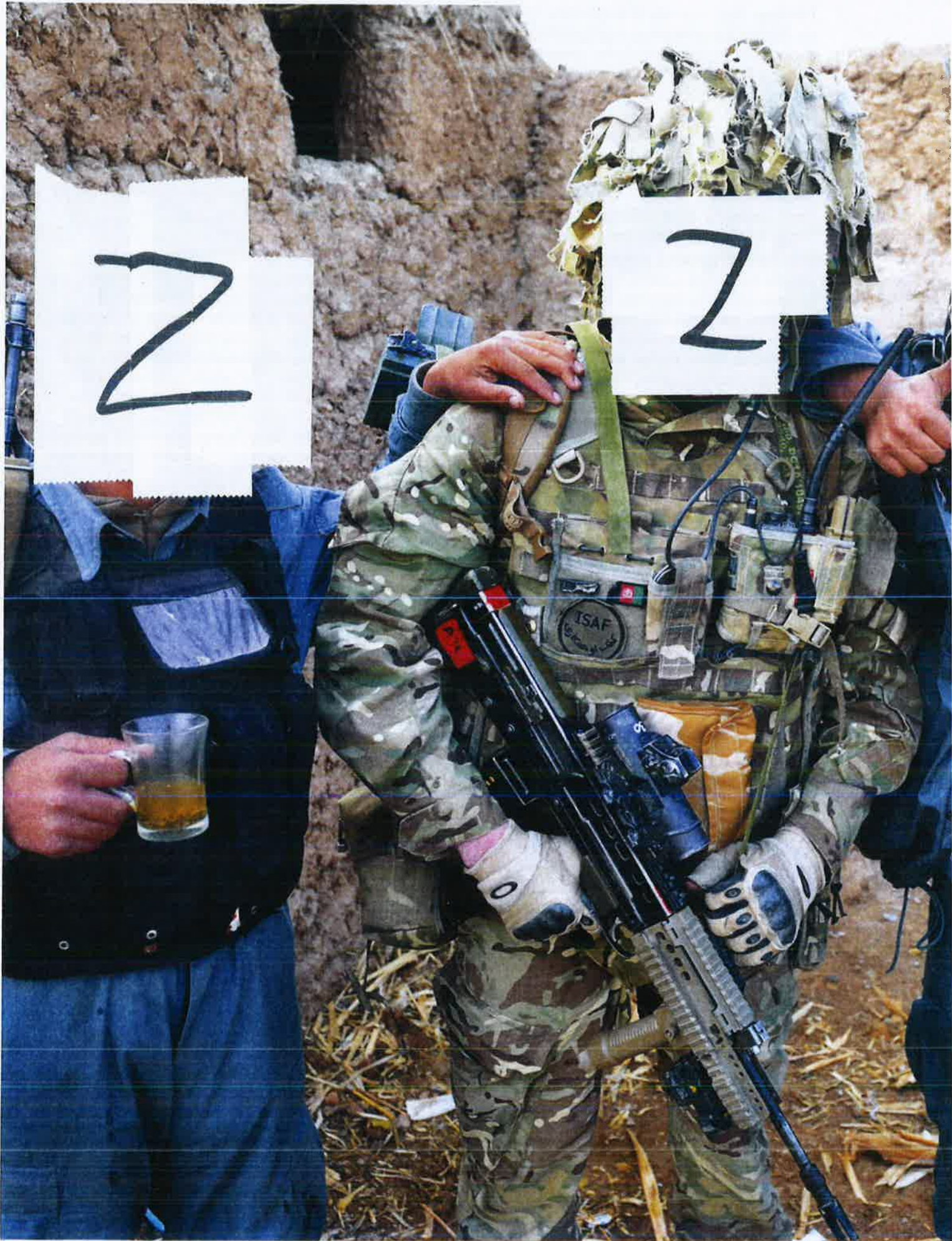
OPERATION ENTIRETY - DELIVERING THE CAMPAIGN[1]

"No matter how clearly one thinks, it is impossible to anticipate precisely the character of future conflict. The key is to not be so far of the mark that it becomes impossible to adjust once that character is revealed".

INTRODUCTION

1. Operation ENTIRETY was the execution of a Campaign Footing within Land Forces. It was formally initiated in April 2009[2], implemented over a 3-4 year period and intended to adapt the 'gearing' of the institutional Army to enable the delivery of tactical and operational success in Afghanistan - what some have termed 'bending the Army out of shape' and others as 'bending the Army into shape'. What was starkly evident by 2009 was that British Land Forces had been present in Helmand Province since April 2006, were still present in Iraq (Operation TELIC) until early summer 2009[3] and the Army was 'running very hot'.[4] Poor understanding, a military deployment that was at variance with both planning assumptions and original intent, a determined enemy and severe under-resourcing[5] all challenged Land Forces at the individual, formation and organisational level. While there were some improvements to force structure and TTPs, by 2008 there was a growing sense that we had "tried to fit the campaign to the Army" [6] and the Army had not yet adapted to the severity and demands of the campaign:

   > *"Soon after taking up CinC [2008] I was on a range of visits and it was clear to me that a lot of the Army was 'in denial' that we were in a war. Iraq was still ongoing, but clearly on the decline. I had a meeting with my senior group in Wilton and asked why this was so – we were fighting a war. Some declared that it had not been designated a Main Effort. I directed we had to go on a 'war footing'.........With Afghanistan, 'half' the Army was in denial and not focussed on it. The MoD refused to declare it Defence Main Effort right through to the time I became CGS when I insisted to CDS that he declare it so".[7]*

   Gen Sir David Richards, interviewed 18 Nov 13

2. Operation ENTIRETY, initiated by General Richards as CinC, and then driven through by him as CGS, was a comprehensive institutional change programme to place the Army on a 'war footing'. Operation ENTIRETY could be seen as an overdue response to failure – a failure to acknowledge that business as usual would not prevail and that the campaign needed to be directed and resourced appropriately. In fairness, Operation ENTIRETY must be seen in the context of three issues: first, the assumption that force levels in Iraq would have declined sharply by the time 16 AA Bde deployed in 2006, something that did not materialise;[8] second, the fact that by 2008 only a minority of the Army had personal experience of service in Afghanistan;[9] third, genuine concerns of over-specialising the Army on a single, albeit highly demanding, counterinsurgency. Whatever the merits of the argument between short term imperative and long term institutional resilience, Operation ENTIRETY proved operationally decisive. In turn, it supported the vigorous debate across the MoD, championed by the Army, over the merits of declaring Operation HERRICK Defence's main effort.

3. Operation ENTIRETY had a profound impact on the Army's attitude and cross-DLOD approach to Operation HERRICK. Combined with a range of other activity – PJHQ transition wargames, theatre reviews, VCDS stocktakes, periodic DOC reports, Departmental and DE&S work on UOR capability delivery and ACDS Log Ops initiatives – it put Operation HERRICK on a campaign footing.

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1 JDP 5-00, Jul 13 (Campaign Planning) – Campaign: A set of military operations planned and conducted to achieve strategic objectives within a given timeframe and geographical area, which normally involves joint forces, frequently in concert with other instruments of national or multinational power.
2 HQLF FRAGO 001/09 dated 9 Apr 09.
3 'Op ENTIRETY should have started in Iraq [TELIC] but there was no will', Lt Gen White-Spunner interviewed 19 Nov 13.
4 CGS 2006-09, interviewed 11 Feb 14.
5 See 'Danger Close' by Col Stuart Tootal (John Murray 2010)
6 CGS 2010-14, interviewed 21 May 14.
7 Gen Sir David Richards, interviewed 18 Nov 13.
8 Despite the drawdown in Iraq the level of commitment required for Operation HERRICK alone was significantly above that assumed for Medium Scale operations in the land environment.
9 Gen Richards (then COMARRC) served as COMISAF Mar 06-Mar 07.

IDENTIFYING THE NEED FOR OPERATION ENTIRETY (WHY SO LONG?)

4. The short answer, in part, is it did not. Prior to the formal launch of Operation ENTIRETY in April 2009 a great deal of change was happening already.[10] The Army does a lot of change and some would argue that it is quite good at adaptation and others that it has a mixed historical record.[11] Yet Operation ENTIRETY was of a different order[12] and the changes prior to 2009 were largely piecemeal, lacked the galvanising effect of a 'warfooting' approach, and, alone, failed to provide the synergistic effect required to fundamentally change the tactical and operational dynamics in Helmand at the time.

> **Observation:** Many areas of the Army were adapting ahead of the formal inception of Operation ENTIRETY. What Operation ENTIRETY did was to give this change clear commander's intent and unity of effort.

5. The challenge was threefold: firstly, having the ability to track and adapt to the 'weak signals', which are early combat indicators of the likely change of operational characteristics ▬▬▬▬ first point);[13] secondly, acknowledging the need to change while 'in contact' ▬▬▬ second point); and thirdly, having the flexibility and mechanisms to bring about necessary change in a timely manner. Underpinning these three are the combination of cognitive and organisation agility, military culture, civilian-military relations and resource freedoms that may serve either to promote or pervert such agility.

6. Operation ENTIRETY occurred after three difficult years in Afghanistan and there was a widespread consensus that the failure to implement it sooner was an indictment on the Army:

> "[that] more of the same was going to get more soldiers killed ... The question that I think historians will ask ... is, why the Hell did it take us so long as an institution to realise we were failing".[14]

> Lt Gen Sir Paul Newton (Comd FDT 2009-12), interviewed 11 Nov 13.

The diagnosis points towards an organisation at the time that had pitifully few means of detecting the 'weak signals' in the first place; lacked an honest early acknowledgement of Clausewitz's dictum, recognising 'the war that you are in' (and an assessment of how that war may evolve and the risks arising); and was heavily constrained by organisational culture and processes which arguably served to promote longer term organisational and sectional interest over shorter term operational imperatives.[15] This is far from saying that many did not 'get it', quite the contrary, especially amongst the cohort of brighter SO1's and SO2's working in Headquarters Land Forces at the time.[16] Yet, in many ways the Army's 'can do' culture can work against it since, in the cause of collective endeavour and loyalty, it can be an impediment to change and serve to mask failure. All these traits were evident from 2006-09 (indeed they had surfaced during Operation TELIC).[17]

> **Observation:** There will always be those who do not agree for both the need for change and the way it is being implemented; the intransigent type. Once orders are issued, such people need to be moved on, although this should be balanced with the need to have a 'voice of reason' and someone asking the awkward question.

WHAT DID OPERATION ENTIRETY DO?

7. **Objective.** The objective of Operation ENTIRETY was:

> The execution of Campaign Footing to meet CinC's intent to ensure that Land Forces are resourced, structured and prepared – conceptually, morally and physically – for success in Afghanistan and then other subsequent hybrid operations.[18]

> Army Briefing Note 32/09: Operation ENTIRETY – the execution of Campaign Footing dated 24 Jun 09

8. **Backdrop.** It should be noted that Operation ENTIRETY was delivered against a challenging backdrop. The slower than anticipated drawdown from Operation TELIC has already been mentioned but just because the Army was placing itself on a 'warfooting' did not necessarily mean all others would follow. Although public focus on both Iraq and Afghanistan was keen there was no sense that the country was 'at war'. Additionally, the designation of Afghanistan as Defence's main effort was not always applied with universal conviction across Defence or necessarily attacked with the same vigour across some of the Army's inter-dependencies.[19] Operation ENTIRETY preceded the move of

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10 Infantry battalions deploying to Afghanistan were already being 'thickened' (augmented) in 2008 to counter under manning, non-deployables and R&R impact as well as increase combat power (Director Infantry 2008-11 interviewed 18 Nov 13)

11 See 'Military Adaptation in Afghanistan', edited by Theo Farrell, Frans Osinga, and James A Russell (Stanford University Press 2013); and 'Coping with Knowledge: Organisational Learning in the British Army?', Sergio Catignani (Journal of Strategic Studies, 8 May 2013).

12 See Annex B.

13 See opening quote.

14 Lt Gen Sir Paul Newton (Comd FDT 2009-12), interviewed 11 Nov 13.

15 Indeed Operation ENTIRETY recognised the need not to undermine the Future Army Structure (Next Steps) work and current Departmental Planning Assumptions (HQLF FRAGO 001/09 dated 9 Apr 09).

16 Range of interviews with key OF4 and OF3 staff officers working in Headquarters Land Forces at the time of Op ENTIRETY implementation.

17 This view was reflected across a range of interviews with 2* and 1* officers in late 2013 and early 2014.

18 Army Briefing Note 32/09: Operation ENTIRETY – the execution of Campaign Footing dated 24 Jun 09.

19 A view held by at least 3 senior Army officers working in Head Office who were interviewed for the study.

Headquarters Land Forces from Wilton to Army Headquarters at Andover and the Top Level Organisational Review (TLOR) implementation, which created a single Army command. Fourteen Arms and Service Directorates (A&SD) were still in existence but on the cusp of transitioning into six Capability Directorates[20]; and Project ALLENBY-CONNAUGHT (PAC) and other infrastructure projects were delivering a built estate for an 'SDR army'.[21] Finally, Operation ENTIRETY coincided with the severe financial pressures resulting from the global and national economic downturn.

Lesson: There are dependencies that will have a significant effect on any major change programme, eg. DIO, DE&S, JFC (PJHQ), other FLCs and MoD Head Office. The Army needs to communicate effectively what it is doing and why and get 'buy in' from such dependencies. A change programme communication plan must be an integral part of the overall plan.

9. The measures involved were to be short term (1-5 years) and reversible, and the capacity to achieve these measures was created by taking risk against contingency. Operation ENTIRETY was based on a series of evolving planning assumptions. The comparison between April 2009 and May 2011 is shown at Annex A.

10. The central tenet of Operation ENTIRETY was to change the way that Force Elements (FEs) were prepared and trained for operations through the Campaign Formation Operational Readiness Mechanism (C-FORM) built around a '6 in the Mix' commitments structure.[22] The key work involved a re-balancing of Pre-deployment Training (PDT) combined with the responsive repatriation and exploitation of lessons from operations, experimentation, and training into the 'institution' of the Army. The blend of Hybrid Foundation Training (HFT) and Mission Specific Training (MST) programmes became the primary platform through which Operation ENTIRETY was delivered. A cross-DLOD approach was adopted and the scope of change was impressive. A detailed breakdown of what was delivered is at Annex B.

Observation/Recommendation: The study team recorded a number of contrary views on the length and extent of MST, with the risks and second order effects this may have created (see Chapter 5-1: Training). It is recommended that a campaign audit of MST is conducted to inform future contingency training.

Observation: An extensive range of mission critical UOR capability was delivered under Operation ENTIRETY (see Chapter 5-2: Equipment), yet this created considerable additional work in the FGen[23] cycle because of capability gaps and/or core equipment was not fit for role.

HOW WAS OPERATION ENTIRETY DELIVERED?

11. Operation ENTIRETY was initiated by the then CinC Land (Gen Richards), who retained a firm grip on it when he became CGS in 2009. He delegated direction and authority to drive the change to Commander Field Army (CFA) (initially Lt Gen Lamb and then Lt Gen White-Spunner) as the primus inter pares (supported) 3* commander.[24] This partly recognised that the normal C2 organisation and processes in the Headquarters at the time were highly bureaucratic and lacked the agility to drive through the necessary change at the scale and speed required. However, CFA had only a small staff and very few of the levers necessary to drive change under his direct control. Thus there was a need to establish a collaborative approach from the start but one sitting alongside the 'normal' C2 and governance mechanisms in HQLF at the time. CFA established an ENTIRETY Steering Group, which he chaired, and which was then co-chaired when Commander Force Development and Training (Comd FDT) was established late 2009. The Steering Group recorded all change under Operation ENTIRETY. The Steering Group also included the principal 2* staff in Land Forces[25] and managed the delivery of Operation ENTIRETY through the Land Forces Campaign Plan (LFCP).

12. Below the steering group was a 1* ENTIRETY Working Group, which was chaired by COS Field Army; a small empowered 1* grouping consisting of a core of ACOS Cts, COS FDT, D Plans, D Eqpt and DMA.[26] It was this latter group which managed the ENTIRETY implementation plan ('spreadsheet management'); holding deliverers closely to account and dispensing direction through a series of FRAGOs. Some commentators observed that the authority of the 1* Working Group (and its roles and responsibilities) did lead to some awkwardness within the 2* structure within HQLF. The Operation ENTIRETY Working Group was the engine room for ENTIRETY implementation and vested considerable authority and power in a small group of 1* officers. The scale of the task in front of them was significant. The requirement to maintain momentum for change led to a 'get on with it mindset'[27], which sometimes led to a lack of understanding of the detail and longer term implications but did serve to overcome some of the residual institutional inertia that Operation ENTIRETY implementation still faced some 12-18 months after its launch.[28]

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20 Combat, Combat Support, Combat Service Support, Information, Medical Capability, and JHC.
21 An Army structure which preceded Operation TELIC and Operation HERRICK.
22 Six manoeuvre brigades filling the OCP: ie. 1, 4, 7, 12, 19, and 20 Bdes (not including 3 Cdo Bde and 16 AA Bde).
23 Force Generation.
24 CFA was also a member of the HERRICK Campaign Stocktake, which consisted also of VCDS, CJO, DCDS Ops and DCDS Pers.
25 COS LF, DG Pers, CM GM (MGO), DGLW, DGLS&E.
26 It is worth noting that Army RP never attended any of the 1* Working Groups (Brig Smith interviewed 20 Nov 13).
27 COS FA 2009, interviewed 20 Nov 13.
28 Interview with Lt Gen White-Spunner 19 Nov 13.

Observation: It is telling that, in order to enforce change on the scale of Operation ENTIRETY there was no ready mechanism in the existing HQLF C2 and governance processes to deliver it. A parallel structure and governance mechanism had to be established to circumvent some of the barriers the existing structure placed in the way of Operation ENTIRETY. In short the model for implementation had to be 'operationalised' in contrast the 'normal business' model.

Lesson: The 1* Working Group was small and empowered. They were able to exercise rapid decision cycles and avoid much of the staffing bureaucracy that existed in HQLF at the time. This caused unease amongst some of the hierarchy because they felt that some of the detail was being lost in the haste. Yet the system worked and delivered a wide range of complex change enforced by issuing orders (FRAGOs). This should be adopted as the model for future use and a review of what 'peacetime' processes could be 'operationalised' for day to day use should be undertaken.

Observation: The Working Group ensured branches submitted cross-DLOD solutions for their areas of change. A range of senior commentators stated that this was the only time they have seen this working effectively.

13. Critical to the effective delivery of Operation ENTIRETY were the 2* formation headquarters. Headquarters Theatre Troops (HQ Th Tps) is a case in point. Some 70% of Operation ENTIRETY structural change and some 50% of TA deployment on Operation HERRICK was delivered through Theatre Troops FEs as well as the training for Joint Force Support(Afghanistan) (JFSp(A)). The GOC and his HQ Th Tps staff, with only 27 military personnel, drove a very extensive change programme in its own right. The only way this could be achieved was with the consequent delegation of authority to the GOC and COS, with further delegation down to the specialist brigade commanders. They in turn had DIRLAUTH with the requisite staff branches in HQLF and the A&SD/CDs. The clear lesson was to truly empower the appropriate level and keep the process light.

Good Practice: The 2 Med Bde model for the integration of Reservists was judged to be good practice. Although specialist medical skills were the common denominator, Comd 2 Med Bde applied strict standards across all personnel in terms of both clinical and military criteria for integration. This ensured a 'one team' mindset in which the distinction between a Regular and Reservists was not an issue.

14. **Liability.** The main focus for the Working Group was the management and re-balancing of liability, because this drove structural change. In simple terms, liability had to be switched to those parts of the structure that needed creating or augmenting or creating to support operation in Afghanistan; and taken from those areas judged not to be critical to mission success (either deployable on or directly supporting Operation HERRICK). The VCDS Operational Enhancement Package allocated funding for LF sponsored enhancement proposals. The liability (810) to underpin these enhancements was to be identified by LF and delivered using compensating reductions by 1 Apr 11.

15. **Project KITCHENER.** Project KITCHENER was formed to identify and deliver liability for structural change – again another parallel system to get around the normal liability management process. Liability savings were targeted at those organisations providing a limited contribution to Operation HERRICK.[29] Although painful for those organisations that had to find savings the Project KITCHENER panel (run by Org Branch) was aggressive in driving the change and overcoming inertia. However, there were associated factors which caused some drag on full implementation including infrastructure constraints in new or enhanced structures; eg. freeing up chef liability does not translate easily into high threat IEDD operator capability; Army liability outside of the TLB was more difficult to flex; and the inflexibility of the NCO career structure in the British Army:

> *"If you tie pay and pensions to a trade then you create inflexibility...it needs shaking up"[30]*

> *Lt Gen White-Spunner interviewed 19 Nov 13*

Although liability was seen as the 'lubricant' for change, the Working Group did not recognise implementation until cross-DLOD factors had been addressed, which required all DLOD leads and deliverers to be 'marching in step'.[31]

Lesson: Pre-ENTIRETY processes for liability management were universally condemned as archaic and outdated. The modified ENTIRETY system was streamlined but still lacking true agility. Operationalising the liability management system should be subject to review and a CONPLAN.

Good Practice: The Project KITCHENER approach to liability management was judged good practice and should be adopted for future operationally driven change programmes.

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29 Specified to be CR2, AS90, CAD, FR, Amph Engr, RLC Chefs, REME LAD/Wkps and CS Med Regts.
30 Lt Gen White-Spunner interviewed 19 Nov 13.
31 COS FA 2009, interviewed 20 Nov 13.

16. **Funding.** Operation ENTIRETY funding did not arise as an issue during research for the study. Net Additional Costs for Military Operations (NACMO) funding enabled MST and the UOR programme (the 'big hitters'), and CFA's budget area funded a range of small to medium enhancements (eg. the £12m to establish LIFC(A)). Operation ENTIRETY costs were hidden rather than neutral and the study team were unable to identify an audit chain or measurements of performance/effect mechanism.

17. **Keeping the Intellectual Flame Alive.** Although Operation ENTIRETY took risk against contingency there was a clear recognition of the need to keep the intellectual flame alive for those capabilities which were not deployed on Operation HERRICK. Headquarters 1 (UK) Armd Div was tasked with leading on 'preserving the seed corn' and guardians of the (heavier) warfighting capability (see footnote 24). Although Operation ENTIRETY effectively became a standing task after 6-9 months, by 2010, the then CinC, Gen Nick Parker, started to switch Headquarters attention beyond operations in Afghanistan, and this was given added impetus with the Prime Minister's announcement in 2011 of the end of combat operation by the end of 2014.[32] Indeed Operation ENTIRETY FRAGO VI (dated May 2011) acknowledged the need to gear Operation ENTIRETY measures to what was then called Future Force Structure and compliance with Planning Round 2011 (PR11). [33]

18. **How Entire Was Operation ENTIRETY?** Although the reach of Operation ENTIRETY was extensive, some areas were not subject to the full blown warfooting approach. The fundamentals of the Military Secretary (MS) system remained untouched with initial implication for campaign continuity/churn and stabilisation of the training audience. Although these were addressed in turn through targeted measures, the tension was never eased entirely and it did highlight the challenge of running a change programme as complex as Operation ENTIRETY where gearing between the key pillars of the programme was not always synchronised smoothly. The study team identified two clear schools of thought which represented both sides of this issue: those who thought a more hardnosed approach should have been taken to gear MS to the mission; and those who saw the preservation of the fundamentals of the MS system as vital for the post ENTIRETY/HERRICK reset.

19. **What Has Changed Since?** A considerable amount has changed since the inception of Operation ENTIRETY which would mean that if the Army had to undertake something like it again then the start state would be very different from 2009. The most prominent change was the formation of Force Development and Training (FDT) Command in 2009, [34] which brought force development, capability development, training, equipment, doctrine and lessons under one 3* organisation:

> *"We needed our own 'TRADOC'[35].....one reason we did not get the initial bit of Afghanistan right was the absence of our 'TRADOC' equivalent.....people came round to it but the institutional reluctance was very palpable'.[36]*

> *General Richards, interviewed 18 Nov 13*

FDT gave the Army a clear institutional focus for assessing the changing character of conflict and subsequent operational adaptation, change and innovation – although the Org and Pers DLODs did not come under its direct remit. The FDT development was reinforced with the formation of the Land Intelligence Fusion Centre (Afghanistan) (LIFC(A)); the Defence Cultural Specialist Unit (DCSU); the Afghan COIN Centre;[37] the Lessons Exploitation Centre (LXC); Army Knowledge Exchange (AKX); and its own experimentation programme – AGILE WARRIOR. All these components have evolved significantly since 2009 and will endure beyond the cessation of Operation HERRICK. Collectively they embed the means for identifying and analysing the 'weak signals' and concentrate key levers for change under a single 3* commander (although training and doctrine have since been allocated elsewhere).

Observation: There is almost universal recognition that the formation of FDT (now FD&Cap) was a good thing. If it functions effectively it should avoid the need to implement something on the scale of Operation ENTIRETY in the future. FDT should future proof against a requirement for an ENTIRETY-like change programme. However, FDT(FD&Cap) must avoid becoming another layer of bureaucracy itself and must do so by challenging orthodoxy and acting as the Army's 'Red Team'.

Observation: The Army's ability to detect 'weak signals' and then translate them into a tangible change programme has yet to be proven (and arguably will not do so until the Line of Departure is crossed). Formal experimentation (such as AGILE WARRIOR) is vital, therefore in providing a test bed for ideas and innovation. Investment in such experimentation will serve to cultivate agile thinking soldiers and part future proof the Army.

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32 https://www.gov.uk/government/news/pm-announces-uk-troop-withdrawals-from-afghanistan
33 Operation ENTIRETY FRAGO VI (LF/FDArmy/2900 dated 6 May 11).
34 FDT was reorganised as FD and Capability (FD&Cap) in Apr 14
35 TRADOC - US Army Training and Doctrine Command.
36 General Richards, interviewed 18 Nov 13.
37 Now the Land Stabilisation and COIN Centre (LSCC); responsible for developing Land stabilisation and COIN tactical doctrine

20. Enduring Lessons from Operation ENTIRETY.

Lesson: For a future Operation ENTIRETY-type change programme the following principles should be adopted:

- Constant change, and not steady state, is the norm.
- Designate a single Commander to lead that change and for that commander to be provided with the requisite levers.
- Empower and authorise small teams to drive the detailed implementation
- 'Operationalise' as much as is possible (including 'peacetime' processes)
- Keep the process light.
- Allocate resources (manpower [right quality] and funding) to deliver
- Understand the dependencies and ensure the gearing between them works
- Be 'output' minded at all times

Lesson: A series of (VANGUARD related) CONPLANs should be worked up to underpin a future operationally driven change programme. They should be reviewed and ROC-drilled on a periodic basis. This should be led by the G3/5 functional area in Army Command.

Lesson: The 'weak signals' should be presented to and reviewed by the senior command forum in the Army. Many will be 'bottom up' driven but there is a need for 'top down' ownership of them in order to assess the need and subsequent direction for change.

Lesson: The Army needs to become more adept at employing 'double loop' learning, where nothing is taken for granted and nothing is off limits (including totemic capability programmes and force structures).[38]

SUMMARY

21. Operation ENTIRETY sought to put the Army on a warfooting. Even after three years of hard fighting in Afghanistan there was still a 'sense of denial' in some quarters that such an initiative was needed. In the Army there is always likely to be some element of institutional resistance to change on this scale but that should not overlook the level of change that had preceded Operation ENTIRETY. Operation ENTIRETY brought a coordinated pan DLOD approach to the generation of FEs for Operation HERRICK. It galvanised and drove the collective effort of all branches of the Army and concentrated it on supporting mission success in Afghanistan. In doing so it recognised that the extant bureaucracy and processes were not agile enough to meet the operational imperatives.

22. There were risks, not least in preserving the longer term balance to the Army (ie. beyond Afghanistan), but many argue that those risks would be compounded further if the Army got Afghanistan wrong. The key to getting Operation ENTIRETY right was governance. Investing responsibility in a nominated commander (in this case Commander Field Army) and giving him the levers to effect change was crucial, especially in by-passing the normal ways of doing business if these proved inadequate for the job. Operation ENTIRETY illustrated also the time required, by function, to realise the changes needed - sometimes over a number of roulements.

Lesson: 'Operationalising' staff processes was critical and the use of orders to impart intent and direction should return to being the norm.

23. The formation of FDT (FD&Cap), and improvements in the Army's ability to detect 'weak signals' should mean it is in a better position to address Professor Howard's observation than was the case in 2001, 2003, 2006, 2009 or 2014.[39] The Army recognised the need to mirror the 'success' of Operation ENTIRETY in delivering cultural change under the banner of Operation AGILITY ('it must be at the heart of all we do in the coming years').[40] Furthermore, the Army 2020 transition plan has incorporated a discrete project to examine institutional agility; Project 24 – Develop and Deliver the Army's Capability for Rapid Adaptation at All Levels'.[41] Yet there is a residual sense, recorded in some quarters, that the British Army would still struggle to mirror the ability of the US Army to turn 180 degrees in good order.[42] The diagnosis here was the extent of command ownership of both the need and nature of the change and the intellectual capital invested in analysing it. That being so, the range (over 50+ major change programmes) and rapidity of change delivered under Operation ENTIRETY, once it started, remains impressive.

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38   Single loop learning (adaption) centres on correcting the error, Double loop learning (innovation) changes or modifies an organisation's underlying norms and objectives.
39   Dates reflect first intervention in Afghanistan; invasion of Iraq; intervention in Helmand Province; UK withdrawal from Iraq; and end of combat operation in Afghanistan respectively.
40   Operation AGILITY Warning Order (ACOS Sp/Plans/7,0AD dated 24 Feb 12.
41   Under the lead of DG Cap.
42   This view surfaced in a good number of interviews.

Recommendation: The Army should take this opportunity at the end of Operation HERRICK to assess formally its standing as an agile learning organisation and build the findings of that assessment into the A2020 transition delivery programme (Project 24 – Develop and Deliver the Army's Capability for Rapid Adaptation at All Levels

> *"In war, change is imposed; in trying to achieve [the] goal for a war-like organisation; peace is the problem"*[43]
>
> *Gen Sir Paul Newton in "British Generals in Blair's Wars", pp. 310 (Ed by J Bailey, R Iron and H Strachan: Ashgate 2013).*

Annex:

Operation ENTIRETY Planning Assumptions Comparison.

Main Changes Implemented Under Operation ENTIRETY.

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43   Gen Sir Paul Newton in "British Generals in Blair's Wars", pp. 310 (Ed by J Bailey, R Iron and H Strachan: Ashgate 2013).

OPERATION ENTIRETY PLANNING ASSUMPTION COMPARISON

FRAGO I (Apr 09)[1]	FRAGO VI (May 11)[2]

• The operational requirement for Afghanistan is currently 8300. but is unlikely to fall, and could possibly grow during the timescale of Operation ENTIRETY.
 	
• A 5-segment Formation Operational Readiness Mechanism (FORM) cycle.
 	
• '6 in the Mix' will not occur until the following conditions are met:
  • Full manning.
  • Operational demand is less than 22 sub units per 6 months.
  • Equipment is available to support a 6-segment FORM cycle.
 	
• Army major units will continue to be programmed on the OCP for 6 month tours.
 	
• Until the intensity of combat in Afghanistan is reduced, brigades need to train, fight and recover as a cohesive group.
 	
• All Afghanistan specific changes are to be reversible (where appropriate) within 2 cycles of FORM (ie. 5 years).
 	
• FAS Next Steps represents the direction of travel – options counter to this will require special consideration.
 	
• The sum total of changes is to be broadly resource neutral. Some activity may need to cease, to resource other initiatives.
 	
• Defence will develop the future contingency requirements over the next 5 years.
 	
• Where appropriate, secondary roles and platforms will be formalised.
 	
• TA structures and alignment will not be considered until the outcomes of PR09 and the Reserves Review are known
	• Account is to be taken of the staffing and implementation of the SDSR, including the migration through Force Structure 15 towards a Future Force Structure to be established by 2020, as well as the impact of the Military Redundancy programme and civilian Voluntary Early Release Scheme (VERS).
	
	• (Following endorsement of PR11)…compliance will be monitored closely, (which) will require Operation ENTIRETY and PR11 measures to be linked and compared to ensure coherence, recognising that Afghanistan remains the ME.
	
	• Operation ENTIRETY is to be conducted in line with the austere financial environment in which Defence finds itself. All tasks need to be within, and subject to, the available resources. In principle, tasks should be cost neutral to the core.
	
	• The politically endorsed military manpower strength for the UK contribution to NATO-led operations in Afghanistan will remain at 9500 for the period of this FRAGO.
	
	• Army major units will continue to be programmed on the OCP for 6 month Operation HERRICK tours with tour intervals of no less than 24 months.
	
	• There will need to be awareness of the endorsed recommendations and changes arising from VCDS' Operation HERRICK Force Generation Review.
	
	• The UK will complete its commitment to combat operations in Afghanistan by the end of 2014.
	
	• Success in Afghanistan will remain Defence's ME, but there will need to be incremental recognition of additional demands for resources, including contingency, UK operations and specifically Operation OLYMPICS (military support to the 2012 London Olympic games).

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1   HQLF FRAGO 001/09 dated 9 Apr 09.

2   LF/FdArmy/2900 dated 6 May 11.
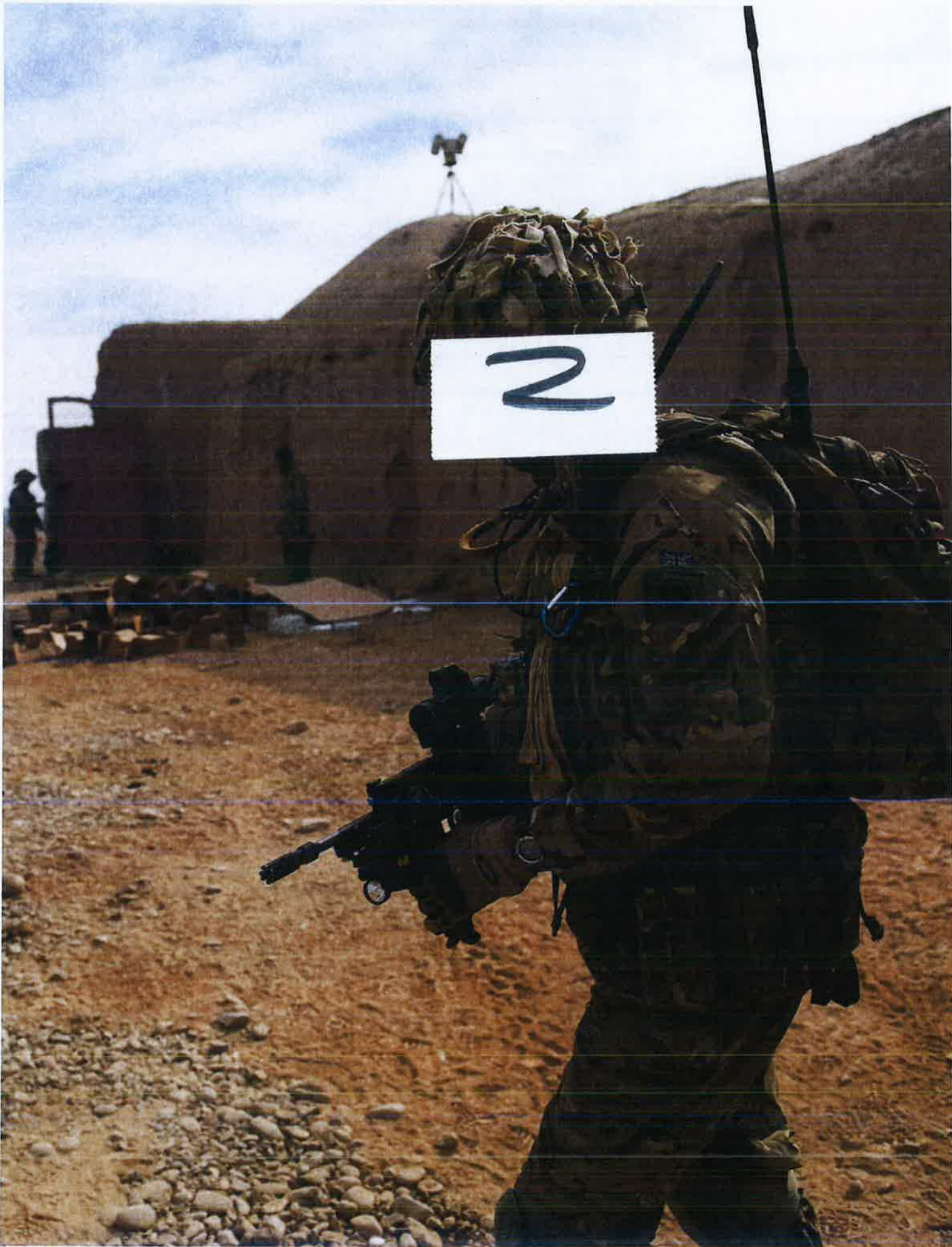
MAIN CHANGES IMPLEMENTED UNDER OPERATION ENTIRETY

DLOD/Area	Measure

Training	• 'Unpicking' PDT and C-FORM created, resourced and enabled
	• Prioritisation of CTG to support Operation HERRICK.
	• Enhancements to OPTAG.
	• Formalisation of commanders' recce programme and theatre immersion
	• Delivery of Contemporised Training Environment (infrastructure and personnel - COEFOR and COESCEN[1]).
	• Realignment (and reduction) of training support burden[2]
	• BATUS/BATUK rebalancing (including Hybrid BG model at BATUS [1,1,1,1,1])
	• Establishment of BASTION training Centre.
	• Creation of Experimentation Centre in LWC
	• Comprehensive C-IED training programme.
	• Driver training enhancements (including establishment of Crew Training School(s) at Sennelager and Bovington)
	• Stabilisation of the training audience
	• Bringing science into training:
	  • Collective Training Objective Review
	  • Development of Hybrid Mission Task List (Land)
	• Integration of Regular and TA training
	• Revised Army Operational Shooting policy issued
	• ISTAR Base surveillance training solution developed
	• Introduction of Ground Sign Awareness (GSA) training package

Equipment	• OTEP established and based at Ludgershall[3] • THOR 14 'frozen' and endorsed[4] • Land training fleet established • Operation MOTA – maximising the availability of the training fleet • Re-roling of mechanised infantry battalions to light role • UOR process energised (CIWGs a key factor)[5] • Delivery of extensive range of UOR capability (see Chapter 5-2 on Equipment)
Personnel	• Implementation of Operation SOLOMON[6] • 2* coordination of personnel measures • Exceptional Action Measures to optimise outflow • Wider utility of Regular Reserves in support of operations • Personnel Unable to Deploy (PUD) initiatives • Implementation of Army recovery Capability (ARC – the 'Patient Pathway' • Improved coordination in the delivery of effective cultural and language capability • Improved TACOS for extended tours (including the Campaign Continuity Allowance)[7] • Expansion of TRiM capability[8] • Improvements to LSA[9] • Improved Operational Welfare Package[10] • FRIs[11] for high threat IEDD operators, REME aviation technicians, AH SNCO pilots, pharmacists and R SIGNALS YoS • Key post manning regime – all key pots to be manned at D-6[12]

Information & Intelligence	• Establishment of Land Intelligence Fusion Centre (Afghanistan) (LIFC(A) • Establishment of the Defence Cultural Specialist Unit (DCSU), including Cultural Advisors (CULADs) under 1 MI Bde • Establishment of Battlegroup Intelligence Support Detachments (BGISD), including Geo Sp • Establishment of Company Intelligence Support Teams (COISTs) • Establishment of CORTEZ B-ISTAR instructors[13] • Provision of Mission SECRET during MST • Roll out of KESTREL[14] • Production of Formation SOPs and Theatre specific aide memoires
Doctrine & Lessons	• Establishment of Afghan COIN Centre (later Land Stabilisation and COIN Centre (LSCC)) • Publication of AFM Vol 1 - Part 10 'Countering Insurgency' (dated Jan 10) • Introduction of HERRICK study weeks (part of MST) • Publication of Operation HERRICK Mission Study Packs • Publication of Operation HERRICK tactical aide memoire (TAM) and individual aide memoire (IAM) - revised 6 monthly. • Formation of Lessons Exploitation Centre (LXC) • Introduction of the Initial Deployment and Post Training Report (IDAPTR) – now the Initial Deployment Report (IDR)[15] • LXC deployed network to facilitate the 'short lessons loop' in Theatre[16] • Formalisation of mission exploitation, including post operations report (POR), post operations presentation[17], Mission Exploitation Symposium (MXS)[18], and post operations interviews (including publication of Post Operations Interview Synopsis). • Establishment of the Army Knowledge Exchange (AKX)
Organisation	• 4 x Al/Mech infantry battalions converted to light role • Formalisation of Brigade Reconnaissance Force (BRF) under RAC • Establishment of 18 additional Fire Support Teams (FSTs)[19] • Creation of 4th Weapon Locating Radar (WLR) battery • Re-roling of 47 Regt RA from CAD to UAV role • Enhancements to MLRS batteries • Additional HERMES 450 task lines created • Establishment of C-IED TF under 8 FEB • Creation of 5th EOD sqn (re-role of 61 Fd Sp Sqn to 61 EOD Fd Sqn) • Creation of 3rd EOD sqn (re-role of 101 EOD Engr Regt (V) to 101 EOD Engr Regt) • Re-role of 36 Engr Regt to Search role • 11 EOD Regt RLC made 'deployable' • Establishment of Military Working Dogs (MWD) Regt • Re-role 15 Fd Sp Sqn to TALISMAN sqn • Creation of 5th regular STRE(Works) in 170 Engr Works Group • Preparation and deployment of TROJAN to Afghanistan[20] • RE manpower enhancements to 18 x High Threat IEDD teams • Re-role of Jt CIMIC to MSSG[21] • Establishment of 5 x Campaign Signals Regts • Creation of 4th EW sqn (223 Sqn) • Provision of R SIGNALS Infantry Support teams • Enhancements to 225 ECM(FP) sqn • Re-roling of 2 Sig Bde (and disinvestment of several TA Signals Regiments) • FALCON deployed to Theatre • Creation of Force Log Regts • Rebalancing of REME manpower to support light roled infantry battalion LADs • Increase in WIS companies from 1 to 2[22] • Enhancements to IX and Intelligence database management capability • Rebalancing of SIB support to Judicial Reviews • SASC QMSIs in each operational bde

Infrastructure	• Delivery of contemporised training infrastructure (eg' 'Afghan village') • Acceleration of 'Soldier First' programme, including enhancements to SLA (16000 bedspace improvements over 4 years from FY 10/11) • Acceleration of 'Families Too' programme, including improvements to up to 500 SFA pa over 4 years from FY 10/11
Logistics	• Creation of Force Log Regts • Operation HERRICK ESS created • CSS 1st and 2nd Line Review • Logistic Support Team (LST) Trial • 11 EOD Regt RLC uplift and made 'deployable' • ATO 'Call to Arms' programme

(Footnotes)

1 Contemporary Operating Environment Force and COE Scenario.

2 No more than 400 soldiers per day involved in training support tasks (reduced from 800).

3 OTEP – Operational Training Equipment Pool.

4 THOR – Theatre HERRICK Operational Requirement; this was the operational equipment requirement set by PJHQ (by type and quantity). Its 'freezing' allowed the OTEP to be stabilised.

5 CIWG – Capability Integration Working Group.

6 Op SOLOMON – a measure to increase infantry inflow beyond ITC Catterick capacity by opening a training company at Barry Buddon (manned by infantry battalion personnel).

7 CCA at (360 per day taxed)

8 TRIM – Trauma Risk Management.

9 LSA – Longer Separation Allowance

10 Including Operational Allowance (£29.02 per day tax free), Unpleasant Work Allowance (circa £3 per day) and HERRICK Drawdown Allowance at £50 per day, taxed).

11 FRI – Financial Retention Incentive.

12 See CFA Direction 'Op ENTIRETY and Key Operational Posts' 3CFA53 dated 18 Jun 09.

13 CORTEZ is the C4ISTAR bearer network system.

14 The KESTREL Network is an 'IP PROTECT Network' that facilitated the connection of OVERTASK and PROMINA to UK FEs in HELMAND and KABUL prior to the delivery of FALCON. It increased bandwidth availability to Coalition Force (CF) HQs, Coy HQ sites and nominated locations.

15 Produced by the deploying TF NLT 30 days after TOA.

16 Initially 1 x SO1 (HQ RC(SW) and HQ JFSp(A); 1 x SO2 and 1 x SO3 to HQ TFH.

17 Half day presentations at LWC, HQ army and HQ PJHQ.

18 Two day event held at RMAS.

19 Royal Australia Artillery provided augmentees (including 2 x FSTs) for 4 x HERRICK rotations.

20 TROJAN – a heavy armoured combat engineer tracked platform.

21 Mission Stabilisation Support Group.

22 WIS –Weapons Intelligence Section.

CONTENTS

SUBJECT **PAGE**

CHAPTER 1-1
COMMAND[1]

'Command is the authority vested in an individual for the direction, coordination and control of military forces'.

INTRODUCTION

1. Command is the activity that integrates all operational functions into single comprehensive operational and tactical concepts. The central tenet of command is communicating the commander's intent to subordinate elements through effective command and control. Thus command is at the absolute heart of what armies do. How command is exercised is conditioned by a number of factors which include an army's culture, ethos and doctrine; yet is also a very personal thing. By virtue of this, an examination of command on operations is likely to attract greater levels of attention that many other aspects of operations and be subject to some emotive response.

2. This chapter does not seek to avoid such scrutiny but acknowledges that the subject is both wide ranging and potentially profound in its reach. The subject of command is likely to figure prominently in future and deeper studies of Operation HERRICK (both military and academic) and this chapter does not set out to achieve those levels of analysis. Rather, it touches on a number of broad areas and themes which shaped the exercise of command on Operation HERRICK (and some enabling factors (covered at Annex A)), and encourages further reflection and study post Operation HERRICK.

3. There are important lessons to take forward with regard to relationship management, multinational/coalition working, host nation enabling and national 'red lines'. A measure of these lessons lie outside the strict Land tactical lessons focus of this study and the reader's attention is drawn to the findings of the forthcoming 'US-UK Integration Study'[3] in order to complement the findings of this report.[4] Also this chapter should be read in conjunction with 'Working in a Coalition' (Chapter 1-2), Battlegroup Level Operations (Chapter 2-1), ▐▬▬▬▬▬▬▬▬▬ Chapter 2-3), Mentoring and Advising Indigenous Security Forces (Chapter 2-4) and C4ISTAR (Chapter 3-1).

> **BLUF Recommendation:** After over a decade of operations (dominated by Operation TELIC and HERRICK), and given the centrality of Command (and Control) in the effective conduct of operations, there is merit in conducting a detailed study of the exercise of operational Command (including the management of risk) from campaign to tactical level.[5]

OVERVIEW

4. Campaigns are 'driven by complexity rather than scale'.[6] Operation HERRICK underlines the importance of understanding the operation you are going to fight and investing in appropriate command and control as a capability. Getting this wrong led us to 'sleep walk into an arrangement with inadequate command and control'.[7] On Operation HERRICK there were four initial implications relating to command:

   - The lack of a buffer between the tactical level and the military strategic; this required brigade commanders, therefore, to operate upwards and serve as part of that buffer.

   - Initially, the UK did not invest fully into the NATO command and control, and therefore did not avail itself of NATO, its capabilities or various facilities.

   - For some years, Regional command was sub-optimal; inadequately enabled by contributing nations. Subordinate national formations protected their national enablers rather than pooling at the 2* regional level. As a result, activity was fractured along national lines.

   - The UK arguably overcomplicated the tactical battle and converted the brigade headquarters into a chimera, requiring it to conduct a level of integration for which it was not originally structured, staffed or educated and requiring it to conduct the type of activity that only a division can do effectively.

5. Improvements to command (and control (C2)) lay in more effective campaign direction, a better enabled 2* Regional command, the re-subordination of UK forces to it, closer integration with allies and partners, and the establishment of the National Component Command (NCC). The concern is that the initial C2 framework, particularly in Helmand, added considerably to the extant complexities of operating in Afghanistan:

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1   In this chapter the term command includes 'control' (C2).
2   Army Doctrine Publication Operations, para 0619, Nov 10 ('*Control is the coordination of activity, through processes and structures that enables a commander to execute his intent*'- Army Doctrine Publication Operations, para 0656, Nov 10)
3   Sponsored by COMMARCENT/CJO and due for publication in Q1 2015.
4   At the time of writing the study team understand the intent of the Danish military to conduct an Operation HERRICK lessons study.
5   Such a study may serve to complement CGS' directed study 'The Army Command Review', especially in terms of British Army command culture (see link):
     http://defenceintranet.diif.r.mil.uk/Organisations/Orgs/Army/News/Announcements/Pages/CGSAnnouncesArmyCommandReview.aspx
6   CDS, Operation HERRICK Campaign Study interview 2013.
7   (Then) Lt Gen Carter, Operation HERRICK Campaign Study Interview 2013

> 'We have a very bad habit in our Armed Forces of having perfectly good, doctrinally coherent C2 arrangements and then introducing a completely bonkers perverse C2 set up that we all know from the outset simply isn't going to work'.[8]

<div align="right">

Maj Gen Cowan, Operation HERRICK Campaign Study interview 2013

</div>

and took some time to address:

> '...although we had deployed HQ 6(UK) Div in 2007(as HQ RC(S)), there was a sense in which Major General Carter's deployment (in November 2009) was the first truly resourced divisional deployment...Not only did he arrive with a very clear view, he was also in effect implementing General McChrystal's plan'.[9]

<div align="right">

Maj Gen Saunders, Operation HERRICK Campaign Study interview 2013

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6. As the campaign matured, relationships deepened and commanders became more familiar (often through repeat deployments) and adept at working within complex C2 arrangements – RC(SW), NCC, PJHQ, Afghan authorities and ANSF. In the course of its research the study team has come across many examples of very effective command, at all levels; often under fire and always under challenging conditions. We have concluded that, at the tactical level, command was well exercised by high quality and well trained commanders.

THE MISSION

7. The mission in this sense is taken to mean those tasks and unifying purpose placed on the principal UK Land tactical force elements (FE) in Afghanistan – the tactical mission. Naturally, it evolved over the course of the Operation HERRICK campaign, not least on the switch from operations in the north of Afghanistan under Operation HERRICK 1-3 roulements[10] to operations centred on Helmand (and Kandahar) Province(s) from Operation HERRICK 4 onwards. Also the mission reflected the dynamics and progress of the campaign and was not discrete to any particular brigade deployment. Thus it is difficult at this stage, and beyond the scope of this study, to make any serious judgements as to the success of the mission. That is likely to be possible only some time after the end of Operation HERRICK.

8. **Operation HERRICK 1-3.** Operation HERRICK 1-3 centred on the deployment of the Afghanistan Roulement Infantry Battalion (ARIB) across a range of tasks and some geographical spread. The 1 WFR and 2 RGR ARIBs (Operations HERRICK 1 and 2 respectively)[11] took on six discrete tasks each with Force Elements (FEs) deployed between up to four locations (ranging from Kabul, Kabul APOD and Mazar-e-Sharif). Both COs pointed out that there were six missions relating to the discrete tasks but no unifying mission for the ARIB.[12] In the case of CO 2 RGR, he ended up writing his own as follows:

The ARIB is to:

- Deter terrorism.
- Reassure and support the people of Afghanistan to return to normality after years of war.
- Support the creation of the Afghan National Army.
- Support the Government of Afghanistan to create a secure environment and reinstate the rule of law.

In order to enable Afghanistan to be a prosperous, democratic and successful country free from terrorism and conflict.[13]

Apart from sounding more akin to a campaign vision statement than battalion mission it served to reflect the absence of unifying direction to the ARIB especially when there was no sense of a coherent campaign plan on which to hang a military mission at the time. It also served to highlight the challenges of drafting a tactical mission for COIN and stabilisation operations where the military involvement is subordinate to the political purpose. The opportunities to identify decisive military tasks are limited and the temporal scope of the mission across a campaign is most likely to stretch far beyond the duration of the deployment of one FE.

9. **Operation HERRICK 4 Onwards.** The tactical mission on deployment to Helmand and Kandahar Provinces reflected the strategic assessment and objectives which underpinned the decision to deploy south, to:

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8   Maj Gen Cowan, Operation HERRICK Campaign Study interview 2013
9   Maj Gen Saunders, Operation HERRICK Campaign Study interview 2013.
10   Primarily the UK support to the PRT(NW) based in Mazar-e-Sharif.
11   Covering the period October 2004-September 2005. It should be noted that 1 GH ARIB had deployed on the first Operation HERRICK (April 2004-September 2004) on the switch from Operation FINGAL.
12   1 WFR (HERRICK 1) POR G3755 dated 18 Mar 05 and 2 RGR (HERRICK 2) POR 59-3G2 dated 25 Oct 05.
13   2 RGR (HERRICK 2) POR 59-3G2 dated 25 Oct 05.

Conduct security and stabilisation operations within Helmand and the wider RC(SW), jointly with Afghan institutions, other government departments and multi-national partners in order to support Government of Afghanistan and development objectives.[14]

Taken from the 16 AA Bde POR (Operation HERRICK 4) and derived from the UK Joint Plan for Helmand and CJO's Directive)

However, Comd 16 AA Bde highlighted some real difficulties in executing his mission:

'We were never really clear what the strategic objectives actually were and how these might be translated into resourced, tactical actions on the ground....The was a lack of clarity, lack of analysis, lack of tactical appreciation, a split planning effort, little pol-mil direction, minimal C2 structures, political prevarication and unrealistic time-scales that foresaw no offensive operations'.[15]

Comd 16 AA Bde, Operation HERRICK 4 in POI dated 21 Nov 06.

by the time 16 AA Bde deployed on their third Operation HERRICK tour, the mission was:[16]

Task Force Helmand (TFH), in partnership with the Provincial Reconstruction Team (PRT), multinational partners and Afghan National Security Forces (ANSF), is to conduct security and stabilisation operations within key population centres in order to deepen Government of the Islamic Republic of Afghanistan (GIRoA) authority across the TFH AO[17]and contribute to the achievement of the stated ISAF operational end state and UK strategic objectives.

and by Operation HERRICK 18[18] the mission included the following range of TFH task, reflecting the state of transition to ANSF lead and re-posturing for RC(SW) and UK redeployment:[19]

- From April-October 2013, support SFAAT[20] efforts to enable ANSF to control and expand security in the decisive terrain of the Central Helmand River Valley and Lashkar Gar as well as FOM along HWY1 and other key LOCs.[21]

- Posture for the transitional basing, evolving force structure and C2, while protecting the mission, protecting the force and maintaining freedom of manoeuvre and the capability to disrupt enemy safe havens.

- Sustain operational reach and appropriate mobility in Central Helmand to support ANSF development and the Helmand PRT and regional Platform efforts at District level.

- Maintain forces at readiness to conduct reserve tasks, including reaction to capability for coalition forces in the TFH AO.

- Through deliberate targeting effects, degrade, disrupt and interdict the nexus of insurgent, drug trafficking organisations, lethal aid facilitation and criminal patronage networks and associated insurgent networks to maximise ANSF overwatch of the regional threat or achieve effects beyond ANSF operational reach.

- Set the conditions for the enduring basing and evolving force structure while reducing and realigning forces.

During the early deployments to Helmand the development and delivery of the tactical mission was not helped by the plethora of military plans (NATO, ISAF, RC(S)) to which the task force was subjected.[22] The eventual alignment of chains of command and influence (ISAF/PRT and PJHQ) was delivered through the RC(S) Operation Plan in October 2008 (Operation TOLO) which confirmed the primacy of the NATO/ISAF chain of command. From TOLO onwards, PJHQ worked towards ensuring that TFH was not subject to divergent directives. From this point there is both a level of increasing consistency in the mission across the span of the campaign up to Operation HERRICK 18[23] and clear evidence of appropriate re-tuning to reflect the alignment of TFH's approach to Security Force Assistance (SFA) to an increasingly effective RC(S)/RC(SW) plan and ISAF Joint Command (IJC) campaign plan, all underpinned by General McChrystal's people centric approach from 2009 and the subsequent surge of largely US forces.

Lesson: There is little mention of the Mission in current British Army COIN doctrine.[24] Given the centrality of the Mission in determining operational activity, effect and outcomes, this should be reviewed as part of the Stabilisation/ COIN tactical doctrine refresh work.

Observation: What emerges from reading the range of Operation HERRICK reference material (including PORs, Post Operational Interviews and DOC Reports) is the relative lack of prominence given to the Mission especially in Commander's Overviews.

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14   Taken from the 16 AA Bde POR (Operation HERRICK 4) and derived from the UK Joint Plan for Helmand and CJO's Directive)
15   Comd 16 AA Bde, Operation HERRICK 4 in POI dated 21 Nov 06.
16   Operation HERRICK 13 (Nov 10-Apr 11)
17   Area of Operations.
18   Formed on 1 Mech Bde – Mar-Oct 13.
19   Operation HERRICK 18 POR dated 15 Oct 13.
20   Security Force Assistance Advisory Team
21   FOM- Freedom of Movement: HWY1 – Highway 1(the main road system circling Afghanistan): LOCs - Lines of Communication
22   Highlighted in a number of DOC Reports
23   The scope of this study.
24   AFM Volume 1 – Part 10 'Counter Insurgency' dated Jan 10.

COMMAND PRE HELMAND

10. As mentioned above, the pre Helmand Operation HERRICK deployments (the ARIB) were centred on supporting the PRT(NW) based in Mazar-e-Sharif. The C2 framework for the ARIB deployments created a real challenge for the respective COs but with mixed insights:

> 'Whilst the deployment of a UK battalion in this current fashion may not be clever, it is effective. The tortuous C2, so readily associated with multi-national operations, coupled with an unwieldy TASKORG, should have resulted in a turgid tempo of operational capability but it has not. The ability of junior commanders to adapt to new and challenging circumstances, with tact and a firm hand, has allowed the battalion to meet its operational challenges and give a good account of itself'.

dated 18 Mar 05).

to:

> 'There appears to be an increasing tendency to complicate tried and tested C2 arrangements, introducing a 'web' rather than a chain of command. [Battalions] have evolved over many years and have well defined capabilities and constraints. There would appear to be an increasing desire to insert additional layers of command, thereby stifling initiative and restricting mission command'.

dated Apr 06. It should be noted that 1 RGBW deployed elements to Helmand and Kandahar Provinces towards the end of their tour as part of preliminary operations.

What stands out from both observations is that the C2 structure placed on top of the ARIB and its subordinate elements was certainly testing and ran the risk of imposing on the ARIB multiple planning cycles and C2 interfaces beyond which a battalion HQ can be reasonably expected to deal with. The fact that all three of the ARIBs met their operational commitments under these circumstances was more a testament to the leadership and drive of commanders and soldiers than sensible design of their C2 framework.

THE MOVE INTO HELMAND - ESTABLISHING CLEAR COMMAND FROM THE OUTSET

11. The initial C2 construct for the UK deployment into Helmand has attracted considerable criticism. Indeed the target for the criticism precedes the actual deployment in that Comd 16 AA Bde and his staff were not involved directly in the tactical planning for the move into Helmand:

> 'They (PJHQ) came up with a proposed package....which had neither examined the tactical problems we faced, nor the Regional dimension (and the demands that this would make on us) sufficiently.... Unfortunately, we had no tactical input into that key initial estimate....In the meantime we were working in isolation, and were in the position where, even though we did not own the tactical plan, we were still going to be the ones to execute it and owning the risk. Moreover, the plan was pretty thin on the military Line of Operation, and was being dawn up by people who did not properly understand the Brigade's skill sets and capabilities'.

Comd 16 AA Bde, Operation HERRICK 4 in POI dated 21 Nov 06.

Lesson: For contingency the tactical dimension must be incorporated into planning at the earliest opportunity and involve those tactical level FEs who are being considered for deployment.

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25   f – Op HERRICK 1 ARIB POR G3755 dated 18 Mar 05).
26   - Op HERRICK 2 ARIB POR dated Apr 06. It should be noted that 1 RGBW deployed elements to Helmand and Kandahar Provinces towards the end of their tour as part of preliminary operations.
27   Comd 16 AA Bde, Operation HERRICK 4 in POI dated 21 Nov 06.
28

'At best the C2 arrangements were ambiguous. We had a non 16 AA Bde OF5 commanding what was essentially a brigade deployment. We had a multinational chain of command to a Canadian brigade (HQ RC(S)), which imposed another layer of command between the battlegroup, and caused a degree of confusion and conflict between national and Operation ENDURING FREEDOM (OEF) objectives. It would have been far more sensible to have deployed the brigade HQ complete and subordinated it to the OEF brigade HQ, regardless of the sensitivities that this may have raised: it was the command structure that we had trained to work with and, in our view, our own commander should have deployed in his normal C2 function from the outset'.

BG Operation HERRICK 4 POI dated 29 Jan 0

The comment at footnote 5 is laid bare and the puzzle is how and why this situation was allowed to occur. Answering the 'how and why' is beyond the scope of this study but its effect on tactical delivery was significant. This C2 construct came unstuck as the span of command expanded[30] and the complexities of operations in Helmand increased. By August 2006 Comd 16 AA Bde resumed command of his brigade. The DOC Operation HERRICK Report (Volume 2) best captured what was a sorry story:

DOC Comment: The C2 arrangement with UKTF on Operation HERRICK 4 were not satisfactory and took some time and effort to resolve. The original construct of Commander 'Helmand Task Force' (an OF5) taking on most of 16 AA Bde HQ staff together with three manoeuvre elements (3 PARA BG, OMLT/ANA and PRT) flew in the face of UK doctrine and best practice. That, together with the presence of Comd 16 AA Bde in theatre (as COMBRITFOR) led to inevitable confusion both in the multinational context of ISAF/MN Bde(S) and in the minds of those subordinates committed to 'Helmand Task Force'. This unusual C2 arrangement was, buy common consent, unsuccessful. The eventual move of Comd 16 AA Bde to command UKTF started to correct this, providing clarity and a level of experience necessary to run what was already a highly complex and risky operation.

Observation: The command construct on Operation HERRICK 4 was thoroughly inadequate and introduced unnecessary risk to UKTF. Initial planning and deployment would have been better carried out by the Joint Force Headquarters (JFHQ), who could have owned the plan from the outset and been better able to draw together the various elements of a Joint Task Force Headquarters (JTFHQ) at an early stage rather than relying on a brigade HQ. This would have provided the benchmark against which the next Task Force Helmand (TFH) Headquarters could have been force generated.

13. Since Operation HERRICK 4, much of the Campaign has been characterised by a tension between numerous C2 relationships that evolved over time. The initial deployment into Helmand, under sub-optimal C2 arrangements, exacerbated an already difficult and risk laden operation. During the period of Operation HERRICK 4 – 6 there was a sense that the NATO C2 apparatus was not mature or ready enough to deal with operational command and control down to Task Force level.

14. Over the course of the campaign, C2 arrangements evolved and matured as relationships developed with RC(S) initially, and more latterly with RC(SW). Certainly by the time HQ 6 Div took over in RC(S), TFH was:

'.....set within a very logical and clear command construct...the campaign was brought together much more coherently ...and [the Task Force] were able to leverage resources in a way that hadn't been possible before'.[31]

Comd TFH Operation HERRICK 6 POR.

The establishment of HQ RC(SW) at BASTION/LEATHERNECK in June 2010, under USMC 2* command, enabled an even clearer C2 structure in Helmand allied to much improved force ratios. Even though multiple chains of command still existed the nesting of these chains within an increasingly mature operation presented less of a challenge than before:

'I reported to three masters: National, NATO and Afghan. The national line was through the NCC to CJO, and that worked very well......The NATO chain of command was pretty straight forward. TFH are a subordinate command within RC(SW)...We fit quite naturally with the USMC; they think on the same sort of scale as we do....The third chain of command was by far the most important one and was key to delivering Transition and ANSF primacy'.[32]

Comd TFH Operation HERRICK 15 POI dated 17 Apr 12.

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29   peration HERRICK 4 POI dated 29 Jan 07.
30   The UKTF force expanded to 4500.
31   Comd TFH Operation HERRICK 6 POR.
32   Comd TFH Operation HERRICK 15 POI dated 17 Apr 12.

15. Getting the C2 relationships right and building on extant C2 structures, rather than ad hoc ones, from the outset and investing in the NATO chain of command earlier should be a fundamental element of any future contingency deployment:

> *'If we can get that right, then many other things become easier. If you get it wrong almost everything else is really difficult. By getting C2 right, first of all, getting authority, accountability and responsibility aligned, that means a clear and ideally simple chain of command; so it is obvious who is actually the boss. Whether that is in an alliance or national context, we made that really complicated at the start of Helmand'.*[33]

> Lt Gen Richard Barons, Operation HERRICK Campaign Study Interview 2013

Observation: In addressing a military problem, the first thing to get right is command and control. Regardless of whether the operation is within an alliance or a national context, it is critical to establish clear, simple C2 relationships from the outset (building on extant doctrine and C2 frameworks) and to align authority, accountability and responsibility.

THE BRITISH APPROACH TO COMMAND AND WORKING AS A COALITION PARTNER

16. Within the force structure in RC(SW) the UK TFH was both subordinate to a USMC 2* command and had coalition partner nations subordinate to it within TFH. Thus there is an opportunity to gauge the judgement and perception of the effectiveness of the British approach to command and performance as both a junior and senior coalition partner. This study precedes any equivalent produced by our coalition partners, and when these are initiated we should seek to encourage an analysis on the British approach to command to be included.

17. Where it has been possible to assess some feedback from the junior partners in TFH, the Danes, Estonians and Latvians have been largely positive about their experience of working to the UK Task Force. However, there is an underlying feeling that British command 'arrogance' hampered relationships and led to some frustrations on the ground. This manifested in itself in a British unwillingness to accept plans or ideas from a subordinate, partner nation battlegroup. There was a sense also that senior British commanders were largely left to their own devices and so the missions reaching subordinate battlegroups reflected the British commander's own priorities and understanding rather than necessarily the overarching NATO plan:

> *'....the British commanders in Helmand rarely felt compelled to follow directives from COMISAF and RC(S).......relations between the staffs of the British task force and the Danish battlegroups were not always smooth, and criticism of British Task force staffs for 'British arrogance' and unwillingness to accept plans from a subordinate battlegroup have been a recurring them in our interviews, but these problems never got out of hand'.*[34]

> Danish Foreign Policy Yearbook 2011. Peter Viggo Jakobsen & Peter Dahl Thruelsen: Clear, Hold, Train: Denmark's Military Operations in Helmand 2006-2010.

and it was not only coalition partners who reflect as such:

> *'one can see that a British Task Force perceived that it was operating semi-independently, verging on the independent in Helmand for a while'.*[35]

> D Cbt, Operation HERRICK Campaign Study Interview 2013

18. Despite being the second biggest ISAF troop contributing nation, the view of the UK as a junior partner to the US is equally important and requires further study. Opinions on the UK's performance as a coalition partner are varied, both external and internal, but:

> *'.....whilst we continued to provide courageous and tough soldiers, capable staff officers and valued capabilities, we continued to be considered arrogant, needy and slow to make what were perceived as simple tactical decisions'.*[36]

> DOC Report Operation HERRICK Volume 4

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33   Lt Gen Richard Barons, Operation HERRICK Campaign Study Interview 2013.
34   Danish Foreign Policy Yearbook 2011. Peter Viggo Jakobsen & Peter Dahl Thruelsen: Clear, Hold, Train: Denmark's Military Operations in Helmand 2006-2010.
35   ████t, Operation HERRICK Campaign Study Interview 2013.
36   DOC Report Operation HERRICK Volume 4.

and:

> 'we, the Brits, are ... useless at being subservient... I don't think we are very good at following, but we are very good at demanding followers'.[37]

<div align="right">

DOC Operation HERRICK Campaign Study Interview 2013

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Among senior British commanders there was a sense that:

> 'we should seek to be a better partner and a more useable partner in the way that...the Estonians were for us. My goodness the faith they placed in us; the fact that they declared they had no red cards that they could be used however. [38]

<div align="right">

Maj Gen Sanders, Operation HERRICK Campaign Study Interview 2013.

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19. Towards the latter part of the campaign, as our relationship with the USMC led RC(SW) developed, the UK made significant progress on understanding the USMC and firmly rooting the chain of command through RC(SW). The appointment of a former UK brigade commander as Deputy Commander RC(SW) and investment in key staff posts were key enablers in this relationship and bought equity. TFH commanders felt they had developed close working relationships with the USMC commanders and staff. Best practice developed to a point where by Operation HERRICK 16 the UK brigade purposefully bent itself to fit the USMC lexicon, particularly in terms of TFH staff branches and job titles, which eased any potential pitfalls over communication. It is anticipated that the forthcoming US/UK (Helmand) Integration Study will highlight important lessons on the British approach to command and our performance as a coalition partner.[39]

Figure 1-1-1 British and Estonian soldiers serving together on Operation HERRICK

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37   DOC Operation HERRICK Campaign Study Interview 2013.
38   Maj Gen Sanders, Operation HERRICK Campaign Study Interview 2013.
39   Sponsored by COMMARCENT and CJO and due publication in Q1 15. The HCS Team seconded a SO1 onto this study, conducted by the US Centre for Naval Analysis in order to ensure some cross study synchronisation.

Recommendation: A more in depth study is recommended to examine all aspects of command and control experience on Operation HERRICK and to include analysis of the British approach to command and performance as a coalition partners (consulting US (USMC), Danish, Estonian/Latvia and Afghan coalition partners (see BLUF Recommendation on page 1-1-1).

THE SPAN OF COMMAND AND RESTORING THE DIVISIONAL LEVEL OF COMMAND

20. The relationship between the 1* and 2* level changed during the campaign. There is some evidence which suggests that the UK over-invested in the 1* level - certainly at the outset – requiring the 1* level to deliver a tactical fight over great distance, whilst concurrently fielding the demands of operational and strategic decision makers. Army 2020 (A2020) has placed the re-set of the divisional level of command central to its thinking. Within this, the 2* level has a role to play in directing and resourcing brigade activity and managing strategic compression, interacting between the tactical and operational/strategic levels.

21. Operation HERRICK suggests the advantages in a 2* 'hierarchy of wisdom', even in the circumstances where a 1* FE is deployed. The importance of the 2* level of command, recognising the complexity of modern operations, the span of command, the difficulty of servicing the tactical and operational levels of command simultaneously and the importance of integrating fully combined, joint, inter-agency, inter-governmental and multi-national (CJIIM) elements. TFH has been a 'brigade on steroids'[40], stretching the one-star commander well beyond anything that was envisaged on first deployment into Helmand. In the Operation HERRICK Report (Volume 3) DOC concluded that the rapid increase in the size of the UK contribution to Operation HERRICK by more than 50% (6,300 to 9,500 by Operation HERRICK 12 in 2010) exceeded the usual span of the 1* level of command and was more suited to a 2* level command. The same impact was felt at unit level where TFH battlegroups often had up to 8 sub-units under command.[41]

22. Although there is little doubt that a properly resourced 2* headquarters could have done some things better, there has been some cautioned expressed that it would be a false lesson to conclude that the 1* level of command could not cope with this pressure, because it did (albeit with heavy augmentation), and that might limit our flexibility in a future contingency operation. Many TFH commanders felt that they were exceptionally well prepared for the scale and span of command at the brigade level in Afghanistan (although accepting that HQ TFH was static). The establishment of a National Contingent Commander (NCC)[42] to help manage issues from both outside and within Theatre, and the passing of issues such as detention to Joint Force Support (JFSp), all served to enable TFH to return to its core business. The shift of national responsibilities away from TFH toward the NCC and JFSp gave TFH commanders some valuable time and breathing space allowing them to focus on the tactical fight and 'not to have to shoulder the burden of endlessly relaying information directly to PJHQ'.[43]
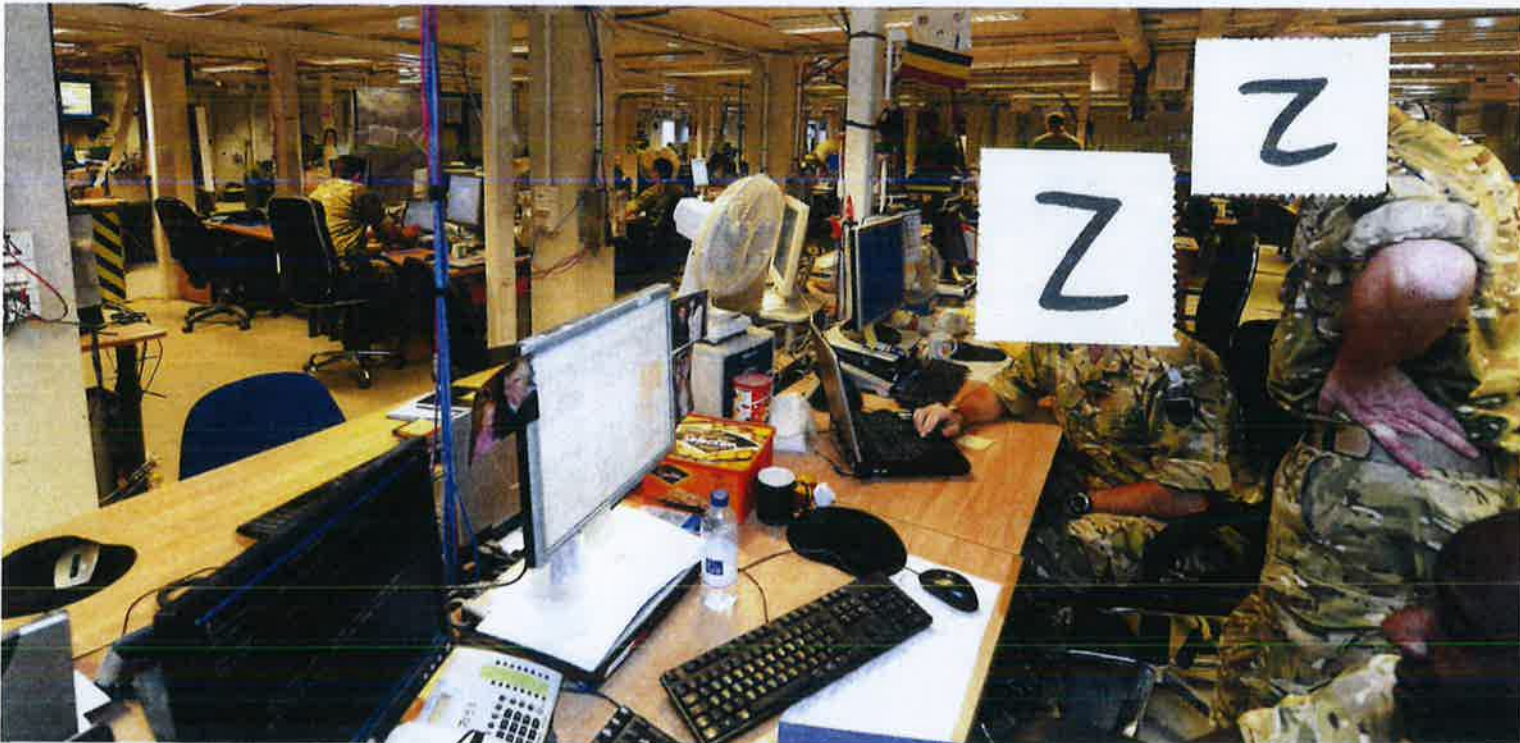
Figure 1-1-2 Task Force Helmand Operations Room, Operation HERRICK 13

40   D Cbt HERRICK Campaign Study Interview 2013
41   ECAB FLOC Deduction Paper dated 9 Jan 09 – 'Currently we identify five points of command as the desired maximum for manoeuvre operations. The less mobile nature of stabilisation operations may allow this limit to be exceeded'.
42   DCOM ISAF was the NCC with Comd JFSp(A) as the Dep NCC.
43   Maj Gen James Cowan, Operation HERRICK Campaign Study Interview 2013

Observation: As part of the reset for contingency there has already been a considerable amount of work centred on the re-balancing of the roles and responsibilities between the 1* and 2* level of command. Operation HERRICK demonstrated both the capability and capacity of an (augmented) 1* level of command to integrate a stabilisation operation of significant scale and complexity and presents future planners with a credible option for deployment. In such circumstances a properly resourced NCC has a key role in allowing the TF commander to deliver operation effect. If brigades return to being pure tactical HQs then they will not be able to take on the range they have in Afghanistan and the 2* level will need to fulfil that bridging role.

WORKING WITHIN THE TACTICAL-STRATEGIC PARADIGM

'Politicians believe they can manage the fog of war. Brief up the key tactical choices'.[44]

, *Operation HERRICK Campaign Study interview 2013*

23. The political context for Operation HERRICK was complex, charged and contentious. The latter half of the campaign saw a significant growth in J9 activity as transition neared and the national risk appetite reduced and Operation HERRICK experience suggests that Land commanders must 'recognise the political sensitivity of the military act'.[45] Over the course of the campaign a number of TFH commanders were critical of the pressure to constantly feed information and seek authorisation back to PJHQ and the MOD in order to satisfy the need to brief Ministers (termed as 'strategic compression'). Understandably, Ministers dislike surprises, and over the course of the campaign there were occasions where the military were not sufficiently candid over the scale of ambition or likely casualties of tactical level operations that would inevitably attract wide media and political interest back in the UK. When so much responsibility is placed on the shoulders of the tactical commander we should not be surprised when 'those sitting at the strategic level want to know what he is up to'.[46]

24. In this regard, DOC has noted that military officers need a greater understanding of the reality of command in multinational operations, and conflation of the levels of command in a media dominated political environment. As one senior officer commented:

> *'I think we need to be better at the military strategic level about the advice we give…to set out for the politicians how a campaign, or the early stages of an operation might unfold, to be very candid about the risks'.*

25. Operation PANCAHI PALANG, in May 2009, was seen by many in the MoD as a last minute surprise and an example of how Ministers had not been 'warmed up properly' to the scale of the operation, the level of casualties and its overall ambition. In hindsight it can be seen that political risk quickly played down from the strategic to the tactical level and was as much driven by the speed of media reporting as it was by the breakdown in trust between the military and politicians. For contingency operations the Army will need to recognise that the flow of information from theatre to PJHQ to the MOD has to be agile and responsive. This information flow should be treated as a warning order; at the very first inkling of an issue, likely operation, something novel or contentious the deployed Task Force should raise it quickly to begin shaping the political appetite.

Lesson: Notwithstanding the importance of a UK NCC, there should be greater depth in training of commanders and staffs in recognising and operating within the conflated nature of contingency operations and for them to be able to manage the complexity and pressures of the tactical, operational and strategic levels of operations simultaneously. This would require more regular participation of representatives of the operational and strategic levels in tactical contingency training.

44 ▮▮▮▮▮ (Hd PRT 2009), Operation HERRICK Campaign Study interview 2013
45 Lt Gen Capewell (CJO), Operation HERRICK Campaign Study interview 2013
46 ▮▮▮ Operation HERRICK Campaign Study Interview 2013

RISK

'I think we really have to alter our risk threshold for a contingency. I think that is partially because we have to, or else we won't deploy anywhere…frankly the risks that we faced after eight years in Afghanistan (Helmand) were as a result of eight years of conflict and eight years of growth and enemy capability. It would be wrong for us to assume that we would walk into that level of sophistication….things morph, our tactics morph, their tactics morph and that is a process we start again from scratch'.[47]

Lt Gen Messenger, Operation HERRICK Campaign Study interview 2013

26. An understanding and management of risk was a key aspect of the Campaign – from authorisations for discrete operations, waivers for equipment, force protection measures, to actions to reduce DNBI.[48] Whilst not in all cases linear, the risk cursor shifted during the campaign. From the acceptance – willing or otherwise – of significant risk in the early years the political and military strategic appetite for risk lowered as the benefits of higher risk tactical activity became less attractive given the strategic impact of losses. The result was a tightening up of oversight and permissions. This also reflected a more established laydown, a better provision of capabilities that allowed discretionary interventions, and improved equipment and TTPs that underpinned force protection. There was also a widespread, and perhaps less well understood, concern of coroner scrutiny. Collectively, these resulted in a greater emphasis on force protection, very significant oversight over losses (such as insider attacks) and 'mission submission' for tactical activity and redeployments that would have been within the decision authority of Comd TFH in the earlier years:

'There was an overwhelming sense that UK forces up to an including unit level, had a healthy appetite for risk – determined and effective as any. Above there were concerns by international partners that the UK allowed itself to become risk averse, preventing the potential of forces under command to be fully utilised. There was recognition that some 'tactical' decision making appeared to be of necessity conducted in London'.[49]

DOC Operation HERRICK Report (Volume 4)

'I was frustrated by our ability to develop tactics that took risk. Limited ability to use offensive measures… pre-planned HLSs:….we have become defensive in mindset'.[50]

Gen Parker, Operation HERRICK Campaign Study interview 2013

27. A number of Comds TFH echoed General Parker's frustration but most accepted this as an inevitable consequence of the operation. However, by 2013, as Operation HERRICK was drawing to a close, commanders were commenting that they thought risk aversion had permeated the psyche of the Army and the wider national consciousness, possibly irreversibly, given that 'we have set some norms…that are going to be a real challenge to adjust'.[51] As the Army moves into contingency the approach to risk needs to be re-examined. The juxtaposition in 2013 of the French intervention in Mali (Operation SERVAL) energised the debate on risk:

'(the French)were only able to conduct that bold fast manoeuvre because they must have delegated a lot decision making and delegated a lot of risk right down to the sub-tactical level. We need to be more robust with the delegation of risk' and the need to 'completely recalibrate our risk appetite…and alter our risk threshold for contingency'.[52]

Lt Gen Messenger, Operation HERRICK Campaign Study interview 2013

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47   Lt Gen Messenger, Operation HERRICK Campaign Study interview 2013.
48   Disease and Non Battle Injuries.
49   DOC Operation HERRICK Report (Volume 4).
50   Gen Parker, Operation HERRICK Campaign Study interview 2013.
51   DOC, Operation HERRICK Campaign Study interview 2013.
52   Lt Gen Messenger, Operation HERRICK Campaign Study interview 2013.

Lesson: Risk assessment, management and delegation will be an aspect of any military operation. There are important lessons to learn from Operation HERRICK:

- A need to capture and exploit the good practice on risk management from Operation HERRICK.
- A need to understand how the risk cursor from Operation HERRICK may change (possibly radically) for the next operation. On a different operation, with a different imperative, the risk threshold will change. In the future there is an important education challenge to ensure that the force understands how a different political context may drive a different appetite for risk.
- Dynamic risk assessment and management must be inculcated across the force and trained for. This includes risk decision making and the provision of advice in regard to the risk of military options.[53]
- There is merit in a wider public and political debate to educate the nation on the operational context and political risks of operations beyond Afghanistan. The Army should consider how this debate can be best enabled.

CAMPAIGN CONTINUITY

28. Among senior commanders there was considerable debate over campaign continuity; in particular the veer and haul of the early stages of the campaign up to about 2009, the balance between brigade and unit cohesion, and the length of operational tours. Early on the MOD recognised that the campaign in Afghanistan was becoming increasingly fragmented and that:

    'the lack of a central campaign plan was criticised for permitting each brigade commander to effectively design his own plan – not necessarily aligned to the ISAF RC(S) plan – and each of which included a 'signature operation' that characterised the brigades 6 month operational tour'.[54]

    DOC operation HERRICK Capability Report, Volume 3, December 2011.

    There was a feeling at the Task Force level that there was a 'reluctance to steer the campaign in Afghanistan from the operational level. The turning of strategic intent into tactical action was done predominantly in theatre with little recourse to an overarching campaign design.'[55]

29. By 2008, VCDS began to initiate a series of measures in order to bring some coherence and strategic balance to the Campaign. Among others these included the campaign continuity meetings chaired by DCDS(Ops), PJHQ led TFH enablement reviews, and the introduction of longer campaign continuity appointments. These measures also coincided with the Army's Operation ENTIRETY drive to bring the Army onto a campaign footing for Afghanistan. All of these initiatives brought a sense of operational ownership to the campaign that continued to develop to a point where by 2012 'we had moved from a 100m individual sprint to a 4x400m relay';[56] there was recognition that:

    '[although] there were big swings of the rudder early on...towards the back end of the campaign for several brigades before me and certainly all the brigades after me, we have made a really determined effort to build on and provide continuity of intent and approach. That has proven to be very successful'.[57]

    Comd TFH Operation HERRICK 15 POR

Observation: Achieving a greater level of continuity across all lines of operation and development is fundamental to achieving Campaign success. It took the Army some three years after entering Helmand (including Operation ENTIRETY) to start to adopt widespread continuity measures in accord with Campaign requirements. Acknowledging that not all the levers are under its control, in the future the Army must adapt more quickly once a campaign approach has been determined.

30. In the early stages of the campaign the cohesion offered by a brigade training and deploying with its units offered a relatively simple, attractive and compelling case for maintaining the status quo. But as the campaign progressed towards the latter stages and the Afghans increasingly took the lead, the debate about deploying a standing headquarters with units rotating out of theatre (the so called 'Northern Ireland Model') became more vociferous. There were mixed views about whether what the Army had done in Northern Ireland (where there was less need for cohesion at the brigade level) was right for Afghanistan. Ultimately the debate centred on cohesion versus continuity. By Operation HERRICK 15 (late Nov 12) there was a palpable sense that the UK could have switched to a standing headquarters that would have provided a far greater degree of continuity with the Afghans and the US. As a TFH commander said at the time:

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53 'We are bad at explaining risk to our political masters. Risk is not studied or instructed enough – we need better use of case studies'. Maj Gen Radford, Operation HERRICK Campaign Study Interview 2013.
54 DOC operation HERRICK Capability Report, Volume 3, December 2011.
55 Comd TFH Operation HERRICK 6 POR.
56 An athletic metaphor picked up by the author in discussion with a number of Operation HERRICK COs.
57 Comd TFH Operation HERRICK 15 POR.

'we could have done it then [HERRICK 15]; we probably could have done it earlier'; in fact we might have considered switching to a different force generation model 'as early as the end of 2007...where you could have had a year long standing HQ with a central staff, including the commander, and you would rotate battlegroups through'[58]

Lt Gen Messenger, Operation HERRICK Campaign Study Interview 2013

Observation: The issue of continuity of 1* command was considered under Project SCIPIO, which addressed some continuity posts across the Force, but concluded that retaining brigade cohesion through pre –deployment training, deployment and recovery remained the optimum model. A critical factor is that successive brigade deployments must be working to a coherent Campaign plan.

31. For those soldiers operating from more austere bases and in dangerous conditions the near universal consensus was that 6 month tours were entirely appropriate. However there was some debate over tour lengths for others as early as Operation HERRICK 7 (2009), particular for those commanders and staff operating away from the front line, in the comparative safety of Camp Bastion or in critical Afghan facing roles. As the Army geared itself up under Operation ENTIRETY, a number of key UK staff posts throughout the NATO command structure became campaign continuity posts of 9 or 12 months to provide a greater level of stability than the 6 month churn had previously offered. One senior officer comment highlights the issue:

'should the C2 organisation deploy for longer? I think there is a lot of sucking of teeth...the debate is out there but there are having to be questions asked in terms of campaign continuity'.[59]

DOC Operation HERRICK Campaign Study Interview 2013

After a year long tour in 2010, Comd RC(S) was of the view that:

'key commanders should do longer tours because this campaign is all about relationships and building trust and that takes time and is not easy to hand over'.[60]

Comd RC(S) POI 9 Nov 10.

Recommendation: There is merit in a more in-depth study into the full range of issues that are material to achieving Campaign continuity in stabilisation operations. This should include key post and HQ tour lengths and R&R policy.

COMMAND DECISION MAKING OR OPERATIONS BY MANAGEMENT

32. There is a direct correlation between the increasingly well-founded nature of the operational theatre and the influence of some negative aspects of management into the running of the operation. The ideal command alignment of Authority, Responsibility and Accountability was, in the view of some commanders, allowed to be compromised in Afghanistan in too many spheres, with decision authorities often sitting elsewhere with specific staff (military and civilian). For example:

'Comd TFH has the freedom to authorise the engagement of insurgent commanders using a missile costing in excess of £100,000, and yet is beholden often to business case management, with authorities held by relatively junior individuals with no command responsibilities for [matters such as gifting with monetary values well below this]...[this defies] all command logic for dynamic support to the operational main effort. This management culture also sees too many single issue experts...who often have little empathy for the operation. Many of these functions could be achieved by reach back'.[61]

Comd TFH Operation HERRICK 18 POR dated 18 Oct 13.

58   Lt Gen Messenger, Operation HERRICK Campaign Study Interview 2013
59   DOC Operation HERRICK Campaign Study Interview 2013
60   ▇▇▇▇ POI 9 Nov 10.
61   Comd TFH Operation HERRICK 18 POR dated 18 Oct 13.

Lesson: The necessary bureaucratic process and oversight must not compromise the operational imperative. Commanders, not managers, must be held to account by the correct alignment of Authority, Responsibility and Accountability (in accord with the new Defence Operating Model) in support of the operational main effort.

COMMAND AT THE BATTLEGROUP LEVEL

33. UK Land operations in Afghanistan were regularly styled as a 'company commanders' war'. Although this observation acknowledges the challenges and complexity of command at the company level, the battlegroup level (some deploying with up to eight sub units and significant ISTAR assets) was where the ability to plan, execute and identify long-term development of the area of operations in a coherent manner occurred; the sub-units executed the battlegroup plan. The size and diversity of the battlegroup HQ and the complex responsibilities that were placed on it increased over the duration of the operation. The following vignette illustrates how the CO and his Chief of Staff (COS)[62] had to understand and manage this increased C2 complexity.

Vignette; managing complexity. What we identified from the way Headquarters were hard wired with IT, and the sheer number of bodies that were in them, was that companies could only process information up to a certain level before they became overloaded. We called this the "watershed of complexity". When a Company HQ reached this threshold, the CF HQ (unit level) would manage any additional assets that were on station. In practical terms a Company HQ, with its current manning, could handle two lines of ISTAR and a strike asset, or one line of ISTAR and two strike assets at any one time: any more than that then the CF HQ would assist.[63]

34. During Operation HERRICK the quality and performance of the battlegroup COS correlated with the overall success of the battlegroup.[64] The tempo and complexity of COIN and stability operations has rightly focused attention on the CO's Intent and the battlegroup's understanding of it. The COS, heading an aspirational team, translated and consistently applied that intent and direction across the battlegroup thereby generating decisions quicker than the adversary. Forged during training and honed during the tour, the relationship, trust and understanding between the CO and COS was pivotal. Commanders and staff knew that the COS fully represented the CO in the latter's absence, especially when it came to decision-making. The opposite also holds true - a cumbersome and mechanistic COS, insecure in his relationship with his CO and often, as a result, tied to process over product, handicapped a unit from achieving its potential.[65]

Good Practice: The role and responsibility of the BG COS was considered good practice. The quality and performance of the battlegroup COS was identified as synonymous with the overall success of the battlegroup during Operation HERRICK and should be used as the foundation for the capability development of the BG HQ in the A2020 model.

35. Notwithstanding the success of the BG COS model, the demands on the BG HQ remained considerable, including during pre-deployment training. The burden fell equally on both CF HQs (unit level) and at company level. For CF HQs this demanded a switch from the Hybrid FORM training (HFT) model of a fast moving 'plan-execute' cycle to a Campaign footing and mindset, with relatively inexperienced staff. [66] Royal Marine BG HQs generally coped better with this additional level of complexity not least due to having three additional ICSC(L) trained Majors compared to an Army equivalent. A particular concern that cropped up across the Campaign was the apparent lack of staff training amongst SO3s and WOs:

> '...they were unable to produce coherent staff work without SO2 mentoring. A technically incompetent officer is not only slower but induces friction'.[67]

Comd TFH Operation HERRICK 15 POR

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62   Generally filled by the unit 2IC.
63   Operation HERRICK 15, CO CF LKG, Post Operation Interview
64   Comd 16 AA Bde, during the 16 AA Bde Mission Exploitation Symposium (MXS) for Operation HERRICK 13 at RMAS, 22-23 Jun 11.
65   The Battlegroup Chief of Staff (COS) – A Formula for Effectiveness, b⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀ September 2011.
66   See CO CF KKG POI Operation HERRICK 14.
67   Comd TFH Operation HERRICK 15 POR.

Lesson: The demands on a battlegroup HQ, and the CO and COS respectively, need to be eased by an overhaul of junior officer education. Training junior officers, in particular, for the complicated nature of the C2 that we now face is not mission specific training. We need to educate our officers to deal with the C2 they are likely to work with on operations. Training for battlegroup staff needs to replicate the C2 complexity now encountered on operations and incorporated into doctrine.[68]

36. The following insight on the burden of command usefully brings out both the increased complexity and also adds weight to the six month tour being the right tour length at the battlegroup level;

> "On a personal point, commanding at the battlegroup level is tiring. I have been a CO for over 2 years now, but was surprised how tiring, particularly mentally, it was on Operations. Prior to this tour I had been deployed on HERRICK in 2008. Since that time the campaign has developed in complexity, as scenarios are no longer treated as black and white. We have to work with all the nuances. At the end of the six month tour you are quite tired psychologically, as a result."[69]

Ibid.

37. Continuity was achieved by a number of different means. COs identified continuity posts (COS, Ops, Intelligence, influence officer and targeting teams) and they deployed some weeks in advance of the main body. The practice of outgoing COs leaving an Operation Order in place covering the first 30 days for the incoming battlegroup was seen as invaluable. The connectivity between the UK and theatre made communications very easy. When combined with the D-5 and D-3 Comd and unit recces respectively, most COs felt comfortable with the level of understanding they had as they started the mission. Extended Relief in Place (RIP), some up to eight weeks long and the resulting crossover between battlegroups also added a measure of continuity; "I had some force elements of H16 under my command for 4-5 weeks. The crossover was very useful, as I had sub-units that were at the top of their game as the rest of the Battle Group sought to catch up as quickly as they could."[70]

Lesson: The means of achieving continuity between battlegroup Relief in Place (including the provision of Mission Secret in the UK base and immersion recces) need to be carried forward into contingency.

38. **The Commanding Officer.** The enduring question of where the CO is best placed remained a factor that COs wrestled with throughout the Campaign. The requirement for the CO to interact and conduct Key Leader Engagement (KLE), were key to intelligence gathering, shaping operations, understanding local psyche and the influences that act on it;

> "The real dilemma was how much time to spend on the ground versus the outstanding Situational Awareness that you can now get in your HQ; remembering that much of what you do is set-piece decentralised ops. You need to be where you can influence, and you have to maintain the balance between the two; there are no hard and fast rules."[71]

Operation HERRICK 14 POI

The most challenging decision that COs had to make can best be summarised as follows;

> "Deciding whether or not to strike a target, cognisant that one has to make the balance between taking the fight to the insurgent and getting the decision right in order not to have adverse affects upon the campaign, whilst simultaneously knowing one's decision making will be scrutinised to the minutest (sic) degree and that these opportunities to strike are exceptionally limited."[72]

Repeated Post Operational Interviews spanning Operation HERRICK 13-18. This quote is from Operation HERRICK 17

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68   (████ ., Operation HERRICK 17 POI.
69   Ibid.
70   Ibid.
71   ████ ████ Operation HERRICK 14 POI.
72   Repeated Post Operational Interviews spanning Operation HERRICK 13-18. This quote is from CO CF Burma, Operation HERRICK 17.

Battlegroup command remains lonely and commanders sought moral support from those closest to them;

"I think it can be pretty lonely as a CO, as you do feel a lot of responsibility on your shoulders. I chose two key personnel to offload to, when needed, and we had a fair exchange of views on topics of concern. That would be my COS and my RSM. It was also very important to have the RSM's perspective of the soldiers' views and thinking and concerns. This aided me in my judgement and planning." [73]

Operation HERRICK 18 POI.

Observation: Given the demands placed on the CO and key staff in the BG HQ on Operation HERRICK, six months is the optimum duration for an operational at the battlegroup level on an operation with this character.

SUMMARY

39. This consideration of command on Operation HERRICK has raised a number of issues which are material to the transformation and development of the Army:

- Changing the extant (and trusted) command and control organisation 'in contact', as part of the intervention into Helmand, was operationally detrimental and should be avoided at all costs in the future.

- There is a clear indication that the British Army could improve its approach to working in a coalition; doing more earlier to bring (subordinate) coalition partners into the fold and to clarify the national and coalition chains of command. This includes investing more widely in coalition headquarters and organisations with quality staff – in turn this buys equity in the coalition.

- Restoring the divisional level of command should not overlook the proven ability of the brigade level to command a complex battlespace while integrating capabilities which ordinarily sit at the divisional level.

- The Army needs to expand the development of commanders to operate tactically but think strategically and consider how this will be incorporated into training.

- There is a need to debate the Army's approach to (operational) risk post Operation HERRICK.

- The Operation HERRICK BG HQ model matured into a very capable command node. The ability to augment its A2020 successor (which is much lighter) should be retained and trained for.

Recommendation: After over a decade of operations (dominated by Operation TELIC and HERRICK), and given the centrality of Command (and Control) in the effective conduct of operations, there is merit in conducting a detailed study of the exercise of operational Command (including the management of risk) from campaign to tactical level.

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73 \ Operation HERRICK 18 POI.

1-1_16
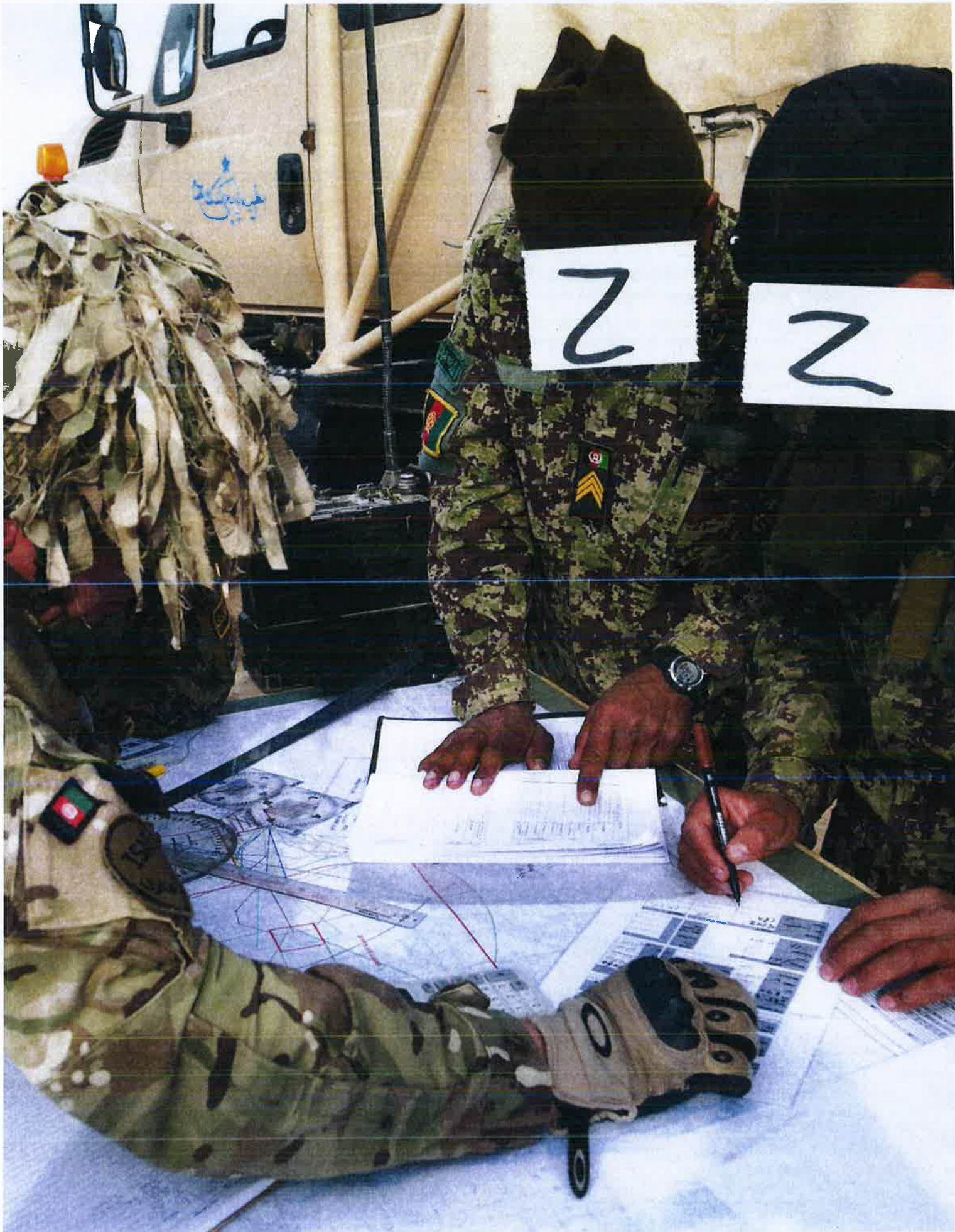
ENABLING COMMAND

1. One frustration echoed throughout the campaign was the inability of the UK to provide the commander with the tools and resources he needed to do the job properly. There has been some debate about the merits of the generally younger, more junior and less experienced UK staff officers compared to their American counterparts, but in broad terms the main areas that came in for criticism were: not viewing command as a capability, the lack of robust communication systems and the lack of dedicated aviation support to the commander.

2. The UK does not have a Capability Director for command. The delivery of command is disaggregated to other capability directorates resulting in a risk of a stove-pipe approach. In this sense the UK might be seen to regard command as an overhead rather than a capability in its own right. The complexity of the Operation HERRICK campaign demanded more and the stark difference between the US and UK approach to enabling command could not be greater. The US invested heavily in this area and there was 'no attempt to cut corners on the communications and bandwidth and all those sort of enablers that the commander has been given, that are recognised as an essential command enabler'. The general sense was that as far as enablement of command was concerned, 'whether that was at the level of ISAF or the level of TFH, we never got that right'. Debate continues over the merits of a Capability Director for command at a time when A2020 is paring back the generic capability at the divisional level of command and whole fleet managing scarce Force Troops Command enablers between the two deployable divisional headquarters.

3. The lack of dedicated aviation to support the commander and avoiding the need to 'go begging for a helicopter'[1] was a constant theme as early as Operation HERRICK 4. Numerous TFH commanders felt that 'you have got to be able to travel the battlefield, conduct battlefield circulation and get in amongst it whenever you need to. It is just iniquitous that we don't do better at that'.[2] At the divisional level in RC(S) it was equally difficult. ▬▬▬ remarked at the end of his tour:

   'if you looked at the headquarters of 10th Mountain Division who came in behind us, there is no debate about giving a 2* Divisional Commander a command flight. The Division comes with a full on command flight because the commander needs it to get around the battlefield'.

Lesson: There is a need to examine the proposal to develop Command as a discrete capability in order to optimise its development and break out some of the stove-pipe resourcing issues that surround current enabling of command.

Figure 1-1-3 A Lynx helicopter on operations in Afghanistan

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1   Maj Gen Cowan, Operation HERRICK Campaign Study Interview 2013.
2   Ibid

4. The creation of TFH Deputy Commanders and Command Sergeant Majors were hailed universally as a success. The former allowed the commander to have an experienced, capable deputy to whom he could delegate certain aspects of his role (more often than not the key link to the Provincial Reconstruction Team (PRT) and the lead in the Counter Threat Working Group). It also alleviated some of the pressure on the COS who was able to spend more time running the staff and focussing downwards rather than sharing the burden of the effect of strategic compression with the commander. The Command Sergeant Majors spent much of their time out visiting FOBs and PBs, providing a valuable sounding board for the soldiers and allowing the commander to 'dip test' the morale of his troops at any given moment.

Good Practice: The establishment of TFH Deputy Commanders and Command Sergeant Majors was clear 'good practice'. For contingency similar positions at formation level should be earmarked drawing on designated posts (akin to 'Red Rum') so that relationships can be developed in training.

COMMUNICATION INFORMATION SYSTEMS (CIS)

5. While CIS is covered in more detail in Chapter 3-1, it is worth highlighting briefly some of the main communication issues that beset commanders at various stages during the campaign. The most frequent criticisms in the early stages of the operation were to do with the lack of equipment (particularly TACSAT), the incompatibility of the various information systems and the fragility of the equipment. Commanders found that:

'what you came down to were fragile telephone calls in very difficult circumstances or shouting into the HF or on a dodgy satellite phone... [our CIS was] pretty stone age [and the variety of different systems was] rather ornate and elaborate. It was a whole cottage industry. We have just got to go with Mission Secret – something we can work with allies - nothing else apart from inevitably some TS stuff. Something that is simple, agile, deployable and robust'.

Maj Gen Cowan, Operation HERRICK Campaign Study Interview 2013

As the campaign progressed and wide band services became available to the lower tactical levels of command in FOBs and PBs, the problem became a lack of bandwidth to support increasingly 'data hungry' applications such as full motion video feeds, video teleconferencing and biometrics:

'You'd try and have a brigade conference call and as many times as not it would fail. The fact that we couldn't video teleconference... exacerbated the isolated nature of many of the battlegroup positions'.

Even as late as Operation HERRICK 11 there was poor connectivity and inadequate bandwidth that were described as major constraints. For the main C2 nodes the staff working environment was functional but basic where they 'sat at 6ft tables that would not have looked out of place in the First World War'. By contrast the USMC 'sat at smart tables with inbuilt computer sockets' that perhaps reflected the UK's stove pipe approach to command as a capability.

Observation: The supporting CIS architecture (including the level at which TOP SECRET connectivity sits) is a critical component of the proposal to develop Command as a capability in its own right.

Figure 1-1-3 A signaller with a BOWMAN communications suite

3 Maj Gen Cowan, Operation HERRICK Campaign Study Interview 2013
4 Ibid.

CHAPTER 1-2
WORKING IN A COALITION

COMISAF's number one priority was to sustain the coalition. The coalition was the main effort. "If you don't have the coalition, then you don't have an effective force in Afghanistan".

INTRODUCTION

1. This chapter should be read as an adjunct to Chapter 1-1 Command. It has not been possible to synchronise the HERRICK Campaign Study with similar studies from other partner nations, in particular the Danes, Estonians, Canadians and US. While they all have studies planned, none have yet to report. Where relevant this chapter has drawn on the US-UK Integration Study[1] which will report in 2015. It is recommended that the Army conducts a study into the experiences of those nations who subordinated forces to the UK; Denmark and Estonia.

2. The UK will routinely operate with allies and partners, in particular as a supporting partner in a US-led coalition. It is extremely unlikely that the UK will conduct war fighting without US leadership, but in other operations the UK may be called upon to lead a non-US coalition.[2] Therefore it is vital that we learn the lessons from almost a decade of working within a coalition in Afghanistan. Land forces must draw from the experience of Operation HERRICK with the aim of being a better, more useable partner.

International Security Assistance Force
Troop Contributing Nations

Nation	Troops	Nation	Troops	Nation	Troops
Albania	286	Georgia	935	Norway	433
Armenia	126	Germany	4,818	Poland	2,475
Australia	1,550	Greece	154	Portugal	118
Austria	3	Hungary	413	Romania	1,876
Azerbaijan	94	Iceland	4	Singapore	39
Bahrain	95	Ireland	7	Slovakia	329
Belgium	520	Italy	3,952	Slovenia	79
Bosnia & Herzegovina	55	Jordan	0	Spain	1,488
Bulgaria	598	Republic of Korea	350	Sweden	500
Canada*	556	Latvia	175	The former Yugoslav Republic of Macedonia**	163
Croatia	312	Lithuania	237	Tonga	55
Czech Republic	626	Luxembourg	11	Turkey	1,845
Denmark	750	Malaysia	46	Ukraine	23
El Salvador	24	Mongolia	114	United Arab Emirates	35
Estonia	154	Montenegro	37	United Kingdom	9,500
Finland	156	Netherlands	166	United States	90,000
France	3,916	New Zealand	188	Total	130,386

Note on numbers: Figures are calculated by the Force Flow tracking system at SHAPE HQ and count all troops under the Command and Control of COMISAF. Numbers of troops should be taken as indicative as they change daily.

* to train Afghan National Security Forces

** Turkey recognises the Republic of Macedonia with its constitutional name

6 January 2012

Figure 1-2-1, ISAF Troop Contributing Nations as at January 2012

3. International Security Assistance Force (ISAF) became a US commanded NATO mission in 2007, augmented by a number of non-NATO nations. NATO became responsible for the command, coordination and planning of the force, including the provision of a force commander and headquarters on the ground in Afghanistan. At the height of the campaign there were 50 Troop Contributing Nations (TCN) with an ISAF total strength exceeding 130,000 at its peak in January 2012. This was a significantly larger coalition than the Iraq War coalition which had 35 TCNs.[3]

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1 The US-UK Integration Study, sponsored by COM MARCENT and CJO, is due to report in Q1 2015. The author of this chapter was the UK lead on the US-UK Integration Study.

2 Ministry of Defence, Strategic Trends Programme, Future Character of Conflict, Defence Concepts and Doctrine Centre, Page 3, Assumptions.

3 The U.S. Senate Committee on The Armed Services, To Receive Testimony on Iraq, Afghanistan and the Global War on Terrorism, Washington, D.C. 3 August 2006.

4. The UK had key roles within the ISAF coalition (see the Operation HERRICK campaign chronology):

   a. HQ ISAF. Lt General Richards[4] was the last COM ISAF before the US took over the COM ISAF role for the duration of the campaign. From 2007, the UK took over the DCOM ISAF role.

   b. HQ ISAF Joint Command (HQ IJC). HQ IJC, a US commanded 3 Star HQ, reached full operating capability in November 2009. HQ IJC was augmented on a rotational basis by one of NATO's nine standing HQs. The UK led HQ ARRC took over this role in 2011[5] from the French-led GRF(L) and was replaced in turn by staff from the Eurocorps GRF(L) and the Spanish GRF(L). The UK periodically held the 2 Star COS IJC and a number of other 1 star posts.

   c. Regional Command (RC) level. From 2006 to 2010, RC (S) was a partnered 2 star HQ,[6] commanded on a national rotation; Canada, Netherlands and UK.[7] In 2010, UK effort shifted to RC (SW) following the United States Marine Corps (USMC) deployment to Helmand. A UK 1 Star was periodically deputy commander of the US Army Division deployed to RC (E).

5. RC (SW) became a 2 Star HQ, responsible for Helmand and Nimroz Provinces, when the HQ transitioned from a Marine Expeditionary Brigade HQ in early 2010 and Task Force Helmand (TFH) resubordinated from RC(S) to RC(SW). The UK held the DCOM RC(SW) role. There were two Land formations subordinate to RC (SW); TFH and Task Force Leatherneck (TFL). TFL was a USMC 1 star HQ that coordinated the activity of two USMC Regiments each equating to a UK brigade in size. The Georgian contingent, two battalions at its peak, came under TFL command.[8] RC(SW) was a coalition of;

   a. NATO Nations: Denmark, Estonia, United Kingdom and US.

   b. Non-NATO Nations: Bosnia and Herzegovina, Georgia, Jordan, Tonga and United Arab Emirates.

   Figure 1-2-2 gives a 'snap shot' of RC (SW) coalition partner task organisation (TASKORG). Note, TFL redeployed in 2012.

6. TFH was a UK commanded 1 Star HQ. The Danes and Estonians were key coalition partners that added mass to TFH with both countries providing force elements and staff. In May 2006 the Danes deployed a 290 strong reconnaissance squadron and in 2007 this was increased to a 750 strong Danish Battlegroup, which took over Battlegroup Centre.[9] In 2006, the Estonians deployed a mechanized infantry company, which was fully integrated into a UK battalion.[10]

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4   In May 2006, HQ ARRC assumed command of HQ International Security Assistance Force (ISAF) IX in Afghanistan. Lt General Richards, COM ARRC took on the role of COM ISAF IX.
5   HQ ARRC deployed, January 2011 to January 2012.
6   From February 2006, Brigadier General Fraser (CAN) commanded RC(SW) as a 1 Star HQ. RC(S) became a 2 Star HQ commanded by Major General van Loon (NL) in November 2006.
7   Maj Gen Page took over command of RC(S) from Maj Gen van Loon (NL) May 2007-February 2008. Maj Gen Carter was the last UK commander of RC(S), November 2009 to October 2010, prior to TFH transfer to RC(SW) October 2010.
8   Each Georgian battalion had a 96 man USMC Liaison Team attached to it.
9   Danish Foreign Policy Yearbook 2011, Clear, Hold, Train: Denmark's Military Operations in Helmand 2006-2010, Peter Viggo Jakobsen and Peter Dahl Thruelsen.
10   HQ of the Estonian Defence Forces, response to DLW questionnaire dated 24 January 2014.
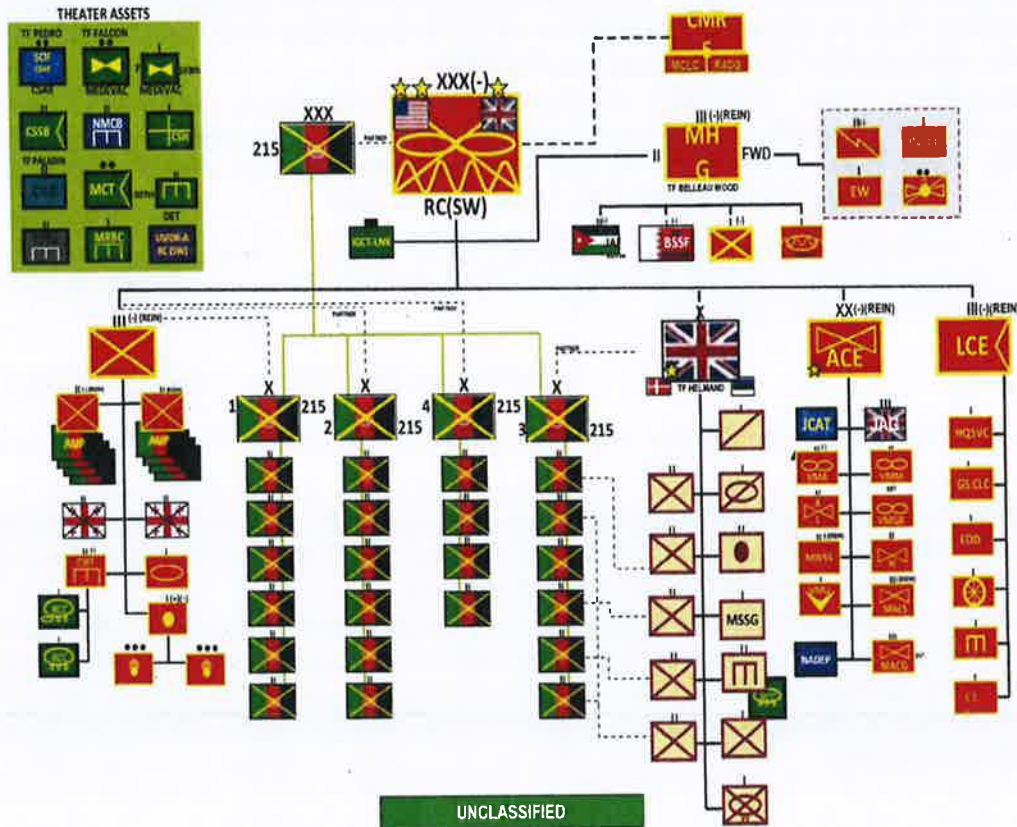
Figure 1-2-2, RC (SW) TASKORG as at March 2013

LESSONS

7. **Lead partner.** In Helmand, there were two significant partner relationships; firstly the UK as the junior partner in a USMC led division; and secondly the UK as the lead partner within a UK coalition brigade level TF construct. The integration frictions experienced as the junior partner by both the UK at the division level and Danes and Estonians at the brigade level are similar. Equity of staff in the HQ was a key factor; having a proportional staff contribution and getting those people in the right places/levels was important. Too little equity at the right level risked marginalisation. It is important that the right balance is struck at the start of an operation and that this is maintained to the end.

8. **Working within a US led Regional Command.** The most obvious issue when you are going to work subordinate to another Nation or another Force, is that you need to understand them. While this is obvious, it can be more difficult than might be expected.

> "It took some time and a lot of effort to work out how the USMC functioned. In this case, the command and control function, the processes, right down to the basics of what do they expect, how do you bid for resources, how to play the game; play by the rules of their game rather than our own. We got very good at it; we were outperforming our counterparts in Task Force Leatherneck[11] when it came to bidding for resources or submitting CONOPS. I think it took us quite a long time to get there. So it is all about training together and maintaining those images, studying and understanding the doctrine and processes of our most likely allies".[12]

> Comd TFH Operation HERRICK 15 Post Operation Interview.

9. **UK as the lead partner.** In learning the best practice of our integration with US allies, we should also learn from the experiences of those nations who subordinated forces to the UK, such as Denmark and Estonia. The UK was in a unique position to provide a 360 degree examination of coalition issues due to its dual role of majority and minority partner. Insights from Danish and Estonian staff, point to a UK staff arrogance in TFH[13] which left a perception that they were 'second eleven' partners. In the light of their experiences, we should review integration and interoperability challenges arising from bespoke UK doctrine and staff attitude, procedures and practices.

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11   Task Force Leatherneck was the USMC 1 star HQ that coordinated the activity of two USMC Regiments (each equating to a UK brigade in size)
12   Comd TFH Operation HERRICK 15 Post Operation Interview.
13   Insights from Post Operation Interviews; this observation ran from 2006 to 2014.

10. **Unity of command.** There is a risk of parallel command which may disrupt unity of command within the coalition. Unity of command within a coalition was critical but often difficult to achieve as national agendas diverged from the ISAF line. Initial operations in Helmand ran the risk of a UK "independent national operation to the detriment of sovereign sensitivities and coalition management".[14] Operations in Helmand arguably achieved a point of balance in 2009/10 with the deployment of USMC forces and the creation of RC(SW). Subsequently, US and UK integration proved excellent. There is a question as to whether or not the UK should have sought to better integrate its deployment, with a resultant loss of autonomy, from the outset.

11. The UK was subject to some criticism about coherence with the NATO/ISAF plan and that TFH was getting orders from PJHQ which was not always consistent with the ISAF line as well as not following the ISAF chain of command. Commander RC(SW) faced a challenge over the issue of UK subordination to the lead nation in Helmand. PJHQ staff were seen as overbearing and at times arrogant by RC(SW) and TFH staff.

> "There is a need to understand that we are serving coalition masters and not just national ones; there is undoubted tension when one's national rear-based operational HQ are pushing a deployed coalition HQ to consider things on their behalf".[15]

Comd TFH, Operation HERRICK 19, interview 02 April 2014.

This perception does not engender coalition unity of command and is an area that should be improved upon in future.

Observation: The UK should consider its approach when a subordinate element within a US led coalition. It should fully integrate and accept a reduction in autonomy from the start of the operation. It should aim to give priority of support to the in place commander in achieving unity of command.

Observation: The UK should reflect on the best way of being an effective tactical partner – where we are subordinate to a bigger US effort. We need to understand better the notion of 'junior partner influence' within an alliance.

Lesson: The UK should learn from the experiences of those nations who subordinated forces to the UK, such as Denmark and Estonia. It is recommended that a study is conducted into both Danish and Estonian integration and interoperability challenges.

COALITION INTEROPERABILITY[16]

12. Coalition integration happens over time and is enabled by both systems and process interoperability. The benefits of coalition operations can be realized when coalition partners mature through an interoperability spectrum; deconfliction to coordination and then to integration. As the ability to operate together increases, so the forces can move through the spectrum of interoperability until full integration can occur. There are some areas e.g. J1, where coalition partners need only to understand another nations process and further harmonization is not required. Figure 1-2-3, illustrates how moving up this spectrum allows growing capability to:

   a. Increase tempo of joint operations. Effective integration enables a coalition to leverage synergies and respective strengths.

   b. Increase number of mission types that can be passed between US and UK. Reduces risks in coalition operations (e.g. force protection, friendly fire).

   c. Possibly increase both military and political influence through the ability to act alongside the US at the same pace (although it may be argued that in some cases deconfliction may allow greater political influence if the UK had control of a sector of the battlefield (TFH)).

It also illustrates how perishable coalition interoperability is, for Operations TELIC and HERRICK, US-UK interoperability developed from the lowest start point (deconfliction). Maintaining a high level of coalition integration between operations is a challenge. Historically, there is a rapid drop off and a coalition force has to relearn past lessons in order to achieve high levels of interoperability.

14   Chief of the Defence Staff interview with DLW, October 2013.
15   Comd TFH, Operation HERRICK 19, interview 02 April 2014.
16   Interoperability describes the ability of UK Forces and, when appropriate, forces of partner and other nations to train, exercise and operate effectively together in the execution of assigned missions and tasks. AAP-6 definition.

UK-US Operations Over Past Decade
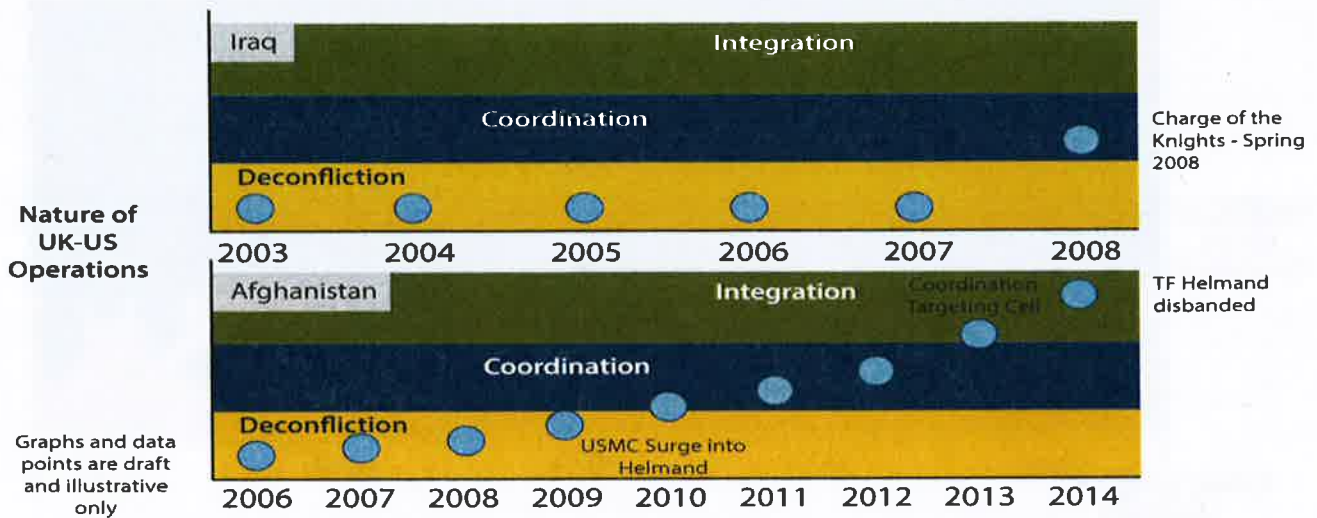
Figure 1-2-3, Interoperability Spectrum: US-UK Operations Over Past Decade17

13. A study of US and UK integration in RC(SW) has identified the following coordinated and integrated capabilities.

   a. **Coalition Targeting Cell (CTC).** The merger of the Targeting Support Group (TSG) and Regional Targeting Cell (RTC) in December 2013 created an integrated US-UK targeting capability. The merger was driven by operational necessity as RC(SW) force elements and ISR redeployed. The CTC has become CG RC(SW)'s tool to influence his battlespace. This was a UK led capability.

   b. **Air Operations.** USMC and UK aviation operations are perhaps the best model for coalition integration. Despite no formal command relationship aviation operations have been integrated for longer than most other capabilities. The combined Air Combat Element (ACE) and Joint Aviation Group (JAG) HQs had a partnered approach.[18] A positive degree of competition developed within the JAG between the three services and also the ACE. For example; a TTP routinely used by RN pilots which was seen as operational good practice was quickly adopted by the remainder of the JAG and the USMC ACE, this extended to briefing formats and general mission business.

   > "They had great synergy and a common bond permeates through the integrated staff. They have similar capabilities, which gave resilience and redundancy, they could do more with less".[19]
   >
   > From interview with ▓▓▓▓▓ MAG (A).

   c. **Security Force Assistance (SFA).** USMC and UK approach to SFA has evolved through deconfliction to coordination and only reached an integrated level when TFH redeployed in April 2014. The decision in 2012 to disband the UK led C10 branch in HQ RC(SW) and reinvest SFA staff across all C1 to 9 functional areas with a USMC one star Deputy Commander SFA added tempo and focus.

   d. ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓

   e. **HQ RC (SW).** From formation in 2010 the functional areas in HQ RC(SW) have moved through the deconfliction to coordination to integration construct at varying levels of success. Figure 1-2-4 gives a subjective assessment of progress towards integration. The key point is that integration, where achieved, takes time (over four years).

Integration by Area

Figure 1-2-4, Interoperability Spectrum: RC(SW) US-UK Integration by Area[20]

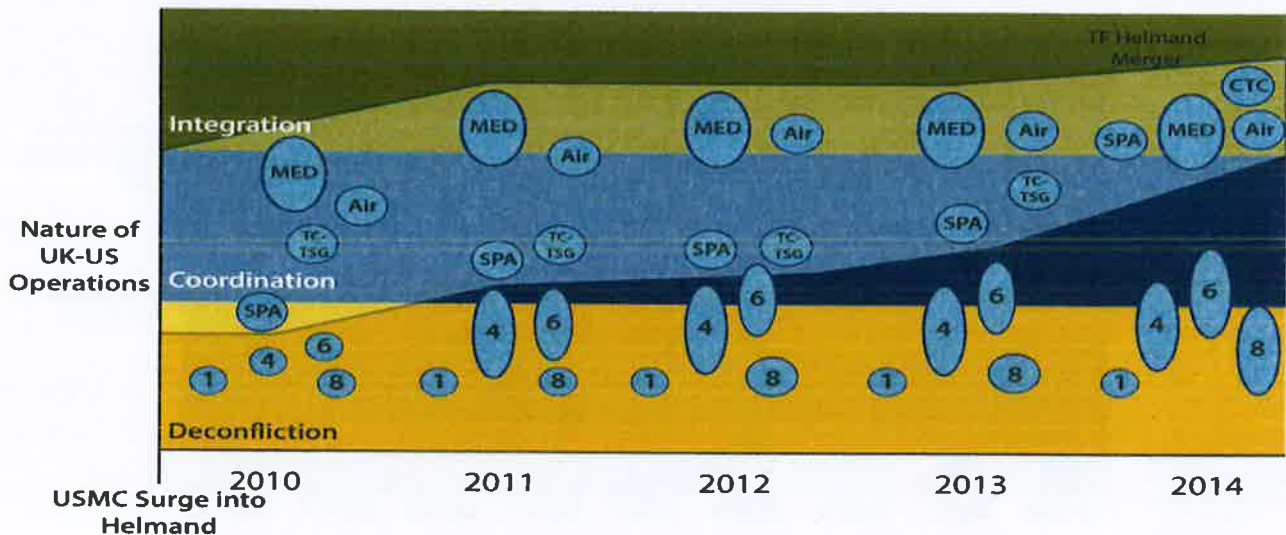14. **Coalition Interoperability - a brigade perspective.** TFH has operated under command of a USMC dominated RC(SW) since 2010 and, over time, conditions have been created for increased integration. UK and US tactical doctrine is already similar and uses tried and tested preparatory techniques – combined planning, war gaming, rehearsal of concept drills, orders groups and rehearsals – to ensure mutual understanding during joint activity. Different rules of engagement, national caveats, CIS protocols, battlespace management methodology and intelligence sharing policy have been rough edges that require to be smoothed, but early engagement between units and HQs, combined planning, the employment of well trained and practiced liaison teams in unit, task force and regional command HQ, and a can-do attitude resulted in a series of extremely successful coalition operations during Operation HERRICK 19.[21]

15. **Coalition Interoperability - a unit perspective.** The UK Manoeuvre Battlegroup routinely operated with an Estonian Mechanised Infantry Company and a Danish Tank Troop under command, and with Danish staff officers embedded into its HQ. During USMC base closures at Sangin it worked alongside US Army and Marine combat and support units on a 2 week 'out of area' operation. In April 2014, it resubordinated to RC(SW) on the dissolution of TFH. Its coalition credentials were strong and they were tested again during the recovery of the last USMC elements from Sangin and the withdrawal from Observation Post STERGA 2 (June 2014). Conditions for success included early inclusion of coalition staff members who attended all major pre-deployment training events; preparatory training would have been optimised if coalition sub-units could have attended. At the sub-unit level, technical and CIS issues were relatively easy to overcome. The judicious application of waivers to enable UK personnel to operate under the protection of other-nation ECM and vehicle protection was critical. Unsurprisingly 'big-hand' doctrinal principals translated well across the coalition although low level Tactics Techniques and Procedures differed significantly dependent mostly on enabling equipment types. Friendly force cultural awareness was essential. Capability briefs, sub-unit immersions, CPX's, rehearsals and 'time on tanks' helped us to understand the domestic and military culture of our coalition partners and smooth the way to an effective working relationship.[22]

16. The apogee of Operation HERRICK has seen high levels of coalition integration achieved. This is due to shared experience, similar doctrinal and operational processes, better understanding of different national capabilities and ten years of campaigning which has generated a level of trust between these nations. The challenge during the fallow period before the next coalition operation is how to start the next operation as an integrated coalition, capitalising on those coalition synergies from the start. Historically there has been a rapid drop off in coalition integration post major combat operations. This suggests that a coordinated Defence Engagement programme consisting of an increased tempo in multinational combined military exercises, staff exchanges, and professional military education (PME) will be required to sustain the post Operation HERRICK heightened level of integration. Commanding General RC(SW) stated;

> "As we lift of from Afghanistan we should look to how we maintain our joint experiences. Tactical formation training will likely to be too expensive but staff to staff events and CPXs could do it. We should also look to send officers onto each others courses so they understood how we function"[23]

interview dated 14 April 2014

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20   Numbers refer to staff function; C1 - HR, C4 - CSS, C6 - CIS, C8 – finance.
21   Operation HERRICK 19 Post Operation Report.
22   Operation HERRICK 19 Post Operation Report.
23   Brigadier General D Yoo USMC, CG RC(SW) interview dated 14 April 2014.

17. The US-UK Integration Study has the following initial conclusions[24]:

    a. Integration skills are perishable. We expect the current high level of UK-US integration observed in RC-SW to decrease rapidly after the close of operations.

    b. History shows integration building up slowly. In a future coalition land operation, it could take years to re-establish this current level of integration.

    c. Act now or re-learn later. Investments now to deliberately maintain this level of integration can reduce the re-learning of the same lessons at the cost of time and effort.

> **Observation:** Effective integration enables a coalition to leverage synergies and respective strengths. It increases operational tempo.
>
> **Observation:** Integration takes time, over four years for HQ RC(SW). In some cases e.g. Coalition Targeting Cell, operational necessity has driven closer integration.
>
> **Observation:** The Targeting Support Group's merger with the RC's Regional Targeting Cell presents a case study for the factors to be considered when creating US and UK coalition teams.[25]
>
> **Observation:** Unless positive steps are taken to maintain levels of integration seen at the end of Operation HERRICK, it is likely that at the start of the next coalition operation these capabilities will have regressed over time.
>
> **Lesson:** Conditions for success included early inclusion of coalition staff members who attended all major pre-deployment training events; preparatory training would have been optimised if coalition sub-units could have attended. For future operations PJHQ should direct that coalition staff and sub units are included in pre-deployment training.
>
> **Observation:** The judicious application of waivers to enable UK personnel to operate under the protection of other-nation ECM and vehicle protection was critical.

18. The most notable coalition interoperability issues encountered in Afghanistan were; CIS, information and intelligence sharing and Combat Identification (Combat ID).

    a. CIS. Right from the start during pre-deployment training the RC(SW) C6 was fighting the communications battle to allow the Commanding General and Deputy Commander to communicate. This was achieved only on unclassified and top secret and above systems. Tactical CIS interoperability between UK and US has been largely constrained to TacSAT. The national Information Communications Systems gateways are unreliable or do not work and require users to conduct 'swivel chair' processes and re-enter data between systems. National data recovery from coalition systems needs to be addressed and far better understood.

    b. Information and intelligence sharing. UK and US information and intelligence sharing at the HQ RC(SW) level were found to be very good, with few interoperability issues. Most reporting was '5 eyes'. This presented a significant constraint for embedded 'non-5 eyes' staff; Danes and Estonians.

    c. Combat ID.

19. Measures that have worked to mitigate coalition interoperability gaps which should be taken as best practice for the future are;

    a. Liaison officers were seen as the single most effective means of closing interoperability gaps and ensuring a common understanding of the plan. To generate a liaison capability the Manoeuvre Battlegroup routinely deployed its lead 3/5 planner during the refine/execute phase to the Estonian Mechanised Infantry Company.[28] Selection of competent liaison officers is key within a coalition.

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24   The US-UK Integration Study is a COMMARCENT, Maj Gen Neller and Commander Joint Operations, Lt Gen Capewell sponsored study. It will report in Quarter 1, 2015. •

25   US-UK Integration Study – sponsored by PJHQ.

26   Interview wit. ▮▮▮▮ USMC, RC(SW) (▮▮▮▮ Royal Signals, RC(SW) Deputy C6 and (▮▮▮▮ SO3 J6 TFH dated 03 April 2014.

27   Similar Combat ID interoperability observations were made in the UK/US Interoperability report published by Dstl 30 May, 2003

28   ▮▮▮▮ :O Manoeuvre Battlegroup, Operation HERRICK 19 Mission Exploitation Symposium, Battlegroup deep dive 18 June 2014.

b. UK enabler embeds (CIS, Intelligence) with the Estonian company proved to be force multipliers.[29] The Army should plan to embed key interoperability enablers into partner forces when they operate as part of a UK formation.

c. Assigning a lead nation advisor or sponsor, was beneficial to bridging the interoperability gap, when coalition staff are assigned to multinational headquarters. Though it may naturally occur in most cases, there are merits to assigning an advisor from a counterpart nation to incoming coalition staff, especially those that will occupy key leader positions. Future coalitions should consider practising such methods to promote greater interoperability and synergy among multinational coalition staff.

20. ██████████████████████████████████████ demanding time consuming workarounds and reducing the tempo of coalition operations. Recommendations for a future coalition HQ are:[30]

a. A single or federated Mission Secret network which is a fundamental to coalition operations that could be exploited before and during deployment.

b. An improved interoperability of VHF/HF tactical CIS.

c. An architectural alignment which enabled a federation and sharing, especially on bearer networks, allowing common coalition applications.

d. Functional gateways between national and mission networks.

Observation: ████████████████████████████████████. Resourcing CIS interoperability would be a quick win as it is a key factor in improving coalition integration. This is a repeat lesson which we continue not to learn.

Observation: The employment of quality liaison officers was the single most effective method of achieving and improving coalition integration.

Lesson: UK enabler embeds (CIS, Intelligence) with the Estonian company proved to be force multipliers. The Army should plan to embed key interoperability enablers into partner forces when they operate as part of a UK formation from the outset. This should be embedded into Land tactical doctrine.

COALITION HEADQUARTERS

21. **Forming a Coalition HQ.** HQ RC(SW) was a USMC led 2 Star HQ augmented by a number of UK tri-service individual augmentees.[31] The HQ had a partnered approach with either a US lead and a UK deputy or vice verse which extended through the staff: The UK held the DCOM, ACOS C5, C9 and C10 and the Deputy ACOS C2, C3. The UK was the junior partner and this was reflected in staff equity within the HQ which was on a ratio of 5 US:1 UK in January 2012.[32] There were also a very small number of Danish (3) and Estonian (1) planners on the HQ RC (SW) staff. TFH was a UK led 1 Star HQ, formed on a Type A brigade, augmented by UK, Danish and Estonian individual augmentees.

a. **Force generation and training.** The best practice should be to form a coalition HQ around a formed HQ. There are a significant number of insights that attest to the benefits of early engagement by key UK staff with the US Command element and Danish staff with the deploying TFH HQ. Early engagement ensures that key decisions are not made by the US commander without UK input. Trust and relationships need to be established and fostered from the start to enable the UK strengths to gain traction. DCOM RC(SW) warns that "muddling through force generation and force preparation undermines UK equity and credibility within a US/UK coalition".[33]

b. **Tour lengths and continuity.** Key USMC and UK HQ RC(SW) staff deployed for 12 months. Key UK staff tour length needs to mirror the lead nation's tour length. A few designated UK campaign continuity posts were off-set from the HQ deployment by three months. In HQ TFH, Danish staff officer deployments were offset from TFH transfer of authority. This approach built in an element of continuity to the HQ. For it to work, staff in continuity posts must attend the incoming rotations pre-deployment training. This will build the necessary relationships and trust to make their continuity role effective. Continuity must be planned from the outset with a consideration of practical measures to achieve it. Maintaining the tempo experienced in a US led HQ over 12 months is challenging. The ability to sustain effort beyond the 9 month point is questionable. "To deliver a cohesive team, you had to prepare and deploy together and then go out together, ideally for a 9 month deployment".[34]

29   HQ of the Estonian Defence Forces, response to DLW questionnaire dated 24 January 2014.
30   Interview with ████████ USMC, RC(SW) C6, ████████ Royal Signals, RC(SW) Deputy C6 and ████████ J6 TFH dated 03 April 2014.
31   In January 2014 MEB-A deployed with a one star commander; Brigadier General D Yoo USMC.
32   As at January 2012HQ RC(SW) staff ratios were; US 427: UK 96 at February 2014 ratios were; US 359; UK 53. Source C1 HQ RC(SW) 25 June 2014.
33   Brigadier R Thomson, DCOM RC(SW) interview dated 27 March 2014.
34   Brigadier General D Yoo USMC, CG RC(SW) interview dated 14 April 2014.

c. **Planning and Doctrine.** The 'planning shops' are the engine rooms of any HQ. In a US led HQ the planning doctrine will be US and UK planners need to understand the doctrine and be proficient in it's application. In HQ TFH, coalition partners had to adapt to UK planning doctrine and a command led approach. Danish staff were frustrated by a lack of NATO doctrine. Often this is learned on the job and as a result, unless the individual is very able, credibility is lost right at the start and the planner becomes marginalised. The US has trained planners, who go through the School of Advanced Warfare (SAW) or School of Advanced Military Studies (SAMS). In preparation for future missions, the RC(SW) ACOS C 3/5 recommended that the UK send young officers through these schools to be trained in how US forces conduct planning. These UK SAMS/SAW trained officers should then be posted to a standing US or coalition HQ – a deliberate pick and post policy.[35]

d. **Selecting the right staff.** There is a view that the UK invested its brightest and best staff into both TFH and Joint Force Support (Afghanistan) rather than HQ RC(SW). DCOM RC(SW) makes the following point "the selected UK staff only embodied one past or future CO, most had the combined challenge of either being in acting rank or newly promoted and then the complexity of an operational tour".[36] While the Armed Forces are joint by design, the practice of sharing HQ staff equity across all three services needs to be examined. The UK needs to get better at recording who has coalition experience and then exploiting that experience by selecting those individuals for future coalition posts.

Lesson: While the Armed Forces are joint by design, the practice of sharing HQ staff equity across all three services needs to be examined. The UK needs to get better at recording who has coalition experience (or training) and then exploiting that experience or training by selecting those individuals for future coalition posts.

Observation: Early force generation, of the right people, and early engagement on coalition pre-deployment training builds trust, relationships and brings early buy in on key decision making. This needs to improve for future coalition operations.

Observation: The UK should align itself better with NATO doctrine to improve coalition integration. This would be a step in the right direction to making the UK a better coalition partner.

Lesson: Ensuring and maintaining the appropriate level of staff equity within a coalition HQ is a key factor. Too little equity risks marginalization by the lead nation. The UK should invest in quality staff in coalition HQs from the outset. Selection and training of staff for coalition HQ posts needs to improve.

22. **National caveats.**[37] The US, as the lead ISAF nation, has aligned its NATO declared national caveats with ISAF policy. This had the effect of making their national caveats 'transparent' in the ISAF coalition.

23. **National Out of area policy.** This was a UK policy bespoke to Afghanistan, which presented a number of challenges. The policy had 2 aspects: the first involved a limit set by the Prime Minister of no more than 300 ground troops operating in the Upper Gereshk Valley (UGV); the second involved a graduated level of approval for UK forces operating outside of TFH and Task Force Belleau Wood AO, which considered the number of troops involved, where they were to operate from and for how long. There was a tried and tested process to gain the necessary approvals for UK force elements to operate out of area. This should not have constrained planning, but due to often misunderstood perception of the out of area policy being a 'red card' national caveat, it was seen by both US and UK staff as a planning constraint. It is likely that out of area policy could remain a constraint for future coalition operations.

24. UK national caveats and other policies set the UK apart within HQ RC(SW). The policy advisor (POLAD) provided UK policy advice to the RC(SW) chain of command. There is no US POLAD equivalent at the one or two star level. This is due to a much closer relationship between the RC(SW) DCOM and London (PJHQ and MOD). For the RC(SW) CG the policy gap is much greater; IJC, USFOR-A, CENTCOM, Joint Staffs, Pentagon, Washington. A clear understanding of UK policy (caveats, ROE, detention, national asset approval, out of area) by both UK and coalition staff is required and this must be achieved during pre-deployment training.

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35 ████████ USMC, ACOS C3/5 Plans, HQ RC(SW) interview dated 08 April 2014.
36 Brigadier K Thomson, DCOM RC(SW) interview dated 27 March 2014.
37 Definition. National caveats are the restrictions NATO members place on their participation in a deployment. There is a national limitation, restriction or constraint of any national military forces or civilian elements under NATO command and control, or otherwise available, that does not permit NATO commanders to deploy or employ these assets fully in line with the approved OPLAN, including freedom of movement within the designated JOA and the approved ROE. MCM-0027-2005, dated 11 February 2009.
38 UK guidance on detention policy is detailed at; Defence Instructions and Notices: Implementation of Cabinet Office's Consolidated Guidance Reference 2103DIN03-014 updated February 2014.
39 HQ of the Estonian Defence Forces, response to DLW questionnaire dated 24 January 2014.

1-2_9

Observation: All nations will have policy variance, a fact of working in a coalition. The challenge was understanding these policy variations and leveraging another nation's policy to turn constraints into freedoms.

Lesson: ██

Lesson: A clear understanding of UK policy (caveats, ROE, detention, national asset approval, out of area) by both UK and coalition staff is required and this must be achieved during pre-deployment training.

25. **Cultural Differences.** It is important to understand the cultural difference between coalition partners. ABCA[40] nations share a common language but the difference between the French and non-French Canadian contingents of Task Force Kandahar, was marked and goes beyond the obvious simple linguistic difference. For partners where English is not their first language we must be more aware of the potential for misunderstanding and steps need to be taken to ensure complete understanding.

> "We have increasingly come to understand that there is no substitute for deliberate, thorough and inclusive battle-procedure (to include full orders, war-gaming, back-briefs and ROC drills at both Unit and Sub-Unit level) and where possible we always re-group at the earliest possible opportunity. These activities all mitigate the risk of misunderstanding or misinterpretation and increase the likelihood of success"[41]

Tactical COIN Vignettes - Operation HERRICK 10, November 2009

The Estonian company found that,

> "It was sometimes challenging to achieve understanding between people with different British accents and the extensive use of military abbreviations"[42]

HQ of the Estonian Defence Forces, response to DLW questionnaire dated 24 January 2014

Observation: The UK needs to recognise the importance of understanding the cultural difference between coalition partners and adjust accordingly.

26. **Planning and Command decision.** Perceptions of USMC and UK Command and planning styles are varied. The UK perception of USMC planning as seen from the Manoeuvre Battlegroup makes an interesting observation.

> "FRAGOs are iteratively gone around and at no point do you have Command guidance coming in. That said, they did listen when we put comments in as we were uncomfortable. In our world the Commander gives directions and that is clear. For them [the US] the whole approach was different. This was my first experience of that. We do questions 1-7 and they do 7-1, in that order. By which point the plan is already 'on rails', and it is difficult to knock it off".[43]

████████████ *Operation HERRICK 19 Post Operation Interview. This view was corroborated by COS 5 Rifles, Manoeuvre Battlegroup, interview dated 24 June 2014.*

27. It was our experience that the Danish staff element were used to a far more staff-driven HQ dynamic than that achieved through the British Army's command-led approach. Estonian simple and honest briefings were gladly received. The US propensity for being over polite on occasion presented a challenge to engaging with knottier issues. These differences make coalition planning and operations a challenge, but also present a mirror through which to consider our own military culture and ask questions of what we can do to be better partners.

Lesson: A significant variance in command style was exercised and experienced by different coalition partners. This should be subject to further study with the aim of better preparing UK force elements and staff and also coalition partners working in a UK led force.

40   ABCA nations; America, Britain, Canada, Australia and New Zealand.
41   Tactical COIN Vignettes - Operation HERRICK 10, November 2009.
42   HQ of the Estonian Defence Forces, response to DLW questionnaire dated 24 January 2014.
43   ████████ . Operation HERRICK 19 Post Operation Interview. This view was corroborated by COS 5 Rifles, Manoeuvre Battlegroup, interview dated 24 June 2014.

CHAPTER 1-3

SCIENCE AND TECHNOLOGY:
DIRECT COMMAND SUPPORT TO OPERATIONS

BACKGROUND

1. Operational Analysts (OA) and Scientific Advisors (SCIAD) have been deployed in support of Operation HERRICK since 2002 and 2006 respectively. At the peak of the conflict, there were OA staff deployed into Regional Command South as well as OA and SCIADs deployed into Task Force Helmand Headquarters and Joint Force Support (JFSP(A)). Initially the SCIAD post was deployed in support of HQ ISAF but the post was moved to provide direct support to UK troops in Helmand Province. The UK provided the core of the HQ ISAF Analysis Branch providing direct analytical support to the UK 4 star COMISAF in 2006/7 and the HQ ISAF Joint Command (IJC) Assessment branch supporting the US 3 star COMIJC. In both cases the analytical support contributed to the theatre level command of all NATO operations in Afghanistan. Annex 1-3-A gives a more detailed account of the important role Science and Technology (S&T) played through Operation HERRICK.

2. In addition to the core OA and SCIADs, S&T staff have deployed on a wide range of tasks including: Defence Intelligence Liaison posts in Kandahar and Lashkar Gah, Deployed Exploitation staff in Bastion and Kandahar and Subject Matter Experts (SMEs) deploying regularly for short periods to provide specific advice in complex areas.

Observation: The integration of S&T staff during Operation HERRICK into forward HQs expanded on the benefits found during Operation BANNER and Operation TELIC. Particularly in the C-IED battle and biometric exploitation.

TRAINING AND INTEGRATION

3. The majority of selection and training for deploying S&T staff was undertaken by Dstl and the Land Warfare Centre SCIAD branch under the behest of PJHQ. The bulk of deployed staff came from within MoD and in particular Dstl. The physical and intellectual demands of operating within a deployed operational HQ were recognised as key factors and selection included elements of psychometric testing and role play. Successful candidates then entered into a prolonged process of cross defence briefings in order to gain an understanding of on going S&T projects and capabilities.

4. To prepare staff for deploying attendance at RTMC Chilwell was mandatory and provided a central mechanism to issue and refurbish equipment such as body armour and respirators. The final training events aimed to integrate the deploying scientists with their host units during the MRX phase of pre deployment training. This integration was highly beneficial in delivering effective S&T support.

Lesson: The traits and characteristics required to work as a deployed S&T advisor are not a prerequisite civilian attribute. Selection methods should be retained and a pool of deployable scientific staff identified for any future operation.

Lesson: The integration of S&T staff into their HQ pre deployment built relationships and allowed the military component to fully understand the capabilities of their embedded scientific staff. Future reactive and high readiness HQs should have assigned S&T advisors, enabling partnering and capability demonstration.

Lesson: RTMC Chilwell provided a central training and equipment hub for all deploying civilians. This successfully enabled a theatre entry base line standard to be maintained and ensured training standards across deployees. This defence capability should be maintained as future conflicts may see mod civilians deployed and increasing numbers of contractors.

OPERATIONAL ANALYSIS

"Command judgements were informed by constant analysis through J2 reflections, measurement of effect and Operational Analysis to ensure that the disruption effect on the insurgency was worth the risk"

Comd TFH, Operation HERRICK 18[1]

5. Operational Analysts have been deployed in support of Operation HERRICK to provide objective, robust, timely analytical advice to the deployed commander and staff, in order to inform the planning, execution and effect of military operations through support to decision making. Analysts have supported all aspects of command decision making especially the planning, execution and assessment of operations.

6. The deployed operational analysts gave independent evidence based advice to commanders on a range of topics from the tactical level, such as patrol saturation, enabled through the OA maintained patrol database, up to the operational level with operational analysis examining campaign effectiveness with input into the Helmand Monitoring and Evaluation Programme and operational level war games such as the Peace Support Operations Model (PSOM), which was facilitated for HQ ISAF in 2011. Other analysis work included casualty estimation, logistical planning and campaign monitoring and polling.

7. One of the most fruitful analysis approaches has been the Land Operational Reporting Database (LORD), which collated theatre operational reporting into a single researchable database. This database responded to RFIs from Theatre, MoD, PJHQ, HQ Army and Defence Equipment & Support (DE&S). It provided a single reference for all incidents involving UK casualties, attacks on vehicles or attacks on static locations. It ensured a consistent source of data and analysis to inform the HERRICK Threat. It allowed operators to spot the unusual or developing enemy TTPs from even small changes and shape the response.

Lesson: Operational Analysis can offer maximum benefit when located near the commander making decisions to achieve campaign and mission success. In HQs where the analysts were based centrally they could offer maximum support across the staff branches and deliver effect. Where the analysts were isolated or even dislocated from the HQ the OA impact was negligible.

Fig 1-3-1 UK Operational Analysts facilitate an operational level war game in HQ ISAF

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[1] Operation HERRICK 18 Post Operation Report.

Lesson: Military appreciation of Operational Analysis is low and leads to lengthy integration times. Regular inclusion of analysts onto future training exercises and study days would raise the profile and highlight the benefit of Operational Analysis.

Lesson: In future operations a single repository of theatre reporting should be maintained. It should be searchable and accessible from a range of locations.

Left Fig 1-3-2 Deployed scientists undertaking in theatre radio trials
Right Fig 1-3-3 UK Deployed Scientific Advisor undertaking C-IED trials

SCIENTIFIC ADVICE

8. SCIADs have been deployed to military operational HQs in Afghanistan in order to provide scientific and technical advice to the UK Commander and his staff in timescales commensurate with the operational need. Scientific advice is drawn from both the SCIAD's personal expertise and MoD's S&T[2] base via reach back. SCIADs also support the delivery of enhanced capability to theatre by conducting theatre trials and obtaining user feedback at the request of the UK S&T base. The reach back capability was vital in delivering accurate and timely scientific advice. It provided a two way technical communications channel, ensuring a clear route for research and development. Since the commencement of Operation HERRICK over 1000 reach back requests have been made from theatre into the UK S&T community.

9. The scope of scientific questions encountered was wide and included hard science such as armour and weapon performance alongside soft science such as insider threat mitigation, anthropology and disease control.

Lesson: A dedicated reach back capability for deployed scientists must be available, ideally at restricted and secret level. The UK S&T community must also be capable of rapidly answering operational requests. These requests and answers should be stored in an information management system to reduce duplication and provide a level of corporate memory.

Lesson: Military appreciation of deployed scientists is low and leads to lengthy integration times. Regular inclusion of scientists onto future training exercises and study days would raise the profile and highlight the benefit of Scientific Advisors.

Fig 1-3-4 UK Deployed Scientific Advisor undertaking C-IED trials

2   Including wider Dstl, Defence Equipment & Support (DE&S), Industry and Academia

10. The deployed scientists had many successes and supported many advances in technology. In particular they were invaluable in the technical battles over C-IED, vehicle armour and personal protective equipment. At the heart of this capability was the trials and testing area initially developed in Kandahar in 2007 then moved to Bastion in 2009. These large compounds allowed accurate field trials to be undertaken in secure representative conditions and were of particular value in testing and accepting UORs.

Lesson: In longer operations, particularly those with unique environmental conditions, a dedicated testing and research facility is highly beneficial in facilitating science and technology advances.

Fig 1-3-5 The Scientific Advisor's Trials and Testing Compound, Kandahar

11. The rapid threat development during Operation HERRICK did lead to a unique advancement in capability development, particularly in the evolution of C-IED threats where increasing casualty numbers required an innovative response. The rapid threat development, ▬▬▬▬▬▬▬▬▬▬ outstripped the traditional research approach and the defence industrial base had no existing countermeasures limiting the application of UORs. The sudden need for rapid research combining government and industry lead to the formation of the C-IED Detect Transition Board which created a cross DLOD military and civilian approach forcing holistic initiatives. This environment allowed a wide spectrum of solutions to be tested and advanced in a collegiate atmosphere. This unique approach recognised that some research avenues might fail, for example through low technical maturity, and accepted that even though finance and resources had been consumed the null return was a step towards a deployable solution. This model was adopted for the rapid development programmes ▬▬▬, VALKYRIE and HERCULES which drove development in force protection, vehicle armour, dismounted soldier capability, medical research and personal protective equipment.

Fig 1-3-6 Deployed scientist undertaking ECM field trials

Lesson: In operations where rapid technical innovation is required an approach must be taken that joins government, industry and military users. The tempo must be harsh with set deliverable goals and timelines. It must be recognised that candidate solutions might fail and that unlike the normal procurement process a part solution might be adopted. A 70% solution is better than no solution.

Fig 1-3-7 Seat belt testing in response to theatre reach back

Vignette: During the latter part of 2009 the Taliban expanded their production of ▓▓▓▓▓▓▓▓ across Helmand. At the time UK forces were equipped with a primary detection capability that : ▓▓▓▓▓▓▓▓▓▓ ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓ . This resulted in increased casualties and growing tactical and operational concern. As part of the C-IED research programme a candidate sensor had previously been tested that employed a different sensing mechanism. This was suggested as a solution to the new Taliban TTPs. Dstl in conjunction with the manufacturer began UK field trials whilst a SCIAD from the LWC hand carried a prototype unit to Afghanistan. ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓

MATERIAL AND PERSONNEL EXPLOITATION (MPE)

12. ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓

13. The UK DEF also played a key role in providing forensic evidence to the Afghan Judicial System in their prosecution of the enemies of Afghanistan. It also advised the UK Government on detainee processes.

> **Lesson:** The capabilities of a Level 2 or 3 MPE facility are a force multiplier and key to accurate targeting and legal adherence. The Defence S&T community should maintain their capability to support such a facility. Although unlikely to be deployable on a rapid contingent operation, a reach back and coordination function should be made available to deployed units.

SCIENTIFIC ADVISORS BRANCH LAND (SCIAD(L))

14. SCIAD(L) is an organic Army scientific support unit sitting within the Directorate of Land Warfare, Commander Land Forces. It is comprised of a small number of MoD scientists and analysts. Its core efforts are training support and operational scientific support.

15. SCIAD(L) has assisted in the selection and training of all deploying scientists and analysts, providing the link between the science and technology community and front line units. It ensures they are tested during mission specific training and are capable of working within a military head quarters.

16.

> **Lesson:** The ability to deploy scientists and analysts forward to work with front line units can yield disproportionate results. There are obvious risk considerations but the capability of deployable scientific support should be maintained.

Fig 1-3-8 A deployed SCIAD undertaking in theatre interviews

CONTENTS

SUBJECT   **PAGE**

CHAPTER 2-1
COMBAT

BACKGROUND

1. Combat operations in Afghanistan were an all arms task. Dismounted Close Combat (DCC) skills were required across the Force. Reconnaissance regiments, with augmentation from other arms, provided the bulk of the Brigade Reconnaissance Force (BRF). The Danish tank platoon, British armoured infantry company, Estonian mechanised infantry and Warthog Group provided the Task Force Helmand (TFH) armoured capability. The combat soldier adapted quickly to both the nature and tempo of operations. He was not found wanting. There is now a generational familiarity with complex counter insurgency and stabilisation operations born out of Afghanistan. Maintaining this familiarity will be the challenge as the Army resets for contingency.

2. The ability to apply a Manoeuvreist Approach was constrained through a lack of political appetite and delegated authority. The limited size of the force saw ground holding absorb the bulk of available manpower. Dynamic manoeuvre still occurred, such as strike operations enabled by aviation, and manoeuvre was prosecuted by exploiting layered Intelligence, Surveillance and Reconnaissance (ISR), precision strike and deliberate detention operations. The fixed nature of the force was compounded by a widespread Improvised Explosive Device (IED) threat and a growing emphasis on force protection over other factors. The cumulative effect saw a significant increase in weight on the man with corresponding loss of agility; Tactics, Techniques and Procedures (TTPs) shaped by the IED threat and an increase in Urgent Operational Requirements (UORs) delivered protected mobility.

3. Capabilities traditionally held at brigade level were routinely task organised down to battlegroup and sub unit level. ISR, particularly networked base Intelligence, Surveillance, Target Acquisition and Reconnaissance (ISTAR), provided a game-changing capability down to the lowest levels, requiring battlegroups to conduct a level of integration and fusion, for which they were not staffed or trained, and conduct the activity that a brigade would more usually do. The maturing nature of the Operation HERRICK command and control model led to a high degree of functionality within battlegroup and sub unit HQs, with the former being able to plan, refine and execute concurrently. These benefits were achieved through large static HQs. Looking to the future, best practice procedures must be identified and converted to processes fit for a mobile HQ.

4. Despite the complexity of the operation, and the fact that six of the ten most violent districts in the country were located in RC (SW), insurgent capabilities were limited. The insurgent had a very limited anti armour capability, there was a rudimentary indirect fire threat and the air threat (to both manned and unmanned) was low. In the future, our adversary may have at his disposal capabilities that are close to our own, in some cases exceeding ours in quantity and quality.

5. The lessons and observations detailed in this Chapter have been subject to a Capability Directorate Combat led military judgement panel and have been grouped by Tactical Function. In the main they focus on the battlegroup level.

COMMAND

RISK APPETITE
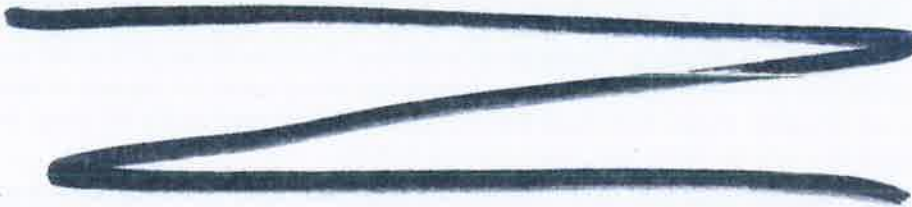
6. The balance of risk changed as Operation HERRICK evolved. Significant risk was tolerated during early roulements in Helmand. But, this changed as the strategic impact of casualties manifested itself at the political level and the insurgent adopted the IED as the weapon of choice. Risk decisions were elevated to Commander TFH or were mandated through policy by PJHQ. As this insight from Operation HERRICK 14 illustrates;

> "On HERRICK 5, as a company commander, I was allowed to make decisions that were now being taken at brigade level".

<div align="right">

▬▬▬▬▬▬▬▬▬ ., Operation HERRICK 14, Post Operation Interview.
</div>

The result being that less risk was delegated and lower level commanders made fewer risk decisions. Force protection became a driver; it shaped policy, UOR capabilities, changed TTPs and reduced risk tolerance. Constrained by policy, the deployed Force became more defensive and less agile:

   a.

   b. The integration of risk analysis into staff planning procedures, and the willingness to delegate risk decisions, must be incorporated in future training and exercises. As the Force transitions to contingency planning and response, staff must be prepared for a more dynamic operational environment and be willing and able to quickly assess risk and delegate decisions.[2]

7. As a result of Operation HERRICK, political, media and public expectation on risk is set at a level that could constrain how we train and fight in the future (which is in itself creating risk). There is an expectation for our soldiers to have the equipment that affords the best protection and that they wear it all the time and that the mission will stop for a casualty. This expectation constrains our ability to take risk. We cannot start the next operation with the risk threshold set at the Operation HERRICK level. Politicians, media and public need to understand that risk thresholds need to be reset. The Army must influence the debate, win it, and rebalance the tolerance for risk. We must regain an offensive mindset.

> **Lesson:** Dynamic risk assessment and management must be inculcated across the force and trained for. The integration of risk analysis into staff planning procedures, and the willingness to delegate risk decisions, must be incorporated in future training and exercises.
>
> **Observation:** The Army's risk appetite changed during Operation HERRICK. As a result, we became predictable, less agile, more defensive in outlook, with constrained mission command and a reduced ability to adopt a Manoeuvreist Approach. The risk threshold needs to be reset in order to become more agile and manoeuverist by design.
>
> **Observation:** There is merit in a wider public and political debate to educate the nation on the operational context and potential risks of operations beyond Afghanistan. The Army should consider how this debate could be best enabled.

BATTLEGROUP FLEXIBILITY TO TASK ORGANIZE

8. **Enduring Battlegroup Utility.** Insights from Operation HERRICK show that the battlegroup was routinely required to task organise and be capable of taking under command specialist capabilities, own and coalition sub units and also second echelon forces such as the BRF or the Brigade Operations Company (BOC), operations validated the battlegroup construct.

> "The battlegroup structure is inherently flexible. It was really good. Had the mission or task changed at any stage, the battlegroup would have been completely flexible, to move on and deliver".

<div align="right">

▬▬▬ Operation HERRICK 17 Post Operation Interview
</div>

1 (▬▬▬▬ Operation HERRICK 14, Post Operation Interview.
2 Key deduction from the Operation HERRICK 15 Mission Exploitation Symposium deep dive into Risk, chaired by Director Land Warfare, 13 June 2012
3 ▬▬▬ Operation HERRICK 17 Post Operation Interview.

9. **Hybrid Foundation Training.** It is clear that the agility required for the battlegroup to be capable of task organising during Operation HERRICK was acquired through Hybrid Foundation Training (HFT). As these insights from Operation HERRICK 15 and 17 illustrate;

> "Regularly re-subordinating companies from one Combined Force to another. This flexibility comes from HFT - where we practice it - rather than Mission Specific Training (MST), which often serves to set the force into the manner in which it has been trained ".[4]

<p align="right">████████████████, Operation HERRICK 15, Post Operation Interview .</p>

> "During HFT and MST the Battalion practiced battlegrouping on a number of occasions. This provided invaluable during Operation HERRICK 17, during which time we took command of Brigade 2nd Echelon Forces on a frequent basis. This practice should be maintained as a central feature and skill during HFT". [5]

<p align="right">Operation HERRICK 17 Post Operation Report.</p>

10. **Foundation Training for Contingency.** Training for contingency operations lacks the certainty of mission specific training for mature campaigns. Once deployed, forces must adapt at speed to a changing situation, context and threat. Key to adaptability is the ability to alter CONOPs and, if necessary force structure to meet emerging threats. This places a premium on interoperability. Training must ingrain the ability to task organise quickly and effectively with UK forces, allies and partners and to integrate new capabilities (UORs) or modularly delivered ones (by example step changes in ISTAR as the campaign develops and matures). Short notice task organisation changes between and within battlegroups should be practiced to ensure drills are understood and Standing Operational Procedures are truly interoperable.[6]

11. **Challenges to Agile Task Organisation.** Recent BATUS[7] experience has highlighted two significant structural problems with battlegrouping that due to Operation HERRICK we have forgotten about. These are the BOWMAN Plan and Management of the Joint Deployed Inventory (MJDI) which are ponderous, complex and take time to implement (████████████████████). These issues were manageable during Operation HERRICK, an enduring operation, but these brakes on agility and flexibility become obstacles in a high tempo Mounted Close Combat manoeuvre environment.[8] LE TacCIS[9] must deliver a solution that enables timely subordination of sub units from one to another. The Army needs to return to agile battlegroup task organisation.

> **Lesson:** The worked-up flexibility that allows rapid re-grouping derived from HFT must be retained. Future training must exercise this skill set as it is an enduring capability that will have real utility for contingency.
>
> **Lesson:** The ability to rapidly and re-subordinate sub units from one battlegroup to another in a timely fashion must be a Key User Requirement for LE TacCIS to enable the Army to return to agile battlegroup task organisation.
>
> **Observation:** The agility and flexibility of the batttlegroup construct to adapt to different missions and tasks was reinforced on Op HERRICK.

RESOURCING BATTLEGROUP HEADQUARTERS

12. Deployed battlegroup HQs were resourced with more core staff (Influence Officer, Media Officer and Plans Officer) and this staff capacity, coordinated by the battlegroup Chief of Staff (2IC) enabled the HQ to concurrently plan and execute operations and generate tempo. Robust battlegroup HQ structures enabled the HQ to manage attached capabilities and understand the complexity of the operational environment.

13. Battlegroup staff force generation and training proved problematic. Force generation was adhoc and often late into MST.

> "We had to work hard to identify where those additional staff officers might come from. The augmentees we used often came from the TA and were available only for the last throes of MST, so they did not have time to fully integrate in a battlegroup HQ prior to deployment". [10]

<p align="right">Operation HERRICK 17 Post Operation Interview, ██████████</p>

A lack of staff trained captains[11] added significant pressure in battlegroup HQ causing over reliance on the 2IC. This was overcome by some battlegroups (notably Royal Marine) by using Intermediate Command and Staff Course trained majors in the plans and operations officer roles.

4 ████████████ , Operation HERRICK 15, Post Operation Interview .
5 Operation HERRICK 17 Post Operation Report.
6 DLW: Foundation Training for Contingency Page 12, December 2012.
7 British Army Training Unit Suffield.
8 Detail fror ████████ Capability Directorate Combat HERRICK Campaign Study MJP, 22 January 2014.
9 Land Environment Tactical Communications Information Systems (LE TacCIS).
10 Operation HERRICK 17 Post Operation Interview, ██████████
11 Captains Warfare Course, pilot started September 2013, aims to improve staff training. However, CWC replaces the Battle Planners course which also trained battlegroup WO and staff sergeants, therefore a training gap remains:

14. The size of future battlegroup HQs needs to be scalable depending on the operation; intervention, hot stabilisation to enduring stabilisation. A2020 Combat structures will deliver a lean battlegroup HQ, that will not have the staff capacity to concurrently plan and execute operations.[12] Expectations need to be tempered to recognise the limitations that this will present, if future battlegroup HQs are required to plan, refine, execute simultaneously. A force generation mechanism is required to augment the battlegroup HQ for an enduring stabilisation operation (a similar capacity to an Operation HERRICK battlegroup HQ). This needs to be exercised.

Lesson: A force generation mechanism is required to augment the battlegroup HQ for an enduring stabilisation operation (a similar capacity to an Operation HERRICK battlegroup HQ). This needs to be exercised.
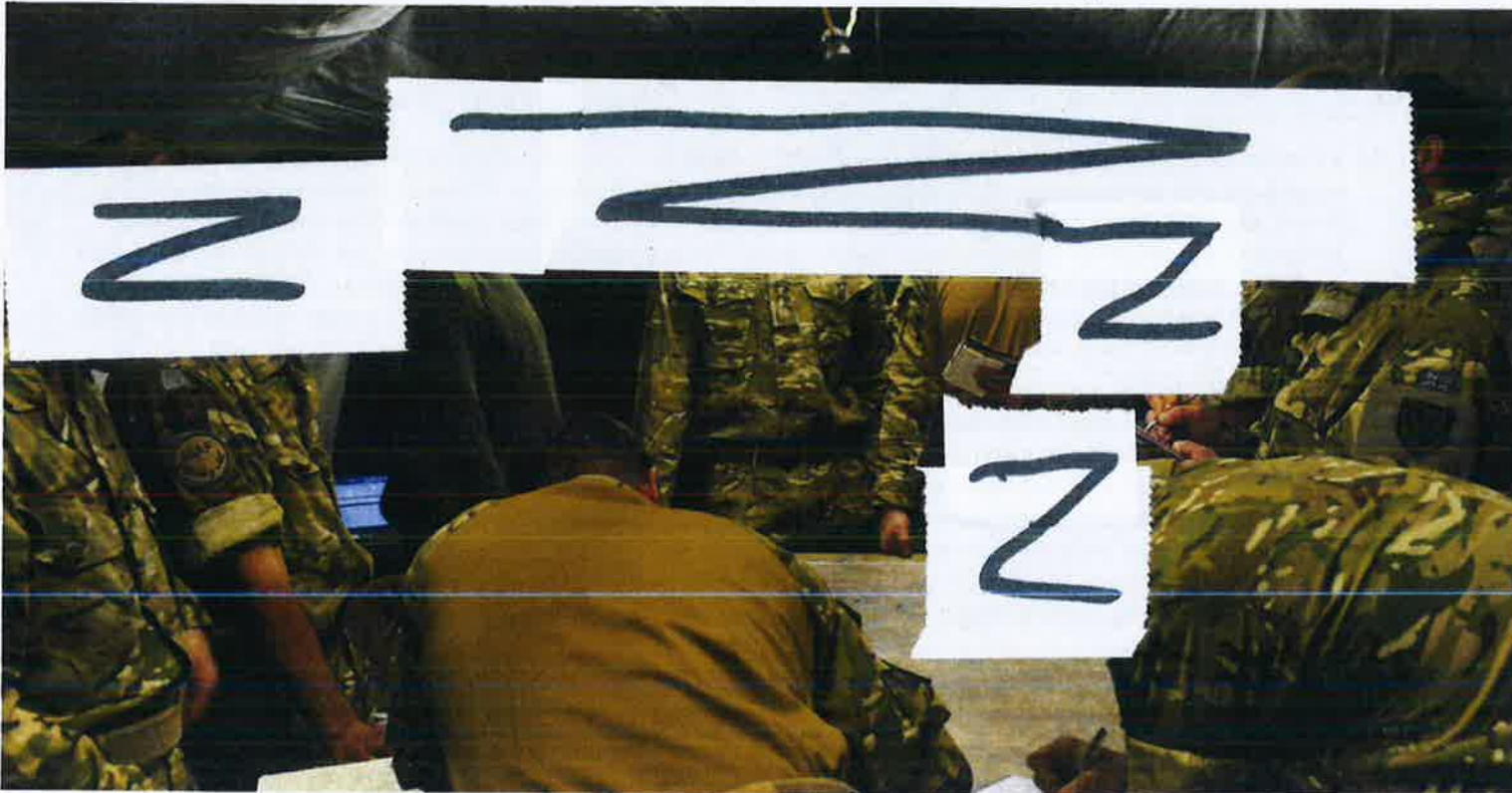
Figure 2-1-1, Resourcing Battlegroup Headquarters

TOP SECRET CONNECTIVITY

15.

Operation HERRICK 14, Post Operation Interview

16.

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12   Capability Directorate Combat HERRICK Campaign Study MJP, January 2014, determined that A2020 battlegroup HQ structures were at least one (1) staff post too few.
13
14   Operation HERRICK 16 Post Operation Interview.
15   ., CF NDA (S), Operation HERRICK 14, Post Operation Interview.

ROBUST COMBAT CIS

17. Operation HERRICK was characterised by a fixed site CIS architecture which developed over time and through the advent of the CORTEZ and Bowman High Capacity Data Radio (HCDR) and Lightweight Bowman Data Node (LBDN) networks. This enabled large amounts of data to be passed, giving near real time access to imagery, enabling Tactical Ground Reporting (TiGR[16]) and biometric data collection. All of this was done over a relatively small area.

Vignette:

Figure 2-1-2, Beyond Line of Sight communication (TACSAT)

18. For contingency we are likely to have less bandwidth, operate over longer distances (e.g. in Mali, on Operation SERVAL, the French required the ability to 'fight' beyond line of sight communications) and will require more robust voice and data systems than currently provided by Bowman. LE TacCIS must deliver these robust CIS links. The following are not currently funded in the LE TacCIS programme: [17]

   a. Beyond Line of Sight communication (TACSAT). It is vital that there is a successor to TACSAT.

   b. Ground to Air. Air-land integration was fundamental to our success during Operation HERRICK. So the requirement for a future communications architecture to support Air-Land integration is required for contingency operations.

   c. TiGR, is not being taken into Core. The functionally of TiGR must be part of the LE TacCIS solution.

19. Expectations need to be managed as battlegroups with experience in Afghanistan conduct HFT;

   "Difficult to believe how far back one has to go in terms of data and voice in BATUS, in comparison to what one was used to as a battlegroup in Afghanistan ". [18]

   ▬▬▬▬▬▬▬ *January 2014 – from experience during Exercise PRAIRIE THUNDER, 2013*

> **Observation:** LE TacCIS must deliver the end user with a capability that enables; beyond line of sight communication, a communications architecture that supports Air-Land integration and the ability to support a tactical ground patrol reporting and planning tool such as TiGR.

Figure 2-1-3 Black Hornet
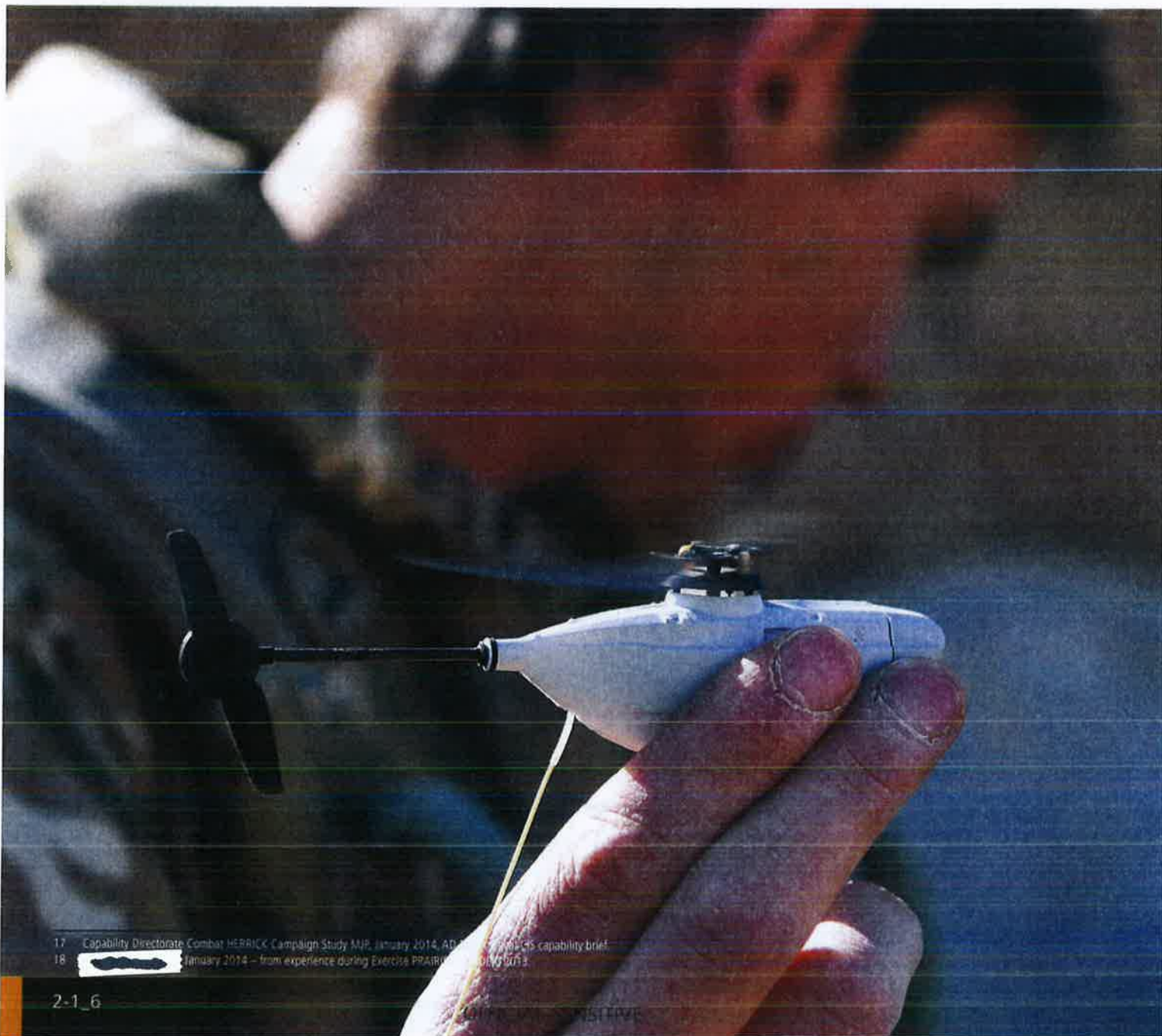
17 Capability Directorate Combat HERRICK Campaign Study MJP, January 2014, AD▬▬ TacCIS capability brief.
18 ▬▬▬▬ January 2014 – from experience during Exercise PRAIR▬▬▬▬ 2013

INFORMATION AND INTELLIGENCE

GROUND MANNED RECONNAISSANCE AND SURVEILLANCE

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25.

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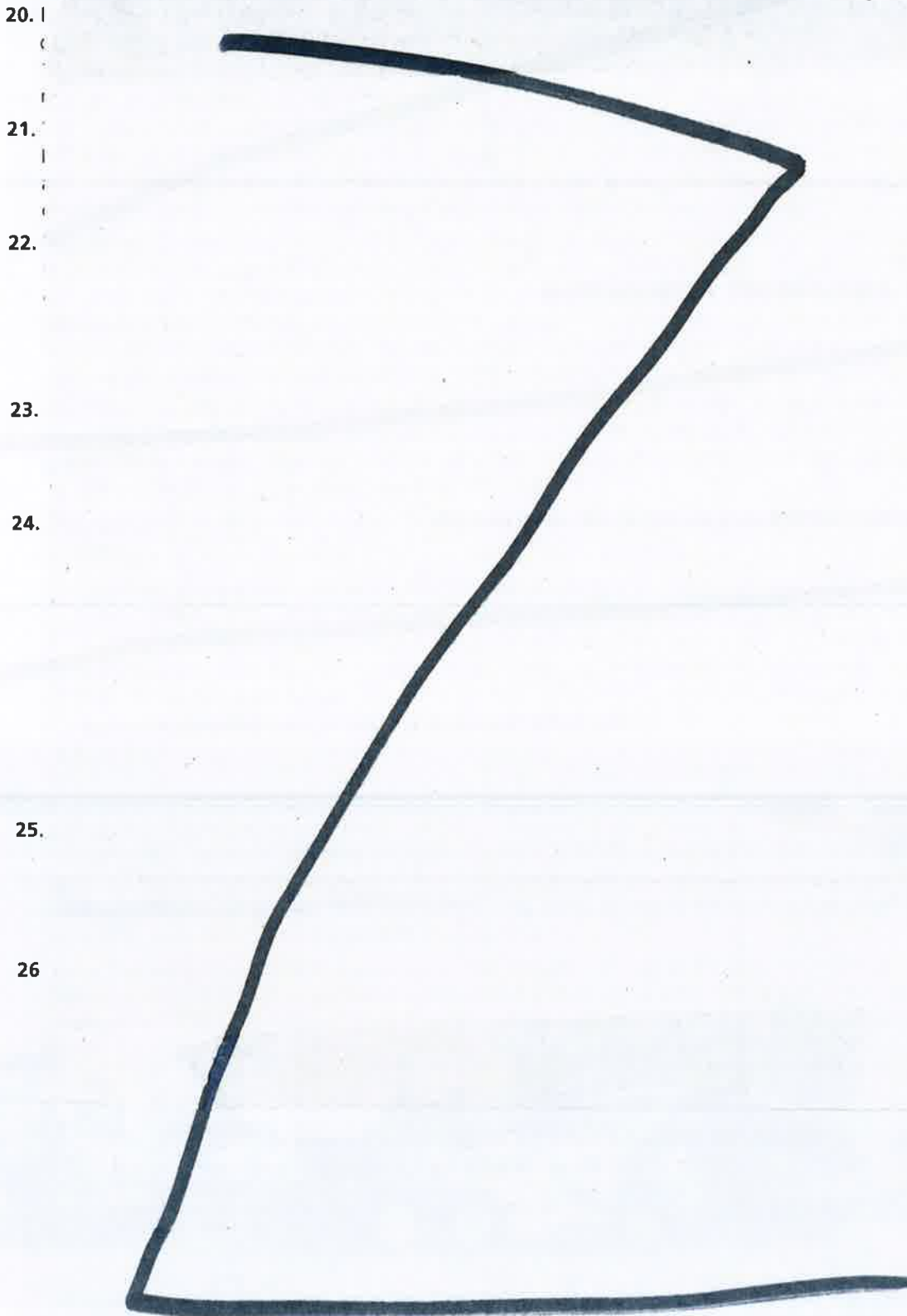
19   Brigade Reconnaissance Force – Operation HERRICK 7. The British Army Review Number 146.

20

21   Operation HERRICK 9.

22   Brigadier Messenger, Commander 3 Commando Brigade, Operation HERRICK 9, Post Operation Interview.

23   Operation HERRICK 17, Post Operation Interview.

24

RECONNAISSANCE CAPABILITY GAP

27.
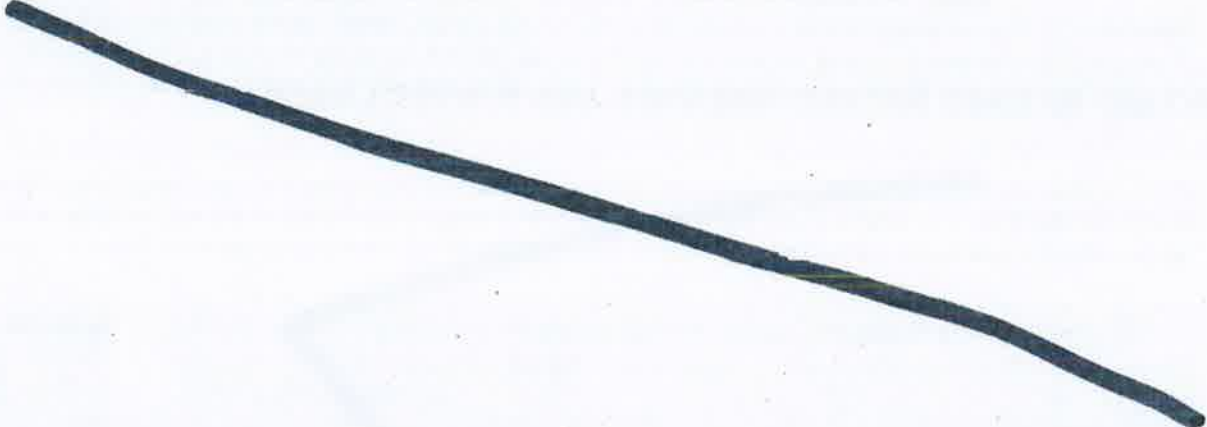
SURVEILLANCE AND TARGET ACQUISITION

28.

29. Insights from Operation HERRICK warn against an over reliance on STA;

CO CF LKG, Operation HERRICK 15, Post Operation Interview

Figure 2-1-4 Desert Hawk 3

25
26
27
28
29

30
31
32

There is a balance, and while STA capability was a proven battle winning enabler in Afghanistan, it should not become a 'go, no go' criteria. Commanders should be prepared to operate without the 'STA comfort blanket' in austere environments, where the ability to task and exploit GMR will be required.

30. The ability for battlegroups to coordinate, operate and exploit the STA capability experienced during Operation HERRICK is a skill set that needs to be maintained. Recent insight from BATUS has seen battlegroups manoeuvre to seize ground to make STA capability more effective.[33]

> **Lesson:** The ability for battlegroups to coordinate, operate and exploit the STA capability experienced during Operation HERRICK is a skill set that needs to be maintained. This can only be achieved through training.
>
> **Observation:** There is a balance, and while STA capability was a proven battle winning enabler in Afghanistan, it should not become a 'go, no go' criteria and commanders should be prepared to operate without the 'STA comfort blanket' in austere environments, where the ability to task and exploit GMR will be required.

BATTLEGROUP INTELLIGENCE FUSION AND UNDERSTAND

31. Battlegroup intelligence was very good, and got better still following investment in more people to process information. Company Intelligence Support Teams (COISTs) and Battlegroup Intelligence Support Sections (BGISS) were force-multipliers. Investment in analysis, improved understanding and reduced the tactical risks of the operation.

32. The size of additional unit and sub unit collection and analysis capability will depend on the type of operation and where fusion is best achieved. The considered view, is to enhance the provider element (military intelligence capability) and provide the "socket" at battlegroup HQ for the provider to "plug" into. Battlegroup intelligence cells (the socket) have been renamed the ISTAR platoon/troop and have been enhanced. For example; a Light Protected Mobility battalion will have one Captain, two Colour Sergeants (one Intelligence, one STAR), two Sergeants, four Corporals, one Lance Corporal and one Private. The intelligence provider and socket concept, to enhance battlegroup intelligence fusion and understand, needs to be exercised.

> **Lesson:** Military intelligence augmentation (BGISS and COIST) at battlegroup and sub unit level improved intelligence fusion and understanding. They were considered force multipliers and the improved Understand reduced tactical risk. The intelligence provider and "socket" concept, to enhance battlegroup intelligence fusion and understand, needs to be exercised.

BATTLEGROUP LEVEL ELECTRONIC WARFARE AND SIGNALS INTERCEPT (EWSI) CAPABILITY

33

> *"I wanted more EW capability. EW was a superb force-multiplier, and was another means to mitigate the doctrinal shortage of men. It allowed me to be where the enemy were".* [35]
>
> Operation HERRICK 13, Post Operation Interview.

34.
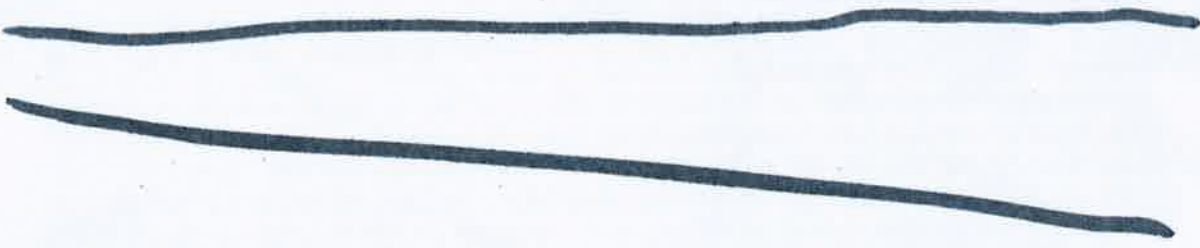
> *52 Bde Study Day – Green Zone Ops BG (N) 40 Cdo RM*

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33   CO 2 ROYAL WELSH, comment during HCS Combat MJP 23 January 2014.
34
35   ▄▄▄▄, Operation HERRICK 13, Post Operation Interview.
36   52 Bde Study Day – Green Zone Ops BG (N) 40 Cdo RM.

35.

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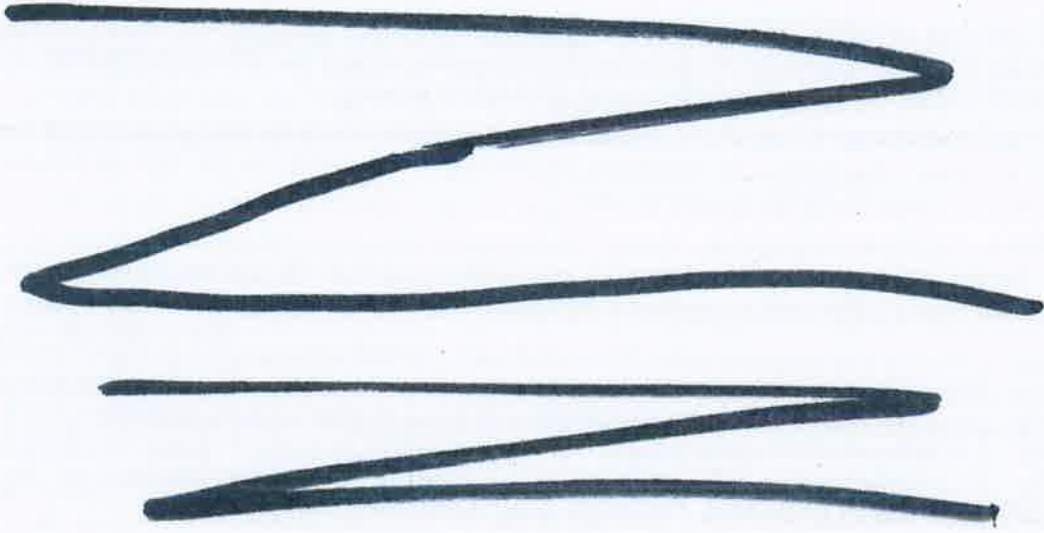
Figure 2-1-5 UK Jackal on Patrol

39   Operation SERVAL was the French, January 2013, Mali intervention operation.
40   2 ROYAL WELSH Battlegroup.

FIREPOWER

BALANCE BETWEEN PRECISION AND FIREPOWER

"The use of precision fires increases as the need for suppression reduces but precision fires are required at all times to avoid collateral damage". Commander TFH[41]

Commander TFH, Post Operation Interview, Operation HERRICK 16.

37. Operation HERRICK saw a shift in the balance between suppression and precision at battlegroup level, driven by the requirement to minimize the incidence of collateral damage (courageous restraint being the most constrictive example). Suppression will remain an essential capability; however, on balance priority now rests in favour of precision at range. Experience on Operation HERRICK suggests that greater range, ▓▓▓▓▓▓▓ and dismounted infantry precision capability was decisive. Snipers and sharpshooters were a consistent force multiplier. During Operation HERRICK 18, 96% of recorded Enemy Killed in Action (EKIA) were delivered by precision fires, and 90% of all direct fire EKIA was achieved by snipers or sharpshooters.[42]

38. The strategic impact of even minimal collateral damage endures and considerable effort was expended to ensure everyone understood that excessive firepower was seldom the route to success; recognising the 'tyranny of fires' and the double edged impact of firepower was vital. Snipers continue to demonstrate that they were the perfect weapon for COIN operations; clinical, cost effective, psychological and causing minimal collateral damage. The Force has a much better understanding of these characteristics than in the past. These lessons have relevance for contingency; determined opponents are no more suppressed by ineffective fire than we are, concerns over collateral damage will endure and weight carriage will demand that ammunition is not wasted.[43]

39. As the campaign developed, engagement ranges increased. This was due to insurgent tactics and the range and firepower of their weapon systems. ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓

Operational Observations for Science and Technology - Post Operation Interviews. Operation HERRICK 16 Compendium Report, 01 October 2013.

Close range precision is still required and this was delivered by the 5.56mm Rifle.

Figure 2-1-6 L7 GPMG

41   Commander TFH, Post Operation Interview, Operation HERRICK 16.
42   Operation HERRICK 18 Post Operation Report.
43   Operation HERRICK 18 Post Operation Report.
44   Operational Observations for Science and Technology - Post Operation Interviews. Operation HERRICK 16 Compendium Report, 01 October 2013.

40. Insights from Operational Observations for Science and Technology reporting illustrate the utility of platoon suppressive fires.

> "GPMG and LMG, were primarily used for area denial and suppression; their effect enabled other soldiers in the patrol to keep their heads up and engage with precision fire from their rifles. Almost every DCC sub-unit (including Police Mentoring and Advisory Group and Brigade Advisory Group) that was interviewed chose to carry the GPMG as the first weapon of choice in each patrol ORBAT, even when INS activity was considered unlikely. If the suppressive capability is not available, then the application of precision becomes more of a challenge. Therefore within the Section and Platoon weapon mixes, the requirements for short and long-range suppressive effects, alongside the need to minimise load, needs to be carefully considered and balanced; this applies equally to contingency". [46]

> Operational Observations for Science and Technology - Post Operation Interviews Operation HERRICK 16 Compendium Report, 01 October 2013.

Capability Directorate Combat are in year 2 of a 3 year Platoon Combat Experiment to determine the most effective mix of platoon weapons. At the end of that they will (if required); re-write the doctrine, re-scale weapon holdings and change direction on training.[47]

41. The Army must carry forward its better understanding of the balance between suppression and precision and improved fire control as a core component of efforts to deepen improvements to overall marksmanship.

Lesson: Sniper and Sharpshooter capabilities, delivered precision at range. Their effect was decisive, accounting for 90% of all direct fire EKIA during Operation HERRICK 18. They also countered platoon weapon overmatch by insurgent weapon systems, and were consistent force multipliers. The requirement for minimal collateral damage and precision will endure. Sniper and Sharpshooter capability must be maintained and exercised.

Lesson: Within the Section and Platoon weapon mixes, the requirements for short and long-range suppressive effects, alongside the need to minimise load, needs to be carefully considered and balanced; this applies equally to contingency.

Lesson: The Army must carry forward its better understanding of the balance between suppression and precision and improved fire control as a core component of efforts to deepen improvements to overall marksmanship.

Observation: Suppression delivered by GPMG, enabled the application of precision capability in a fire fight. GPMG was the suppression weapon of choice for a significant number of DCC patrols in Afghanistan.

MAIN BATTLE TANKS IN AFGHANISTAN

42. While the UK did not deploy Main Battle Tanks (MBTs), coalition partners (Canada - 2006, Denmark – 2007 and USMC - 2011) all deployed MBTs to reduce operational risk. The UK did deploy Warrior, Viking, Warthog (replacing Viking in 2010) and CVR(T). In late 2007 a Danish Leopard 2 platoon deployed to Afghanistan as part of the Danish Battlegroup operating under TFH command. Danish tanks were used on all significant TFH operations and in April 2014 were task organised to the UK Manoeuvre Battlegroup, under HQ RC (SW).

43. The UK decision not to deploy Challenger 2, when there was hard evidence from Operation TELIC on the utility of armour[48], as a means to reduce operational risk was out of kilter with our coalition partners. The Danish Battlegroup commander's request for forces in 2007, provides useful insight into the Danish decision to deploy tanks.

> "Once he had seen for himself the difficulties of the terrain and the hardship and casualties suffered by the British at their FOBs in the Green Zone, he telephoned home to request a Leopard tank platoon. His account of the operational realities convinced the Danish Defence Command to reverse an earlier decision not to deploy tanks. The Danish parliament approved the deployment of three tanks in October, and the tanks became operational in Helmand the following month". [49]

> Clear, Hold, Train: Denmark's Military Operations in Helmand 2006-2010, Peter Viggo Jakobsen and Peter Dahl Thruelse, Danish Foreign Policy Yearbook 2011.

44. The USMC's decision to deploy M1 A1 Abrams was influenced by the effect Danish tanks and Light Armoured Vehicles (LAVs) had on the insurgent during Operation HERRICK 12.

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45 The FN Minimi (LMG), was considered to have a ┊ Tight and Risk Aware by ┊ ▮▮▮▮▮▮▮ , OC B Coy, 5 SCOTS, 22 June 2012.   Optimising for Contingency at the Tactical Level: Light,
46 Operational Observations for Science and Technology - Post Operation Interviews Operation HERRICK 16 Compendium Report, 01 October 2013.
47 SO1 DCC, Capability Directorate Combat, June 2014.
48 TacDev Role-of-Armour Study: an historical review, Paul R. Syms and John L Simpson, Dstl LBSD, 29 February 2012.
49 Clear, Hold, Train: Denmark's Military Operations in Helmand 2006-2010, Peter Viggo Jakobsen and Peter Dahl Thruelse, Danish Foreign Policy Yearbook 2011.

"We sent Danish tanks and LAVs up there [following an insurgent attack on the Venco Imtiaz Construction Company guard force whose task was to protect the construction of a new road from Highway 1 to Sangin, Route 611]. I think the shock of seeing armor finally made them break up their attack. It was the largest group of enemy forces I've seen massing since I've been here". [50]

Quote from notes taken by MA/COM RC(SW) during a meeting between COM RC(SW) and COMISAF in Camp Leatherneck, Helmand on 23 August 2010

This incident served as confirmation to the USMC that there was a role for tanks in Helmand, subsequently an Abrams Company deployed in March 2011.

45. COIN operations in Helmand have demonstrated that tanks can be readily task organised into smaller groupings, as both the Canadians and Danes have demonstrated to great effect. Their Leopard 2 tanks were deployed in Kandahar and Helmand, respectively, and have provided invaluable support to British troops.

Figure 2-1-7 Danish Leopard 2 with BRF Jackal in overwatch

50   Quote from notes taken by MA/COM RC(SW) during a meeting between COM RC(SW) and COMISAF in Camp Leatherneck, Helmand on 23 August 2010.

"The physical presence, target suppression, neutralisation and compound breaching capability was immense and important. On the flanks and working the spaces between Gereshk and Sangin the Leopard 2s complemented well the capabilities and psychological effects of the VIKING and CVR(T) mobile operations groups. There is much to be said for the persistent loitering menace of a main battle tank sitting in over-watch; it intimidates insurgents and reassures both coalition forces and local nationals" [51]

_____ , *Post Operation Interview.*

46. The Danish tank platoon played a decisive role in the Danish Battlegroup's breach into Gereshk on Operation PANCHAI PALANG through which The Light Dragoons Battlegroup conducted a forward passage of lines to complete the break-in to Babaji. Danish tanks were employed on the northern flank during the subsequent clearance operation. Furthermore, their menacing presence had a detrimental psychological effect on the insurgent. [52]

Lesson: There is a role for tanks in COIN. The UK's decision not to deploy tanks to Helmand Province was out of step with all our significant coalition partners. The USA (US Army and USMC), Canada and Denmark all deployed tanks to reduce operational risk. There is a need to incorporate use of armour into UK COIN doctrine and exercise it.

Observation: Capability such as Armoured Fighting Vehicles, Unmanned Aerial Vehicles, Attack Helicopter and Fast Jet all have significant psychological impacts on EF and on the local population. The value and exploitation of this psychological impact needs to be better understood.

47. The Danish tank platoon was grouped with a Medium Electronic Warfare Team, ISR (PUMA), infantry close support, Tactical Air Control Party, Armoured Engineer Section, communications detachment, medical and maintenance sections – 16 platforms. A potent combat team, especially when grouped with the Armoured Infantry company. [53] Danish tanks were judged very effective in direct support of dismounted operations from the outside and fringes of the Green Zone.

Observation: The concept of the combat team, based around the capabilities grouped with the Danish tank platoon should be the subject of experimentation to inform force development.

UNCONVENTIONAL USE OF ARMOUR

48.

49. I

This scheme of manoeuvre was repeated successfully for a further two similar operations. [55]

50. Operating from a desert leaguer, the Danish Tank platoon routinely supported the dismounted CF NES(N) Recce Platoon during partnered Recce patrols with the ANA.

"The psychological impact of having such a presence on the high ground was clear; insurgent radio intercepts regularly reported updates on the tanks, the ANA were confident whilst on patrol with such overt and impressive support, and the locals were very aware who had the controlling hand. At night the noise of tanks moving in and out of position was so loud that whilst sitting in the compound
t
t _____ Throughout the 48-hour period, despite much scouting by the enemy, no shots were fired, a positive outcome". [56]

Lessons Learned: Utility of Tanks to Dismounted Infantry, by _____
_____ *1 GREN GDS, CF NES(N), Combat 2013 (Journal of the Combat Arms) pages 70-72*

51 _____ Post Operation Interview.
52 The Applicability of Main Battle Tank to Insurgency, _____ CO Royal Dragoon Guards, 16 September 2010.
53 From interview with _____ Danish Army, Manoeuvre Battlegroup Intelligence Officer and C _____ , Danish Army, SO3 J5 Manoeuvre Battlegroup dated 13 April 2014.
54 Danish Armoured Commander Post Operation Interview.
55 HQ RC(SW) C3 operations, 2012.
56 Lessons Learned: Utility of Tanks to Dismounted Infantry, by _____ , Recce Platoon Commander, 1 GREN GDS, CF NES(N), Combat 2013 (Journal of the Combat Arms) pages 70-72.

Vignette:
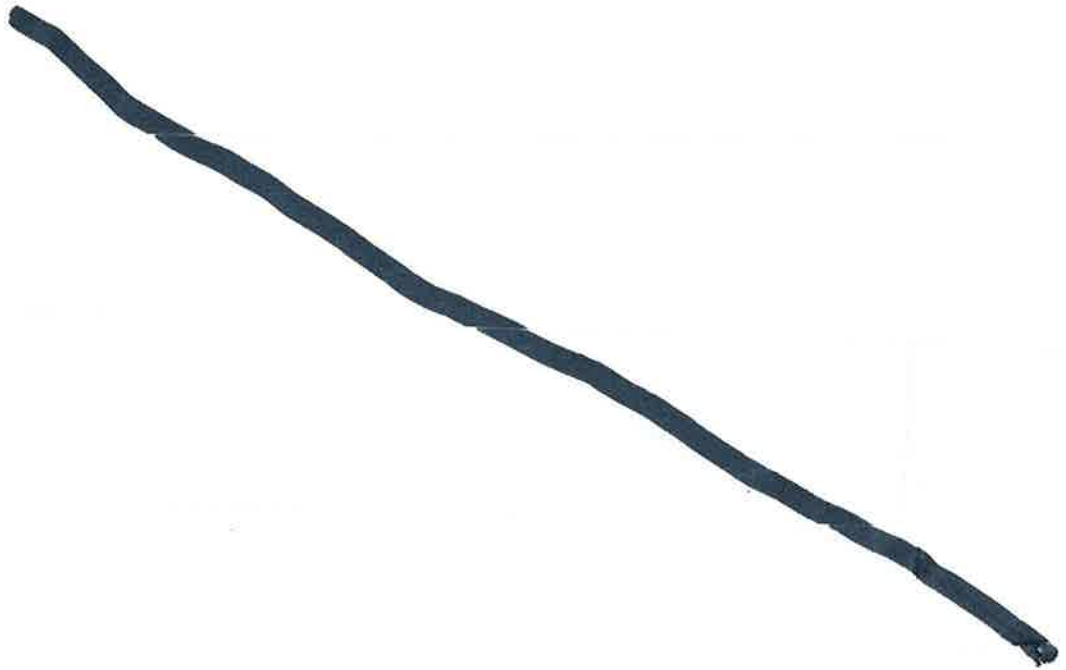
Lesson:

should be better exploited, it is embedded in current doctrine for fighting in complex terrain. It needs to be trained for and exercised. This capability will have utility in the urban environment.

FIRE SUPPORT GROUP

51. The specific mission requirements and tactical challenges faced on Operation HERRICK contributed to the adoption of the Fire Support Group (FSG) as an adaptable and potent structure to support manoeuvre at the sub unit level. Under Operation ENTIRETY the FSG concept was embedded into core training courses to ensure commanders and soldiers were able to 'Train as You Fight' utilising the structures and TTPs employed in Afghanistan.

52. A2020 formally structured the FSG concept within Light, Light PM and Mechanized Infantry Battalions, reallocating Anti-Tank and Machine Gun platoon manpower into smaller FSGs held either centrally within Fire Support Company or subordinated within a Rifle Company to enable tactical manoeuvre.

53. The drawdown of operations in Afghanistan and the increasing imperative to rebuild capability for contingency has highlighted the enduring requirement for the highest level of core skills in both anti-armour and anti-personnel operations that are best delivered by application of Javelin, GPMG (SF), GMG and HMG weapon systems by specialist operators and commanders. Capability Directorate Combat has directed that Anti-Tank and Machine Gun platoons across Light, Light PM and Mechanized Infantry Battalions will be re-established.[57]

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57 Delivering Infantry Battalion Direct Fire Support Capability for A2020, Combat Information Note 02/13, 07 June 2013.

MANOEUVRE

COMBINED ARMS MANOEUVRE

54. There is conflicting opinion on the impact of Operation HERRICK on the Army's ability to conduct combined arms manoeuvre. A pessimistic view is;

> *"Enduring operations in Afghanistan (and Iraq) have dominated the Army and its force development over the last decade. The Army has become bespoke and specialised (UORs, Mission Specific Training (MST), BRF and Counter Insurgency (COIN) focused) and therefore unsuitable for the demands of the Future Character of Conflict. The Army is reverting back (reset for contingency) to the combined arms manoeuvre approach, in doing so becoming more agile and adaptable".[58]*

> *Operation HERRICK 18 Post Operation Report.*

This view has been generated from a number of factors and constraints that frustrated successive TFH commanders.

55. A recurring theme throughout Operation HERRICK was that TFH commanders wanted to generate manoeuvre. Initially during Operation HERRICK 4 and 5, this was achieved through the creation of Manoeuvre Outreach Groups (MOGs). Designed to fight the deep battle, generate tempo and seize initiative from the Taliban. TFH approach to operations was shaped by the understanding that Afghans saw security through physical presence rather than manoeuvre. Operation HERRICK 6 saw the start of the Force being fixed, with the building of tactical bases outside district centres. By Operation HERRICK 12 there was a palpable frustration at the force being fixed and the inability to generate sufficient manoeuvre forces.

> *"Retain manoeuvre (don't become fixed or over-extended) and with it the initiative. This is so essential during high levels of combat (and casualties)".[59]*

> *Commander 4 Brigade, Operation HERRICK 12, Post Operation Interview.*

56. Manoeuvre and speed are as much an essential tenet to success, as having the correct force level. Force level, or more exactly force densities, were regarded as adequate to hold, but inadequate to expand influence further due to Rest and Recuperation (R&R), and high casualty levels. This also raises the issue of the balance between fixed bases and more manoeuvrable force elements. A lack of resource (mass[60]) and the establishment of patrol bases to hold, fixed the force. Initially the BRF provided the only manoeuvre unit available to the TFH commander, and its use was constrained by the paucity of aviation[61].

57. The USMC surge and subsequent handover of Sangin, increased TFH force densities enabling battlegroups to generate Operations Companies. Manoeuvre was extensively leveraged to counter insurgent tactics of observation and scouting screens and over come the IED laying. The key lesson was the value of combined arms manoeuvre and moreover the balance between ground-holding and manoeuvre to deliver effect, maintaining both tempo and initiative.

> **Lesson:** A combination of low force density and a fixed force constrained the ability to generate manoeuvre at brigade level and below. This handed the initiative to the insurgent. The USMC surge changed boundaries and enabled TFH to generate the force densities to manoeuvre. The key lesson was the value of combined arms manoeuvre and moreover the balance between ground-holding and manoeuvre to deliver effect, maintaining both tempo and initiative.

GENERATING A BRIGADE LEVEL MANOEUVRE CAPABILITY

58. A bespoke brigade manoeuvre force, the BRF was generated to fight the deep battle.

> *"Having a BRF trained specifically is great and gives us the second echelon manoeuvre potential. The BRF also brings us a high-end weapon of choice for Find and Strike".[62]*

> *Commander TFH Post Operation Interview. Operation HERRICK 17.*

59. The BRF was sometimes misunderstood to be merely a strike asset; in fact their great utility was in their ability to achieve tactical surprise, using aviation or Warthog to deploy into an area of interest, by outflanking insurgent IED

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58   Operation HERRICK 18 Post Operation Report.
59   Commander 4 Brigade, Operation HERRICK 12, Post Operation Interview.
60   The force ratios to population size that is required in order to be successful in COIN is generally regarded as 20 soldiers per 1000 inhabitants (20:1000). TFH just about achieved this after having handed over Sangin to the USMC.
61   It is important to understand that patrolling is not manoeuvre.
62   Commander TFH Post Operation Interview. Operation HERRICK 17.

belts and scouting screens. Layering robust ISTAR collect in support enabled "Strike to Spike" operations to mine a vast amount of information that could rapidly be fused into actionable intelligence for further exploitation.[63]

60. The BRF's roots lay in the 3 Cdo Bde Patrols Troop and 16 AA Bde Pathfinder Platoon, which provided the basis for a formation-level reconnaissance and strike capability to their respective brigades on the early Operation HERRICKs. With the companies and platoons of subsequent deployments largely fixed by the tactical situation, ad hoc BRFs were generated by the Army's light brigades that followed, in order to maintain a similar formation-level manoeuvre capability. Under Operation ENTIRETY, the BRF (from Operation HERRICK 15) was founded on a Formation Reconnaissance squadron. It is likely that in any future brigade level intervention operation, a similar brigade level manoeuvre capability will be required. This capability will be vested in the light cavalry regiments.

Observation: The BRF provided the TFH commander with a second echelon Find and Strike capability. It is likely that in any future brigade level intervention or stability operation, a similar brigade level manoeuvre capability will be required. This capability will be vested in the light cavalry regiments.

Figure 2-1-8 BRF in the Dashte – Operation DAAS January 2013

BATTLEGROUP MANOEUVRE

61. Battlegroup manoeuvre was extensively leveraged to counter insurgent tactics of observation and scouting screens and overcome IED laying. Achieving tempo in manoeuvre involved aviation and ground assault operations.

    "The effect was to suppress the insurgents through behaving; unpredictably, at range, proactively, ruthlessly and coherently with the governance and socio-economic Lines of Operation".[64]

    Operation HERRICK 14 Post Operation Report.

Manoeuvre created the physical and psychological security space to enable other levers which delivered the medium to long-term solution. Extensive use of night pre-moves - unpredictably - and the more permissive Dashte for vehicle insertions have contributed to confounding the insurgent ability to fix and in turn unbalanced their ability to operate with impunity.

62. Virtually all operations were combined arms affairs. Well-established lessons continued to apply throughout the operation, such as vehicles (including armour) operating in close country must be supported by infantry. It reinforced the point that commanders must have all-arms experience. There was a pervading view from commanders with armoured experience that there was a lack of understanding (from TFH staff) of how to employ armoured forces (Warthog, Warrior and Danish Leopard 2) and conduct Mounted Close Combat. A combination of a predominantly light or protected mobility experience and the static nature of the operation has created a generation whose experience of armoured operations is limited.

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63   Operation HERRICK 16 C4ISTAR Mission Exploitation – 06 November 2012
64   Operation HERRICK 14 Post Operation Report

63. Ground manoeuvre was complex. The ground itself presented constraints and opportunities. The more permissive Dashte provided opportunity for ground manoeuvre and was used extensively by MOGs, Formation Reconnaissance, BRF and ▇▇▇▇▇▇ The Green Zone constrained the movement of protected mobility platforms with the notable exception of Warthog. Roads and tracks channelled forces and generated vulnerable points that were exploited by the insurgent. Heavy Protected Mobility (PM) provided protection but lacked tactical mobility, routinely being channelled and forced into vulnerable points. This reduced tempo and the ability to manoeuvre.

64. During Operation HERRICK 10, the 2 MERCIAN Battlegroup assault across the Zumbelay Canal provides insights into the complexity of a battlegroup combined arms operation in the Green Zone (see Annex A). The multi-national nature of this operation, with the Czech ▇▇▇▇▇▇▇▇▇▇, Danish Mechanised Company and Estonian Mechanised Infantry, is illustrative of what we should expect when conducting future coalition combined arms manoeuvre. Training in a multi-national environment and the interoperability demands that this will generate should be built into future training. It also validates the continued requirement to conduct complex combined arms training.

Lesson: Training in a multi-national environment and the interoperability demands that this will generate should be built into future training. It also validates the continued requirement to conduct complex combined arms training.

Observation: A combination of a predominantly light or protected mobility experience and the static nature of the operation in Helmand Province has left a generation whose experience of armoured operations is limited. These commanders lack an understanding of how to employ armoured forces and conduct Mounted Close Combat.

AIR MANOEUVRE

65. The ability to manoeuvre by air assault was a significant capability and force multiplier, generating tempo and crucially maintaining the initiative. Intelligence led air assault operations frequently achieved shock, surprise and significant impact against the Taliban whilst markedly reducing the IED threat. Air assault operations were critically dependent on adequate Support Helicopter availability. Operation MOSHTARAK demonstrated the ability to plan and conduct air assault at battlegroup level and this was routinely planned and conducted by the BRF (Operation MERCURY). Air assault is a capability that has enduring relevance for contingency. Operation HERRICK has generated a cohort of soldiers, outwith 16 AA Bde, who have conducted air assault operations. There is a real risk as we reset the force for contingency, and the role reverts to the specialist brigade, that this hard earned capability and understanding will be lost to the wider Army.

Observation: Retaining an Army-wide familiarity with air manoeuvre capabilities and air assault planning considerations is important post Operation HERRICK.

Figure 2-1-9 Air Manoeuvre

SHORT GAP CROSSING CAPABILITY

66.

Commander TFH, Operation HERRICK 16, Post Operation Interview.

Lesson: '

HEAVY PROTECTED MOBILITY (PM)

67. Heavy PM (Mastiff[66], Ridgeback[67], Wolfhound[68]) provided significant protection but lacked

Operation HERRICK 18 Post Operation Report.

Heavy PM was fit for purpose in Afghanistan, but as it becomes a core capability (re-named Mechanized Infantry (Mech Inf)) [70], there is significant concern for contingency as the Mech Inf capability lacks tactical mobility until the introduction of the Utility Variant in 2022.[71]

68. The off-road capability in temperate climates is yet to be proven.

> *"I have yet to experience Heavy PM and Armour or Armoured Infantry in somewhere like BATUS, but I fail to see how the two could be combined and expected to work together – the loss of tempo will be too great and constrain the commander's plans.*

Operation HERRICK 18, Post Operation Interview.

Observation: Heavy PM was fit for purpose in Afghanistan. For contingency operations Heavy PM capability lacks

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65 Commander TFH, Operation HERRICK 16, Post Operation Interview.
66 Mastiff 1 (TCV) In Service date (ISD) 2006. Mastiff 2 (TCV) ISD 2009, Mastiff 3 (TCV) ISD 2010.
67 Ridgeback ISD
68 Wolfhound ISD 2009.
69 Operation HERRICK 18 Post Operation Report.
70 Change in terminology: Heavy PM will be renamed Mechanized Infantry, Combat Information Note 004/14 dated 28 February 2014.
71 Capability Directorate Combat, Capability Audit 2013, Mounted Close Combat capability gap.
72 Operation HERRICK 18, Post Operation Interview.

NIGHT OPERATIONS

"Extensive use of night pre-moves - unpredictably - and the more permissive Dashte for vehicle insertions have contributed to confounding the insurgent ability to fix and in turn unbalanced their ability to operate with impunity." Operation HERRICK 14, Post Operation Report. 73

Operation HERRICK 14, Post Operation Report.

69. Night operations by Conventional Forces in Afghanistan were characterised in the main as night manoeuvre rather than night fighting.[74] Night manoeuvre was used to generate surprise, reduce risk and gain both tempo and initiative. While the insurgent did not contest TFH at night, which provided ISAF greater freedom of manoeuvre and reduced risk[75], he did operate at night to move men an materiel, intimidate local nationals and emplace IEDs. Rarely conducting offensive operations at night, he demonstrated an awareness of the technical overmatch that ISAF held, by minimising movement and adopting a defensive posture during periods of high mililux levels.

70. How widely did we operate at night? Operational analysis, Post Operation Reports and Interviews paint a contradictory picture. The highest assessment of night activity by a sub-unit was 40% with a mean average of 15%.[76] The most common usage was to undertake covert night transits. These allowed elements of unpredictability and uncertainty to be generated when the patrol emerged or became visible to local nationals and insurgents.[77]

Figure 2-1-10 Night Operations

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73   Operation HERRICK 14, Post Operation Report.
74   (▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓)
75   Comd 16 AA Bde, Operation HERRICK 13, Post Operation Interview.
76   Operating at Night, WARDEV LM to Comd FDT, 15 December 2010.
77   16 AA Bde Mission Exploitation Symposium, Night Operations Deep Dive, 23 June 2011.

71. The tempo of night operations pulsed over time. The tempo during Operation HERRICK 9 to 12 was perceived as being too low.[78]

> *"There is a prevailing sense that we are not conducting enough night operations in Afghanistan. There may be a collective reticence to expand our night activity, specifically due to the IED threat".[79]*

Operating at Night, WARDEV LM to Comd FDT, 15 December 2010.

Significant ambition existed within the force to conduct more operations at night, however, this was at times constrained by operational tempo, given the requirement to operate during the day; and in certain locations the assessment that the perceived threat from IEDs could not be reasonably mitigated in darkness.[80] President Karzai's ruling[81] on offensive operations at night in and around civilian population centres also dampened the appetite for night operations, manifest in both the disapproval of proposed operations and a perception that they were prohibited.

72. There was a concerted effort by 16 AA Bde and 3 Cdo Bde (Operation HERRICK 13 and 14) to increase the tempo of night operations. Operation HERRICK 14 saw extensive use of night pre-moves, however, the concept that ISAF could benefit from using the night to conceal operations and confuse the insurgent had been challenged by 20 Armd Bde (Operation HERRICK 15), and that in many respects, the local people were unnerved by night operations and felt less secure when ISAF used the night for manoeuvre and movement, thereby reducing their confidence in GIRoA. Combined with the fact that movement at night (especially on foot) contained more risk, (given that ground sign of IEDs is far harder to detect) made the case to avoid using the night, (except when absolutely necessary) all the more convincing.[82]

73. By Operation HERRICK 17 there was a palpable frustration that we were not using the night to better effect.

> *"I know that in the early days the argument was that in a COIN environment we need to engage with the people so operating at night had limited utility. But the situation has moved on greatly. At this point in the campaign we need the interaction with the people to be from the ANSF, so moving at night to avoid the population and support the ANSF from an unexpected direction would be useful".[83]*

Operation HERRICK 17 - ▬▬▬▬▬ Post Operation Interview.

> *"We have convinced ourselves that the Taliban do night work and we should not do anything that in any way compares us to them. We have taught ourselves that the local people relate night operations to the Taliban, so we have always restricted this otherwise invaluable capability. I think this approach has been unnecessary".[84]*

Operation HERRICK 17, ▬▬▬ Post Operation Interview.

Understanding the cultural impact of conducting night operations is a lesson that must be learned for future COIN operations.

74. One area during Operation HERRICK where our night capability appeared strongest was in the conduct of intelligence-led ambush and night standing patrols to enhance tactical base Surveillance and Target Acquisition Plans (STAP) and protection. Exploiting the night to conduct offensive operations increasingly delivered results in both the interdiction and removal of the insurgent.[85] The number of ambushes conducted at night grew tour on tour. These operations would appear most appropriate given the limited local national presence at night to interact with, and the ability to delineate between local nationals and insurgents at night due to the inactivity of the former.

75. There was a perceived training gap in the capability of conventional ground-holding troops to conduct more complicated night operations. The capability ceiling was set at the standing patrol/ambush level, which should be well within any infantry sub-unit's capability. There appeared to be no lack of directed training for night operations during core[86] or MST[87] and the availability and quality of Night Vision Devices (NVDs) improved as the campaign developed. However two problems were assessed to be undermining this progress; the availability of NVDs in training and time to train effectively at night. Successful operations beyond the most basic at night require consistent 'rehearsal, rehearsal, rehearsal'.[88] This was frequently difficult to achieve against the backdrop of a congested MST programme and a

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78   DLW Information Note dated 19 September 2011.
79   Operating at Night, WARDEV LM to Comd FDT, 15 December 2010.
80   There may be a collective reticence to expand our night activity. This view was particularly prevalent from Sangin.
81   And COMISAF's Night Raids Tactical Directive, Revision 2 dated 5 November 2011.
82   Operation HERRICK 15 – Mission Exploitation Symposium.
83   Operation HERRICK 17 ▬▬▬ Post Operation Interview.
84   Operation HERRICK 17, ▬ ; Post Operation Interview.
85   Synchronised use of ISTAR assets and ambush at night to C-IED emplacers.
86   SCBC now conduct a silent full company attack with all on NVDs. 3 years ago this would have been a dawn attack.
87   There are some conflicting reports; Operation HERRICK 17 MST opportunities to operate at night were limited. We were given the task to take the lead for development of night capabilities in 4 Mech Brigade. We became quite proficient. In Kenya (the final part of HFT) we operated widely at night. Then we began our MST and we seemed to step back. CO TSU NDA, Post Operation Interview. This may be due to OPTAG reducing night training in response to the Operation HERRICK 15 reduction in night operations tempo.
88   ▬▬▬▬▬

limited equipment pool. Therefore many commanders arrived in theatre with the will but not the means to conduct more expansive night operations. ⬛⬛⬛⬛⬛⬛⬛⬛⬛ Operation HERRICK 17 makes the point;

76. ⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛

77. There is a distinct lack of night operations tactical doctrine[91] and there is no reference to Night Operations in Army Field Manual, Volume 1, Combined Arms Operations, Part 2, Battlegroup Tactics. It is recommended that a night operations doctrine audit is conducted.[92]

78. Despite significant technological overmatch against the insurgent in Afghanistan, conventional force night operations were constrained by policy, perception and the IED threat. Whilst manoeuvre at night was used to good effect, fighting at night was limited to ambush and night standing patrols to enhance FOB and PB STAP and protection. The requirement to manoeuvre and fight at night will endure into contingency. The Army must be able to operate at night against an adversary with an increased night-fighting capability of its own. We must also understand better the cultural impact of operating at night, and judge when it is and is not appropriate to operate at night in order to retain this operational advantage and use it appropriately.[93] DCC and MCC capability and training need to reflect this enduring requirement. The DCC user currently experiences technical advantage in STA against its opponents and assumes the ability to manoeuvre unseen in low light conditions. The increasing proliferation of II and TI sights and optics will negate this assumption in the coming decade, especially amongst near-peer opponents or irregular forces adapting commercial technology (eg digital cameras) to military use. The DCC user must develop the capability to manoeuvre against a threat that has the ability to observe in all light conditions and with a potential beyond the horizon STA capability through low tech unmanned aerial systems.[94]

Lesson: The requirement to manoeuvre and fight at night will endure into contingency. The Army must be able to operate at night against an adversary with an increased night-fighting capability of its own. DCC and MCC capability must develop the ability to manoeuvre against a threat that has the ability to observe in all light conditions and with a potential beyond the horizon STA capability through low tech unmanned aerial systems.

Observation: We must also understand better the cultural impact of operating at night, and judge when it is and is not appropriate to operate at night in order to retain this operational advantage and use it appropriately.

Lesson: There is a distinct lack of night operations tactical doctrine and there is no reference to Night Operations in Army Field Manual, Volume 1, Combined Arms Operations, Part 2, Battlegroup Tactics. It is recommended that a night operations doctrine audit is conducted.

Lesson: There is a lack of consensus on whether Operation HERRICK has had a detrimental impact on night fighting capability. Current evidence from BATUK suggests that we are less tactically effective at fighting at night than during daylight and that hot climates will impact on night operations tempo. It is recommended that a study is conducted to determine the impact of climate on night fighting tempo.

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89 ⬛⬛⬛ Operation HERRICK 17, Post Operation Interview.
90 ⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛

⬛⬛⬛⬛⬛⬛⬛ not good at any of this stuff regardless of whether it is day or night" Comd BATUK ⬛⬛⬛⬛ 7 February 2014.
91 No reference to night operations in AFM Volume 1 Combined Arms Operations Part 2 Battlegroup Tactics 2013.
92 Capability Directorate Combat have issued Tactical Doctrine Note 01/14 – Light Infantry Company Group Operations at Night.
93 The Future Operating Environment and Threat for Expeditionary Operations in the Land Environment July 2013.
94 Capability Directorate Combat – DCC Capability Audit 2013 Analysis dated July 2013.

DCC MANOEUVRE IN COMPLEX TERRAIN

79. The challenging nature of the ground and the IED threat required the dismounted soldier to manoeuvre in complex terrain. The Green Zone or urban interface presented limited ingress or egress points and was often marked by deep irrigation ditches and steep slopes down into the Green Zone.[95] These access points became high risk vulnerable points. The residential compound area, often a grid of tight alleys too narrow for vehicle movement and the high walls fencing each route, constrained lateral movement to dismounts.[96] Friendly force movement was predictable and provided opportunity for the insurgent to attack (IED and direct fire) while remaining constantly hidde▬ ▬▬▬

80. The ability to cross gaps and compound walls was a fundamental skill requiring the appropriate equipment and the means to train. Two capabilities, in addition to the Bridge System Infantry Assault (BISA), were fielded to enable gap crossing and wall scaling; The Obstacle Crossing Capability[97] and the Light Weight Assault ladder.[98] Ladders are now organic DCC manoeuvre support tools rather than simply vertical access enablers and must be redesigned as such around soldier burden.

81. The BISA was used effectively to cross canals;

> "This was the first time an Infantry Assault Bridge has been used in the Upper Gereshk Valley on Operation HERRICK 15. It was used by Combined Force BURMA soldiers in support of a BRF operation in vicinity of KHOMARI. The asset was used to bridge the NES Canal allowing the BRF to extract on foot after conducting a Heliborne Assault Force onto target on the western side of the canal".[99]

The BSIA will reach its out of service date by 2014 and the DCC obstacle crossing capability by 2022.[100]

Observation: It is likely that future conflict will occur in complex terrain. DCC users must retain the ability to cross, or breach, simple natural and battlefield obstacles. They must also maintain the capability to cross short wet and dry gaps without requiring specialist manoeuvre support.

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95   Operational Insights, Company level tactics in Helmand, September 2012.
96   4 RIFLES Operational Vignettes. Operation HERRICK 10 & 11
97   Obstacle Crossing Capability, ▬
98   Light Weight Assault ladder,
99   Combined Force BURMA lessons learned – The Utility of the Infantry Assault Bridge, 2 MERCIAN Battlegroup, 12 March 2012
100 Infantry Assault Bridge, out of service date 2014. Capability Directorate Combat, Capability Audit 13, 03 July 2013

Figure 2-1-11 Manoeuvring in Complex Terrain

PROTECTION

WEIGHT ON THE MAN

"The fighting value of a soldier is in inverse proportion to the load he carries."

Cathcart et al 1922 101

82. The challenge faced in the land environment of balancing the needs of physical risk management and the load burden on the soldier has been extremely testing throughout Operation HERRICK. Providing appropriate physical protection, with the least imposition of burden, within a tactically agile and permissive policy framework has proved a difficult balance to strike. As a rule and as a result of a number of pressures, the balance has generally swung in favour of additional force protection. The result has been that the dismounted soldier is extremely heavily burdened, to the significant detriment to his tactical agility and mobility. This in turn impacts significantly on his overall force protection and the ability of the force to complete the mission.[102]

Figure 2-1-12 Risk – Combat Load Fatigue

83. Advances in Personal Protective Equipment (PPE) have increased the weight carried by the infantryman. In Afghanistan the average DCC soldier carried 57 kg into combat. This burden was made up of protection (armour and ECM), lethality (weapons and ammunition) and sustainment (water, food and batteries). While the issue of a dismounted soldier's load is not new, it became acute during Operation HERRICK. Every increase in soldier burden impacts upon capability; if he wears heavier armour his risk of heat injury increases, he becomes fatigued more quickly, the quality of his marksmanship reduces and his situational awareness diminishes.

84. This insight from 2008 clearly articulates the issue.

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101   Cathcart et al. "On the maximal load to be carried by the soldier." Army Hygiene Advisory Committee Report No. 3, 435-443, 1922.
102   The Future of PPE in Contingency – The TFH Perspective, Comd TFH dated 14 August 2013.

"Force protection at the individual level is excellent but the incremental increase of individual protection measures, and in particular the weight of OSPREY body armour, has not been considered holistically and has now reached the point where mobility has been sacrificed at the expense of survivability. The balance is out of kilter. The lightening the load Urgent Statement of User Requirement (USUR) is welcome and must deliver quickly to reduce the advantage that the highly mobile insurgent currently has over TFH force elements operating in the dismounted role". [102]

Comd 16 AA Bde, Operation HERRICK 8 Post Operational Interview.

85. The challenge as the Land environment adapts to operations beyond Operation HERRICK is to change a mindset forged in Afghanistan where the over burdened dismounted soldier is accepted as the norm. Commanders should be granted the ability to make a military judgement on the level of PPE required to be worn on future operations to make the mission successful. This is seen as a critical risk by Capability Directorate Combat and is being addressed on a number of fronts;

   a. Project HERCULES, which reported in 2012, applied a scientific approach to the lightening the load USUR. It aimed to reduce the physiological and cognitive burden on the dismounted soldier.[104]

   b. Project PAYNE seeks to re-empower junior commanders by delegating risk assessment and risk management to the lowest practical level. This empowers them to assess the risk holistically and derive force protection measures and levels of mission critical equipment carriage that significantly reduces the burden and enables the infantryman to 'fight light'.[105] The School of Infantry is now using the jungle to demonstrate to students how an extreme version of fighting light can be appropriate.

   c. Project VIRTUS an integrated head, torso and load carriage system which aims to reduce the burden on the man.

Lesson: There remains a requirement to reduce the DCC load. Commanders should be granted the ability to make a military judgement on the level of PPE required to be worn on future operations to make the mission successful.

COMBAT ARMS COUNTER IMPROVISED EXPLOSIVE DEVICE (C-IED) CAPABILITY

86. The most significant threat faced by the International Security Assistance Force (ISAF) and Afghan National Security Forces (ANSF) during Operation HERRICK was the IED. The insurgents were extremely agile, mobile and adaptive in their tactics. The asymmetric nature of the campaign in Afghanistan led to the insurgents adopting the IED as their weapon of choice. During Operation HERRICK 9 the IED was responsible for 63% of all TFH casualties, a 39% increase in IED finds or strikes compared to Operation HERRICK 8.[106]

87. The C-IED campaign created a 'cottage industry' in C-IED capability which significantly changed the manner in which combat force elements operated. An analysis of C-IED success identified the following; 60% of success was attributable to C-IED TTPs, particularly Ground Sign Awareness (GSA), 30% equipment capability and 10% luck.[107]

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103   Comd 16 AA Bde, Operation HERRICK 8 Post Operational Interview.
104   Project HERCULES - Final Report FY12/13.
105   Dismounted Close Combat, Step changes and a Critical Risk, AD DCC, Combat 2014, Journal of the Combat Arms.
106   Operation HERRICK 9 Post Operation Report.
107   Operational Insights, Company Level Tactics in Helmand, September 2013, p 92.
108   Beyond Operation HERRICK and the demise of the bespoke C-IED adviser the Capability Directorate Combat Support plan is to include a C-IED adviser in the Battlegroup Engineer party who will be integrated into the planning process. DLIMS 16756 Institutionalising C-IED across the Army.
109   At individual level this will be through MATT 9.
110

89. Patrol planning through avoiding pattern setting and route selection by avoiding vulnerable points and areas of known risk was a vital skill set in countering insurgent IED capability. During Operation HERRICK, patrol planning was enabled by TiGR. TiGR allowed the user to record and complete a comprehensive patrol report, and enabled the electronic capture and recording of patrol traces. This significantly improved situational awareness at Combined Force level, particularly during relief in place and Transfer of Authority periods.[111] Although TiGR will not be taken into Core, the functionally of TiGR, as an aide to patrol planning, must be part of the LE TacCIS solution.

Figure 2-1-13 C-IED – Vallon

90.

91. The requirement to maintain the hard won C-IED skill set (the C-IED TTPs) is not in question. There is a risk that C-IED understanding could atrophy over time when the force is no longer in combat. C-IED equipment must still evolve and will drive adaptation of TTPs learned during Operation HERRICK. C-IED detect skill needs to be kept alive, in infantry battalions this will be through the Assault Pioneer Platoons. GSA training should form part of combat arm pre-employment training and for those elements of combat support that are routinely deployed with combat arms (Fire Support Teams, Engineer Reconnaissance). This skill set needs to be maintained through regular inclusion in unit training and provision of appropriate Defence Estate for it to be conducted.[115]

Lesson: Ground Sign Awareness training should form part of combat arm pre-employment training and for those elements of combat support that are routinely deployed with combat arms This skill set needs to be maintained through regular inclusion in unit training and provision of appropriate Defence Estate.

Lesson:

111 TiGR SOP handbook
112
113
114
115 Operation HERRICK 18 – Lessons for Contingency dated 15 September 2013

SUSTAIN

BATTLEGROUP COMBAT SERVICE SUPPORT

92. Battlegroup Combat Service Support (CSS) was characterised by a bespoke centralised system of CSS resupply. It is explained in detail at Chapter 4-1 and Figure 4-1-3, the Joint Force Support (Afghanistan) (JFSp(A)) supply and distribution network is a useful schematic and clearly illustrates the tactical distribution laydown at the high watermark of operations, around 2009-2012 (Operations HERRICK 9 to 15).

93. Developments within Combat sustainability capability during Operation HERRICK took place within a stabilisation laydown consisting of well established ground and aviation lines of communication and permanent tactical base infrastructure. The demands of contingency operations will require robust sustainability capability for the Combat user to minimise physical load, enhance tactical agility and reduce battlegroup CSS activity in complex environments.

> **Observation:** Battlegroup CSS as experienced in Afghanistan should not be used as the model for contingency. The demands of contingency operations will require robust sustainability capability for the Combat user to minimise physical load, enhance tactical agility and reduce battlegroup CSS activity in complex environments.

REST AND RECUPERATION (R&R)[116]

94. R&R during Operation HERRICK was a key part of the morale and welfare of our personnel and their families. Personnel deploying for at least 6 months were eligible for one period of 14 days R&R. From 1 January 2011, personnel deploying for tours lasting less than 4 months, no longer qualified for R&R. This policy change, announced by the Secretary of State and put in place during Operation HERRICK 12, reduced passenger traffic over the air bridge by 11%, significantly improving air bridge resilience.[117] Personnel deploying for at least 12 months were eligible to 3 periods of R&R, each of 14 days. Those deploying for at least 9 months were eligible to 2 periods of R&R.[118]

95. R&R was seen by commanders as necessary but when compounded by casualties, non-discretionary guard tasks and policy (manpower cap) it reduced the ability for battlegroups to generate enough mass to manoeuvre and maintain the initiative. R&R was cited throughout Operation HERRICK as the single greatest factor constraining tempo. [119] The R&R 'window' covered 60% of a 6 month tour. The impact of R&R often being most keenly felt at company level, where undermanning created significant risk.

96. In 2012, a report into the impact of under manning on operational effectiveness was initiated to gather evidence into the impact of R&R on operational capability. Interviews were conducted at the Infantry Battle School (IBS), Support Weapon School (SWS) and Land Warfare School (LWS) to capture insights into the impact of under manning, caused in part by R&R. The report was conducted at a point in the campaign when the TFH patrol base (PB) and forward operating base (FOB) foot print was at the high water mark. The executive summary of that report concluded;

> *"Whilst it is recognised that the current TFH considers the issue to be manageable there does appear to be conclusive proof that under manning, caused by R&R and Disease and Non-Battle Injury (DNBI), impacts on the ability to conduct operations at a variety of levels. Significant risk is being taken at the lowest tactical level but it must be measured against an almost universal acceptance that R&R is worth it".* [120]

> *The Impact of Under manning on Operational Effectiveness, Comd FDT, 13 January 2012.*

97. The tension between the need for R&R and its impact on resourcing is evident. The psychological pressures on particular personnel, especially EOD & Search, and those routinely engaged in the close contact battle are considerable and opportunities to de-stress are vital but for others the need for R&R may be less. The issue links to the wider issues of tour lengths and continuity.

98. ██ . This allowed operational force densities to remain at the required level. But, this model requires acuity at ministerial level to massage the manpower cap. 3 Cdo Bde recommended that, to account for DNBI, R&R, Compassionate cases et al, force generation should seek 115% of the requirement.[121] In Bosnia, R&R was conducted in theatre.

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116   See Chapter 6-6 Personnel, which has further detail on R&R.
117   Army Briefing Note 50/10, Changes to Rest and Recuperation Policy dated 23 July 2010.
118   JSP 760 places the decision to grant R&R with the operational commander – see Chapter 5-6.
119   The Impact of R&R on Operation HERRICK 13, 16X/J1, Comd 16 AA Bde, dated 08 July 2011.
120   The Impact of Under manning on Operational Effectiveness, Comd FDT, 13 January 2012.
121   Operation HERRICK 9, Post Operational Report.

99. There were several suggestions to abandon R&R as it was just too disruptive to force elements which already carried a manning burden from casualties and injuries. Implications and benefit trade-offs for removing R&R need to be investigated. Implications need to include identifying the benefits and burden to the Unit/Task Force (e.g. costs, mission accomplishment, continuity, etc.); the soldier (e.g. psychological impact, physical burden, family stress, etc) as well as MOD duty of care (e.g. media, public interest).[122] A review of R&R policy to identify how to maintain combat power needs to be conducted to inform force generation for contingency.

Lesson: A review of R&R policy to identify how to maintain combat power needs to be conducted to inform force generation for contingency. During Operation HERRICK R&R was a contributory factor to reduced force densities, that constrained operations and added tactical risk to low level routine tasks.

TEAM MEDICS

"The medical chain was fantastic. I would only like to highlight that, at the point of wounding, having as many medically trained personnel saves lives. Ideally every man should be trained as a Team Medic. I have soldiers alive today because of this training." Operation HERRICK 15 Post Operation Report [123]

Operation HERRICK 15 Post Operation Report.

Figure 2-1-14 Team Medic providing immediate first aid for gunshot wound to throat

100. Operation HERRICK had a highly responsive MEDEVAC system (MERT, PEDRO, Dust-Off and Protected Mobility Ambulance) to a Role 3 hospital. Survivability was further enhanced by trained non-specialist Team Medics[124] at the point of wounding. PJHQ directed that the ratio of Team Medics should be; 1:2 for combat troops and 1:4 for supporting arms.[125] Note that the Team Medic ratios during Operation TELIC were; 1:4 for Combat Arms, 1: 6 for Combat Support Arms and 1:8 for Combat Service Support Arms.[126] There is evidence that deploying units tried to achieve higher ratios of trained Team Medics. A medical audit conducted during Operation HERRICK 17 determined that (86%) (excluding all AMS personnel) were Team Medic trained.[127]

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122 Hence the Secretary of State for Defence announcing the Army Briefing Note 50/10 policy change.
123 Operation HERRICK 15 Post Operation Report
124 Team Medic is an Army qualification in delivering emergency battlefield trauma care. The Team refers to a 1:4 ratio, which represents a Fire Team in an Infantry Section
125 Army HQ Mounting Order for Operation HERRICK Version 6.2 published 01 Novenber 2012.
126 Operations in Iraq an Analysis from the Land Perspective, Chapter 9, Page 9, dated 29 November 2010.
127 The Carriage of Personal Medical Emergency Equipment: An Audit on Operation HERRICK 17 dated 11 December 2012.

101. Units engaged in kinetic operations, during Operation HERRICK, have found that Team Medics have proved themselves invaluable in responding to injuries on the battlefield and improving the standard of care to those that have been wounded. In order to provide redundancy and assurance of the availability of this skill set, units are routinely ensuring that every solider is Team Medic trained and accepting that the benefit outweighs the training burden in achieving this during an already compressed training programme. Units have also cited that this approach contributes to the moral component of operations by increasing confidence across the unit that they will be cared for effectively should they become a casualty.[128] The capability for all DCC [and MCC] soldiers to provide such life saving treatment and exercise its use in demanding and realistic training situations must be maintained on the completion of current operations.[129]

102. Team Medics must remain a core tactical capability for contingency at a force ratio that meets the deployed requirement, and that can be sustained through the training and assurance pipeline. Directorate Training (Army) has Team Medic capability funded until 2015/16; it will be reviewed in the interim to ensure it is correctly structured for contingency.

Lesson: Combat Arm Team Medics must remain a core tactical capability for contingency at a force ratio that meets the deployed requirement, and that can be sustained through the training and assurance pipeline.

POWER MANAGEMENT:

103. Power management was a particular problem which endured throughout the campaign. There were two aspects; tactical base and soldier power management.

   a. Power management became increasingly complex as tactical bases evolved. Base sustainability was key; from temporary austere bases and CPs to longer term FOBs.[130] The broader issues concerning tactical base architecture are covered in Chapter 3-7. Units did not have enough soldiers appropriately trained to manage, service and maintain the range of power generation systems deployed.[131] This issue became acute and was mitigated in part by JFSp(A) through the Power Management Team and training organic unit operators. The following insight from Operation HERRICK 17 makes the point;

   "There was a lack of understanding at lower levels about basic power management and the use of generating systems (FEPS, LFG etc) Units rely on a few specialists. This will need to be addressed for future operations".[132]

   Commander 4 Brigade Operation HERRICK 17, Post Operation Interview.

   b. Capability enhancements across Command and Battlespace Management, STA and Lethality have significantly increased the electrical power demands of the DCC user. In Afghanistan batteries were considered "a mission reducing factor"[133] in terms of the extra weight carried due to the mix of batteries (VHF, HF, ECM etc). There is a critical requirement to standardise the power demands/supply of the DCC user, delivering efficiencies within a generic soldier architecture, and to deliver enhanced charging capabilities such as power scavenging and inductive charging. The development of future MCC platforms must include the capability to host and support DCC power management capability.[134]

Observation: Power management at unit level needs to comply with current power management policy. Non-compliance during Operation HERRICK had a negative impact on tactical base capability.

Lesson: Common and interoperable power management systems need to be developed for the MCC and DCC user. Defence Procurement and capability development must look at new equipment through a power management lens.

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128   Operation HERRICK 18 Post Operation Report.
129   Capability Directorate Combat – DCC Capability Audit 2013 (CA13) Analysis dated July 2013.
130   Capability Directorate Combat is the proponent for Tactical Base capability.
131   LFSO 4550 Jan 2011 – All Arms General Purpose Field Power Management Policy states that units/Imns should nominate power managers to act as the commander's adviser on GP Field Power. The All Arms General Purpose Field Power Operator Instructor course is delivered by RSME and is designed to ensure that units have instructors to deliver distributed field power training to soldiers.
132   Commander 4 Brigade Operation HERRICK 17, Post Operation Interview.
133   Operation HERRICK 12, LORST.
134   Capability Directorate Combat – DCC Capability Audit 2013 Analysis dated July 2013.

OFFICIAL SENSITIVE

3.

4.

2-1-A-2
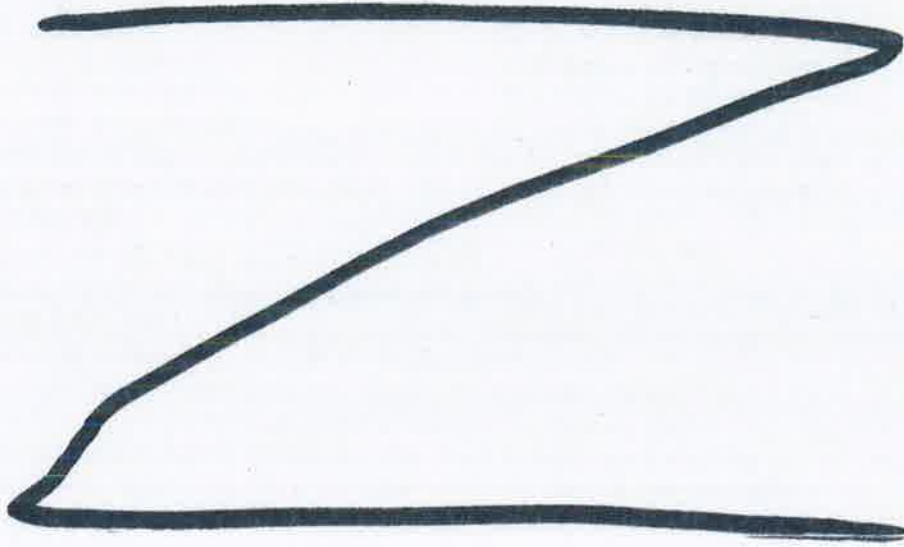
CHAPTER 2-2
COMBAT IDENTIFICATION

BACKGROUND

1. Combat Identification (Combat ID)[1] during Operation HERRICK was set against the background of the National Audit Office (NAO) Report published in 2002[2] that examined whether the Ministry of Defence (MOD) had developed an approach to Combat ID that minimised the risk of fratricide alongside the need to maintain or improve combat effectiveness. A second NAO report, published in March 2006[3], examined Defence progress in Combat ID capability. The focus for all these reports was Operation TELIC. Both NAO and PAC reports were critical, particularly highlighting failures in the Land Environment. Land attempts to rectify the areas highlighted for improvement, have in many cases failed to be realised due to insufficient direction and priority. The 2013 Army Inspector's LIMDIS report to ECAB included the intention of the Army Inspector to scope 'the apparent poor appetite, within the TLB and across Defence to deliver a Combat ID solution, it is largely seen as an Army problem'.[4]

2. In 2012, Director Joint and Air Capability and Transformation stated that;

> "Fratricide incidents, NAO and PAC reports have all served to periodically inject impetus and during Op HERRICK much has been achieved to improve our Combat ID capabilities and procedures. However, many of the recent improvements have been by UOR and have addressed the particular challenges and nature of the operational environment in Afghanistan, necessarily ignoring wider considerations. Furthermore, the resource challenges of successive planning rounds have impacted Combat ID related core programmes and projects significantly and our capability in contingent operations has been left far behind'."[5]

> *EC-44-02-01-01 Combat Identification – Governance and Risk. 4 April 2012.*

3. In recognition of this, he directed that a new strategy and approach to Combat ID be taken. In the Land Environment, this saw the transfer of 1 Star proponency from Directorate Land Warfare to Capability Directorate Combat (CD Cbt).[6]

4. The Planning Round 11 savings resulted in the removal of funding for all but UOR Combat ID measures. This impacts on the Army's ability to develop further its Combat ID capability until 2016 and limits our ability to keep in step with ABCA[7] and other coalition Combat ID developments. This situation could be interpreted by the NAO and the Media as reflecting the priority placed by MOD on its duty of care to personnel – a view that is a risk to the Army's reputation.

5. Fratricide[8], a hallmark of all periods of war, has not reduced with improved technology and the risk of misidentification of own, or coalition forces, as well as non-military actors, is rising. Based upon historical evidence, there is an expectation of an enduring potential for fratricide incidents in all future operations.[9]

Observation: Planning Round 11 savings measures, impact on the Army's ability to develop further its Combat ID capability until 2016 and limit our ability to keep in step with ABCA and other coalition Combat ID developments.

This is a risk to both the Army and Defence reputation.

Observation: Fratricide, a hallmark of all periods of war, has not reduced with improved technology and the risk of misidentification of own, or coalition forces, as well as non-military actors, is rising. Based upon historical evidence, there is an expectation of an enduring potential for fratricide incidents in all future operations.

6. **Operation HERRICK Combat ID Capability.** For Operation HERRICK a number of Combat ID Urgent Operational Requirements (UORs), some in response to fratricide incidents and subsequent lessons learned, were introduced to enhance legacy Combat ID capability. These were:

   a. **JAVELIN Arc Marker.** UOR in response to fratricide incident during Operation HERRICK 9.

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1   JDP 3-62 Combat Identification; is the process of attaining an accurate and timely characterisation of detected objects in the battlespace to support an engagement decision or of combining Situational Awareness (SA), Target Identification (Tgt ID) and specific Tactics, Techniques and Procedures (TTPs) to increase operational effectiveness of weapon systems and reduce the incidence of casualties caused by friendly fire.

2   NAO (2002) 'Combat Identification' Report by the Comptroller and Auditor General, House of Commons 661 Session 2001–2002, dated 7 March 2002 (U).

3   NAO (2006) 'Progress in Combat Identification' Report by the Comptroller and Auditor General, House of Commons 936 Session 2005–2006, dated 3 March 2006 (U).

4   ECAB/P(13)56 Dated 21 October 2013.

5   EC-44-02-01-01 Combat Identification – Governance and Risk. 4 April 2012.

6   The ACA&I responsibilities for Combat ID are split; CD Cbt is the ACA&I lead for 'Combat Identification Policy and Capability Development and CD Info is the ACA&I lead for 'Combat ID - Technical Integration.

7   ABCA; America, Britain, Canada, Australia and New Zealand.

8   Fratricide is defined in JDP 3-62 Combat Identification as; The accidental death or injury which occurs when friendly forces engage their own forces believing them, or their location, to be an enemy target. This definition clearly excludes death or injury caused by collateral damage during the engagement of a correctly identified enemy position both of which are nevertheless amongst the causal indicators for a failure in Combat Identification.

9   Combat Identification Strategy, MoD paper, dated 10 November 2012, page 1.

b. **Tactical Infrastructure Marking.** UOR in response to the fratricide incident at Patrol Base ALMAS, during Operation HERRICK 11.[10] An Active IR & Thermal beacon designed to mark Tactical Bases to Air used with passive thermal marking panels.

c. **Casualty Locating Beacon (CLB).** UOR in response to a 'man away' incident during Operation HERRICK 15.[11]

7. **Fratricide during Operation HERRICK.** The instances of fratricide recorded during Operation HERRICK are detailed in the table below. Ground to ground fratricide remains the most common form of fratricide. The most damaging fratricide incidents have been those involving attack helicopter and fixed-wing air platforms, because of greater lethality of air-to-ground ordnance. There was, however, a marked decline in such incidents through the operation; this decline has been associated with improved air-to-ground training and liaison. The Operation HERRICK instances of fratricide are broadly comparable to Operation TELIC fratricide data.

HERRICK	TYPE	KIA	WIA
H4	Ground to Ground	1	
H4	Ground to Ground	1	
H5	Ground to Ground	1	1
H5	Ground to Ground	1	1
H6	AH to Ground		4
H6	Air to Ground	3	2
H6	Ground to Ground	2	
H8	AH to Ground		9
H9	Ground to Ground	1	

HERRICK	TYPE	KIA	WIA
H9	Ground to Ground	2	2
H9	Ground to Ground	1	
H11	Ground to Ground	1	
H11	AH to Ground	1	9
H11	Ground to Ground	1	
H12	AH to Ground		9
H12	Ground to Ground	1	
H13	Air to Ground	1	2
Total		**18**	**39**

Figure 2-2-1, Operation HERRICK UK fratricide data (from Dstl fratricide database[12])

Observation: Ground to ground fratricide remains the dominant cause of fratricide. The most damaging fratricide incidents have been those involving Attack Helicopter and fixed-wing air platforms, because of greater lethality of air-to-ground ordnance. There was, however, a marked decline in such incidents through the operation; this decline has been associated with improved air-to-ground training and liaison. The instances are broadly comparable to Operation TELIC fratricide data.

8. **Combat ID in the TI region of the Electromagnetic Spectrum.** The risk of fratricide due to the difficulty of achieving personnel identification (PID)[13] using TI devices is an enduring lesson identified from Operation HERRICK. Identification Friend or Foe (IFF) devices employed on Operation HERRICK, such as PBIR, DIRM and IR cylumes and beacons are only visible to image intensifiers. Figure 2-2-2 illustrates the Combat ID capability gap between in service IFF devices and as an example, Javelin which operates in the TI wavelength.[14]

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10   21 December 2009, Patrol Base ALMAS was incorrectly positively identified as an insurgent location and the Apache AH crews were authorised to engage and 200 x 30mm rounds were fired. In the attack Patrol Base ALMAS sustained 3 UK Cat A (one died of wounds), 4 UK Cat B and 5 UK Cat C casualties.

11   A replacement GPMG Gunner was required to enable a patrol to participate in a planned operation. Having joined the patrol at short notice the soldier deployed on the task. During the patrol a compound was occupied, Pte A was employed as a sentry in a location that was screened from the remaining patrol members. Task complete, the patrol returned to a nearby ISAF location, without Pte A. MAN AWAY was called by the CF when Pte A could not be located at the CP. Pte A, remained within the compound and was subsequently recovered by an ISAF patrol that had moved to his last known location.

12   Dstl fratricide database from Operation HERRICK, UK deaths and injury only.

13   PID is defined as; Assured determination by specified means of the identity of an element and, where required, types of equipment or system. Specified means include visual, system or a combination of both and or track behaviour. (JSP 398).

14

Electromagnetic Spectrum

Figure 2-2-2,

9.

10.

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16
17
18
19
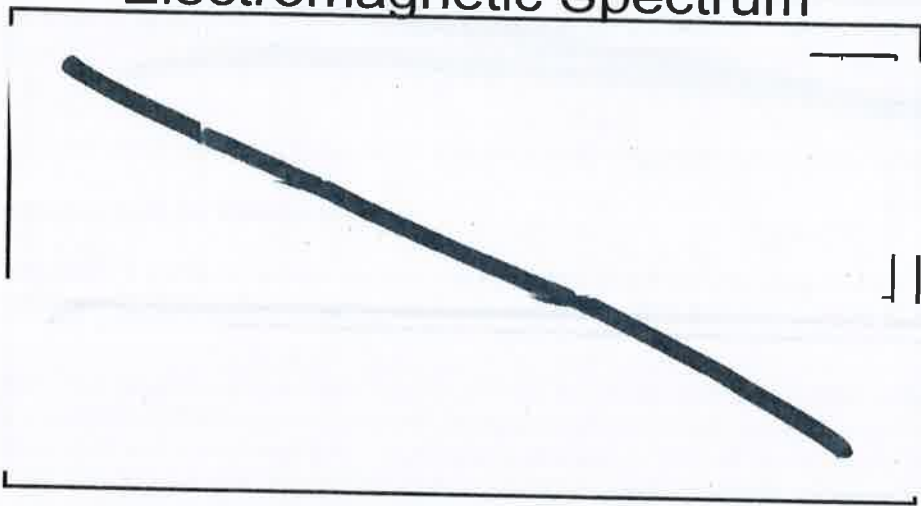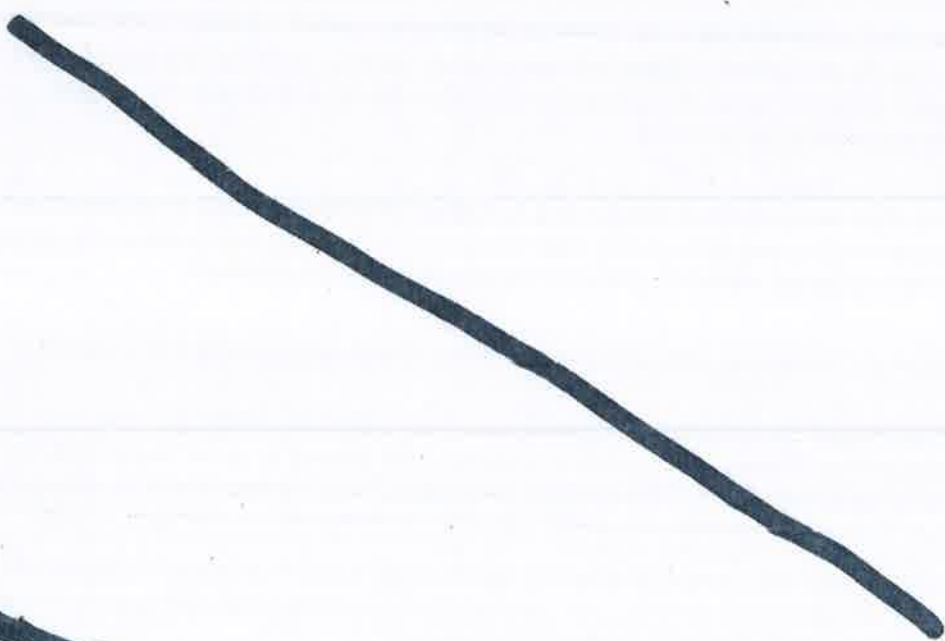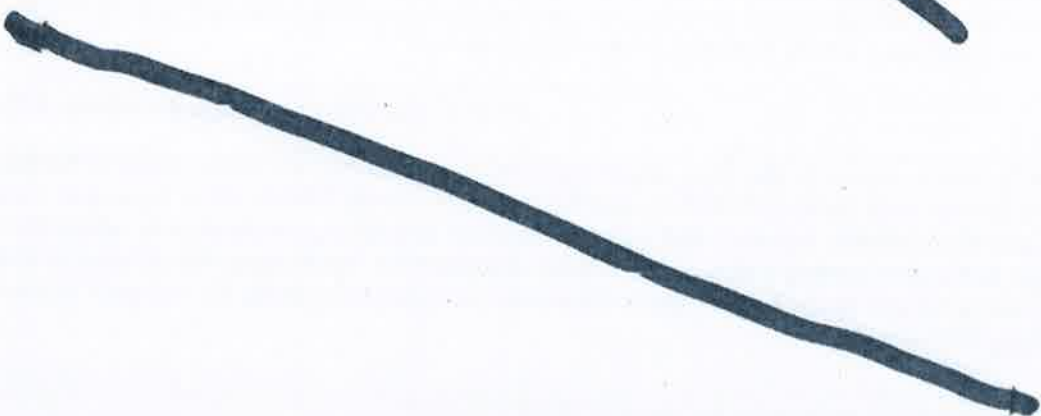
11.

"The Bowman situational awareness architecture remains fragile when operating across nets".[20]

Operation HERRICK 18, Post Operation Report.

There is also an inability to pass accurate Tgt ID and SA data in a timely manner to where it is needed, by voice or data. LE TacCIS must deliver a SSA and COP capability that will deliver enhanced Combat ID capability.

Vignette: Operation HERRICK 18 Near Miss. The Warthog Group (WHG) and the Brigade Operations Company (BOC) were conducting a joint operation to disrupt insurgents. The intent was to establish Temporary Check Points (TCPs) at predetermined locations in order to establish a foothold on the ground and a base from which to launch patrols to achieve the disrupt. Whilst occupying the TCP with flanking support from the BOC, the WHG received incoming Small Arms Fire (SAF) from an insurgent occupied compound to the North East and returned fire. During the engagement a WHG sharpshooter incorrectly identified the insurgent position and engaged a compound occupied by the BOC. Check fire was called and the mission continued as planned. Confusion existed over the location of flanking forces and the BOC detachment were targeted in the belief that they were insurgents. Where tactically possible additional Combat ID measures should be employed to guard against such errors.

Lesson: An integrated (air, land, coalition) common operating picture, and the ability to pass accurate Tgt ID and SA data, improves shared situational awareness and reduces the risk of fratricide. SSA and COP capability must be included as a Key User Requirement for LE TacCIS.

12. Sub-optimal access to Operation HERRICK equipment, including UORs during MST. Compressed MST resulted in risk being taken as individual training took priority over collective MST. The result was increased risk of fratricide due to a cohort of individuals having missed or conducted compressed collective training.[22]

Observation: Force elements should have adequate access and time to train appropriately with Combat ID capability.

13. Requirement for Recognition Training. Recognition training has been allowed to wither due to enduring operations in Afghanistan (and Iraq). As the force resets for contingency there is a requirement to reinvigorate recognition training.

"Despite technological advances Combat ID remains a highly complex and multifaceted challenge with a pivotal human element; depending, in many cases, on the physical and cognitive performance of highly trained, yet nonetheless fallible, individual servicemen and women".[23]

JDP 3-00 (Campaign Execution), 3rd Edition, P.89.

This cognitive decision to engage or not, often under conditions of severe threat and stress, requires a bespoke skill set. Training to develop visual recognition skills to enable personnel to identify friendly forces' personnel, equipment, emblems, insignia and platforms, including allies and the indigenous population, will significantly reduce the risk of human error. Recognition training is an area that requires directed effort. Visual recognition is often an essential element in achieving PID and can be key to reducing the number of fratricide incidents, the challenge of attaining visual PID is likely to be enduring.

Lesson: Recognition training needs to be reinvigorated across the Army.

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20   Comd TFH Operation HERRICK 17 Post Operation Report.
21   Operation HERRICK 18, Post Operation Report.
22   Land Environment Combat ID Risk Register: Risk ID 005, 28 November 2013.
23   JDP 3-00 (Campaign Execution), 3rd Edition, P.89.

14. Interoperability. Operation HERRICK was characterised by a lack of Combat ID interoperability between coalition and partner forces, this risk will endure for contingency operations. This risk is compounded by no specific common multi national Combat ID doctrine. In the absence of shared doctrine, nations fall back on their bespoke national Combat ID capability. Commanders are reduced to directing Combat ID policies consistent with Combat ID technology of the least capable nation. As a result Combat ID cannot be tested or trained prior to the deployment or integration of the coalition force, reducing operational effectiveness and increasing risk of fratricide.

> "The use of Combat ID equipment, such as Mockingbird, and improved SA equipment such as HeATS and GrATS[24] varies considerably by Brigade rotation in HERRICK. This marked difference in unit SOPS continues to make effective training of allies (especially air forces) challenging".[25]

Operation HERRICK 14 Post Operation Report.

The UK participation in the US led series of Exercise BOLD QUEST initiatives will inform future Combat ID capability development and close the interoperability gap. Combat ID must be common across the Joint environment and interoperable with key allies and host nation forces.

Lesson: There is a lack of Combat ID interoperability reducing operational effectiveness and increasing risk of fratricide. Combat ID doctrine must be made common across the Joint environment and interoperable with key allies and host nation forces.

15. Current Situation. The MOD's planning assumption is that future operations will be predominately conducted in coalition with partner forces, making Combat ID more complex, and calling for interoperability of equipment and harmonisation of TTPs. Within the Land Environment, two of the Combat ID pillars are deemed to be satisfactory (SA and TTPs) but there is no sophisticated TID capability. The table at Figure 2-2-3 gives the current status of TID capability. The major Combat ID capability gap is TI 'On The Man'. This DCC capability gap is a factor of lack of technology maturity to deliver capability reliably.

MOST EXTANT TGT-ID MEASURES OPERATE IN VISIBLE & IR BAND
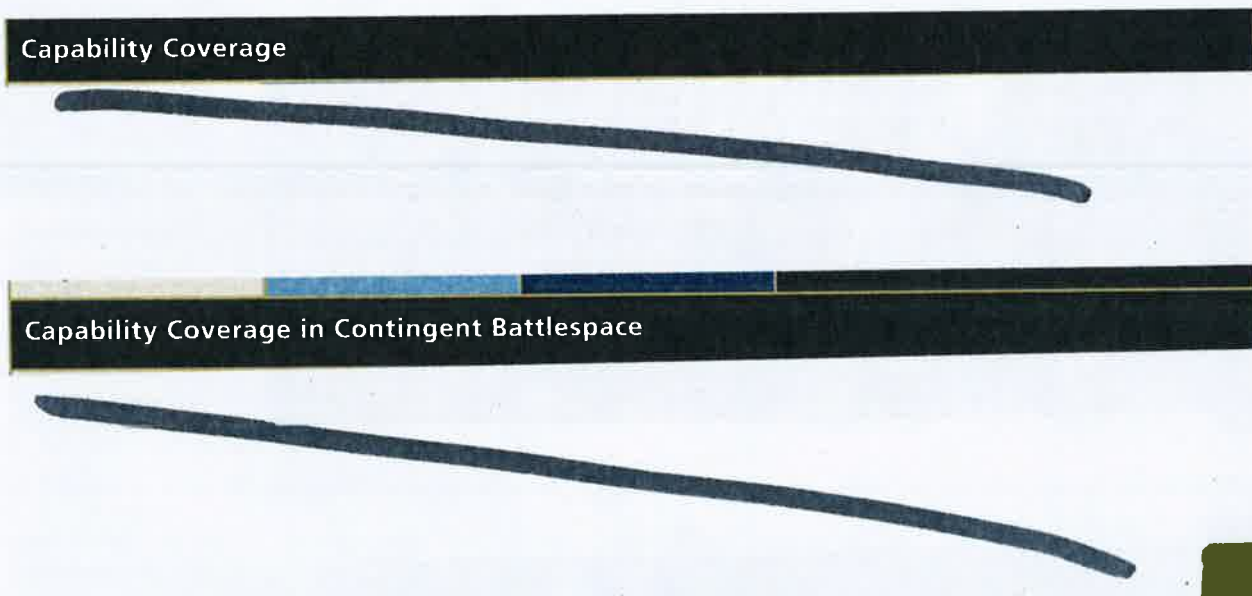
Figure 2-2-3, Current TID capability – capability gap in red

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24 Ground Asset Tracking System (GrATS), Helicopter Asset Tracking System (HeATS). Satellite based position reporting system.
25 Operation HERRICK 14 Post Operation Report.
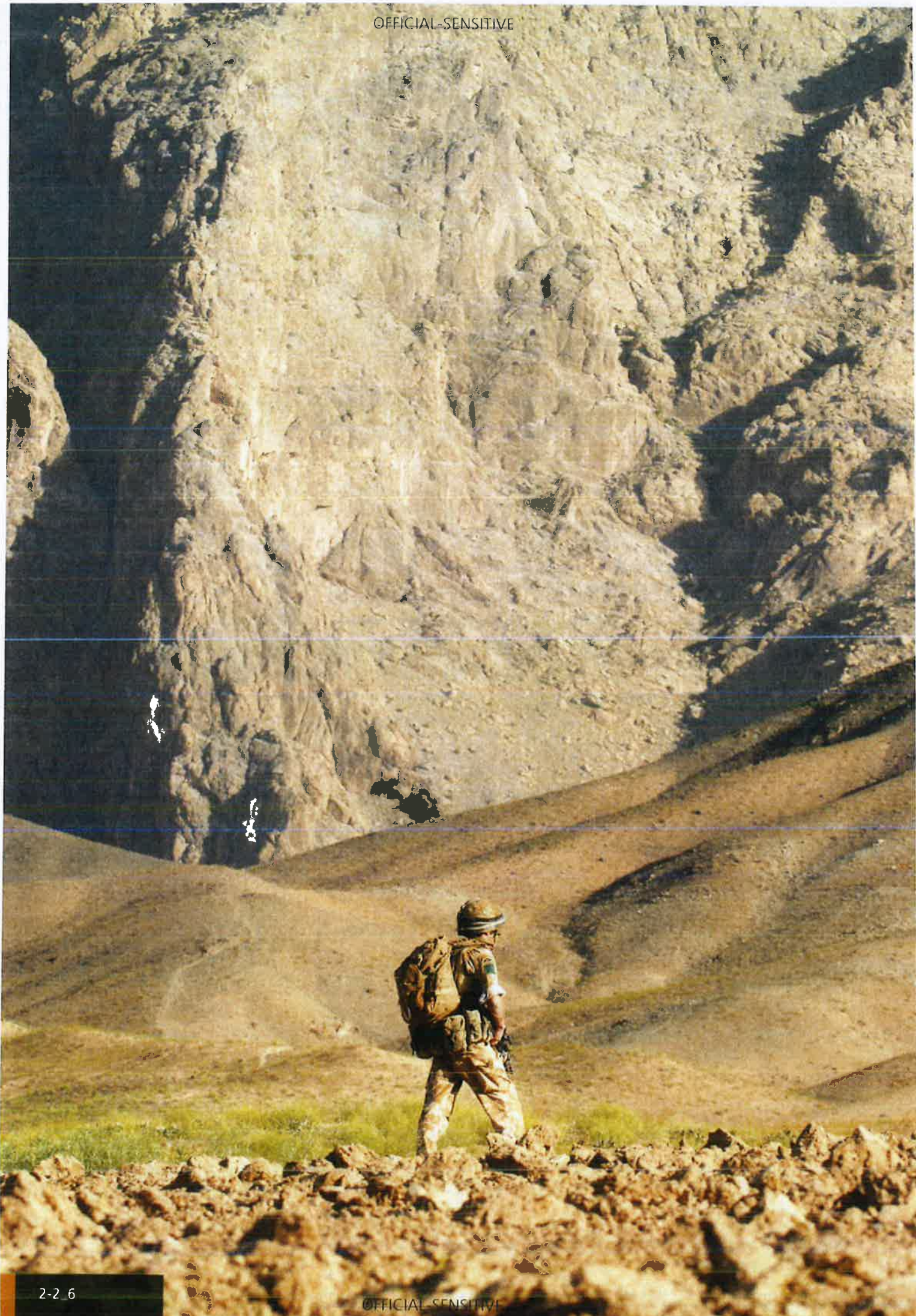
CHAPTER 2-3

REMOVED

CHAPTER 2-4

MENTORING AND ADVISING INDIGENOUS SECURITY FORCES

"The UK's approach to mentoring and advising, which has been much scrutinised over the years, is now the envy of many. British commanders and soldiers have an intuitive feel for the role and do it well. The employment of formed units in the BAG and PMAG delivered a capability that the USMC greatly respects."

Commander Task Force Helmand, Operation HERRICK 18.[1]

BACKGROUND

1. Security Force Assistance (SFA[2]) was the term adopted by ISAF to explain the framework within which ISAF progressively handed over responsibility (Transition) to the ANSF as the lead security provider. The SFA in Afghanistan Doctrine Note details the UK approach to SFA.[3] The UK adopted a partner, mentor, advise pathway.[4] Partnering conducted by ground holding battle groups was the mainstay of initial Afghan National Security Forces (ANSF) capability and capacity development. Mentoring and advising conducted by Adviser Groups as Transition progressed. Working and living alongside their ANSF counterparts they were able to train and mentor the ANSF to the point at which advising at the tactical level was no longer required. This chapter will detail the insights from the mentoring and advising roles.

2. At the operational level the Afghan National Army (ANA) was developed more quickly and, arguably, at the expense of the Afghan National Police (ANP). This was due, in part, to policy; the North Atlantic Council (NAC) recognised that a functioning police force (and the related justice institutions) was central to the international community's ultimate disengagement from the country, but pervasive police corruption and the question of how to deal with it, and in turn develop the police as an institution, delayed ISAF (and UK) engagement in police reform and development.[5] It has now been recognised that the delay caused was an operational error:

   "I think we would have established the NATO Training Mission-Afghanistan and enhanced our focus on building up Afghan National Security Forces [especially the police] more rapidly if we were to approach this campaign again".[6]

   DCDS Ops to House of Commons, Defence Committee, Oral Evidence: Afghanistan HC 944, 28 January 2014.

3. Initial Operation HERRICK tactical level engagement with the ANSF was in the form of small Observer Mentoring Liaison Teams (OMLTs) which evolved conceptually from the Military Transition Team experience gained during Operation TELIC. Operation HERRICK 8 saw the first dedicated OMLT Battlegroup. OMLT units were responsible for the development of the ANA with the occasional focus on the ANP. Operation HERRICK 12 saw the first deliberate split in mentoring and advising along indigenous security force organisational structures. In reality they were doing a remarkably similar job, although it must be highlighted that ANP mentoring presented specific policing challenges beyond the experience of the Police Mentoring and Advisory Group (PMAG) units. Sitting above the Brigade Advisory Group (BAG) and the PMAG was the Military Assistance Group (MAG).[7] The MAG was developed to provide continuity of mentoring to key ANSF appointments with culturally aware advisors. The MAG looked 'up and out' to the ANA Regional and Corps levels while complementing and reinforcing the work of the BAG and PMAG.

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1 Operation HERRICK 18, Post Operation Report.
2 SFA is the unified action to generate, employ and sustain local, host nation, or regional security forces in support of legitimate authority. SFA encompasses all ISAF actions to develop ANSF operational effectiveness and includes mentoring, partnering and advising. JDN 6/11.
3 Doctrine Note 13/03 UK Security Force Assistance in Afghanistan, June 2013.
4 Partner; An approach to relationship building through direct assistance and shared endeavour that creates the right conditions, spirit and capabilities to achieve a formal and enduring strategic partnership. Mentor; An experienced and trusted advisor who provides counsel and leadership to another person, or organisation, by agreement. Advisor; Someone who can recommend a course of action, offer advice, or inform another party, about a fact or situation. JDN 6/11.
5 NATO weekly press briefing by NATO Spokesman James Appathurai and Ambassador Mark Sedwill, Senior Civilian Representative for Afghanistan 14 July 2010.
6 DCDS Ops to House of Commons, Defence Committee, Oral Evidence: Afghanistan HC 944, 28 January 2014.
7 From the end of Operation HERRICK 15 onwards.

ANA DEVELOPMENT

4. The BAG had the lead for the tactical and institutional development of 3 Brigade[8], 215 Corps (3/215 Brigade). Tactically, this was delivered through the Kandak and Tolay Advisory Teams (KATs and TATs).[9] A 3/215 Brigade Handbook was first produced by the BAG, following the publication of Gen McChrystal's Embedded Partnering concept, on Operation HERRICK 12.[10] The BAG role was ideally suited to an Infantry battalion:

> "In this role you need the same level of individual skills – shooting, medical training, etc – as all soldiers, with the secondary skill as an advisor".[11]

Operation HERRICK 16, Post Operation Interview.

The Operation HERRICK 15 BAG deployed without its own integral force protection. This proved a constraint during both Pre-Deployment Training (PDT) and when deployed. The intent was to force closer cooperation between ground holding battlegroups, who owned the force protection, and the BAG. By Operation HERRICK 17, force protection was once again integral to the BAG.

3/215 – Partners and Advisors
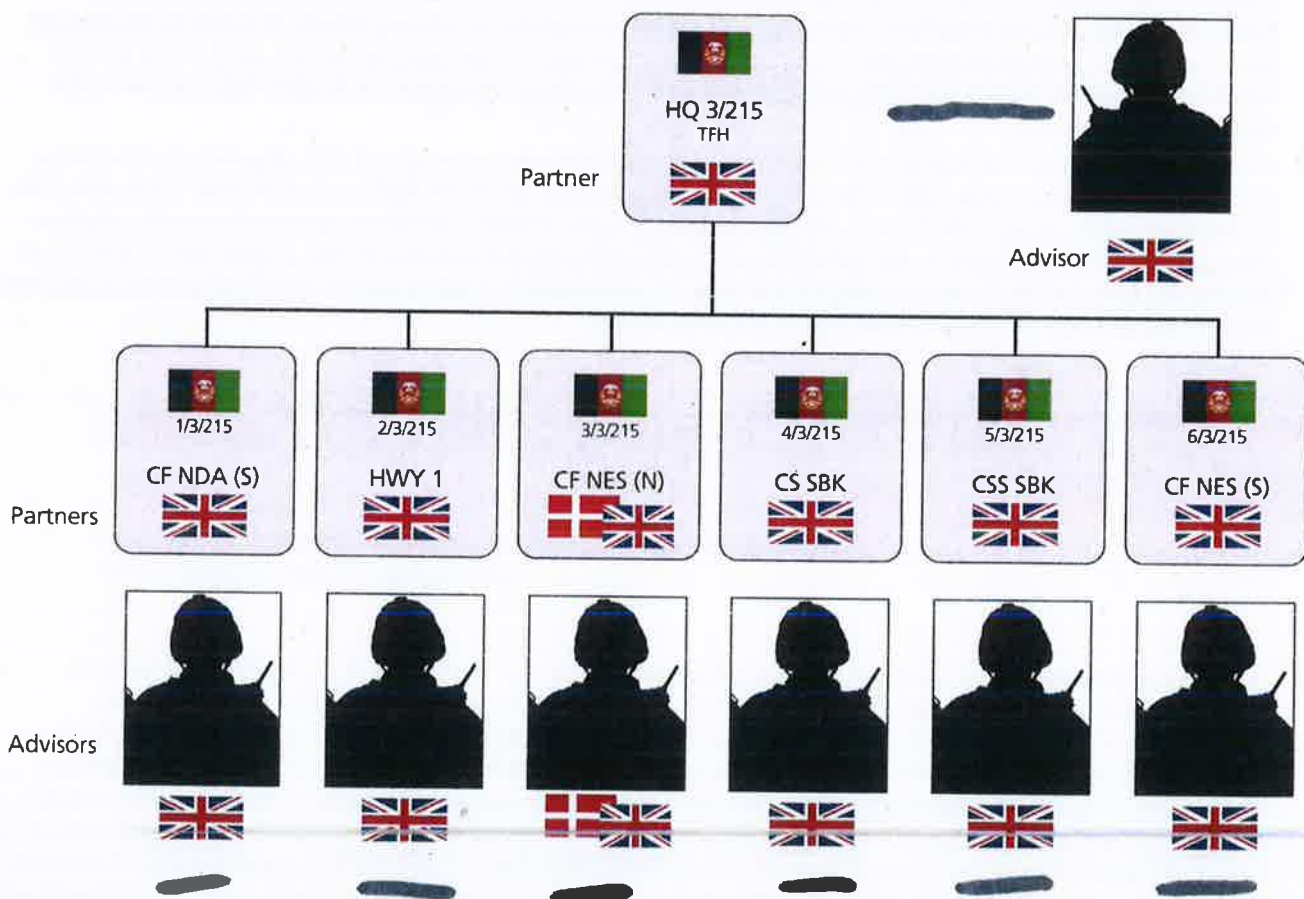
Figure 2-4-1. 3 Brigade 215 Partners and Advisors March 2011

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8   Task Force Helmand was partnered with 3/215 Brigade. HQ 3/215 formed up in early February 2010. The Bde comprises of 3 x infantry Kandaks, 1 x CS Kandak, 1 x CSS Kandak and a Hwy Kandak.
9   Kandak = Bn, and a Tolay = Coy.
10 3/215 Brigade handbook Version 4.0 – 01 March 2011.
11 Operation HERRICK 16, Post Operation Interview.
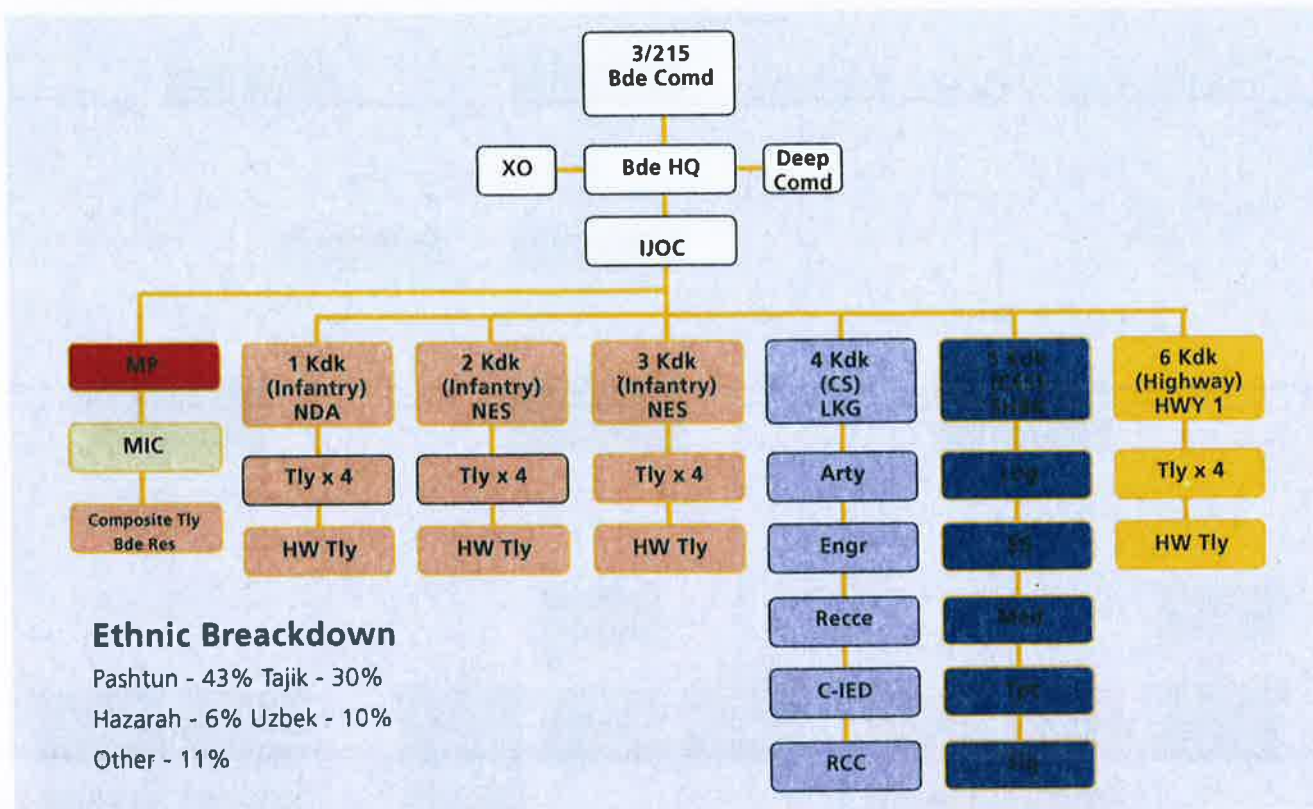
Figure 2-4-2. 3 Brigade 215 Corps ORBAT October 2012

POLICE DEVELOPMENT

5. TFH first started mentoring the ANP, in a concerted way, on Operation HERRICK 11 and 12 and this then later developed in to the Police Development Advisory Training Team (PDATT) on Operation HERRICK 13. This was in turn the precursor to the PMAG on Operation HERRICK 14 and 15. The first 'doctrine' for specific police mentoring was an AUP Smartbook produced on Operation HERRICK 14 (September 2011).[12]

6. The PMAG drew together in a single battlegroup the previously disparate Task Force Helmand (TFH) efforts to develop the capability and capacity of the ANP. Based on a combat unit, the PMAG deployed elements force generated from a wide range of cap badges and nations to all three of the Central Helmand Districts, including a small mentoring team to the Operations Coordination Centre for the Province (OCCP). The basic 'unit of currency' for the PMAG were the Police Advisor Teams (PATs); a multiple sized group operating within a district, predominantly at the precinct, but often down to checkpoint level. Several PATs worked to a District Advisor Team (DAT), based on a sub-unit HQ living in the District Police HQ and working alongside the District Chief of Police (DCoP). In this way, the PMAG were embedded at all levels of command and were able to develop an understanding of the Helmand Police human terrain and staff processes. The PMAG became the ANP experts at every level and provided a window into the ANP common operating picture, such as it existed.

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12   TFH Afghan Uniform Police Smartbook, September 2011

Helmand Police Orbat
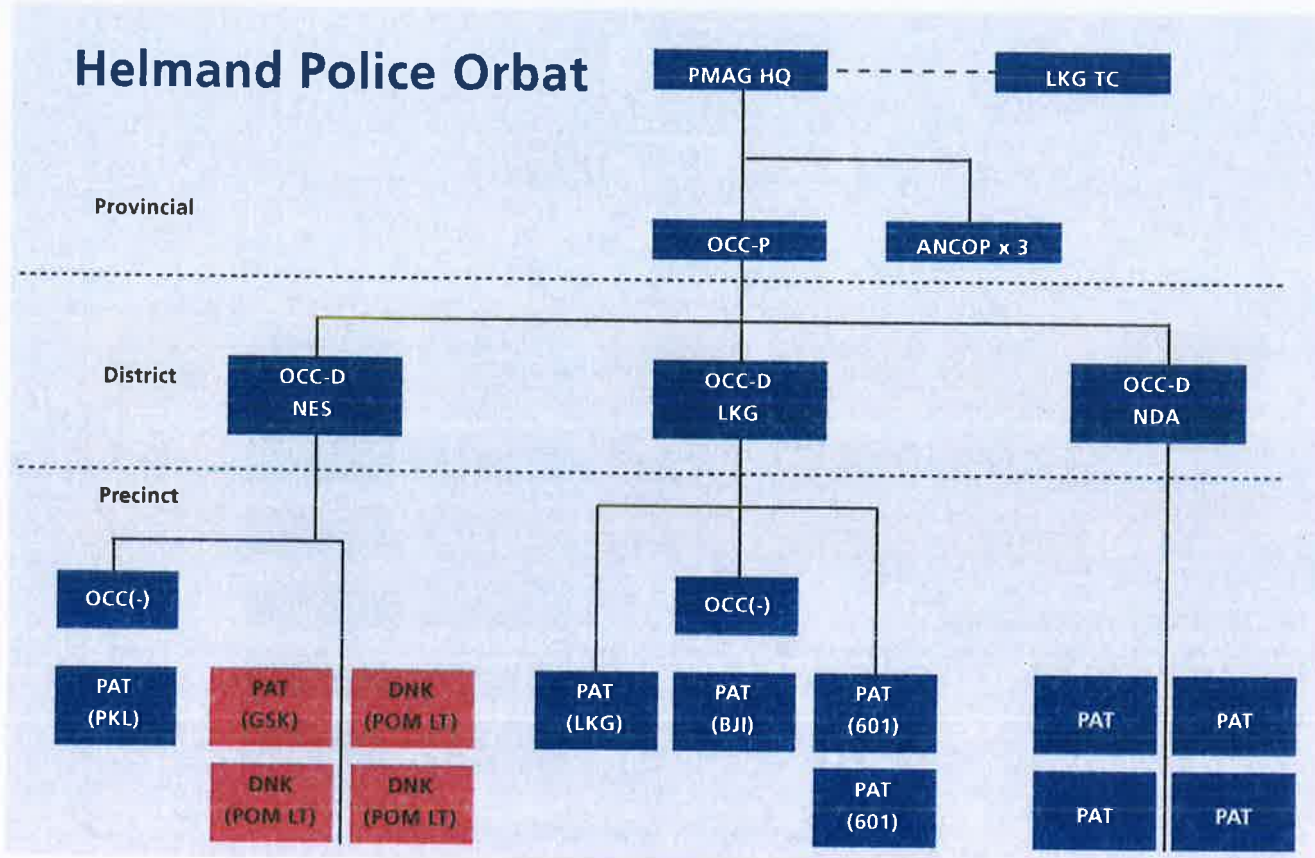
Figure 2-4-3. PMAG organisation mirrored AUP organisational structure

7. Operation HERRICK 18 and 19 saw the drawdown of the PMAG and BAG capabilities – these were reformed under the Brigade Advisory Team (BAT). The BAT focussed on advising 3 /215 Brigade with some oversight of the Operational Co-ordination Centres (OCCs). The UK argued that 215 Corps was the youngest ANA Corp and in order to account for Regional inconsistencies the UK should mentor 'lower and lighter for longer' to better achieve mission success. This was recognised as the correct decision and delivered a smoother Transfer of Lead Security Responsibility within TFH Area of Operations.

8. In the case of Operation HERRICK, it is interesting to note that the PMAG did not materialise as a coherent body until Operation HERRICK 14, did not reach Full Operating Capability (FOC)[13] until mid-way through Operation HERRICK 16 and then started to draw down before personnel deploying on Operation HERRICK 17 had even completed their Reception Staging and Onward Integration. For a campaign spanning the best part of a decade and where the exit strategy was to develop the indigenous security forces to such an extent that they could provide for their own people, the TFH police mentoring apparatus was at FOC for less than six months. Consequently, one overarching lesson that we take away from our attempts at SFA during the Afghan campaign will be to engage with the police sooner rather than later; for it is they who will ultimately provide security for the people in the population centres and provide the enduring security which will enable all other stabilisation effort.

Lesson: Early engagement with indigenous security forces either during or immediately post the intervention phase of the operation need to be part of the tactical design. Forces should be configured with the means to conduct Enabling Indigenous Security Force activity as part of Hot Stabilisation.

Lesson: All levels, both tactical and institutional, of the indigenous force need to be developed together.

Observation: For a campaign spanning the best part of a decade and where the exit strategy was to develop the indigenous security forces to such an extent that they could provide for their own people, the TFH police mentoring apparatus (PMAG) was at FOC for less than six months.

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13   Police Mentor Advisory Group peaked with a Full Operating Capability of 20 PATs during the tenure of 1st Bn Welsh Guards on Operation HERRICK 16. By the time The Royal Dragoon Guards raised their flag over PMAG HQ in April 2012 they had already begun to send PATs home. By the close of Operation HERRICK 18 the number of PATs had reduced to zero and PMAG was operating only at the district level on a 'Patrol to Advise' basis and were not routinely embedded with their ANP counterparts.

FORCE GENERATION AND TRAINING

9. **Force Generation.** Lessons from Operation HERRICK confirm that force elements fulfilling the advising and mentoring role are best drawn from a formed unit, augmented as required and providing its own force protection. The strength of a formed unit is that it allows the CO to select the right people for the advising or mentoring task.

> *"The best mentors were those who were not necessarily your best soldiers but had maturity, length of service, the experience and patience. And that is not necessarily your very best combat soldier".* [14]

Operation HERRICK 17, Post Operation Interview.

In short mentoring is best described as a 'mindset not a skillset'. Specialist augmentees should be integrated early during Mission Specific Training (MST). The formed unit model with organic force protection, developed during Operation HERRICK, should be taken forward as best practice for future advise/mentor tasks.

10. Professionalising a cadre of advisors/mentors into a career field stream has been raised as a potential future course of action to support Defence Engagement, but consensus of opinion is divided. Afghanistan demonstrates the flexible nature of our soldiers (BAG, PMAG) who with the correct training can turn their hand to the tactical advising and mentoring role. Mentoring at the MAG level was a twelve month engagement with significant language training prior to deployment. Generating a pool of personnel with mentoring experience would be possible but it would require significant investment in language training as the focus of effort shifted from region to region. A2020 Project 21, is scoping this course of action.

Observation: Advisor force elements are best drawn from a formed unit, augmented as required and providing its own force protection. Unity of advisor effort is vital and the Army should retain the unit led approach to Advisor teams in the future. This approach proved effective, resilient and should be the contingency model.

11. **Soldiers Training Indigenous Police.** A capability gap exists in the Army's ability to provide police mentoring and training. For those in the PMAG the role of advisor was made more difficult by the fact that a member of the military is advising a policeman; an Afghan commander required assistance in matters of civil policing, search and seizure, criminal procedure, and investigations. It is recommended that a study should be conducted in how to close this gap. A solution may be found in the continental gendarmerie model through directed Reserve partnering with UK police or a contractor delivered capability (e.g. the US DynCorp). During Operation HERRICK, units training for the PMAG role had to rely on ad hoc unit driven input from local UK police services. PMAG Operation HERRICK 17 exploited contacts within both North Yorkshire Constabulary and the Police Service of Northern Ireland (PSNI) to allow soldiers at all levels to get a feel for policing TTPs, albeit western ones. PMAG Operation HERRICK 17 soldiers were able to patrol with serving officers in Yorkshire cities and visit control centres in Northern Ireland prior to deployment, both of which gave an important view of what good policing looks like. The RMP could not provide this level of insight as they do not have a Community Policing role.

Lesson: A capability gap exists in the Army's ability to provide police mentoring and training. A study needs to be conducted on how the capability gap in the Army's ability to provide police mentoring and training should be closed. A solution may be found in the continental gendarmerie model through directed Reserve partnering with UK police or a contractor delivered capability.

12. **Pre-Deployment Training Formed Around Role.** COs deploying in BAG or PMAG roles considered PDT to be under resourced, lacking focus and the role poorly understood by the training body. Despite concerted effort to improve MST through immersion, a role specific two day partnering brief, a bespoke Combined Arms Staff Trainer (CAST), participation in-role on the FTX and CT5 event, this negative view persisted. PMAG PDT raised the following concerns;

> *"If one is serious about ANSF development being the mission-critical activity, then it needs to become the focus of pre-deployment training rather than being something that is achieved through the ad-hoc allocation of limited spare capacity".* [15]

Operation HERRICK15, Post Operation Interview.

Whilst ████ Operation HERRICK16 echoes this point;

> *"We had to drive and design much of the [training] programme, not simply expect the system to provide, placing considerable pressure on Bn HQ", he also makes the point that, "it is very difficult, if not impossible, to practise advising realistically during MST. The training environment cannot satisfactorily replicate the human environment and frictions in which the PATs work".* [16]

Operation HERRICK 16, Police Mentor Advisory Group, Post Operation Report.

14 ████ Operation HERRICK 17, Post Operation Interview.
15 ████ Operation HERRICK15, Post Operation Interview.
16 Operation HERRICK 16, Police Mentor Advisory Group, Post Operation Report.

CO PMAG Operation HERRICK 17 believes that it is equally difficult to exercise the PMAG HQ in the UK and a PMAG specific CAST is difficult to plan and deliver. He believes an alternative approach would be to conduct Questions 1-3 after immersion and then develop Police Mentoring, Advising and Development (PMAD) as a SIDECON activity during the higher HQ staff training; however, it must be accepted that it should be approached as a core activity.

13. These insights are not exclusive to the PMAG experience. The BAG also had a similar experience, although without the added complexity of understanding policing. It is recommended that a review, to inform future SFA operations, is conducted of Operation HERRICK advising and mentoring training.

Lesson: The training organisation understood the MST requirement for the mentor and advisor (PMAG and BAG) roles in Afghanistan but found delivering realistic training was the challenge. It is recommended that a review, to inform future SFA operations, is conducted of Operation HERRICK advising and mentoring training.

14. **The Value of Immersion.** Without doubt some of the best preparation for both BAG and PMAG was the two week in-theatre immersion conducted at D-9 months.[17] Described as the 'silver bullet' of MST progression, immersion training was the most important conceptual training for the advisor/mentor role. COs found immersion crucial; it allowed then to shape training, conceptually prepare and understand. It gave a point of reference from which both the BAG and PMAG could train to compensate for a lack of expertise in the training base. Immersion allowed soldiers to become accustomed to life amongst the Afghans and in the case of those with specific mentoring roles, it provided the opportunity to meet with their Afghan counterparts on their own turf. For the future, units should conduct immersion visits to assigned areas of focus as this will significantly improve understanding.

Lesson: Immersion training was the most important conceptual training for the advisor/mentor role. Immersion should be included in force preparation for future advisor/mentor tasks

15. **Doctrine.** To better prepare the force in the future, mentor and advising indigenous security force doctrine[18] should be refreshed to capture good practice from Operation HERRICK. There is a need to capture the science of mentoring: in particular the conceptual side, the 'softer' side, the immersion process, preparation and building relations.

Observation: Mentor and advising indigenous security force doctrine must be updated to capture the mentoring and advising lessons from Operation HERRICK.

DURING DEPLOYMENT

16. **Mentoring Fratricide.** The term 'mentoring fratricide' (or 'mentor clutter') was coined by PMAG 15 to describe the problems caused when mentoring efforts were not properly de-conflicted. Not a new phenomenon, multiple actors and multiple mentors caused confusion and a lack of coherence from the start. It has been described[19] as the single biggest hindrance to the effective conduct of operations. The PMAG 'shared' the mentoring space with United States Marine Corps (USMC), ▬▬▬▬▬▬▬ , Helmand Provincial Reconstruction Team (PRT) Rule of Law Team, European Policing Mission and civilian contractors.

17. Mentoring should, by definition, be one to one business as you have to develop a mentoring relationship with your mentee. There is no development coherence or strength to that relationship if a mentee has multiple actors. For the mentees, access to multiple mentors is damaging; everybody wants a piece of his time. The regional head of AUP logistics had seventeen mentors for him and his staff. The people with the most complete view of the combined mentoring picture were more often than not the Afghans themselves. This allowed them the opportunity to play one coalition mentor group off against the other and horse-trade for resources.

18. The following insight illustrates how mentoring fratricide was avoided during Operation HERRICK 15;

> "In order to minimize disruption, and in conjunction with the US mentor team and the PRT, we apportioned one western mentor to each Afghan who "owned" the relationship and through whom everyone else would work. For example, the Provisional Chief of Police's mentor was a USMC Colonel from Task Force Leatherneck (and this neatly demonstrates the difference between mentoring and partnering, because the Chief of Police in fact had two partners; TFH and TFL, but only this one mentor). If Commander TFH wanted to speak with the Chief of Police for instance, he would discuss it with the USMC mentor and he (or we) would take things on from there".[20]

> ▬▬▬▬ , *Police Mentor Advisory Group, Operation HERRICK 15, Post Operation Interview.*

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17   The load on the in-place/hosting force should not be underestimated; 30 personnel for 2 weeks is a significant burden.
18   AFM Vol 1 Combined Arms Operations Part 9 Tactics for Stability Operations and AFM Volume 1 Part 10 Countering Insurgency
19   Repeated Post Operation Reports and Interviews.
20   ▬▬▬▬ Police Mentor Advisory Group, Operation HERRICK 15, Post Operation Interview.

19. Mentoring fratricide also caused mentor overload; Afghans in the OCCP and PPHQ more widely were at risk of suffering from advisor weariness. It makes unity of effort very difficult to achieve. During Operation HERRICK 17, all parties agreed in principle that they should be doing more to work coherently together, but could never agree on the process by which they were held to account. The fact that military and civil boundaries were not contiguous often generated more than one interlocutor, further exacerbating mentor fratricide. For the future, coalition partners must strive to achieve mentoring unity of effort as mentoring fratricide is a significant factor that undermines the enabling effort.

> **Observation:** For the future, coalition partners must strive to achieve mentoring unity of effort as mentoring fratricide is a significant factor that undermines the enabling effort.

20. **Countering the Insider Threat.** Historically, insurgents have exploited infiltration, impersonation, coercion and intimidation. This threat, which manifested itself as the Insider Threat, was equally prevalent in Afghanistan. The Insider Threat was not limited to location; it existed both 'inside the wire' and 'outside the wire'. The strategic consequences were significant, influencing both ISAF and ANSF Centre of Gravity (its cohesion) by undermining the will of the coalition. Insider attacks also struck at the heart of the coalition relationship with ANSF partners, jeopardising the trust built over a ten year campaign.

21. The motivations for inside attacks are various, often complex, and likely to evolve during the course of a campaign. Since 2007, the number of insider attacks against ISAF rose, and in 2012 they accounted for 22% of ISAF fatalities.[21] In Helmand Province, 2012 saw a marked increase in Insider Attacks; the threat often migrating rapidly from other Regional Command (RC) Areas of Operation. An Insider attack incident in RC(E) migrated in less than 24 hours to RC(SW) – a coordinated effort by related ANA soldiers. In this case the incident was not motivated by the insurgency but by a misguided religious interpretation of all ISAF soldiers were infidels.

22. The coalition response was a rapid COM ISAF driven and directed effort to institutionalise Insider Threat training across ISAF. The Insider Threat has also been mitigated through the absolute co-operation of the ANSF chain of command and the disciplined and sensitive application of C ▬▬▬▬.[22] The rapid development of ▬▬▬▬ ▬▬▬ during Operation HERRICK 18 MST to establish common TTPs for preventative and reactive measures to counter the threat is an example of dynamic reaction in UK and in Theatre to threats in theatre. The rigorous application of ▬▬▬▬▬▬▬, conducted with respect to Afghan partners, proved highly effective in protecting UK troops. Establishing an empathetic rapport to allow the identification of a locations baseline behaviour was central to identifying indicators and warnings of a potential threat. Additionally, the ANSF worked to reduce the threat through command engagement, the use of their own Guardian Angels, and the introduction of measures to identify and eliminate potential sources of infiltration, including enhanced vetting and internal security measures.[23]

23. The Insider Threat will remain a factor in future security force assistance operations. It is recommended that ▬▬▬▬ ▬▬▬ is developed for contingency as the UK's measure to counter the Insider Threat. There is a need for military training and education to enable personnel to understand the precursors, evaluate the risk and seek to prevent Insider Threat attacks from occurring.

> **Lesson:** Insider Threat training must be designed to enable personnel to understand the precursors and evaluate the risk.
>
> **Lesson:** ▬▬▬▬ was an example of dynamic reaction in the UK to threats in theatre. ▬▬▬▬▬ was good practice adopted by ISAF. A similar Insider Threat strategy should be adopted for future mentor and advising indigenous security force or capacity building operations.

24. **UK Civilian Police Risk Appetite.** During the early years in Helmand, only the military could deliver mentoring effect at the precinct and checkpoint level. The UK civilian police who volunteered to deploy to Helmand were all of Superintendant or Chief Superintendant rank and therefore rightly focussed at developing the DCoPs and other senior AUP staff. However, they struggled to secure any Foreign and Commonwealth Office approval to travel out of the main bases. This caused local friction between civilian and military police mentors.

25. One force multiplier provided to the PMAG was the Embedded Police Mentor (EPM). These were retired American law enforcement professionals, working for a civilian company and hired under a USMC contract. They were armed, embedded into the PATs and shared the same RoE and force protection constraints. Whilst they came with varying degrees of experience, and hence perspective, this allowed the delivery of training in 'blue' policing skills to the Afghan patrolman, at his checkpoint.[24]

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21 ISAF Insider Threat Handbook; COMISAF's Guidance on Combating Insider Attacks, April 2013.
22 ▬▬▬ Measures to Counter the Insider Threat, Tactical Doctrine Note published by Lessons Exploitation Centre, Directorate Land Warfare January 2013.
23 Operation HERRICK 18, Post Operation Report.
24 Observations of a Police Mentor, Combat 2014.

Observation: Civilian police mentors were force multipliers. They have the capability to deliver 'blue' policing skills and provide community policing advice. A capability that the Army does not have.

Observation: Civilian police mentors (US and UK) added significant value to the police mentor and advise task. The differing freedoms and constraints on movement will almost certainly be in place for future operations. These need to be understood and the task tailored to suit their strengths.

26. **Partnering Approach.** A consistent key observation made by PMAG and BAG during Operation HERRICK was the temptation for ISAF to push familiar western solutions onto a force that already had its own processes. Through the NATO Training Mission – Afghanistan (NTM-A), US G1-4 systems were used as the means to build ANSF capability.[25] This approach failed. Collective iterations of mentors found that the best way to approach the problem was to understand the ANSF's own systems and to find ways to encourage a largely illiterate and often sceptical force to use that which they already had. "Indigenous force pull rather than mentor force push"[26] should be taken forward as an approach that works where an indigenous force system is already in place.

Observation: Imposing a foreign system onto and indigenous force does not work; get to know their system, enable it and use it.

27. **Tactical Planning Considerations.** The conduct of deliberate planning for operations was an area of considerable challenge for ISAF when dealing with the ANSF. Whether it was the US Military Decision Making Process, NATO Comprehensive Operational Planning Directive, 6-Step Process or the 7-Questions, to the ANSF, especially the ANP, this were all alien concepts. Planning horizons were measured in hours, operations were almost always reactive and the whole process was usually conducted over chai with no formal mechanism for approaching a problem, recording decisions or developing orders.

> "It was hard work, and often left us feeling uncomfortable about needing to cut corners in the planning process in order to keep up with them, and not hold them back on their operations".[27]

> *Comd TFH, Operation HERRICK 17 Post Operation Interview.*

28. To complicate matters, UK and USMC mentors encountered two significant cultural bars to efficient planning and execution

    a.

    b.

29. Contingency training should routinely include indigenous security force elements or taking an alternative approach we should attach units or sub units to other developing armies. This will 'train in' the planning frictions experienced in Afghanistan.

Lesson: Contingency training should routinely include indigenous security force elements or taking an alternative approach we should attach units or sub units to other developing armies. This will 'train in' the frictions of operating alongside an indigenous force experienced in Afghanistan.

30. **Cultural Understanding.** The importance of cultural understanding is a recurring and well documented insight from Operation HERRICK. The value of experienced and capable Cultural Advisors, Military Linguists and Interpreters is indisputable.[29] The role and nature of SFA operations arguably requires higher levels of cultural understanding. Cultural insensitivity greatly increases the risk of Insider Threat. Cultural and linguistic understanding are vital for an expeditionary army. It is recommended that the Danish model for provision of cultural enablers and linguists is exploited. They extended an offer to language students to join their force, which was extended to the Afghan Diaspora.

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25   Operation HERRICK 18 EISF Mission Exploitation Symposium, Military Judgement Panel
26   ▬▬▬▬ Operation HERRICK 15, Police Mentor Advisory Group.
27   Comd TFH, Operation HERRICK 17 Post Operation Interview.
28   Observations of a Police Mentor, Combat 2014
29   Operation HERRICK 18 Post Operation Interview.

Observation: Cultural Advisors, linguists, interpreters all proved invaluable in delivering cultural understanding to the advisor mission. Cultural understanding will be a central tenet of future Defence Engagement; Cultural Specialists (Human Terrain (CS (HT)), linguists and interpreters will be key enablers.

Recommendation: The Danish model for provision of cultural enablers and linguists should be exploited.

31. **Tolerance for a Culture and Society that is not our Own.** Cultural norms between societies and countries do diverge, corruption and patronage were endemic in Afghanistan. "White collar" corruption, taking bribes from contractors is part of Afghan life. Through our prism of society and security it would appear wrong to accept corruption on any level. However;

> *"They do not see corruption in the same way as we do, though we attempted to identify any examples of this and tried to encourage the Chief of Police to stamp them out"* [30]

(▬▬▬▬▬▬▬▬▬), *Operation HERRICK 13, Post Operation Interview.*

The risk lies when the level of corruption undermines the indigenous force.

> *"The blatant venality of the ANP in the way that Governor Led Eradication was enforced, and the fact that my soldiers were forced to stand by and watch it just weeks after arrival in Theatre, was galling nonetheless".* [31]

Operation HERRICK 16, Police Mentor Advisory Group, Post Operation Report.

32. ▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬

33. ▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬

▬▬▬ *Operation HERRICK 15, Post Operation Interview.*

This once again highlights the balance commanders will have to make between avoiding tackling the flaws (in our eyes) that appear to be culturally accepted whilst trying to ensure it does not affect combat effectiveness or credibility.

Observation: Patronage and corruption is a barrier to capacity building but when preparing for the SFA tasking personnel must be trained in how to conduct relationships where it is prevalent.

34. **The Importance of Building Strong Personal Relationships with Mentees.** The recurring insight from Operation HERRICK is that the success in this area is directly proportional to the strength of the personal relationship that exists between the parties, and that this relationship suffers after each unit rotation from the requirement to start the relationship afresh. [33] The PMAG and BAG deployed for six months. The MAG deployed for twelve months. Getting the right balance is a significant planning consideration that should be based on the value of relationships, the time spent establishing them and the friction of an inevitable 6 month mind set amongst a generation of soldiers (ANSF) permanently at war.

35. Central to everything that mentors do is the relationship that they build with their counterparts. In Afghanistan this was generally, but not always, a fairly simple process. The Pashtu tradition of Melmastia (hospitality) meant that most meetings were friendly, beginning with a long series of enquiries about health, wellbeing and family, all accompanied by chai, almonds and sweets. Getting straight down to business was considered rude and many westerners who were paying only a fleeting visit fell into this trap and meetings were less productive as a result. The message is simple: incorporate cultural training early and often into MST at all levels and treat your mentees as equals, taking time to understand their motivations. [34]

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30 (▬▬▬▬▬▬), Operation HERRICK 13, Post Operation Interview.
31 Operation HERRICK 16, Police Mentor Advisory Group, Post Operation Report.
32 ▬▬▬ Operation HERRICK 15, Post Operation Interview.
33 CO Police Mentor Advisory Group, Operation HERRICK 17 Post Operation Interview.
34 ▬▬▬▬▬▬ Combat 2014.

> **Observation:** Mentoring success is directly proportional to the strength of the personal relationship that exists between the parties, and that this relationship suffers after each unit rotation from the requirement to start the relationship afresh.

36. **Learning by Doing.** Give the Indigenous Force (ANSF) every encouragement and opportunity to take the lead, rather than force them into an unequal Coalition (ISAF) led partnership, and then support them fully to ensure their success. In Afghanistan, conceptual capacity has been built through "Learning by Doing". Examples of key successes were the Op OMID (ANA) and ZAMARY ZARAK (ANP) series of operations which were independently planned, rehearsed and executed by 3/215 Brigade and the Lashkar Gah ANP. Advisor support and non-organic enablers (Joint Fires, Fixed Wing, Rotary Wing, ISTAR, Light Armoured Reconnaissance Company and Viking (light armoured vehicles) Squadron) were fully integrated. Both operations demonstrated the ability of the ANSF to prepare, deploy, execute, sustain and recover, with limited ISAF involvement boosting their confidence and, importantly, demonstrating to the local population (and the insurgent) their ever increasing capability.[35]

> **Observation:** Give the Indigenous Force every encouragement and opportunity to take the lead, rather than force them into an unequal Coalition led partnership, and then support them fully to ensure their success.

37. **Leadership Training.** Teaching leadership skills is an activity the Army feels comfortable with. There had clearly been some success as CO PMAG Operation HERRICK 15 observed "nascent signs of more officers being prepared to give and execute orders on their own." Critical to the development of leaders is ensuring that the process takes place within the existing societal and cultural context. However, development of a comprehensive leader cadre has been difficult as, "a consequence of the one-deep level of expertise that exists throughout Afghanistan".[36]

38. Much of the time spent mentoring the ANSF was invested in maximising effect for the available resource. The obvious and most effective way to do this was by running Train-the-Trainer cadres so that they could sustain their own skill sets. Another, less obvious, approach was to talent spot key individuals and to spend time developing their natural ability.

39. **The Use of Enabler Leverage as a Mentoring Tool.** Leverage in the form of the 'Big 5' enablers (C-IED, QRF, Fires, CASEVAC and ISTAR) was seen as part of the transactional nature of the SFA model. They allowed the mentor to gain access, generate trust and understanding. Enabler support, particularly to the ANA, was widespread. It generated a culture of dependency and expectation and developed a mindset that lead to practices that encourage dependency amongst the mentored force, which is counterproductive. The counter to this, is that enabler support was key to developing ANA capacity to a set timeline. Enablers underpinned fragile ANA capability, allowed confidence to grow and provided a back stop when it went wrong.

40. 'Gifting' was a lesser form of leverage and perhaps the biggest mistake as far as the police were concerned, since propping up the Afghan system by supplying them directly with stores, fuel, clothing and equipment. The initial good will this buys was very useful and in the short term it helped mentees to perform, but as a strategy for development it is unsustainable. Leverage can be counter productive; it may give the mentor some short term gains, but is counter productive in the longer term. In the future, leverage, as employed in Afghanistan, should not be used as a mentoring tool.

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35   Operation HERRICK 12 Post Operation Report.

36   Operation HERRICK 16, Police Mentor Advisory Group, Post Operation Report.

41. Insight on the Best Approach to Enabler Disengagement. When it came to weaning the ANSF off the 'Big 5' enablers, the USMC and TFH adopted differing approaches, although both had a common goal. ISAF direction envisaged a binary reduction from 'Big 5' enabler support to CASEVAC and Fires through 2013. This approach softened early in the summer to a more pragmatic stance. Enabler support preserved ISAF relations, which was a significant factor as the ANSF would provide a significant element of the covering force as ISAF redeployed. ▬▬▬▬▬▬

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▬▬▬▬▬▬▬▬▬▬▬▬▬ TFH employed a 'light and early' model which proved highly effective ensuring that the ANSF grew in resilience and independence, whilst preserving their confidence and underpinning the close relations that remain vital to both Afghans and ISAF.

Observation: The use of enablers or gifting can be a double edged tool. It buys access, trust and goodwill but encourages dependency and stymies development.

Observation: The USMC and UK employed different approaches to the reduction in enabler support. Both approaches worked but they must have caused confusion at Corps level. For the future a common approach should be identified and adopted when working in a coalition.

42. **Modulated Disengagement the Catalyst for Confidence.** In the latter stages of the campaign, there was a need to reconcile the drive for redeployment with the need to continue developing the ANSF. The two activities are not 'natural bedfellows', but the BAG and PMAG found that modulated disengagement was the catalyst for confidence that the ANSF needed to operate without mentors; it was the spur for them to accept what we had to offer. To do this, one has to have an appetite for risk, understand what is 'good enough'[38] and to have the discipline to focus only on the achievable.[39]

Observation: Modulated disengagement was the catalyst for ANSF confidence to operate independent of ISAF support and saw rapid development in both capability and capacity.

43. **Measuring ANSF Development.** The Commanders Unit Assessment Tool (CUAT) was a coalition assessment tool, used as the primary means to update TFH and higher chains of command on the status of ANSF development. The CUAT had a six-week battle rhythm reporting cycle which conformed to the ISAF Joint Command (IJC) cycle. The CUAT incorporated qualitative and quantitative measurement from partnered units.[40]

   a. **Commander's Subjective Assessments.** A command assessment of the status of each ANSF unit, completed in consultation with the ANSF partner, characterizing them with one of five Rating Definition Levels (RDLs).[41] Assessments reflected the commander's judgement as to how the status of the unit compares to the definitions established for each RDL.

   b. **Qualitative Objective Data.** The second section of the CUAT catalogued equipping and personnel issues and dealt with qualitative objective data.

   c. **Commander's Assessment Appendix.** Individual ANSF commanders were also assessed through a subjective assessment of their capability. It was a confidential addendum to the main CUAT and written as such. A 'sanitised' version was releasable to the ANSF chain of command.

44. The CUAT as a measurement of effect tool provided a traffic light colour coded system of ANSF progress. It enabled the chain of command to report on SFA progress; unit, organisational (G1-4) and leader development. It also enabled the next roulement of mentors and advisors to check their mentee's or ANSF units progress to prepare themselves appropriately, and, as the Tour progressed and their mentees improve, the advisors could re-align their approach to better suit the developing ANSF. This, of course, was a highly simplistic view, but a vital one – one size does not fit all.[42]

Observation: The Commanders Unit Assessment Tool (CUAT) provided a means for a coalition approach to assessing ANSF development.

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37 ▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬
38 The term ANSF good enough was in use in 2012 to describe an ANSF solution that would work. The phrase went out of use by 2013.
39 ▬▬▬▬▬▬▬▬▬ , Operation HERRICK 17, Post Operation Interview.
40 3/215 Brigade handbook Version 4.0 – 01 March 2011, part 2, Chapter 14 – CUAT process.
41 RDL; Established, Developing, Effective with assistance, Effective with Advisors, Independent.
42 Senior Leadership Performance Development, Top Level Advising, 29 March 2013.

CONTENTS

SUBJECT   **PAGE**

CHAPTER 3-1

COMMAND, CONTROL, COMMUNICATIONS, COMPUTERS, INTELLIGENCE, SURVEILLANCE, TARGET ACQUISITION AND RECONNAISSANCE (C4ISTAR)

'Our enemies will continue to attack our physical and electronic lines of communication. And the growth of communications technology will increase our enemies' ability to influence, not only all those on the battlefield, but also our own society directly. We must therefore win the battle for information, as well as the battle on the ground.'

Strategic Defence and Security Review 2010[1]

BACKGROUND

DEFINITION – WHY C4ISTAR?

1. C4ISTAR represents the bringing together and fusing of some of the key information and communications support that commanders need to conduct operations. Historically these have been considered separately; operational communications, tactical communications, intelligence, target acquisition and reconnaissance have been separated in stove-pipes. The fusing of these areas into C4ISTAR represents a move towards a more coherent approach to the provision and use of information.

2. This series of sections will identify the challenges, key success factors, weaknesses and potential false lessons of the Operation HERRICK campaign from a C4ISTAR perspective.

THE CHALLENGE

3. At the outset of Operation HERRICK the C4ISTAR capability available to 16 AA Bde, 3 Cdo Bde and 12 Mech Bde in 2006 and 2007 was characterised by stretched and disparate connectivity both inter and intra UK land elements and very limited network enabled ISTAR capabilities. The British Army had just begun to introduce Bowman combat radio to replace the aging Clansman system, and the first few brigades to deploy had not received training on the new radios. There were very limited numbers of tactical satellite communications sets to enable Beyond Line of Site (BLoS) communications. Communication at the operational level, between UK force elements and back to the UK was through the Joint Operational Command System (JOCS), a UK Secret system which was not compatible with coalition partners or other governments departments. The first Operation HERRICK deployments saw Comd TFH and his staff using unclassified civilian e-mail to communicate with the other members of the Helmand Executive Group (HEG).

'Initially there was no common Information System network that allowed the Helmand Executive Group (senior reps from FCO, DfID, Counter-Narcotics and the MOD) to talk to anyone else, or indeed amongst themselves. All communications were done on Hotmail to begin with.'

▬▬▬▬▬▬, *Operation HERRICK 6*[2]

4. Training and force generation from a C4ISTAR perspective were also ad hoc. Few C4ISTAR equipments were moved from Operation BANNER[3] to the HERRICK theatre despite Operation BANNER C4ISTAR capabilities having mature Defence Lines of Development (DLOD) and high levels of C4I and ISTAR integration. However, the most decisive factor was the continued underinvestment in C4ISTAR capabilities, which in the early years of Operation HERRICK diminished commanders' ability to prosecute the operation.

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1 Strategic Defence and Security Review 2010, HMG, Page 16.
2 Post Operation Interview.
3 Operation BANNER was the name given to UK military operations in Northern Ireland up until 2007.

3-1_2
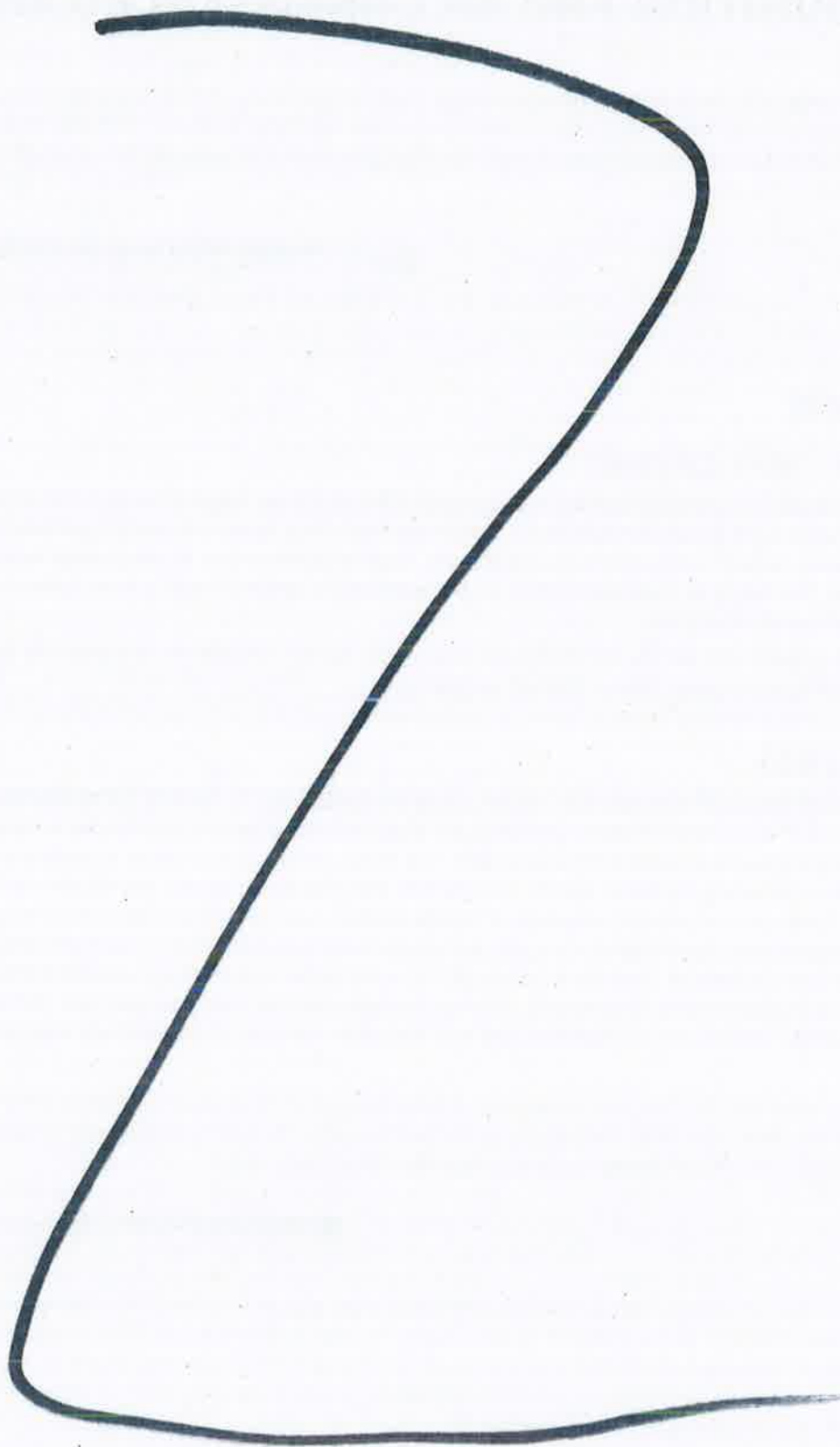
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CHAPTER 3-2

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CHAPTER 3-3

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Chapter 3-4
AIR LAND INTEGRATION (ALI)

'If you can knit up the powers of the Army on land and the powers of Air in the sky then nothing will stand against you and you will never lose a battle'

General Montgomery[1]

'The key asset required for support to troops in contact is access to aviation and air.'

Comd 16 AA Bde Op Herrick 4[2]

Figure 3-4-1. Harrier GR-7.

INTRODUCTION

1. This chapter will focus on Air Land Integration (ALI) *'the integration of air and land capabilities and activities in order to achieve desired effect in accordance with the commander's plan'*.[3] This study has Land tactical lessons as its focus and therefore ALI will be reviewed from the standpoint of troops operating on the ground. Wider Air operating issues will be subject to separate study to be conducted by Air Command. This Chapter should be read in conjunction with both Chapter 3-2 Joint Fires and Chapter 3-5 Aviation.

2. The UK military emerged from Operation TELIC in Iraq with a still developing ALI capability that lacked the rigour required for 21st century conflicts. ACM Sir Clive Loader, then CinC Air Command acknowledged in a 2009 RUSI article that 'our broad understanding of ALI doctrine, our terminal control capabilities and our inter-component interfaces generally lacked coherence during the Iraq conflict'.[4] Post the Iraq war in 2003 Project Coningham-Keyes (PC-K) was launched as a joint initiative between to identify and address current capability shortfalls, with an emphasis upon tactical level execution. It recognised weakness in the approach to ALI, notably deployed C2 for tactical air, incoherent joint doctrine, weakness in the ALI career path and a lack of professional Air Space Management and incoherent equipment programmes.[5] The root cause was the lack of an empowered capability owner and one of the key recommendations was the creation of the Joint Air/Land Organisation (JALO) as a replacement for the Joint Air

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[1]   PRO Air 37/876, General Montgomery, Notes on Air Support of an Army in the Field, folio 66, 27 December 1943.
[2]   16 AA Brigade Post Operational Report, Operation HERRICK 4, in AFM Vol 1, pt 13, page i.
[3]   Definition taken from AFM Vol 1 Part 13, ALI page 2-1.
[4]   ACM Sir Clive Loader, Is True ALI Achievable?, in RUSI Defence Systems, February 2009, page 50.
[5]   Land/Org/6111, 'A Joint Focus within the FLCs for the Development of Air/Land Capability' A Paper for project Cunningham-Keyes', 28 June 2004.

Support Organisation (JASO) to bring cross DLOD coherence to the ALI capability. ALI in Afghanistan, particularly at the tactical and operational level[6], has been a significant improvement and many of the shortfalls in PC-K have been addressed. The role of JALO has been pivotal to this success.

3. *'The military has emerged from a 10 year campaign highly proficient in ALI. Not since the Army Air Control Centres (AACC) developed during the North Africa campaign in World War 2 has the mutual understanding between the Air and Land Components been so strong'.*[7] From the outset of UK operations in Afghanistan, Air Power was a major feature of the campaign. It was fortunate that despite the RAF being committed to supporting two campaigns (Operation TELIC and Operation HERRICK), UK forces enjoyed operating in an environment very well resourced by both UK and coalition aircraft. The use of air was far more extensive than in Iraq and saw an exponential rise in the variety of UK platforms/capabilities occupying Afghanistan air space: TriStar, Voyager and C-17 Globemaster, C-130 Hercules, Harrier GR-7, Tornado GR-4, an array of RAF airborne Intelligence, Surveillance, Target Acquisition and Reconnaissance (ISTAR) platforms, RAF Unmanned Aerial Systems (UAS), Army tactical, mini and micro UAS, Support, Attack and Utility Helicopters (SH, AH, UH). Additionally UK forces benefited from the extensive air cover provided by the United States Marine Expeditionary Air Wing (MAW) once Task Force Helmand was re-subordinated to Regional Command South West (RC(SW)) in 2010. However, UK ground forces have now become accustomed to operating in a theatre with a level of air support that is unlikely to be matched for early entry land forces on future operations in terms of both mass (the number of aircraft available, particularly in the Close Air Support (CAS)) role and diversity (the range of weapons, sensors and effects).

Figure 3-4-2. Tornado GR-4 Crew Scramble from Khandar DOB.

4. *'Although the level of integration is currently very high, history relates the mistakes in allowing it to fade away in the absence of operational imperative.'*[8] There are also risks in rigidly applying lessons from the last 10 years. They must be considered in the context of a campaign where control of the air has been assured, where the enemy has lacked anti-air capabilities and where the electromagnetic spectrum has been largely exploited at will. Contested airspace and an enemy with even rudimentary Electronic Warfare (EW) or Anti Aircraft (AA) capabilities may necessitate more traditional methods of integrating Air Effect in support of the Ground commander's Scheme of Manoeuvre. The recent ALI development nurtured 'in contact' and with Urgent Operational Requirement (UOR) funding, has revolutionised what was a latent and underused capability. The contingency era may well offer more challenging environments where the threat to air platforms may be high and this will require significant cross DLOD overheads not incurred in supporting the Afghanistan campaign.

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6   The ACM Leader paper acknowledges that there are still improvements to be made at the strategic level in terms of a coherent approach to procurement and inter-service relationships, but this is outside the scope of this study.
7   Speech by SDC(A) to RCDS on ALI lessons April 2013.
8   Ibid.

AIR ASSETS

5. Throughout the campaign commanders observed that the execution of ALI was highly successful and vital to mission success. Indeed Comd TFH during Operation Herrick 4 in 2006, acknowledged that 'achieving fire power overmatch, at close range, with air, aviation and surface indirect fires (IDF) was vital to avoiding friendly forces casualties and defeating enemy attacks', and that it 'required the battlegrouping ALI targeting assets at the very lowest tactical level'.[9] This was at a time when UK forces were widely dispersed in platoon houses located in District Centres across Helmand. With the lack of mass, in terms of troop numbers, the danger of a base being overrun was widely reported with the implication that the likely level of UK casualties could have led to strategic failure at an early stage of the campaign.

Observation: Operation HERRICK has re-affirmed the Future Land Operating Concept (FLOC) assumption that if ground forces lack the mass to effectively manoeuvre and become fixed, they become increasing dependant on the 'technological edge' to prevail over adversaries.[10] In Afghanistan this was manifest by Indirect Fires (IDF) and air support. This reality should be reflected in future operational design.

6. RAF assets in Afghanistan were part of the wider Middle East regional 83 Expeditionary Air Group (EAG) which in turn came under a 1* Air Component Commander (ACC) based in the NATO Combined Air Operations Centre (CAOC) at ▬ ▬▬▬ Many TFH commanders stressed the importance of face to face contact with the UK ACC to better understand the '3rd dimension' and that this engendered improved 'Air Mindedness' amongst land forces. Some managed three visits during their tenure.

7. Aircraft supporting Operation HERRICK were grouped into Expeditionary Air Wings (EAW): 904 EAW at Kandahar (Harrier GR7 then Tornado GR4, Tactical Air Transport (AT), MQ-9 Reaper UAS, BAe146, HS125), 903 EAW at Camp Bastion (Sea King ASaC[11], the Camp Bastion airfield complex, the Joint Aviation Group (SH and AH Force)), and a ▬▬▬▬▬▬▬▬▬▬. The 901, 902 and 906 EAWs supported the wider theatre from various locations on the Arabian Peninsula with strike aircraft, Strategic AT, Tactical AT, Nimrod MR-2, Sentinel, VC-10). The number of UK aircraft grew from an initial in theatre force of 18 Fixed Wing (FW) and 13 Rotary Wing (RW) to a peak, in 2011, of 26 FW and 32 RW. The United States Marine Corps (USMC) Marine Air Wing (MAW) arrived in 2010 basing significant additional aircraft in Helmand including a AV-8B Harrier Squadron, a MV-22B Osprey squadron in addition to squadrons of AH-1W Cobra, UH-1Y HUEY and CH53 Sea Stallion helicopters.

8. Intuitive understanding of the Air Command and Control (C2) arrangements was lacking by ground forces. Air operations were commanded from the highest levels, as theatre assets by the ACC in the COAC, however the in-theatre EAW COs also held Airfield Operating Authority with delegated duty holder responsibilities for Air Safety under Military Aviation Authority regulations with a C2 chain through the COAC direct to Air Command, not via the Permanent Joint Headquarters (PJHQ). The EAW CO ultimately held a red card on air safety grounds for the launch of aircraft in support of ground operations. This resulted in some tactical C2 tensions between air and ground commanders due to misunderstanding of the interpretation of operational and operator risk. For example, Kandahar and Camp Bastion were variously referred to as Deployed Air Operating Bases or Land Main Operating Bases which led to different Service interpretations of regulations on responsibilities and execution of Force Protection.

Figure 3-4-3. C-17 Globemaster Taking Off from Camp Bastion.

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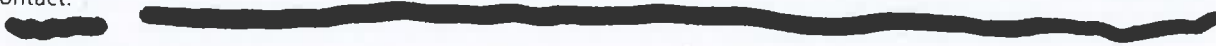
9 16 AA Bde Post Operational Report, paragraphs 26a and 27, dated 19 October 2006.
10 Supporting Note 1: Compensating for a Lack of Mass, in Future Land Operating Concept (FLOC) Development Agenda (January 2014), page SN1-1, paragraph 2c
11 Airborne Surveillance and Command variant.

Lesson: The delineation between the operational risk held by the ground commander and the air operating risk held by the duty holder commander of the EAW must be clarified from the outset of future operations. The construct should be rehearsed on joint exercises and on wargames conducted during MST to ensure that boundary issues can be quickly resolved.

TACTICAL AIR GROUND SYSTEMS (TAGS)

9. TAGS provides the specialist planning staff for the integration of air power into land operations and facilitated interaction between Land and Air planners within the relevant Fire Support Coordination Centre (FSCC)[12] for the execution of joint fires/joint effects. The fundamentals of ALI throughout the campaign largely followed the principles of UK endorsed doctrine within AFM Volume 1, Part 13 but a distinct feature of the campaign was the necessity to conduct detailed ALI/ air planning in HQs at a level far below the Division/Brigade level envisaged in doctrine. 16 AA Bde deployed on Operation HERRICK 4 with a framework HQ and a single manoeuvre battlegroup with orders to support stability activity. They quickly found themselves in intense kinetic defensive actions resulting in air assets more usually controlled from the divisional level, at battlegroup and even company. The campaign was therefore characterised by a degree of flexibility, 'ad-hocery' and frequent changes in the organisation to ensure that ALI expertise was massed, integrated and available to forces and commanders where and when they needed it.

10. Integrated Fire Support Teams (FST), consisting of Forward Air Controllers (FAC), Artillery Forward Observation Officers (FOO) and Mortar Fire Controllers (MFCs), were highly successful for the delivery of ALI on the front line by troops in contact.

11. Initially ALI was also hindered by an under resourced Air and Aviation C2 node in Task Force AEGIS[13] within HQ Regional Command South (RC(S)) which was not configured to support an air assault brigade complete with AH. These initial weaknesses were overcome in subsequent rotations by deploying augmented battlegroup and brigade HQs. The augmentation of the two permanent Brigade Air Liaison Officers (BALO) in the FSCC by additional Air Staff Officers (ASOs) within Deployed Air Integration Teams (DAITs) was highly successful and was considered a best practice. The UK ALI arrangements developed to align with UK doctrine once the initial UK 2* command of RC(S) on Operation HERRICK 12 occurred: FST/FAC at company/platoon level, a Tactical Air Control Party (TACP) of relevant size augmenting battlegroup, brigade and Regional Command level and, a theatre Air Support Operations Centre (ASOC) within HQ Commander Joint Operations (HQ CJO) at Kabul all under the CAOC at Al Udeid.

Observation: The DAIT concept was considered best practice but will not be taken forward into contingency under A2020 constructs. This decision should be reviewed.

12. The arrival of the United States Marine Corps (USMC) and the establishment of RC(SW) at Camp Leatherneck in Helmand necessitated an adjustment of the UK TAGS to align with the new USMC approach to Air C2. The complex C2 arrangements that emerged under the RC(SW) structure is shown in diagram 3-4-5. Although there was no effective enemy air picture to manage the number of coalition assets and systems using the Helmand airspace meant that complexity in Air operations and in particular Air Space Management (ASM) was considerable.

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12   Sometimes renamed Joint Fires and Effects Cell (JFEC).
13   TF AEGIS was the core Canadian Brigade HQ that commanded RC(S) from Kandahar during the initial NATO expansion during 2006.
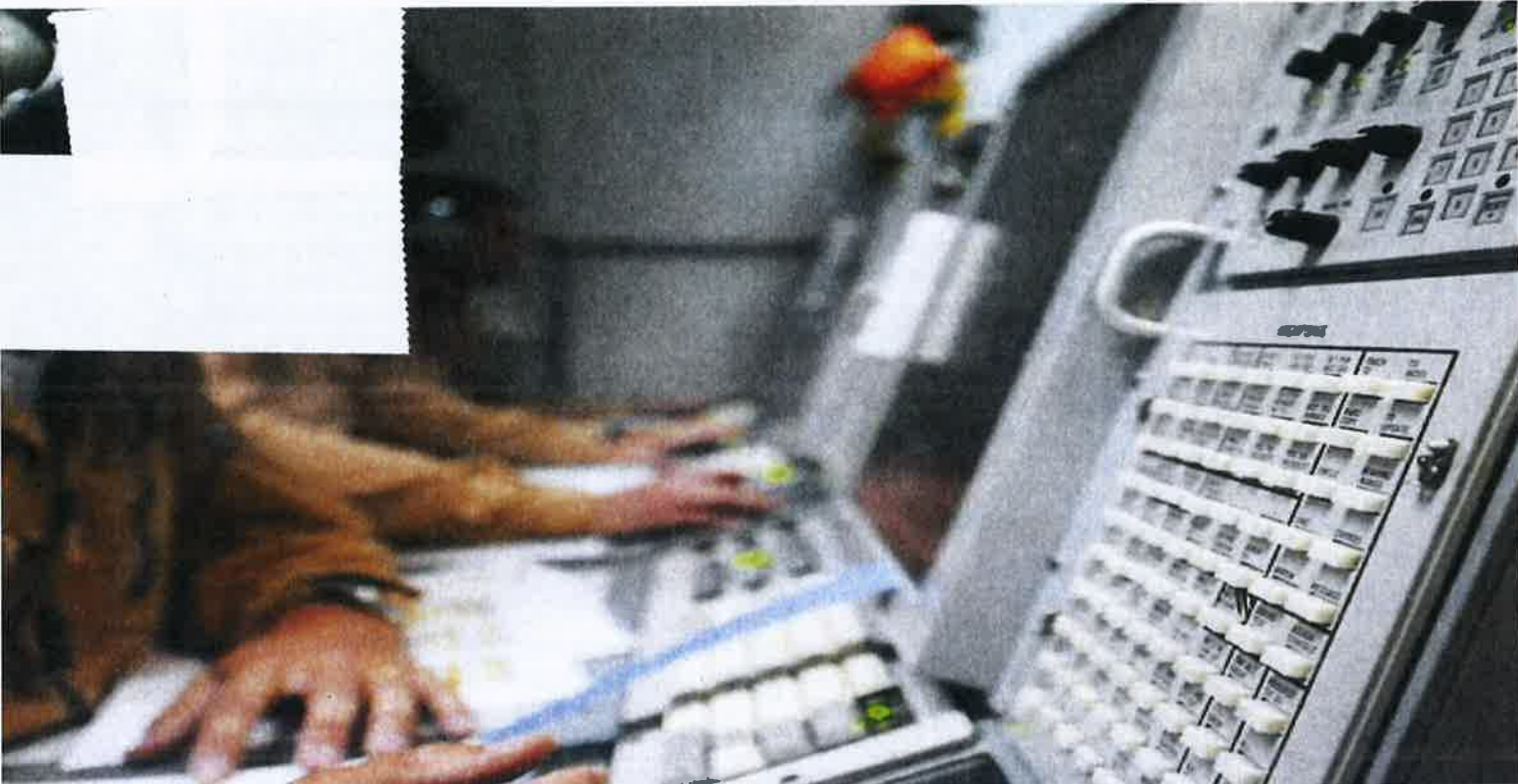
Figure 3-4-4. Fighter Controllers Operating from Sentry E-3D
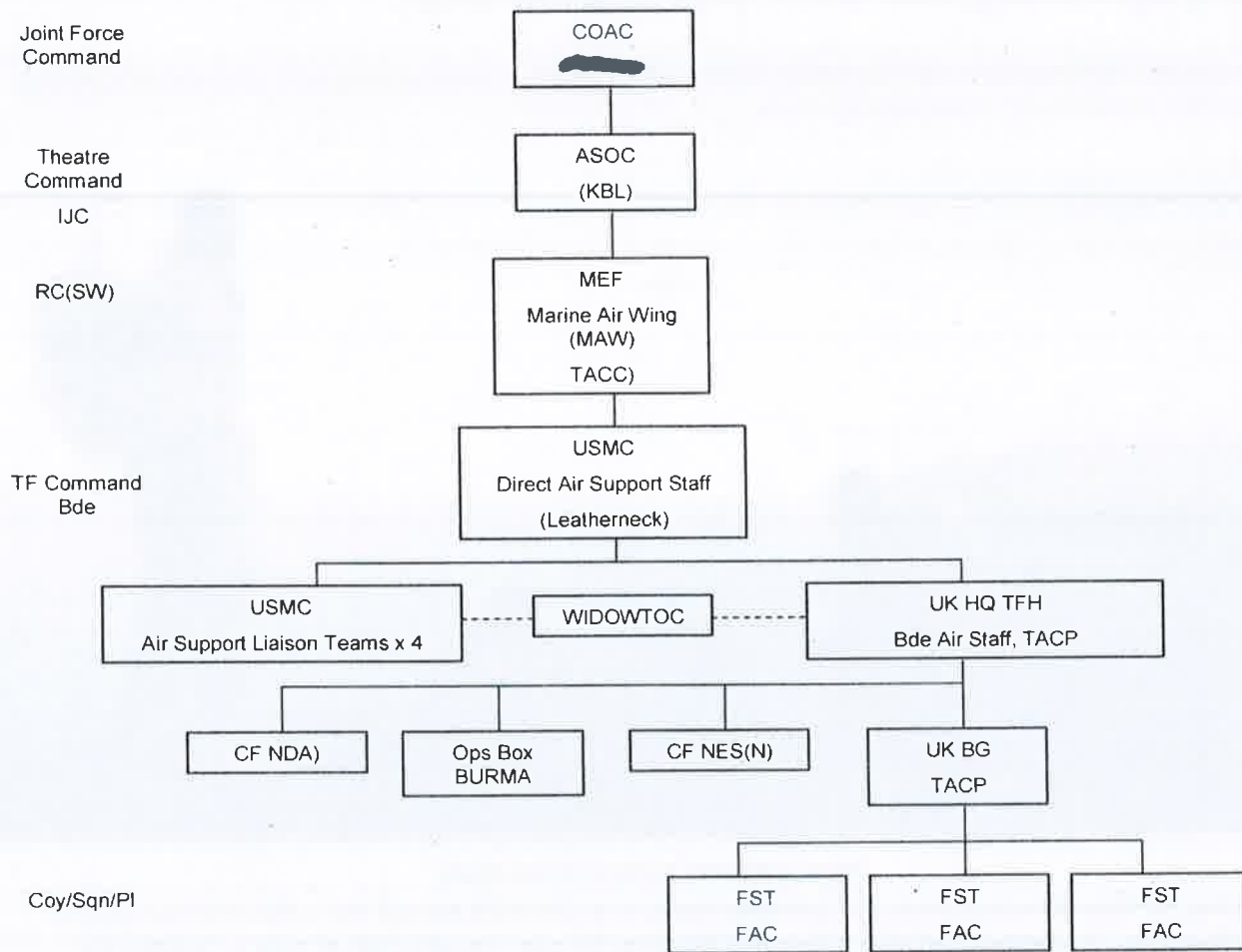
Figure 3-4-5. RC(SW) TAGS Structure

ALI PRIORITY LESSONS

JOINT BATTLE SPACE MANAGEMENT (BSM)/ JOINT AIR SPACE MANAGEMENT(ASM)

13. During Operation HERRICK the airspace became particularly congested the number of above ground capabilities increased: military fixed wing aircraft but also UAS, aviation, conventional artillery and long range missiles, but also national civil aviation and even the transit of international air carriers. The risk of mid air collision was top of the ACCs risk register. As such ASM C2 nodes became critical enablers. The experiences in Iraq and initially in Afghanistan revealed that Joint BSM was barely being practiced and certainly not at the lower levels of command which were exposed to a widening spectrum of joint fires capabilities. The ACC identified mid-air collision as the most significant risk, one with the potential to result in national mission failure. A number of aircraft near miss (AIRPROX) incidents, particularly between RW and UAS, and RW and Indirect Fires (IDF) highlighted the inadequate level of air de-confliction training in an increasingly congested airspace, particularly in the vicinity of Forward and Main Operating Bases (FOBs/MOBs). Gaps in wider BSM expertise in the Land Component were addressed by improving overall awareness of BSM and specifically ASM and Airspace Coordination Measures (ASCM) through education such as the Joint Fires Staff Officers Course and Joint Battlespace Management Course at the Royal School of Artillery, the Joint Air Land Organisation (JALO) initiated ALI Early Education Package and the Tactical Air Battle Management course (TABM) at RAF Boulmer.[14]

> **Lesson:** Awareness of UK BSM Tactics Techniques and Procedures (TTPs) and Standard Operating Procedures (SOPs) needs to be extended beyond the professional ASM cohort and include all personnel operating above ground capabilities.

14. The merging of the ALI staff and the artillery tactical parties at each level of command was successful and essential to the delivery of effective Joint Fires and Air Manoeuvre. The integrated Fire Support team (FST) became the critical enabler to ALI at the tactical level. Due to their importance they became theatre assets and were 'whole fleet managed' from HQ TFH, allowing them to be massed as appropriate and to mitigate the skill gaps that emerged during Rest and Recuperation (R&R) rotations. This was considered best practice.

> **Lesson:** Air Land Integration staff and artillery tactical parties must be merged at every level of command to execute joint fires for all types of contingency operation.

Figure 3-4-6. FAC Training at Cape Wrath

15. During the force generation process, air specialists tended to be identified late and then conducted their training in stovepipes. The training of FACs/ASM personnel tended to focus on executing ASM in order to facilitate the delivery of joint fires. The requirements of the increasing number of airborne ISTAR platforms many with much longer persistency in a FAC's airspace, and the implications to the wider ISTAR Collect plan was a common gap in knowledge. The lack of an integrated approached was mitigated as an Operation ENTIRETY measure by appointing Joint Ground

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14   The Joint Fires Staff Officers' Course and ALI Early Education package are currently in abeyance.

Based Air Defence (Jt GBAD) as lead for ASM. It has since been decided that Capability Directorate Combat Support (CD CS) will be the capability proponent in the Land Environment working with Joint Force Command (JFC) Joint Warfare (JW) to develop the contingent capability.

Lesson: FST personnel should be viewed as joint assets and trained together from Collective Training (CT) level 2 onwards producing more capable ALI C2 nodes. By identifying FST teams earlier in the FORCEGEN cycle FOO, FAC, MFC, TACP training could be better synchronised.

Lesson: A bespoke ALI exercise, such as Ex MOUTAIN DRAGON supported by RAF directing staff is required during MST.

Lesson: The course design for FAC training should be reviewed to ensure there is a greater emphasis on the needs of airborne ISTAR assets (FW, RW, and UAS) and the importance of their integration with the wider theatre COLLECT plan.

16. 1 Air Control Centre (1ACC) deployed from 2006-2010. 1ACC are the UK's deployable ASM C2 asset establishing the RAF's Air Support Operations Centre whose remit is to provide dynamic procedural airspace control. The Marine Air Ground Task Force (MAGTF) deployed into Helmand from late 2009 and established the Direct Air Support Centre (DASC), callsign ▓▓▓▓▓▓▓ and executed procedural control of the Helmand airspace. 1 ACC then supplemented the USMC manning at both the DASC and the Tactical Air Ops Centre. The control of airspace in RC(SW) was therefore based on USMC procedural ASM doctrine and UK forces had to adapt to in order to integrate. However, Operation HERRICK has narrowed the UK experience of ASM. Contingency operations may be conducted in very different circumstances in support in a high tempo conventional force on force manoeuvre, a credible enemy air threat and where the CIS infrastructure is more susceptible to degradation. The USSR lost 118 Fast Air platforms during their occupation of Afghanistan and more recently the Ukrainian experience[15] has demonstrated the vulnerability of air and aviation platforms to an adversary equipped with modern Air Defence systems. It is likely that UK aircraft will not enjoy the same HERRICK freedoms on future operations. Core UK ASM doctrine covers TTPs for a range of tactical environments but not all have not been practiced by the current generation airspace managers. Effective ASM remains a risk for contingency if not redressed in future training activity. Policy, procedures and training for the crucial C2 enablers requires review to provide a continuing ASM capability optimised for all potential contingency operations.

**Figure 3-4-7. Afghan Mujahadeen with Surface to Air Stinger Missile, near Jalalabad 1989
(a threat largely absent during Operation HERRICK).**

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15   Ukrainian army aircraft Il-76 shot down near Luhansk, Ukraine, 14 June 2014, killing all 49 service personnel on board. In addition at least 5 helicopters were shot down in the period May-June 2014.

Observation: UK forces will need to remain familiar with US ASM procedures as US led coalitions are likely to be a common model for future operations.

Lesson: The UK's pre Operation HERRICK Air Space Management doctrine is still fit for purpose. Led by Joint Force Command (JFC) Joint Warfare, UK Forces' Training regimes must return to cover the full range of ASM including air operations in non-permissive air environments.

Observation: Other theatres have shown the vulnerability of aircraft to an enemy with modern AD systems. Future exercise scenarios should be developed to test commanders in the realities of such a restrictive environment.

AIR STAFF OFFICER LIABILITY

17. The geographical breadth of the Air Component Area of Responsibility (AOR)[16] means that the Air Component Commander (ACC) and Land Component Commander (LCC) HQs will nearly always be separated. In order to integrate activity Land headquarters require sufficient RAF Air Staff Officers (ASO) to provide specialist advice (air planning, aviation integration, ASM, targeting, air safety) to satisfy modern manoeuvre warfare. Appropriately trained ASOs were vital and continued to be required at formation level in addition to the ASOC. Operation HERRICK also demonstrated that RAF ASOs were required at battlegroup level as TACPs. HQ TFH was assigned ASOs in the form of a DAIT from 904 EAW to control of air operations and BM from within HQ TFH. The DAIT concept was praised by nearly all TFH commanders. Typically they were assigned a core of 3 x ASOs. The RAF emphasis on selecting and posting suitably experienced and high quality personnel to land headquarters in barracks and on operations paid dividends. Work is currently in hand (between JALO and JFACC HQ staff) to establish the level of ASO support to meet the requirement of the Reaction and Adaptable forces for contingent operations.

Lesson: Operation HERRICK demonstrated that informed airmen, in particular a DAIT, properly integrated into land component formations results in much improved understanding of air power and its optimal utilisation in prosecuting land operations. Establishment tables of land component HQs for contingency need to be amended to reflect this requirement ensuring airmen (ASOs) and Army ALI trained specialists are integrated into Land Forces to the lowest practicable level.

18. A2020[17] acknowledges that Air will provide a critical enabler to Land operations and that the divisional HQ will need to be augmented by additional air and aviation staff expertise. ASO manning was reviewed by the A2020 study and revised attributions have been agreed in principle with Air Command. ALI expertise has been concentrated in the Specialist Brigades (3 Cdo and 16 AA Bdes) and in the Reaction Force (RF) Divisional headquarters. Wider RF formation air staffs have been reduced to establish the new Air Support Integration Group (ASIG) as a replacement for the Air Land Integration Training and Advisory Team (ALITAT). This will service the ALI and training needs of those in the Adaptable Force (AF). When increased numbers of air staff are required for 'best effort intervention' brigade or divisional deployments they will be found from the ASIG, AF Division HQ and 1 Artillery Brigade. Further work will be required to redefine the roles of the AISG, and potential structure to best service the A2020 concept.

Observation: The A2020 concept reduces the number of Air Staff Officers (ASOs) routinely available to support ALI training outside of the RF. This may result in a loss in the current level of ALI expertise and result in initial theatre entry forces drawn from the AF deploying on contingency with inadequate ASM expertise.

AIR STAFF OFFICER (ASO) SELECTION

19. Several ACCs[18] observed that some RAF personnel they encountered lacked a sound understanding of air power and that to be effective as ASOs their knowledge of Air Power must be more detailed and practical to be of use in the Joint arena. It was felt that some personnel nominated for DAIT posts, particularly during the early phases of the campaign, were not credible within TFH HQ. There were cultural differences and preconceptions between RAF and Army personnel. Initially some ASOs encountered a negative attitude or arrogance on some Army staff officers' part, while others struggled to represent air at the 'bird table' in a manner useful and convincing to the ground commander. As a result ALI was not always effectively integrated in a timely manner. As the campaign matured this issue dissipated as ASO selection was tightened up by Air Command and, individuals benefited from the experience of multiple tours.

16
17   Army 2020 Internal Report pages 4-9 to 4-16.
18   ACC 1 Air Movements Wing: DLIMS Lesson Air 13118 originated 21 January 2011, and DLIMS 13105

Lesson: A review is required of the selection and training criteria of ASOs to ensure they are able to fulfil their function effectively, irrespective of their specialisation. They require both the knowledge of the provision and mechanisms of delivery of Air power, but also the ability to explain to and engage with non-air personnel (a requirement likely to increase under the new A2020 concept).

20. FACs were a scarce resource, expensive to train and, formations struggled to force generate FACs in sufficient numbers, particularly within Harmony guidelines.[19] Optimally a greater return of service than a 6 month tour is required (based on current Joint Forward Air Controller Training and Standards Unit (JFACTSU) capacity). A Joint FAC career stream has been proposed although there are many service career management difficulties to overcome. Capability Director Combat Support (CDCS) have proposed a Joint Fires operator stream which might accommodate FAC appointments.

Lesson: CD CS and JALO should consider the creation of a formal FAC/Air C2 career stream to provide a consistent manning of FAC/TACP liability.

JOINT FIRES SYNTHETIC TRAINING

21. As a result of a UOR, a concept demonstrator programme at the RAF Air Battle Training Centre (ABTC) at RAF Waddington was adapted to deliver the Distributed Synthetic Air Land Trainer (DSALT) capability to allow integrated, synthetic environment Joint Fires training for both aircrew and Army fires personnel. The resultant MST Exercise MOUNTAIN DRAGON has been routinely cited in Mission Exploitation (MX) events as the pinnacle of the Joint Fires MST process: Personnel often referred to 'MOUNTAIN DRAGON moments' when describing their most demanding operational situations from theatre. It most faithfully replicated current operational conditions and allowed integration of surface to surface and air to surface fires in a manner that was impossible to achieve with live munitions and current training safety regulations. It can also represent the further complication of a credible enemy air picture, absent during Operation HERRICK. Building on the success of MOUNTAIN DRAGON, JALO and CTG are developing a new Exercise STEEL DRAGON which is adapted to represent a contingency scenario.

22. The DSALT delivered significant savings by reducing the use of expensive resource such as aircraft and aircrew hours, however, DSALT is currently only funded until 2019 and there are no core-funded programmes that offer its capability or will be in service to replace it before its Out of Service Date (OSD). To maintain ALI/Joint Fires training at optimal levels into contingency a Front Line Command (FLC) level agreement should be reached on coherent synthetic training policy and programmes, and current systems such as DSALT should be supported until a suitable replacement is taken into service to avoid a capability gap. Synthetic systems, accredited to meet international standards, should be developed that render high fidelity replication of effects such that live training can be reduced to easily affordable and agreed minimums.

23. For a variety of reasons many UORs were fielded directly to theatre or procured without a training fleet and were therefore frequently not available to deploying personnel during MST.[20] UAS platforms were an example where many units only developed their expertise once deployed and during active operations.

Lesson: A Front Line Command (FLC) level agreement should be reached on coherent ALI synthetic training policy and programmes, and current systems, such as DSALT, should be supported until a suitable replacement is taken into service to avoid a capability gap.

Lesson: It is recommended that Director General Capability (DG Cap) conduct a cost/benefit analysis on whether UORs that require wider integration within the Joint Battle Space should be mandated to develop a synthetic training capability alongside the equipment.

'AIR MINDEDNESS' IN LAND UNITS SUPPORTING INTEGRATED ALI PLANNING

24. At the start of the Operation TELIC, and then again at the start of Operation HERRICK, it was recognised that Land Forces' appreciation of air power, was inadequate.[21] Land headquarters tended to consider the Air aspects of their plans late without a full understanding of Air C2 and the wider Air Tasking Order (ATO) process and timelines. This lack of 'air mindedness' resulted in poor integration of air (CAS, ISTAR and CSS) in support of land plans, particular for the non-specialist ground manoeuvre brigades on their first HERRICK rotations. Embedded ASO with ground formations mitigated this shortfall.

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19   Harmony Guidelines are designed to ensure harmony between competing aspects of Service personnel's lives: operations, time recuperating after operations, personal and professional development, unit formation and time with families. The aspiration is for service personnel to have 24 months between operational tours.

20   See Equipment Lessons: Training Fleets and Risk.

21   Dstl Operation HERRICK 8 LORST, DLIMS 12347 created 09 August 2010.

Lesson: Air advice needs to be taken early and throughout the land planning cycle to ensure that any air considerations, limitations and opportunities are fully understood. There was a general lack of knowledge amongst Army personnel of timelines in the air planning cycle. Staff training and education during Foundation Training needs to be reviewed to better institutionalise air planning understanding ensure that this potential knowledge gap is closed.

25. Now, as Operation HERRICK come to a close, the UK has a generation of air-minded officers and soldiers within the land component. The understanding of air power has been hard won but to maintain 'air mindedness' into contingency training in air power and specific air and aviation capabilities needs to continue to be part of the land training syllabus at all levels. ALI is currently integrated at all levels from the Brigade Commanders' Course, Advanced and Intermediate Command and Staff Courses (ACSC, ICSC(L) and various Joint Fires courses. JALO sponsored an ALI Early Education Package between 2010 and 2012 to address gaps in Army personnel's air awareness (now discontinued). Formation ASOs ran regular Air/ALI study days and MST events evolved to ensure that manoeuvre commanders were better versed in the complexities of Joint Fires and Air. Exercises such as MOUNTAIN DRAGON, PASHTUN SABRE, and JOINT WARRIOR were all considered good practice that should be continued into contingency.

Observation: It is no longer enough for commanders to solely rely on the expertise of individual air specialists. The proliferation of air assets (many operated by land forces) on the modern battlefield requires section commanders and above to be air aware and capable of factoring air into their planning.

Lesson: Joint Air Land Organisation (JALO) and D Trg(A) should review Foundation Training standards and secure funding to ensure that baseline ALI education ensures sufficient grounding in the basics of ALI, to enable specific adaptation during Mission Specific Training (MST) to enable previously non air-specialists to execute complex ALI manoeuvre

26. Current operations have made complex ALI a 'whole army affair'. This requires appropriate HQ structures at all levels and regular training. Operation HERRICK has demonstrated the need for all ground manoeuvre brigades to be effective in ALI in an enduring campaign. A2020 envisages a construct whereby air expertise is concentrated in the specialist brigades (16 Air Assault and 3 Commando Brigades). It is unlikely that infantry brigades in the Adaptable Force will be able to maintain their current levels of expertise as the UK will not be able to resource the permanent level of decentralisation of aircraft and ALI SMEs as current experienced on operations nor will Defence be able to match current operational exposure during training.[22] As previously highlighted the number of ASOs under A2020 is to be reduced resulting in 16 AA Brigade maintaining a unique capability not matched elsewhere in the Army. There is a risk that much of the hard won ALI expertise will be lost, and unless the envisaged mentoring link within the Formation Operational Readiness Mechanism (FORM) is maintained between 16 AA Brigade and high readiness brigades in the Reaction Force it is likely that they will not be able to make up the training shortfall during MST. Imagination and flexibility in seizing low level training opportunities will be a requirement of the reduced numbers of permanently established ASOs in the RF.

Lesson: Commander FD&C must articulate the level ALI expertise that is required across the wider Army and fund suitable Foundation Training to support it.

Lesson: The ability to conduct ALI is a highly perishable skill. A dedicated conceptual and structural focus (the seed corn) must be maintained within A2020 structures and incorporated into doctrine from which the Army can expand the ALI capability across all formations committed to a future enduring stabilisation operation.

Lesson: Mechanisms should be developed to enable commanders at all levels (company to brigade) to be better integrated with the SME training of their tactical air groups (for example Exercise MOUNTAIN DRAGON) in order to better understand the realities of ALI.

Observation: To help mitigate the reduction of the current level of air mindedness in land units, improved formal and informal inter-service relationships between land and air units should be encouraged. Additionally RAF training events within the Defence Exercise Programme (DXP) might be better matched against Army training requirements.

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22   Speech by SDC(A) to RCDS on ALI lessons April 2013.
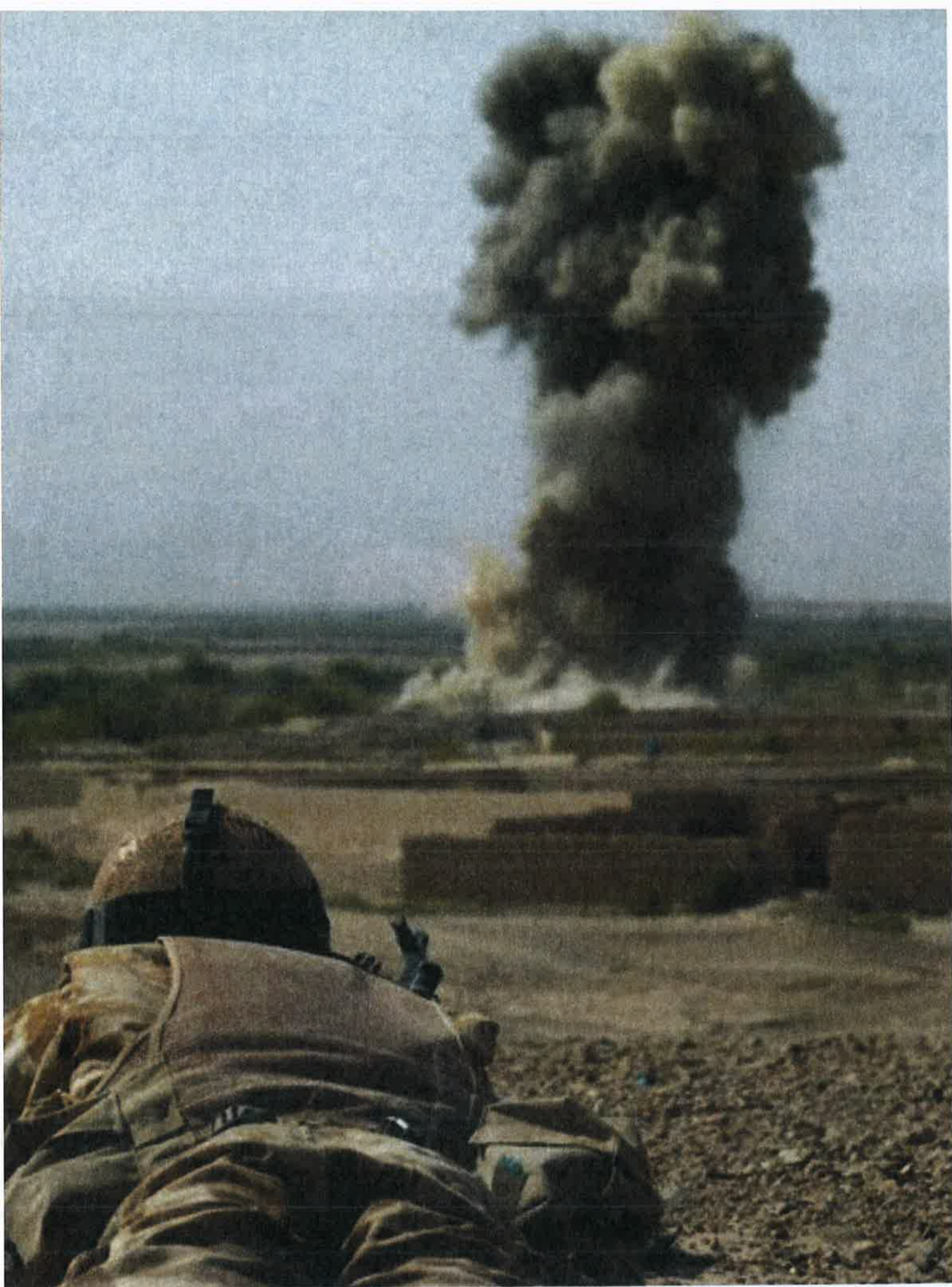
Figure 3-4-8. Soldier Observes effects (██████ Bomb dropped near Musa Quala

3-4_11

WEAPON EFFECTS TRAINING

27. In the early phases of the campaign there was a lack of awareness of the effects of Air Delivered Ordnance (ADO) amongst many ground commanders. Ground commanders exhibited a bias towards the use of land organic fires as there was a negative perception that the effects of conventional air delivered bombs were more destructive than was actually the case, and little understanding of the realities of modern low yield, low collateral damage weapons.[23] There were occasions when ADO would have been the best option, but not selected. Until air weapons effects have been experienced there was a tendency to choose other weapon systems, despite the advice of FACs. A good practice executed by JALO once Operation HERRICK became an enduring operation was to centrally manage the force generation of FACs in order to ensure that 30% of FACs on each rotation had previous combat experience.[24]

Figure 3-4-9. EAW Personnel Fitting Paveway IV Bomb to GR4 Tornado

28.

Lesson: Employment of Air Delivered Ordnance (ADO) is inadequately exploited if there is a lack of understanding of weapon effects by FACs, FOOs and ground commanders. Until live weapons have been experienced there is a tendency by ground troops to inflate Collateral Damage Estimates. There is a need to fund and plan training events which will expose ground troops to the reality of live ADO weapon effects.

Lesson: The continued use of the Bombard Observation Post and reinstatement of Fire Power Demonstrations should be resourced to widen ground troops understanding of weapon effects if High Readiness forces are to be properly prepared for first rotation contingency operations.

Lesson: The inclusion of an air weapon expert early in the targeting process will ensure that the best type of ground or air launched weapon is used. Relevant doctrine and TTPs should encourage this mindset.

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23 Dstl Operation Herrick 9 LORST, Post Operational Report Commander TFH 11, Operation HERRICK 14, DLIMS 15542 raised 05 December 2011.
24 Originally mandated by JALO to better manage JFACTSU capacity, but a positive second order effect was improved weapon selection by FSTs/ground commanders early in their tours.
25

29. After 10 years of operations in Afghanistan many ground troops have a thorough understanding of ADO weapon effects. However a new cohort of soldiers who have not experienced combat is expanding. The Army will quickly lose confidence in ADO once again unless funding is allocated to fill the capability gap. During the campaign JALO contributed to better awareness through the ALI Early Education Package (EEP) and also through developing the Joint Fires Weapon Effects Demonstrator project, a web-based video tool for providing understanding of specific munitions effects. Additionally, ▬

▬[26] However, simulation and synthetic training cannot replicate the realities of live weapon demonstrations. Air and Land live firing ranges are configured very differently, but better integration of Air live fire training events within the DXP could give Land joint fires operators a better understanding of the terminal effects of all Joint Fires munitions, even within current range safety regulations. The reduction of funding coupled with peace time safety constraints has reduced the opportunities for specific live fire inoculation training events

Lesson: Policy, processes and procedures need to be put in place to enable Joint Air Land Organisation (JALO) to centrally manage the force generation of FACs. This will enable JALO to provide the optimum mix of combat and non-combat experienced FAC and reduce the risk of the latter having the learn in contact.

PRECISION

30. The principle of 'first do no harm' directed by General McChrystal[27], drove a need for precision delivered effects that avoided collateral damage to people and structures. This principle eventually underpinned every engagement decision. Due to the increasing political pressure the expectation of 0:0 engagements (zero civilian casualties & zero collateral damage) drove the deployment of precision weapon systems during the campaign. It should be noted that this was a choice of HQ ISAF to impose offensive Rules of Engagement (ROE) restrictions beyond the minimum requirements under the Law of Armed Conflict (LOAC). ▬

Lesson: The Joint Fires Integrator project needs to be funded to find a replacement for Firestorm to enable accurate calls for precision fires. It will be an important capability gap to close

31.

Lesson: FACs and ground commanders training needs to include better understanding of the capabilities offered by low collateral weapons and to improve their awareness of the options available.

32. A consequence of ground forces operating in a theatre dominated by precision and low yield munitions is that ground commanders have come to expect nothing else.

Observation: It is essential that commanders fully understand the risks involved in danger close engagements and do not become desensitised and blasé to the phrase. Although the RAF has adopted a precision only policy for ADO, it is not the same for ground fires and commanders will need to re-learn the realities of unguided and suppressive fires that may be used in different theatres.

Figure 3-4-10 The FAC Firestorm Suite

26 DLIMS Lesson 27269, LELWG direction of 29 November 2012
27 General McChrystal, ISAF Commander's Counter Insurgency Guidance. Page 7, dated August 2009.

MAPPING

33. Throughout the operation aircrews reported some difficulties in maintaining situational awareness of ground units due to disparities in maps supplied to the Land and Air component. A lack of common mapping was a factor in the Kajaki Dam[28] and Patrol Base ALMAS[29] fratricides. There is a requirement for Task Forces (TFs) to provide a map list for FACs. Pilots require the same information and it is imperative that the same maps are available to all. If the FAC is dismounted and in a high workload situation, the pilot can reduce the FAC's workload by reference to a common map. TFH was the first TF to produce a list of in-use maps and other TFs should be encouraged to follow this procedure. Maps need to be produced in a format that is suitable for fast-jet use. Digital mapping and common reference markings via a ruggedized tablet have been developed for use in the Tornado GR-4. Digital mapping and common reference markings have been developed but still are not universal due to the nature of high tempo coalition operations. The problem was particularly acute in operations involving air and ground units.

Lesson: Air platforms and ground personnel must be issued with common mapping products to enable situational awareness. The Common Geo Reference System (CGRS) should be endorsed and adopted by NATO and non-NATO forces.

CHAT SERVICES

34. Internet enabled real time Chat Services, in the form of point to point communications and chat rooms have changed the way units communicate. The trend of voice being primary and data being secondary has reversed.[30] During the early HERRICK deployments UK airborne Intelligence Surveillance and Reconnaissance (ISR) and C2 platforms had particular problems maintaining situational awareness due to the increasing use of Internet Relay Chat services, such as mIRC, by ground units to pass mission critical information. mIRC fits were lacking in UK aircraft throughout much of the campaign.

Lesson: Internet Relay Chat (mIRC) or future chat services, which are compatible with coalition partners, must be built into future Air ISR and C2 platforms and in the meantime the requirement should be reflected in the Theatre Entry Standard to be satisfied by UOR provision.

PSYCHOLOGICAL IMPACT OF AIR

35. Show of Force missions by Air became increasingly common during the Afghanistan Campaign. 5 percent of all ISAF Show of Force Fixed Wing (FW) missions were flown by UK aircraft. Four distinct categories of Show of Force missions emerged:

    a. Pro-Active to generate enemy activity (e.g. communication traffic) for wider targeting.

    b. Pre-Emptive to deter future enemy activity.

    c. Responsive to deescalate an on-going engagement (i.e. force the enemy to break contact).

    d. Post Event, to prevent enemy re-engagement or to re-assure friendly forces and local nationals.

36. FW, RW, UAS and even Ground Based ISTAR (GBI) aerostats have all been shown to have a show of force effect, especially AH which has become the 'weapon of choice' for many ground commanders.[31] However, only FW has been the subject of in depth operational analysis by the Air Warfare Centre (AWC). Although Measurement of Effectiveness (MoE) for show of force is difficult the study did appear to show that they became decreasingly effective over an extended timeframe. Two factors seem significant. Firstly, greater awareness by the enemy in a mature theatre of different platform capabilities and response times, and, secondly a show of force is only credible if the enemy believe it is the first step on a scale of escalation. The increasingly constrictive ROE imposed over offensive engagements reduced the implied 'threat'. As the campaign has matured and focussed on the Afghan lead, the deterrent effect of the show of force has again diminished as the insurgent appear to be aware of the frequent lack of FAC enablers with the ANSF reducing their ability effectively target using NATO aircraft, thereby losing the deterrent effect. Finally, the focus of current study has been on the enemy and little attention has been given to the wider population (e.g. effect on livestock) in a COIN/stabilisation theatre that has become acutely aware of the need to win the Influence campaign.

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28 DLIMS 3427 uploaded 21 October 2009.

29 DLIMS 17150 refers. PB ALMAS was incorrectly positively identified as an insurgent location by a US Apache AH crew which was authorised to engage and 200 x 30mm rounds were fired. In the attack PB ALMAS sustained 3 Cat A (one died of wounds), 4 Cat B and 5 Cat C casualties. The tools and systems necessary to assist the maintenance of situational awareness were out of date at the time of the incident, meaning that pertinent information was not easily accessible.

30 Information Lessons: Emerging Software and Balance of Voice and Data observations

31 Post Operational Interview Comd 16AA Bde dated 21 November 2006.

Lesson: The show of force mission initially proved extremely effective. The current deterrent effect of Air, UAS and Avn (particularly AH) on Enemy Forces (red) is widely accepted. However, a technical study should be conducted to be better understand the root cause of the psychological effect in order to inform future Force Development, platform design and TTPs.

Observation: Although theatre entry forces are likely to benefit from Show of Force missions the effect is likely to lessen for follow on forces in an enduring campaign, particularly if the ability to escalate is removed.

Lesson: Further study is required into the wider value and exploitation of the psychological impact of air, as a non-kinetic effect, on the civilian (white) population and the wider campaign influence agenda.

FAC PROTECTED MOBILITY

37. On occasions the communication fit for FST/FAC vehicles constrained their ability to maintain communications with aircraft. In a campaign typified by complex terrain and multiple air assets it is vital that FACs maintain full situational awareness and failure to do so was cited in a number of service inquiries. FACs operating communication systems from within Protected Mobility (PM) platforms often proved unworkable. Many FACs reported numerous compatibility problems when working from WARRIOR, often having to dismount to established effective ground to air communications. This will have serious implications for the FAC capability for the Reaction Force Brigades as they require armoured FST and FAC, currently mounted in WARRIOR 514 which has proved to be not fit for purpose.

Lesson: FACs must be provided with a vehicle with appropriate ground to air communications, which matches the level of protection provided by the vehicle to the supported formation.

LOW LEVEL AIR DISPATCH

38. During the early phases of the campaign, when ground troops were frequently operating from remote and isolated patrol bases, delivery of stores by air dispatch (AD) was the only viable method of rapid resupply. AD was not without risk and the loss of an aircraft from enemy fire or loss of the stores, by missing the Drop Zone (DZ), remained a significant risk. During Operation HERRICK TTPs were amended to allow AD from lower levels thereby providing a niche capability for the delivery of essential stores accurately into a small DZ. The ability to air drop to remote and inaccessible locations reduced the risks involved in road or helicopter resupply and as such a precision drop capability will have an enduring relevance for contingency and as such should be brought into core.

Lesson: For future operations AD remains an essential capability which would be greatly improved by the development of an enduring precision/guided air drop capability

CONCLUSION

39. ALI remains a very successful legacy of operations in Afghanistan but one predicated on the very specific requirements and circumstances of the operation in Helmand and the inherent operational imperative. Although many of the shortfalls in the in the 2004 Coningham-Keyes ALI report have been addressed, Defence must not lose the impetus and integrated approach to ALI. Past experience shows that vital knowledge has been lost as operations end, resources reduce and priorities change. In the current financial climate, and as the Services reduce in size and re-structure to meet A2020, there is an even greater risk that the gains made over the last decade will be lost. Once lost they will take time and resources to regain so Defence must seek ways to institutionalise current best practices and to champion ALI structurally as well as in adaptive training and education. Defence needs to inculcate a sense that ALI should be as intuitive to all three services as their traditional core doctrine.

CHAPTER 3-5
AVIATION

BACKGROUND

1. UK aviation elements first deployed to Afghanistan in late 2001. ▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬. During the period January 2002 to mid 2006, helicopters from the Joint Helicopter Command (JHC) continued to support UK forces in Afghanistan on Operations and VERITAS[1], FINGAL[2] and JACANA[3] before the formal announcement of Operation HERRICK in late 2005. Preparations were made during 2005 for a deployment on preliminary operations in February 2006. The deployment contained 3 firsts; the first time that a Joint Helicopter Force (JHF) had deployed at the start of an operation (previously it had evolved over time), the first time UK aviation had deployed under command of a multinational 2* Headquarters (HQ) and, the first time UK Attack Helicopter (AH), Apache WAH 64, had deployed on operations.

AVIATION COMMAND AND CONTROL (C2)

2. The formation of the JHC in 1999 established the requirement for a joint deployable HQ to provide Command and Control (C2) to multi-platform aviation detachments on operations. Elements of the Support Helicopter Force (SHF) from Odiham deployed to lead the preliminary operation HERRICK aviation force deployment prior to the first HQ JHF (Afghanistan) (JHF(A)) assuming command on 15 April 2006 under a UK OF-4.[4] Initially the force consisted of Army and RAF helicopters (CH-47 Chinook, Apache WAH64, Lynx), but Royal Navy Sea King joined in late 2007 and RAF Merlin helicopters in late 2009.

3. In a similar manner to much of the UK Task Force, the initial JHF(A) deployment had complex C2 arrangements which were further exacerbated by geographical separation. JHF(A) Headquarters was located alongside HQ Regional Command (South) (RC(S)) with the majority of the Support Helicopter Force (SHF) at Kandahar Airfield and the remaining aviation elements (Lynx and WAH64) based forward in Lashkar Gah and Camp Bastion. This construct immediately hampered aviation operations due to the 45 minute transit time between the two locations 'eating into' the authorised flying hours allocation with little direct benefit to troops on the ground in Helmand. The knock on effect was a delay in the initial deployment of 16 AA Bde forward of Kandahar as there was Prime Ministerial insistence that UK troops would operate within guaranteed 1 hour medical evacuation timelines (the 'Golden Hour'). This could only be met by establishing a Role 3 Field Hospital at Camp Bastion supported by an aviation Medical Emergency Response Team (MERT). Both required significant infrastructure investment before they could be declared operational and enable operations to adequately supported across much of Helmand.

Observation: There was a political expectation that UK troops would reach a hospital capable of surgery within 1 hour. In Afghanistan the only way to meet this expectation was by aviation MERT. If this political expectation persists into contingency it is likely that the establishment of adequate medical provision will be a major constraint on the speed and geographic lay down of future deployments. There will be a need for Very High Readiness (VHR) aviation assets to deliver a MERT capability similar to that honed as a result of a 10 year enduring campaign. If this capability cannot be met then operation planners will need to manage political and national expectation closely.

4. JHF(A) deployed into a coalition theatre alongside two other Aviation Task Forces, the US and Dutch. Effectively Commander JHF(A) had 3 chains of command:

   a. Coalition. RC (S) (TACON) and in turn to Commander International Security Assistance Force (COMISAF) (OPCON).

   b. National. Commander British Forces (COMBRITFOR) to Permanent Joint Force Headquarters (PJHQ) (OPCOM).

   c. Technical. Air Operating Authority to JHC in the UK.

   There was no formal direct command relationship between Commander JHF(A) and Commander Task Force Helmand (TFH) although, in reality, JHF(A) staff were heavily involved in TFH planning and execution of aviation operations with 85% of JHF(A) tasking flown in support of TFH. In this early period JHF(A) suffered from a lack of situational awareness of and effective coordination with the other two aviation TF HQs (Dutch and US), including frequent disputes[5] between HQs TFH, RC(S) and JHF(H) over aviation tasking authority.

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1   Operation VERITAS: UK contribution to operations against the Taleban Government in 2001.
2   Operation FINGAL: UK contributed 2000 personnel to initial ISAF operations in Kabul and northern Afghanistan 2001-2002.
3   Operation JACANA: UK contribution to targeted search and destroy operations against Al Qaeda in southern and East Afghanistan in 2002.
4   OF-4 Lieutenant Colonel/ Wing Commander/Commander.
5   An issues highlighted in many Post Operational Interviews (POIs) and Post Operational Reports (PORs) from Commanders of JHF(A) Operation Herrick 4-8.

5. C2 arrangements improved in January 2009 with the establishment of a UK OF-5[6] as Commander Joint Aviation Group (COMJAG) within RC(S) bringing unity of command over JHF(A) and the ▬▬▬▬▬▬▬ This allowed Commander JHF(A) to site his Forward HQ at Camp Bastion with HQ JHF(A) Rear remaining at Kandahar. COMJAG enabled much better RC(S) coalition aviation integration and planning as well as taking the lead for interface with JHC over helicopter operation/safety and becoming the delegated UK holder of aviation risk on behalf of Commander JHC. Relieved of its wider responsibilities HQ JHF (A) Forward was able to be focus on tactical support to UK troops in Helmand and become TACON HQ TFH.

6. The arrival of the US Marine Corps (USMC) in southern Afghanistan and the formation of RC (SW) in 2010 resulted in further aviation C2 changes. COMJAG moved to Camp Leatherneck in Helmand to create a fused UK/ US aviation headquarters under a US 1* Aviation Combat Element (ACE) in the newly formed HQ RC(SW). Whilst remaining under command of RC (SW), and not the USMC Marine Aviation Wing (MAW), the JAG was an integral and equal partner in the delivery of aviation effect in RC(SW). The combined JAG / MAW tasking and operations cells proved very successful, ensuring more efficient use of assets and enabling the massing of coalition aviation in support of ground operations. From Operation HERRICK 14 onwards the focus shifted to transition and COMJAG and Commander JHF(A) spent an increasing amount of time mentoring and supporting the embryonic ANA aviation capability.

7. The COMJAG concept worked well and Figure 3-5-1shows the JHF and JAG structure in 2011. The purple indicates those elements coordinated directly from within the JAG; however, COMJAG retained full command of all attached assets in theatre; combat, combat support and combat service support aviation elements. The green elements were coordinated by the OF4 JHF(A) Commanding Officer, the operations focus and, the blue elements the engineering and logistic focussed support under the OF4 Program Aviation Engineering (PAE) including the Royal Naval 1710 Mobile Aircraft Support Unit (MASU). Both OF4s reported to COMJAG.

Figure 3-5-1. Operation HERRICK 15 JAG/JHF TASKORG (Nov 2011).

Lesson: ▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬

Lesson: ▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬

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6   OF-5 Full Colonel/ Group Captain/Captain

AVIATION ASSETS

8. JHC Battlefield Helicopters (BH) offer three key capabilities (LIFT, FIND and ATTACK) which are enabled by five endorsed BH roles: offensive support, control and direction of fire power, command support, Intelligence, Surveillance, Target Acquisition, Reconnaissance (ISTAR), tactical mobility.[7] From the outset it was clear that all aviation capabilities and roles would be called upon due to the difficult terrain, dispersion of coalition forces and the pervasive threat to ground movement from Improvised Explosive Devices (IEDs) and insurgent action. The initial Operation HERRICK deployment consisted of 8 x Apache WAH64, 4 x Lynx, 6 x CH47 Chinook (CH47 liability rose almost immediately to 8) and 5 x Forward Arming and Refuelling Points (FARP) nodes. Mark 7 Lynx deployed very shortly afterwards to support command circulation with a steady overall increase in assets and flying hours into 2007. To meet the increased LIFT requirement, Sea King helicopters were deployed in January 2008 and Merlin in late 2009. The Lynx was found to be underpowered for the hot and high environment drastically curtailing its utility and, as a result, an Urgent Operational Requirement (UOR) delivering a greater capability, Lynx Mk9a was fielded in mid 2010.

9. The aviation deployment reached a high point, with a total of 33 aircraft (9 x CH47, 11 x AH, 4 x Lx Mk9A, 4 x Sk, 5 x Me) and 602 personnel, in January 2011.[8] Military aviation assets were augmented by a civilian contract with Skylink Aviation in 2009 for Mi8T and Mi-26 airframes able to conduct routine resupply tasks thereby releasing military SH flying hours. The contract was for freight movements only and funded from NATO common funding to which the UK contributed 12% of costs.[9] The UK Area of Responsibility (AO) decreased after the deployment of the USMC in late 2009 but conversely the Marine Air Wing (MAW) brought significant additional which were available to UK forces as required. The MAW had 5 aviation squadrons: MV-22B Osprey, AH-1W Cobra, UH-1Y HUEY and a squadron of CH53 Sea Stallion helicopters. Although the reduced AO meant that flight times were shorter demand did not reduce. UK forces in TFH now had the mass to dominate the ground, allowing manoeuvre with an increasing number of offensive deliberate aviation enabled operations. For the first time in the campaign JHF(A) began to operate within allocated monthly flying hours. As a result, to meet aircraft transition requirements, the Sea King (Sk) was redeployed to UK in October 2011 and the Merlin returned to UK in May 2013. The desire to keep an aviation ISTAR and Command & Support platform in theatre delayed the anticipated recovery of Lynx Mk9 until December 2013. In October 2013, the ▬▬▬▬▬▬▬▬▬▬▬▬▬ concluded that Chinook and Apache numbers would need to remain unchanged for the majority of 2014 in order to provide significant LIFT and ATTACK capability during the final redeployment of UK forces in late 2014 – early 2015.

AVIATION UTILITY

10. The primary purpose of JHF(A) was to facilitate tactical mobility, reconnaissance and fire support to the multi-national force of RC(SW) and the UK TFH. Three types of aviation tasking emerged during the campaign which drove much of the planning cycle: Non-discretionary which consisted of the Immediate Response Team (IRT) (including MERT, Very High Readiness (VHR) CH47 and AH in reaction to call from Troops in Contact (TIC); Discretionary (J4 movement of personnel and materiel): Pre planned deliberate Operations. At its zenith in 2011, the following aircraft allocation became standard from Camp Bastion:

   a. Non-discretionary.

      (1) 2 x VHR Apache AH.

      (2) 1 x VHR Chinook MERT/ IRT.

   b. Discretionary.

      (1) 2 x WAH64 tasking lines. (ATTACK limited FIND)

      (2) 3 (surging 4) x CH 47 tasking lines. (LIFT and MERT)

      (3) 2 x Lynx tasking lines. (LIFT (Command Support), FIND)

      (4) 2 x Sea King tasking lines. (LIFT and FIND)

      (5) 2 (surging 3) x Merlin tasking lines. (LIFT and limited MERT)

11. The level of kinetic activity required to prevent the defeat of UK ground troops during the early phases of the campaign was unexpected. JHF(A) HQ structures had to expand rapidly to enable the HQ to plan, refine and execute simultaneously. The following battle rhythm emerged within RC(S). CO JHF(A) and staff liaised with battlegroup COs 10 days out to develop outline CONOPS for deliberate operations. The battlegroup then bid to HQ TFH and hence to HQ RC(S) for aviation support. If approved RC(S) and COMJAG would allocate assets (US, NL or UK) and COMJAG produced relevant FRAGOs.

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7   JHC Aviation Operations Manual Edition 2, July 2013, page 2-1, paragraph 1.

8   For full details of aviation assets over the full campaign see the Campaign Chronology in Section 1.

9   Des Browne, Secretary of State for Defence; Written response to parliamentary question from Liam Fox; Hansard, 17 March 2008.

day and 13 minutes by night. In addition, the coalition developed a number of templated rapid planning operations to short circuit the lengthy planning cycle. For example, ▬▬▬▬▬ was enacted to provide aviation support to operations in pursuit of insurgent high value, short notice targets. This type of planning template is a good practice for future operations. Under RC(SW) and US Aviation Command Element (ACE) planning timelines were similar: 96 hours Initial Planning Conference (IPC), 72 hour Mission Planning Conference (MPC) and then they brief their aviation COs (COMMAG/JAG) 48hrs previously.

> **Observation:** Planning horizons for aviation operations can be reduced by the identification and development of standardised aviation operations. Articulating these in theatre specific aviation SOIs is a good practice which will facilitate rapid planning cycles.

AVIATION OPERATIONS

12. Aviation was central to the success of the HERRICK Campaign. Although there was no joint doctrine on JHF(A) at the outset of Operation HERRICK, the UK will leave Afghanistan with a successful JAG/JHF(A) construct and a force, both ground and air staff, specialist and non specialist brigades, that has honed their expertise in the utility of aviation over a 10 year period. Although SOPs, TTPs and Staff work had to be adapted, UK aviation worked well with the US Aviation TF and other aviation actors. It was routine for a UK CH-47 to be escorted by a Dutch AH in support of Canadian ground forces. At first during the campaign was digital relief in place of UK Apache WAH64 by Dutch AH, enabled by the familiarity built up over an enduring campaign and the co-development of similar TTPs.

13. The first deployment of UK Apache WAH64 was particularly successful. AH TTPs developed, in contact, with help of the Air Manoeuvre Training and Advisory Team (AMTAT). The greater capability in attack, find and C2 (only WAH 64 had good air to ground communication) over other coalition AH platforms resulted in availability of AH becoming a Go/No Go factor for many company and platoon level operations. ▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬ AH was feared due to its firepower and for an air platform its persistence on target. As top cover AH had a significant deterrence effect and was one of the few platforms of which the very presence would cause insurgents to break contact rather than just temporally go to ground. [10]

Figure 3-5-2. AH Apache Firing GPF Rocket

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10   Chapter 3-4, Air Land Integration, noted that insurgents tended to only go to ground after a show of force by fast air, only to re-engage once the aircraft had passed over.

14. The first operational deployment of UK Apache Long Bow was undoubtedly successful within the context of the Afghanistan theatre and a COIN campaign. However, this success should not be taken as a given for future operations. Soviet losses of over 300 helicopters, including Mi-24 Hind, in the 1979-89 Afghanistan War and recent Ukrainian aviation losses in the Donetsk region suggest that in different circumstances it may not.

> **Lesson:** The strengths and weaknesses of WAH64 need to be assessed for contingent operations to better understand whether it will have the same impact and deterrent effect in other theatres and environments.

15. A significant constraint, throughout the campaign, was not so much the number of aviation platforms, but rather an initial under estimation on the required aviation flying hours by JHC and PJHQ. During Operation HERRICK 4 it took CDS intervention to double and then triple hours mid tour. The initial UK dispersed force laydown meant that the management of aviation flying hours was the most significant constraint on UK aviation operations, resulting in a UK mindset constrained by operating in aviation poverty.[11] The deployment of Lynx Mk 9A in 2007 delivered an Armed Aviation capability which allowed many of the WAH64 flying hours to be switched from escort duties to other find and attack tasks. This is a role that Wildcat will be able to deliver in the future.[12] However, it was not until Operation HERRICK13 in 2011, when the UK AO had shrunk, there was no Kandahar to camp Bastion transit and there was the traditional lull in insurgent activity over the winter that TFH began to operate largely unconstrained by the flying hours, for example 30% of CH47 hours not flown. In the opinion of COMJAG on Operation HERRICK 14,

> *'UK ground commanders were mentally unable to fully exploit the aviation situation when UK and NATO aviation platforms were finally available in greater numbers'.*

Without aviation experts involved at the heart of the planning cycle there is a danger that commanders can fail to exploit the full capability of aviation.

16. JHF(A) HQ suffered teething problems in the first deployment. HQ JHF(A) was an augmented headquarters with individuals drawn from across the 3 services. Many commanders and staff suffered from a lack of detailed knowledge of the different aviation platforms (particularly WAH64 on its first operational deployment) within the JHF, which limited their ability to become truly 'air-minded'. This was particularly acute within ground manoeuvre brigades due to a lack of knowledge of the joint staff work for the integration of aviation with ground manoeuvre. Initially the understand function was largely populated by RAF staff who were too focussed on A2 rather than the wider J2 which includes factors more relevant to ground operations.

17. The coherency of the JAG cohesion was undermined by differing tour lengths of staff branches within the helicopter force: CH47 aircrew 8 weeks, AH and Lynx aircrew 2 x 3 month tours, REME aircraft maintenance specialists 4 months and AAC/RAF ground crews 6 months. The rationale behind the various tour intervals was valid (for example the effect of pilot combat fatigue on air safety, the need to rotate pilots to keep them in date for skills not practised in Afghanistan) but, the result was uncoordinated force generation and dislocated training between different aviation platform types during Pre Deployment Training (PDT) and Mission Specific Training (MST). Coordination from JHC can help mitigate the human and capability impacts but a JHC review at the time of writing has no plans to merge or align tour lengths on future operations.

> **Lesson:** Deployed tour lengths for aviation personnel will differ depending on an individual's role and the challenges of the operational environment. HQ JHC should set minimum and maximum tour lengths but in-theatre JHF commanders should determine exact deployment periods to optimise output and endurance. CJOs operational estimate process should reflect this reality.
>
> **Lesson:** Given their unique Force Generation and sustainment circumstances, aviation force elements are likely to remain detached from the Land element Campaign Formation Operational Readiness Mechanism Cycle (C-FORM). The deploying ground formation must engage with HQ JHC at the earliest opportunity to ensure that aviation remains linked to MST progressions.

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11   COMJAG Operation HERRICK 14, Post Operational Interview
12   The Wildcat Mk1 is the Joint MoD (Navy/Army) light utility helicopter, the Army's new Battlefield Reconnaissance Helicopter and a quantum leap in capability for the JHC. It is powerful, more agile and far more capable than the legacy Lynx with a fully digital cockpit including a modern Defensive Aid Suite (DAS), full visual mapping, modern navigation equipment and in-built secure radios

ENDURING AVIATION LESSONS

COLLECTIVE TRAINING (CT)

18. The creation of a JHF necessitates the integration of aviation platforms and aviation staff from the 3 services and potentially coalition partners. Integration with ground forces, particularly Unmanned Aerial Systems (UAS) operated by land personnel must also be developed. At the beginning of the campaign there was a perception that the expertise gained from the still on going operations in Iraq would be sufficient for Operation HERRICK. This turned out not to be the case as the theatre, environment, threat and indeed capabilities available were very different. The UK had also lost expertise across the full spectrum of aviation activities as a result of the focus on Operation TELIC and the suspension of funding for elements of aviation training.

19. Initially aviation training was still stove-piped, Service and platform specific with many crews only gaining experience of operating within a wider Joint Aviation Group (JAG) once in theatre. This resulted in significant risk in both helicopter flying and wider Air Land Integration (ALI) in early rotations. However, joint CT did evolve over time into an excellent series of MST events such as exercises PASHTUN HORIZON/DAWN/JAGUAR. It is notable how the tone of the post Operational Interviews (POIs) from TFH Commanders changes around the Operation HERRICK 14 tour onwards, focussing on how well they were prepared and supported by the training support organisation, including the Collective Training Group (CTG) and the Air Manoeuvre Training Advisory Team (AMTAT). Resource implications are likely to limit a return to the broad-spectrum, aviation capability of early 2000s. However, capability gaps need to be identified and resourced to maintain, at a minimum, a seed corn capability otherwise regeneration at a later stage will be lengthy and difficult.

> **Lesson:** An aviation concentration event, such as Ex PASHTUN JAGUAR, linked where possible to brigade and battlegroup training, should be funded and planned as part of VHR force ratification and follow-on force MST. It should specifically include multi-platform aviation patrols.
>
> **Lesson:** Mentoring of ground manoeuvre troops by AM Subject Matter Experts (SME) should continue but needs to be tailored to the specific operation. The role of the Air Manoeuvre Training and Advisory Team (AMTAT) and 16 AA Bde, as AM SMEs proved and remain central to the training of non-specialist units in the Reaction and Adaptable Force. Divisional and Brigade G7 staff must consult both in the planning of training events involving aviation
>
> **Lesson:** Ten years of operations in Afghanistan have focussed resources and training on aviation capabilities specific to the theatre. There is a danger that Defence will lose the 'seed corn' expertise to re-generate full spectrum helicopter capabilities. JHC must articulate the gap, develop appropriate Collective Training Objectives (CTO) and understand the training burden and equipment costs of doing so.

AIR MANOEUVRE (AM)

20. A feature of the campaign was the access all ground forces had to UK and coalition helicopters in a theatre with a favourable air situation. Within this construct the ability to manoeuvre by air/aviation and conduct aviation assault became a significant capability, generating tempo and, crucially, maintaining the initiative. A good example was the extent to which aviation was integrated into Operation MOSHTARAK when simultaneous helicopter assaults on insurgent strongholds were a feature of the offensive in north Nad-e-Ali. Afghanistan has therefore provided Ground Manoeuvre (GM) brigades with unprecedented opportunities to train, plan, and conduct tactical AM[13] at battlegroup level.

21. The UK entered the campaign with AM expertise, both tactical and operational AM, vested in the specialist 16 AA Bde and 3 Cdo Bde. However, experience gained from multiple rotations on an enduring campaign has made tactical AM a 'whole Army' experience. There is evidence from reading PORs/POIs of a perception that all GM brigades have become fully proficient in Air Manoeuvre operations.[14] There is a danger in allowing this perception to persist beyond Operation HERRICK. In reality in addition to Aviation Close Combat Attack (CAA) strike operations

Figure 3-5-3. Soldiers from 1 Royal Welsh preparing for an AM operation during Op HERRICK 16.

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13 Tactical AM can be readily conducted within a GM formation, given appropriate planning assistance within the formation HQ. Normally an AM BG would provide synchronised support to ground operations or operate as a discrete manoeuvre element. (AFM Vol 1, Pt 12, Air Manoeuvre, Chapter 4).

14 Air Manoeuvre is conducted within the land environment in order to achieve advantage, through shaping, and sustaining tasks. It can also provide the decisive act. It unites attack, support and reconnaissance helicopters; ground, air assault, airborne forces and fires within a combined arms and joint framework. (Pam 101 AAvn Operations Manual, 2012, paragraph 0129).

only a limited range of tactical AM was executed, such as Aviation Manoeuvre, Aviation Attack/Raid. Wider AM such as AM Guard, Air Assault and operational AM was seldom practiced. It is still a specialist skill set that is soon lost without recent practise.

22. Air Manoeuvre is a capability that will have an enduring relevance for contingency, however the UK does not have sufficient Battlefield Helicopters to permanently structure the level of decentralisation experienced during Operation HERRICK. Consequently the Army will still need a dedicated conceptual and structural footing from which to expand the AM capability across formations committed to future enduring stabilisation operations.[15] The delivery of the full range of AM will remain the unique feature of 16 AA Brigade.[16]

23. It is unlikely that GM brigades will be able to maintain their current levels of experience after the end of current combat operations. The Lead Armoured Infantry Battlegroup and GM Brigades on an enduring operation will require reinforcement with AM expertise by Air Manoeuvre Planning Teams (AMPTs). As the default theatre entry VHR force 16 (AA) Brigade will therefore be required to generate AMPTs to enable ground manoeuvre formation's tactical Air Manoeuvre training and subsequent operations in addition to their own requirements.

Lesson: A review is required to confirm whether full spectrum AM operations is solely the preserve of the specialist 16 AA Bde which has responsibility for the generation of the Air Assault Task Force (AATF). Direction given within the Army Future Training Strategy (AFTS) on the balance of Aviation Movement, Aviation Manoeuvre and Aviation Assault expertise for the Reaction and Adaptable Forces.

Observation: Air mindedness is a highly perishable skill. A lack of current expertise greatly inhibits the ability to fully exploit the utility of aviation. The high level of AM expertise within the current generation of UK land forces is at risk of being lost. If 16AA Bde is both the sole AM force and, the default early intervention force, then there is a risk that ground manoeuvre brigades will once again have to relearn AM skills, in contact, if a contingency operation extends to a campaign footing.

Lesson: Aviation embeds either temporary or as permanent staff in a Battlegroup or Brigade headquarters, significantly enhances aviation understanding. HQ ORBATS for training and operations must include these staff.

Observation: Under A2020 the 16 AA Bde deployable Air Manoeuvre Planning Team (AMPT) will augment non specialist ground manoeuvre HQs. A review is required into whether the current AMPT capability is large enough to both conduct operations with 16 AA Bde and to train follow on forces.

AVIATION PLANNING AND PLANNING TOOLS

24. Experience on Operation HERRICK has emphasised the need for AM competencies more broadly across the Task Force. Integration of aviation planning staff was routine within brigade and battlegroup headquarters. Specialist staff such as the 16 AA Bde Air Manoeuvre Planning Team (AMPT), Mobile Air Operation Teams (MAOT), the RAF Deployed Air Integration Team (DAIT) and Air Staff Officers (ASO) proved vital to staff understanding of aviation and how to integrate it into their planning. As the Army returns to a contingency footing and, under current A2020 thinking, these specialists staffs are to be concentrated in support of 16 AA Bde, it is likely that Battlegroups, particularly those within the Adaptable Force, will not have routine access to the specialist knowledge they have become accustomed to.

Lesson: Aviation needs to be an integral part of all soldier's mindset in the contingency era. Aviation planning factors must be incorporated into Land Forces staff officer courses to ensure that the gains made during Operation HERRICK endure. Aviation planning education in the wider Field Army should be co-ordinated by JHC and might include a better aviation/ground unit pairing relationship particularly during MST, to broaden experience.

25. In a similar manner to the experience of wider ALI, it was observed that without specialist AM staff support wider awareness of the complexities of planning and executing aviation operations was poor, particularly in the first rotations of the non-specialist ground manoeuvre brigades. The 'JAG pack' formalised the theatre specific planning process and restrictions (e.g. risk parameters). Figure 3-5-2 is an example taken from JAG Pack 6 and is an example of a good practice that should be mandated in future theatres by JHC.

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15   Army 2020 Internal Report, Chapter 5, Para 5063 dated 20 August 2012.
16   Airborne, TALO, Aviation, Attack/Raid and Air Assault.
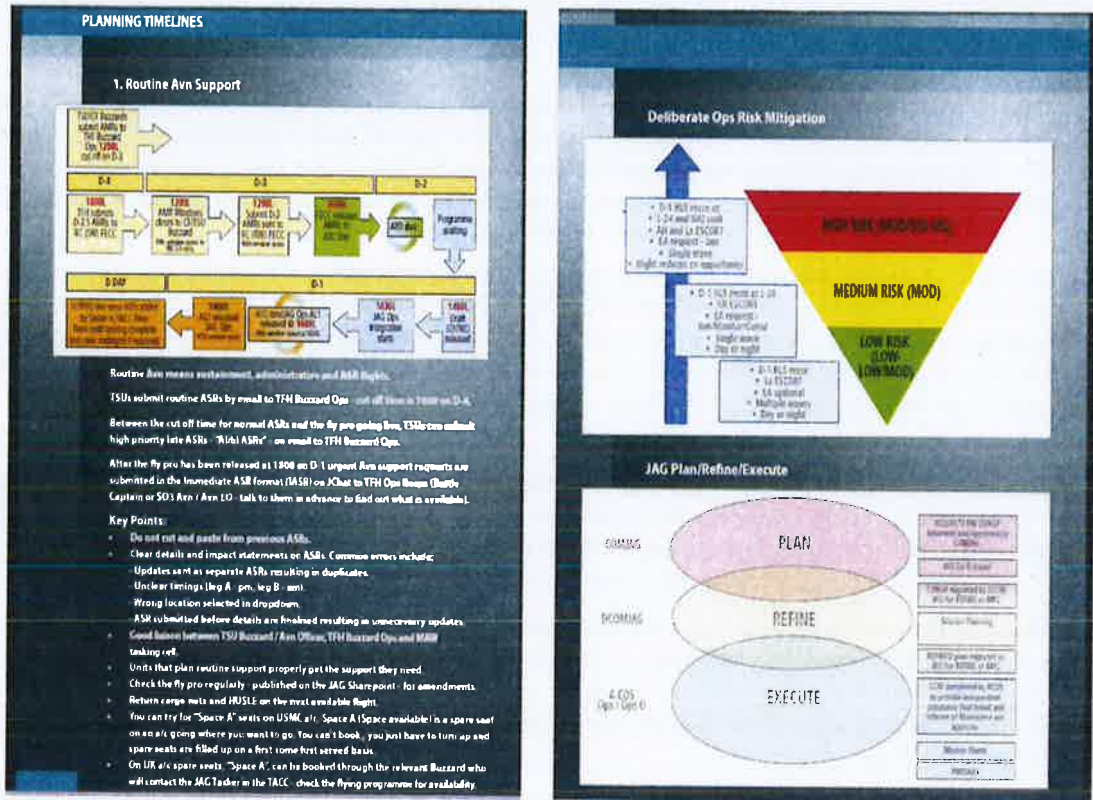
Figure 3-5-4. Example of Aviation Planning Tools taken from JAG Pack 6.

Lesson: Aviation planning tools need to be provided for 16 AA Bde but also to support ground manoeuvre units. In order to facilitate planning, fast, reliable and easily used AM planning tools that simplify the planning process are required. JHC direction should mandate that the Operation HERRICK JAG Pack be used as a template for future operations.

Figure 3-5-5. CH-47 Chinook Landing in Dust Cloud

ENVIRONMENTAL TRAINING (ET)

26. Flying conditions in Afghanistan proved much more challenging than those experienced in Iraq.[17] The difficulties of 'Brown Out' landings in dust, operating at altitude and night/low light flying were significant. Valuable aviation flying hours had to be expended in the conduct of in-theatre training to re-qualify and maintain aircrew competencies. In an effort to mitigate this aviation training was funded to be conducted in Arizonia on Exercise CRIMSON EAGLE as part of Foundation training. This provided vital ET to experience flying in very similar desert conditions to Afghanistan. ET is a costly and time-consuming activity that is almost exclusively conducted overseas. It is currently unfunded beyond 2015. Whilst aspects of ET can be undertaken alongside ground forces, significant elements of aviation ET need to be done without troops due to the increased risk posed by the training activity. HQ JHC should determine the range of environments required for aviation ET.

> **Lesson:** HQ JHC must specify the environments that require aviation Environmental Training (e.g. extremes of temperature, altitude or over water) against future contingency scenarios and ensure that they are properly funded. Where possible, ET should be conducted alongside Land elements.

As discussed in Chapter 2-1(Combat), night operations by conventional ground forces in Afghanistan were characterised in the main as night manoeuvre rather than night fighting.[18] Whilst ground manoeuvre at night was used to good effect, fighting at night was limited[19] to ambush and night standing patrols to enhance Forward Operating Base (FOB) and Patrol Base (PB) surveillance, target acquisition and protection. Although experience on Operation HERRICK has demonstrated that ground troops have not been able to achieve the requisite level of training to consistently 'fight at night', the requirement to manoeuvre and fight at night will endure into contingency. Some limitations were experienced by FW platforms but RW faced additional problems. Current aircraft equipment fits constrain the ability of aviation to operate in a degraded visual environment and during low light periods. CH-47 initially could not fly on 2 out of 3 of nights, and although Red illumination gave an additional 10 days night flying per month there were constant difficulties in maintaining qualified crews. As with ground troops night fighting skills, night flying competency is also highly perishable and a considerable proportion of aviation flying hours was used for in theatre night flying training.

> **Lesson:** As part of a UK forces 'fight at night' capability review, JHC should quantify the capability gap for improved night flying by UK helicopters. Specifically this should include an assessment of the relative benefits of the procurement of a capability to fly at night with red and/or black illumination.

OPERATING IN A COMPLEX BATTLESPACE

27. The Operation HERRICK battlespace, including airspace, was congested, particularly with the increase in UAS, necessitating tight control but, as an enduring campaign, one that became well understood. Even so, the risk of aircraft collision in the tactical battlespace remained high with a number of near miss (Air Proximity) incidents involving helicopters, UAS and Joint Fires occurring at various times during the campaign.[21] Air collision was the Air Component Commander's (ACCs) principle risk. The co-location of Royal Artillery Joint Fires personnel with Air/Aviation controllers within Fires Support Teams (FST) at every level of command was effective at reducing the risk and a lesson learned.[22]

28. 1 Air Control Centre (1ACC) deployed from 2006-2010. 1ACC are the UK's deployable ASM C2 asset establishing the RAF's Air Support Operations Centre whose remit is to provide dynamic procedural airspace control. The Marine Air Ground Task Force (MAGTF) deployed into Helmand from late 2009 and established the Direct Air Support Centre (DASC), callsign "OVERLORD" and executed procedural control of the Helmand airspace. 1 ACC then supplemented the USMC manning at both the DASC and the Tactical Air Ops Centre. The control of airspace in RC(SW) was therefore based on USMC procedural ASM doctrine and UK forces had to adapt to in order to integrate. However, Operation HERRICK has narrowed the UK experience of ASM. Contingency operations may be conducted in very different circumstances in support in a high tempo conventional force on force manoeuvre, a credible enemy air threat and where the CIS infrastructure is more susceptible to degradation. The USSR lost 118 Fast Air platforms during their occupation of Afghanistan and more recently the Ukrainian experience[23] has demonstrated the vulnerability of air and aviation platforms to an adversary equipped with modern Air Defence systems. It is unlikely that UK aircraft will

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17 From Post Operational Report CO JHF Operation HERRICK 5.
18
19 President Karzai's imposed tight controls in 2012 on ISAF night operations, particularly raids into civilian dwellings.
20
21 POR COMJAG Operation HERRICK 13. The risk of collision in the tactical battlespace remains high and must be minimised. The complex and congested airspace, especially in CHMS presents a potential Flight Safety risk. Coordination is needed not only with other aviation assets, but also Air and Joint Fires.
22 See Chapter 3-1 Joint Fires, paragraph 13.
23 Ukrainian army aircraft Il-76 shot down near Luhansk, Ukraine, 14 June 2014, killing all 49 service personnel on board. In addition at least 5 helicopters were shot down in the period May-June 2014.

enjoy the same HERRICK freedoms on future operations. Core UK ASM doctrine covers TTPs for a range of tactical environments but not all have not been practiced by the current generation airspace managers. Effective ASM remains a risk for contingency if not redressed in future training activity. Policy, procedures and training for the crucial C2 enablers requires review to provide a continuing ASM capability optimised for all potential contingency operations.

Observation: The principle of merging ASM staff and Artillery Tactical Parties at every level of command was successful and must continue for all types of contingency operations.

Lesson: Aviation requires close liaison with all users of the battlespace and effective integration of aviation/air complexity can only occur if aviation planners are involved early in the training and operational planning cycle. The Defence Exercise Programme (DXP) must ensure that complex battlespace deconfliction is represented in training events such as Exercise MOUNTAIN DRAGON in preparation for operations. .

Observation: UK forces will need to remain familiar with US ASM procedures as US led coalitions are likely to be a common model for future operations.

Observation: Other theatres have shown the vulnerability of aircraft to an enemy with modern Air Defence systems. Future exercise scenarios should be developed to test commanders in the realities of such a restrictive environment.

HLS MANAGEMENT AND HELICOPTER HANDLING TEAMS

29. During Operation HERRICK a number of air safety incidents occurred due to poorly managed Helicopter Landing Sites (HLS) due to a lack of trained/experienced personnel. This was particularly prevalent before the arrival of the USMC in 2010, as UK ground forces were stationed in numerous patrol bases across a large AO requiring JHF(A) to service up to 136 HLS. Poor HLS location and marking, lack of knowledge of the 'pilots perspective', poor coordination with local Battlespace Management/FST, lack of coordination with joint fires and UAS, and poor tactical foresight of likely reactions from the insurgent were all cited as weaknesses at various times during the campaign. This was particularly acute when the HLS lacked specialist Helicopter Handling Teams (HHT). The initial lack of confidence in HLS operation led to the deployment of elements from the Mobile Air Operations Team (MAOT) from the Joint Helicopter Support Squadron (JHSS) at RAF Odiham to improve in theatre training for Battlegroup HHTs to enable them to run HLS correctly and safely. They were also able to provide specialist advice to HQ TFH, to contribute to the production of TFH SOP 3007 HLS Management, oversee the currency of the in-theatre JHC JAG Pack and, to maintain a Theatre-specific HLS Directory. All of these documents are examples of good practice which should be produced at the earliest opportunity on future operations. During deliberate operations a MAOT was able to embed with a battlegroup as required to ensure that Emergency Landing Sites were properly selected and manage the extraction of casualties by the MERT aircraft.

Observation: The presence of suitably trained specialist HHTs will significantly reduce the risk of air safety incidents around an HLS. If there is an expectation of numerous FOBs with related HLS, then planners must foresee this requirement during MST and generate increased numbers of HHTs.

Lesson: For Contingency, the balance between specialist and non-specialist Helicopter-Handlers within VHR forces must be determined by HQ JHC.

Observation: There will be a requirement for the specialist HHTs, to be augmented by MAOT personnel, to deliver theatre 'point of use' training to both specialists and non-specialists. HLS safety must be institutionalised as a core training requirement during RSOI.

OPERATING RISK

30. Understanding of aviation risk and related freedoms by ground commanders was initially poor. Examples included practical matters such as wearing of seat belts for personnel in flight or the escort requirement for ANA personnel in UK helicopters, right up to balancing aviation safety launch criteria against mission imperative in go/no-go decisions. Given that the mission imperative can outweigh aviation safety, a clear understanding of the balance of aviation operating and operational risk and the delineation of the ownership of that risk between the Tactical Commander and Aviation Operation Duty holder is required. It should be clearly stated in future PJHQ Operational Orders.

31. The creation of the JAG formalised the ownership of risk and enabled a more formal risk versus reward regime and aviation check matrix to be developed thereby providing a robust level of evidence to the supervisory chain. This was captured in the JAG Pack and is a concept to be taken forward into contingency and doctrine. A JAG road show during MST and briefing on aviation risk during RSOI is also a good practice which helped to raise awareness across the force.

Lesson: A clear understanding of the balance of aviation operating and operational risk and, the delineation of the ownership of that risk between the Tactical Commander and Aviation Operation Duty holder is essential. A specific war game should be conducted during MST to identify and mitigate boundary issues.

Lesson: To comply with the Military Aviation Authority mandated Duty Holder chain, COMJAG should be established as the default holder of UK aviation risk and the associated aviation safety regime.

Lesson: A good practice developed during the campaign was the aviation risk register. This included a Helicopter Landing Site (HLS) and Escort Threat matrix that was developed as a mandatory assessment activity before aviation launch for both mandatory and discretionary tasks. The need to maintain an aviation risk register during contingency operations must be incorporated into aviation doctrine and TTPs.

JUDGEMENTAL TRAINING

32. Within the constraints of the Afghan COIN campaign, the investment in judgemental training for commanders at all levels proved beneficial. Experience has shown that personnel need to receive consolidated ROE and judgemental training commensurate with their delegated authority within the campaign they are fighting. Future contingent operations will be different in nature, but the need for judgemental training for aircraft commanders, Forward Air Controllers, Close Combat Attack initiators and wider ground commanders when taking engagement decisions for aviation launched weapons will endure. The judgemental training delivered by the Air Manoeuvre Training Advisory Team (AMTAT) during MST for Operation HERRICK is seen as good practice. However the capability owner for judgemental training remains unclear.

Lesson: An enduring capability owner for judgemental training needs to be identified. The AMTAT will retain the lead for aviation but wider foundation training must also include judgemental training as a core skill set for all commanders. Narratives developed for training scenarios in support of future operating environments must be in sufficient depth to pose realistic choices to commanders.

FORCE PREPARATION AND FORCE READINESS

33. Like the majority of force elements deploying on Operation HERRICK, particularly in the early rotations, the generation of aviation Individual Augmentees, (IAs) both within JHF(A) and ground units was often late and not synchronised with formed units.[24] Due to a lack of joint activity during MST awareness and understanding of the full range of aviation aircraft types, even by some COs of JHF(A), was sometimes weak. JHC must exert greater control the on force generation, force preparation, integration and even the validation of JHF commanders from the outset of future operations.

34. IAs entered the force generation and training pipeline with different operational rotary wing experience. IA training had to be specifically tailored to the platform and task that they were to undertake. This led to some confusion by in theatre commanders over the competencies that individuals had and the risk envelope in which they were therefore operating. It was therefore important to develop a standardised system to audit the level of understanding and competence of personnel with the Theatre Entry Standard of aircraft operating in Afghanistan. JHC developed Command Instruction 14 (CI14) as a standardised format to allows JHC HQ and deployed or aviation commanders to gauge the levels of competence and training of deploying aircrew. The information allowed the Operational Duty Holder to formally identify and highlight risk to deployed aviation commanders to enable them to assess the incoming aircrew and their likely requirements for training during their handover phase prior to conducting operation. It also enabled deployed commanders to supervise and, where necessary, constrain the aircrew and then balance risk against the tasks they wished to conduct. HQ JHC should articulate the theatre entry competencies for personnel for each aircraft type in mounting orders of future operations.

Lesson: JHC must exert greater control the on force generation, force preparation, integration and even the validation of JHF Commanders from the outset of future operations.

Lesson: Aircrew training needs to be dynamic, innovative and reflect the context of the operating environment. This must include a thorough understanding of the strengths and weaknesses of the aircraft deployed at Theatre Entry Standard (TES). Where pilots have not had access to aircraft at TES during C-FORM the CI14 assurance process will provide an auditable competency register for the in-theatre COMJAG/Comd JHF. HQ JHC must ensure that the CI14 concept is taken into core.

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24   Further lessons on force generation can be found in Chapter 5-7.

Figure 3-5-6. MERT in a CH 47 Chinook.

MEDICAL EMERGENCY RESPONSE TEAM (MERT)

35. The role of aviation in the medical plan and the provision of MERT have developed incrementally during the Operation HERRICK campaign into a capability that is widely accepted as world class. An Incident Response Team (IRT) helicopter (Chinook) provided CASEVAC on Operation HERRICK. This became a non-discretionary tasking that ring-fenced 2 x CH-47. After 10 years in Afghanistan UK troops, politicians and the wider public and become accustomed to the gold standard CASEVAC provided by a dedicated aviation MERT. There is an expectation that it will endure on future operations. However, the Operation HERRICK MERT has been able to operate from well founded static bases against insurgents with no sophisticated anti-air capability. In other theatres aviation MERT may not be possible and the Army may be reliant once again on vehicle mounted CASEVAC options. This option must be exercised during FT and the MOD will need to plan for the expectation management of politicians and the public as we return to contingency.

36. The UK CH-47 MERT capability was complementary to US PEDRO Medevac aviation. PEDRO was mounted in a smaller airframe (normally 2 x Black Hawk) than the UK MERT but was able to access smaller FOBs and was fully night capable. However, as a smaller platform the medical care and interventions once onboard were lacking and the early medical intervention available during flight on the UK CH-47 was a significant factor in the improved casualty survival rates during the operation HERRICK campaign.

> **Observation:** At the time of writing the MERT capability remains unfunded outside of Operation HERRICK and doctrine and TTPs for contingency CASEVAC have yet to be codified and brought into core. A Defence decision is required on the enduring requirement for aviation MERT within the Joint Personnel Recovery Plan by Capability Directorate Combat Service Support (CDCSS).

SYNTHETIC SUPPORT TO COLLECTIVE TRAINING

37. The Operation HERRICK airspace became increasing complex as additional UK and coalition force elements, including UAS, have deployed. A proliferation of UORs were fielded but were frequently not available during MST. The combined, complex, congested and fused battlespace of the future will be difficult to replicate within safety parameters in live training events. As discussed in Chapter 3-2, Joint Fires, synthetic training offers the only realistic opportunity to fully train and test for the integration of aviation within the wider joint fires community. The Air Battle Training Centre at RAF Waddington was utilised to deliver Exercise MOUNTAIN DRAGON and proved to be the single most effective training event for the development of ALI. There is an urgent need to expand the current simulation capability to ensure that the increasing numbers of aviation, air and joint fires actors, now operating in the joint Battlespace, are exposed to real complexity in battlespace management. Without it, there is a significant risk that the highly perishable skills honed during the enduring Operation HERRICK campaign will be lost.

> **Lesson:** The best way to effectively replicate likely operational complexity and to overcome restrictions on the UK training estate, is a synthetic training capability, including a synthetic wrap for aviation. Funding needs to be secured for the development of an enduring synthetic training facility such as the DSALT.

COMMAND SUPPORT AVIATION

38. The ability to conduct timely battlefield circulation and Key Leader Engagement in a large, complex COIN theatre with joint, coalition, cross government and local actors was fundamental to commander's ability to Command, exert Influence, maintain Situational Awareness and execute Consequence Management. Due to the peculiarities of the Helmand AO with numerous widely dispersed FOBs/PBs and difficulties in road movement there were frequent instances of commanders being 'stranded' in forward FOBs for days at a time due to a lack of aviation or other transport back to central HQs. As a result many did not take the risk and to a certain extent became fixed in the MOBs.

39. Battlefield Helicopters (BH) are key enablers in allowing Commanders to execute this function. General Richards when appointed COMISAF highlighted the lack of provision of a 'Command Flight' by the UK as a significant hindrance, even embarrassment, which was eventually overcome by the US. The burden on commanders is unlikely to reduce on contingency operations and the provision of a capability, such as provided by a Utility Helicopter, will continue to be a requirement that needs resourcing. Lynx Mk 7 was initially deployed in the BH role but was overly constrained by its inability to operate at altitude and in heat. As such it was unavailable during summer months, the 'fighting season' requiring commanders to utilise support helicopters instead. A major refit as a UOR delivered the more capable Lx Mk 9A in 2007. Future BH must not be constrained in the same manner.

Figure 3-5-7. Lynx Mk 7 Battlefield Utility Helicopter

Lesson: Command Support should be designated as a specific aviation task, resourced appropriately and included in the operational design of future operations.

AIRFRAME AVAILABILITY MEASURES

40. Helicopter availability was a contentious issue throughout the campaign from the platoon commander in contact right up to the highest political echelons briefing Parliament and the press. The confusion of claim and counter claim was exacerbated as the method for recording aircraft availability centred on a measurement of flying hours, the methodology of which differed across the Services and by aircraft type. Although essential to the engineering (mechanical constraints) and air safety community (pilot/crew constraints), ground commanders found the measure of flying hours difficult to interpret for tactical planning purposes and preferred measures indicating airframes, lift capacity and the ability to mass forces. During Operation HERRICK 15 Comd 20 Brigade was very concerned with the tactical constraints and significant risks of landing a second wave of troops on an objective once surprise had been lost. He stated that 'a report telling him he had double the number of flying hours did not help in balancing risk'. There are resourcing implications in changing the method of recording aircraft hours, but the aviation commander needs to exploit the differences in order to meet the ground commander's requirements.

Lesson: A standard method of expressing aviation availability must to be identified to ensure better understanding, not only of flying hours and numbers of aircraft but also in terms of the AM capability available to the commander.

CHAPTER 3-6

COUNTER IMPROVISED EXPLOSIVE DEVICES (C-IED)

'Like it or not, the IED as a threat is here to stay. All force elements need to be capable of operating in an IED threat environment and we must ensure that dealing with the IED is not merely seen as the preserve of the specialist'.

Principal Ammunition Technician Officer (PATO) Land Forces 2009-10.

Figure 3-6-1. IEDD operator confirming an IED using manual drills

OVERVIEW

1. Counter-Improvised Explosive Device (C-IED) capability evolved rapidly throughout the Operation HERRICK campaign. In 2006, the structure of the ▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇ capability was still focussed primarily on UK Military Aid to Civil Power (MACP)[1]; any surge requirement abroad was difficult. The Army perception existed then that C-IED was a 'specialist' capability, carried out only by Explosive Ordnance Disposal (EOD)[2] force elements. Initially there was not a large IED threat, but from late 2006 when the use by insurgents increased and the reliance on IEDD operators, as the sole capability against this threat, proved increasingly inappropriate.[3] The force became progressively fixed by the IED proliferation and a responsive, adaptable enemy.

2. Under the capbadged focussed Arms and Service Directors (RLC and RE), EOD capability within the Army was highly stovepiped and incoherent. This situation could not endure in light of the growing IEDD problem and change was urgently needed. Equipment and training was under resourced and a major rethink about the emerging threat was required. A strategy to counter the IED threat required speed and agility in delivery. In particular, IEDD team training needed to be adapted and in-Service equipment required updating to meet the new challenging operating environment.

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1 There was a standing task throughout Operation TELIC and Operation HERRICK to provide separate coverage for the UK home base as well. This included Operation Olympics in 2012 (during Operation HERRICK 16).

2 EOD comprises Conventional Munitions Disposal (CMD) and Improvised Explosive Device Disposal (IEDD).

3 CMD teams were available for tasking but the conventional munitions threat was minimal. There was also a lack of institutionalisation of C-IED across the force.

3. In 2008 key reviews were conducted which would shape the C-IED outcomes for the campaign. The Burley Review[4] examined all aspects of capability delivery leading to a strategy to implement the 3 C-IED doctrinal lines of operation; Attack the Network (AtN), Defeat the Device (DtD) and Prepare the Force (PtF). A Land EOD Review[5] focussed on C-IED capability, while the emphasis was on moving from a defensive to an offensive posture. A comprehensive plan, starting in late 2008, required a significant reorganisation, an uplift in trained manpower and a drive for new equipment.[6]

4. Measures were agreed after these formal reviews and implementation followed which enabled the embodiment of the doctrinal C-IED lines of operation and to put in place the drive for improvements. Major equipment projects were identified to enhance the capability to detect IEDs and subsequently C-IED team protected mobility.
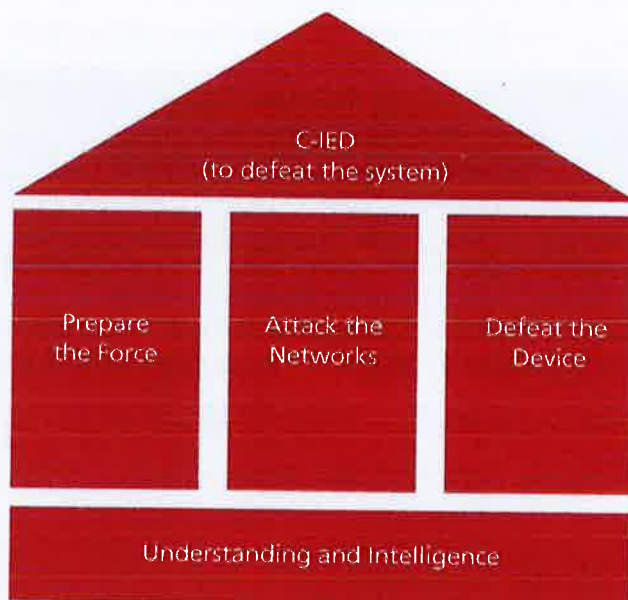
Figure 3-6-2. C-IED Doctrinal Lines of Operation

5. The formation of a completely new C-IED Task Force from Operation HERRICK 11 (starting from November 2009) with an offensive posture enabled better manoeuvre support and fuller technical exploitation. This force employed increased numbers of IEDD teams as well as intelligence experts and made a major contribution towards campaign success. Force elements became better prepared as C-IED evolved from a being a 'specialist' task to an 'All Arms' activity; as a result casualties[7] began to reduce. Measures were also taken to try and counter and remain ahead of the Explosive Ordnance (EO) threat as well as to institutionalise C-IED across the Army.

Dates	Capability
Apr 06 Apr 08	EOD elements under command JFEngr Gp. 2 IEDD teams.
May - Oct 08	IED Threat escalation. TTP adaptation. Burley Review and Land EOD Review
Nov 08-Mar 09	Operation Entirety reorganisation. 1 MWD Regt created. 36 Engr Regt re-roled to an RE Search Regt. Full VALLON detector fielding and into HERRICK 10. Lightweight RCV, DRAGONRUNNER, first fielded.
May-Oct 09	C-IED Tf Assembling capability in Theatre. Migration from High Metal to low metal IEDs
Nov 09-Apr 10	FOC C-IED TF. C-IED PM FOC High Assurance Dogs (STAMP) introduced to C-IED TF and IED Detect dogs (BEEK) introduced into All Arms use.
May-Oct 10	ANSF C-IED capacity building commenced. TALISMAN capability fielded with JF Engrs

4 The Burley Review: PJHQ C-IED Study Team Report: LWC/OSG/Comd 101/08 dated 14 November 2008. See Annex A for full detail and a summary of recommendations.
5 Land EOD Review final version 4.7, 8 Bde dated 18 March 2009. This followed the Burley Review (November 2008). It made a number of recommendations, the principal of which were that Land EOD units to be equipped and trained to handle the threat posed by IEDs: rationalisation of EOD and Search training and common standards with assurance across the Army.
6 The Army initiated a set of measures to better align Land Forces (LF) to ensure continued success in Afghanistan and to better to meet operational requirements over a sustained period. These measures have been placed under the umbrella of Op ENTIRETY (Campaign Footing). The key tenet was to ensure LF was resourced, structured and prepared – conceptually, morally and physically – for success in Afghanistan and then other subsequent hybrid operations. For further detail see Annex B and Part 1: Op Entirety – Delivering the Campaign. See also Annex C for an EOD and Search Task Force Orbat.
7 IED Statistics for Afghanistan and Helmand by volume and type are summarised at Annexes D to H.

Dates	Capability
Nov 10- Apr 11	WIS company switches from C-IED TF comd to IEF ANSF equipment delivered into HERRICK 14.
May- Oct 11	HORN Detector fielded to All Arms Search Teams (AASTs). Training at risk on RSOI.
Nov 11-Apr 12	All Arms Light Rollers (CHOKER) fielded for use with Mastiff.
May - Oct 12	Capability development continues.
Nov 12- Apr 13	TTP adaptation from dismounted to mounted emphasis ANSF C-IED development surge.
May -Oct 13	EOD&S TF disbanded and elements taken under command JFEngr Gp. ANSF capability overtakes UK capability.

Figure 3-6-3. C-IED Chronology

WHAT WAS THE PROBLEM?

6. The Threat. There was a poor strategic intelligence picture of the Afghanistan region. Too little attention had been paid to the threat whilst Operation TELIC had continued in parallel. We did not know enough about the capabilities of the Taleban: either their ability to reconstitute following losses, or their supply baseline from other regions. Their threat had been underestimated. The C-IED threat in Operation HERRICK lacked the complexity encountered on Operation TELIC, where effective TTPs had been developed to counter the high tech threat. The IED threat in Afghanistan was significant in terms of volume and effect. It was not until Operation HERRICK 6 (from May 2007), that there was the start of a better focus on C-IED and some more resources became available. Hitherto it was not clear who was gathering intelligence and what happened to it. Whatever was collected was not exploited and there was no evidence of the establishment of a supporting database.

7. Lack of Capacity. Experiences gained from Northern Ireland (NI) had not been adapted, despite C-IED operators still serving with that experience.[8] The initial EOD force attribution for the UK was based from historic high threat operator requirements. No real detailed planning had been conducted to determine the exact requirement for the future IED threat. At that stage NI was moving towards normalisation, the Balkans had seen a low IED threat and although Iraq had presented a wide-ranging threat, the UK requirement for C-IED input had been minimal. In 2006 there were only 6 IEDD teams available: 4 on TELIC and 2 on HERRICK.[9]

8. As HERRICK deployments grew in size and capacity, the force started to expand inside its AO and more problems were encountered. The IEDs there were of a low tech nature but increased in volume and were better concealed. The few teams deployed started to find that they neither had the skill sets to tackle, nor adequate equipment. This early focus was inadequate.

9. It was also becoming apparent that the type of threat being experienced was not going to go away, because the Taleban saw that it was working. The IEDs being used were cheap, effective easy to assemble, and delivered a strategic effect being used as a low level tactical weapon. Moreover they had an effect out of all proportion to their delivery, cost and complexity. Thus they were likely to remain their weapon of choice. The Taleban in effect 'institutionalised' the use of the IED.

10. As casualties from IEDs increased, the small number of deployed ATOs came under significant pressure and were unable to cope without additional resources. The first UK KIA from an IED was in October 2006 and IED activity in Helmand quadrupled from 2007 to 2008. The first ATO was killed in 2008. The requirement to 'Attack the Network' and to get on the 'front foot' against this threat had become urgent.

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8   In Northern Ireland the police took over the exploitation. The Army lost elements of the weapons intelligence and the exploitation part of it. We had lost that idea that high threat teams worked in conjunction with Royal Engineer Search Teams, the high threat search and the high threat EOD worked hand glove. The Burley Review re-introduced all those elements.

9   This was also a reflection of hard learnt TTPs and improvements in FP for IEDD teams as well as better and more appropriate equipment. See Annex I which summarises the eventual growth of the teams by HERRICK.

KIA Causes 2004-2008
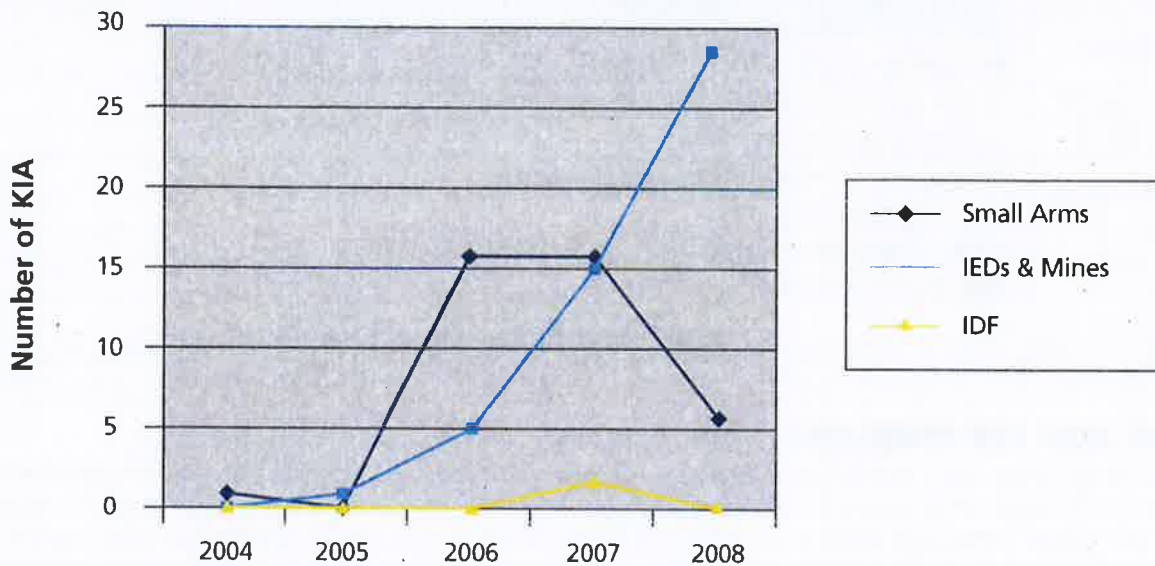
Figure 3-6-4 Cause of UK Fatalities in Helmand 2004-2008 (Operation HERRICK 1-8)

11. ~~██~~ This
vital migration was missed and it took time and cost lives to catch up and provide a counter. This led to the difficult decision of who was going to do what to meet the EO threat. It added further complications to the efforts to change the force's posture.

12. Operation HERRICK 10 (May to October 2009) saw the major change in C-IED campaigning terms. The IED threat had increased again. The impact was harsh in terms of increased casualties. It was fixing company and battlegroup manoeuvre, both physically and psychologically. At the end of Operation HERRICK 10, 19 Lt Bde had lost 65 KIA, 82% by IEDs. It took until the end of Operation HERRICK 13 (April 2011) to achieve some sort of balance with the requisite number of teams.[10] The insurgents remained extremely adaptive: ~~████████~~

13. Efforts continued to get ahead of the threat and not to get caught out by any subsequent migrations. Further migrations did occur such as to larger charges as the TF moved from dismounted to mounted in the latter stages, but these were more successfully monitored.

14. ~~██~~

15. Lack of C-IED Capability. Not only was the threat not well understood by everyone, but the cross DLOD capabilities to address these shortcomings were not synchronised. There was no up to date C-IED doctrine, organisations were wrongly configured, training was under developed and equipment was both inadequate and insufficient in quantity. C-IED Capability Integration Working Groups (CIWGs) were constantly challenged as the threat developed and then rapidly changed. There was always a need to try and catch up in order to counter with new capabilities. This meant that solutions being considered had to be dealt with in a different way from a mobility platform type CIWG, which required a more deliberate approach.

16. Research and Development had not been sufficiently focussed to address the main issues, especially the lack of detect capability. New UOR equipment could not be developed quickly enough. It took time to look at options to counter the emerging threats, once they had been identified. Initially there did not appear to be a gap mitigation strategy.[11] It took up to a year to field some equipment, which was then often out of date as the threat had changed again. In reality, the UOR process could not keep pace with the migrating threat. This aggravated the training pipeline as changes were always being introduced, which had to be loaded onto Reception, Staging and Onward Integration (RSOI) to deal with.

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10 "In my view there is an absolutely vital requirement to ensure that - and this is a key principle of EOD and Search and C-IED capability – with the fast pace of technological change and migration of the threat that you cannot adopt a traditional approach to capability development". AD DEODS 2012-2014, interviewed 31 Jan 14. See also Annex I for Summary of EOD and Search Teams.

11 "This was a very good example of why we set up ████ VALKERIE, and HERCULES Boards and in the way that we did, because even if you cannot afford to UOR straight away you have indentified the gap, have worked out what the solution is, you have done the design work on it and you put it on the shelf. So that when that threat does emerge, you are not starting from scratch. You are preparing stuff up for what might happen. This if something happened; you take it off the shelf and run with it. That is best practice and therefore you need to have a research programme worth its salt and you need to have an exploitation path worth its salt". Director Equipment Directorate 2011-2013 Interviewed 07 August 13.

3-6_4

ADDRESSING THE PROBLEMS

17. The process of addressing these C-IED shortfalls was very challenging and took valuable time to implement. The Burley Review (November 2008) and the Land EOD Review (March 2009) resulted and were used as the main hand rails to address all the shortcomings identified. Extensive staff action and organisational change was needed to follow up the recommendations which remain extant today.[12]

18. The Burley Review,[13] examined all aspects of capability delivery and led to CJO accepting the following recommendations:

   a. A change of approach from defensive to offensive C-IED.

   b. The embedding of additional suitably trained teams within the UK Forces to provide a dedicated capability to each manoeuvre battlegroup with an element to train and develop the Afghan National Security Forces (ANSF) C-IED capability.

   c. Enhancement of exploitation by increasing weapons intelligence structures

   d. Review of existing UK C-IED embedded staff at various HQs to ensure appropriate national influence and benefit was guaranteed.

   e. Requirement to generate a comprehensive individual and collective C-IED education and training regime.

   f. Establishment of a Defence C-IED governance structure, with PJHQ acting as the 'supported' HQ in the delivery of operational C-IED effect.

   g. The adoption of the lines of operation as outlined in draft NATO doctrine[14], to provide the required structure and staff focus and to enable an integrated C-IED Campaign Plan.

19. The Review accurately identified the number of teams that would be required to mitigate an escalating IED threat over time, but there was no means of quickly force generating the solution. It was a complex bill and initial force attributions had been based on historic response levels. Little investment was made towards EOD and Search force attributions during the Balkans and Operation TELIC timeframes. Undermanning in the then existing structures had been allowed to endure. Trying to close the gap with no additional manning was not possible without significantly lowering the training standard and this course of action was rejected. The approach was expanded to incorporate the 3 doctrinal lines of C-IED operation and to put the Force on an operational footing. TTPs were reviewed and adapted from both Operation TELIC and experiences from NI, during Operation HERRICK 8.[15]

20. The Land EOD Review made a number of recommendations, the principal of which were:

   a. That Land EOD units were to be equipped and trained to handle the threat posed by IEDs.

   b. The rationalisation of EOD and Search training and common standards with assurance across the Army.

21. **Reorganisations.** RLC and RE existing C-IED capabilities did not match the operational requirement and a difficult reappraisal had to take place to agree to pool, then grow potential capabilities. Operation ENTIRETY directed significant changes across RLC and RE organisations to remould Units and to create a new C-IED Task Force structure modelled on US experiences from both Iraq and Afghanistan. It took time to produce and was deployed at high risk on Operation HERRICK 11. By the end of Operation HERRICK 14, the C-IED Task Force had reached full capability.[16]

22. **Operator Standards.** In order to counter the lack of IEDD operators, training standards on EOD training could have been lowered in order to produce more operators more quickly. However this was rejected as too high risk, could have led to more people being killed and may have delayed any recovery effort. From Operation HERRICKs 10 to 13 there was a requirement to 'hold firm' as the concept of C-IED started to take hold. Operators became more adept at dealing with IEDs; however the ▬▬▬▬▬▬ devices continued to be a problem. To counter this, training was further adapted and the Taliban's IED efforts began to fall below the force attributions that were emerging from the revised courses. Eventually in early 2012 a period of stability[17] was reached.

23. **Capability Exploitation.** In 2006 there was an inadequate exploitation capability, with only a single experienced WIS Warrant Officer (WISWO) post within the Task Force Helmand Headquarters. However ▬▬▬▬▬▬ , had continued to work with US Forces and did continue to use their exploitation facilities very successfully. Shortcomings were highlighted and many of the elements that had been previously familiar in NI were recommended for re-introduction: the NI lessons revisited. ▬▬▬▬▬▬▬▬▬▬▬

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12 See Annex B for the full Op ENTIRETY summary of unit enhancements made.

13 The Burley Review: PJHQ C-IED Study Team Report: LWC/OSG/Comd 101/08 dated 14 November 2008. See Annex A for full detail and a summary of recommendations.

14 AJP 3-15, Draft 4 – proposes as a useful conceptual tool to consider all C-IED activity as falling within 3 lines of operation (attack the device, attack the system and training and education) within which there are six key operational activities (Predict, Prevent, Detect, Neutralise, Mitigate and Exploit) that form the basis for an integrated and holistic approach to defeating the adversaries IED campaign.

15 TTP review then became a dynamic process.

16 See Annex C for a sample C-IED Task Force from Operation HERRICK 15 and Annex I for rising team composition across all HERRICKS.

17 For example: "During Operation HERRICK 10, the average number of IEDs dealt with by a high threat EOD operator was 80 in 6 months. By Operation HERRICK 14 this figure had reduced to 12". Interview AD DEODS 2009-2011 Interviewed 30 September 2013.

24. **Managing the C-IED capability.** There was no clear focus for UK Defence and C-IED policy in the early part of the campaign. Initially it was a mix of Theatre, PJHQ and capability feeds that reported up to the 3* DCDS Ops. In order to gain greater coherence, a Steering Group process was established chaired by the then MGO. This steering group was informed by a number of working groups to offer strategic direction and oversight. This gathered momentum as the campaign progressed and the threat evolved.

OUTCOMES

25. **Capability Awareness.** There was a deeper focus on the development of UORs. In particular there was closer liaison with Science and Technology, with priority on detection of low metal content IEDs. This was not well coordinated in the early stages, but became well organised with the emergence of the Transition Boards, ██████ , VALKERIE and HERCULES (PVH), established with Dstl and widely with many other stakeholders.[18]

26. **Team Mobility and Remote Control Vehicle (RCV) development.** Not only had there been a concern about the lack of suitable remote means to tackle IEDs, but there had been a capability shortfall for protected mobility for the IEDD teams. This was further complicated by the desire to achieve compatibility between the two. There was a requirement to provide a suitable vehicle into which a suitable RCV could fit, which now had to be addressed.

27. **An Institutionalisation way ahead.** The wider need was to ensure that C-IED training packages were taught at the lowest level possible. Training packages, such as Ground Sign Awareness (GSA)[19], hand held detector packages and training for Military Working Dogs (MWD) dogs were put in place to ensure that detection chances were improved. However for the future, as soon as Phase 1 training commences, individuals need to be made aware of C-IED and dependent on cap badge, migrate up through the levels of understanding as appropriate. Using this approach the IED can be viewed as less of a challenge, and instead seen more as just another obstacle to mobility. A formalised institutionalisation process has now been established with a strong staff team on an implementation phase until 2017.

28. **Human Factors Mentoring and Stress.** The IEDD and High Risk Search team critical assets need protecting in every way. The fact that they cannot be trained quickly and remain a very finite battle winning resource means that during and post operations they need to be closely managed. Work continues to gain some sort of recognition for stress suffered to ensure that readiness is maintained for the wide variety of roles undertaken.

LOOKING AHEAD

29. **A Further Capability Review.** In 2012 as the situation stabilised, there was time to address the wider, enduring issues. C-IED capability was of concern to everyone: training and preparation had to be more thorough. This led to the process of deliberate institutionalisation and the setting up of new organisations to ensure that forces would be better trained and aware of any future emerging threats.

30. **In 2013 DEODS[20] initiated a capability investigation with Dstl, which ran concurrently with the main Land Environment Capability Audit.[21]** It looked into the ability to counter the EO threat and where any weaknesses lay and found that, whilst the specialist area had been addressed the generalist area had not. A more basic capability was required.

31. **Once complete, this work will link into how current doctrine across Force Protection and C-IED is revised.** It will need to cover the following areas: C-IED, Materiel and Personnel Exploitation (MPE), EOD, Weapons Technical Intelligence (WTI) and military engineering.[22] Significant doctrinal gaps require cross-DLOD action, especially in training. These gaps are being addressed with the creation of a Joint Doctrine Note 'Countering the Explosive Ordnance Threat'.[23]

32. **Importance of Wider Cooperation.** With changing threats and technological advances, secure C-IED sharing remains a vital strand of keeping ahead. Working closely with the US was key and more collaboration with others will be needed. Continued liaison with Partners across Government (PAGs) remains essential. Recent work on the Integrated Approach by the Stabilisation Unit has highlighted the vision of the Security Action Group (SAG) in producing the basis for developing integration across government.

33. **Defence Engagement and Overseas Capacity Building.** There is a strong demand for overseas engagements with UK C-IED capability as a market leader. Not only is this to be encouraged, but it can help to keep abreast of emerging threats as well as helping train less capable C-IED forces to look after themselves.

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18 See Science and Technology Chapter 1-3 Enclosure 1.
19 GSA was recognised as a key skill on HERRICK 9 , DLIMS Lesson 2964, and pilot lessons were run from HERRICK 10 (during 2010).
20 DEODS. This is the Defence EOD and Search Tri Service organisation commanded by an AD and sits inside the Army CS Capability area. DEODS was established in 2011 from a combination of the Land Forces EOD Branch and the Joint EOD and Search Branch. Source: 2011DIN01-170 released August 2011. Joint Capability EOD and Search Staff (JCES) were absorbed in 2012.
21 The Land Environment Capability Audit. This was the big examination across the Army HQ to establish where the capability gaps lie. DEODS TNA as part of this investigation: Ref R-DHCSTC_1376990_P_ T3_031/005 version 2/30th July 2013
22 Key doctrine reference ADP Operations, Chapter 7, Para 0724.
23 JDN C-EO Threat. Sponsor by DCDC and authored by DEODS July 2014.

ENDURING LESSONS

AN OPERATIONAL MINDSET.

34. The Defensive Approach. Task Force Helmand (TFH) was defensive in mindset initially and the Army had decided that protected mobility and TTPs were the solution. This had worked on Operation TELIC against a high tech threat, but was now found to be inadequate against the new type of threat. In order to regain the tactical advantage, there was a requirement to 'Attack the Network'. The ability to get out and patrol, to dominate the ground, in order to build up the intelligence picture, the 'Understand', was proving challenging. Only in this way would some form of exploitation be enabled. Indeed until this happened, there was no chance to attack any insurgent networks further up their organisational chain. This requirement had been well understood in NI, but capabilities had been allowed to lapse. Additionally we had not learnt sufficiently early enough from the US in Iraq with their Task Force (TF) TROY.[24] The US had understood the concept to tackle the IED threat in 2005 and changed their mindset, we did not adapt readily or quickly enough.

35. Changing Approach. After structural change, Exploitation[25] was eventually developed with the introduction of the TORCHLIGHT[26] capability in Theatre. It needed to be a fully connected capability to enable any data collected to be acted on. Wider applications such as cross governmental use of data to generate sanctions, international pressure and financial disruption is beyond the scope of this report, but will continue to be explored within the 3 star proponent for C-IED strategy. AtN is an enduring strategy and should be established as an enduring capability.

> **Observation:** Defence will need to recognise that if it wants to get 'left of the bang' and remain offensive for any future operations, then it needs to call upon other levers beyond purely military ones. It needs to institutionalise the C-IED mindset.

36. One of the enduring lessons is that in order to attack networks, there needs to be a dedicated grouping, such as the US has with JIEDDO[27] that is capable of reaching into these other cross governmental organisations and getting them to act on their behalf. The UK chose not to take this route for Operation HERRICK.

> **Lesson:** We adopted a defensive mindset to the IED threat initially in Afghanistan. There is a requirement for C-IED to have an offensive posture to succeed. This requires an effective capability across the doctrinal Lines of Operation: Attack the Network (AtN), Defeat the Device (DtD) and Prepare the Force (PtF).

GETTING AHEAD OF THE THREAT - UNDERSTANDING THE THREAT, INTELLIGENCE AND INFORMATION

> *"If you are going into a country completely lacking in any intelligence, you are going to struggle. It is going to take you a while to have that understand paragraph covered off."*
>
> *Commander 8 Engineer Brigade 2006-2007, Commander Operational Support Group (OSG) 2008-2009.*[28]

37. When the threat was examined, it required careful analysis to gain agreement from both Theatre and the home base about what it was exactly. Then in order to try and get ahead, it was necessary to assess at any one point where the threat had migrated to, and how it appeared to be developing. Judging that proved very challenging. The next step was how to mitigate what developments had been assessed to have taken place and what the likely Taliban reaction to that would be, if any. This was high risk analysis, because certain responses did not always tend to initiate insurgent counter measures. The technical challenge was to try and have a solution for each insurgent change.

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24 TF TROY was the US C-IED TF based in Iraq which had some embedded UK staff. It leant heavily on earlier UK specialist support.
25 Exploitation is defined as "The systematic collection, information processing and dissemination of intelligence obtained by Tactical Questioning (TQ), interrogation and data from recovered materiel" – JDP 2-00
26 TORCHLIGHT was the exploitation capability set up in Bastion to assist the ▮▮▮▮▮▮▮ and was later commanded by the Intelligence Exploitation Force (IEF). VARSITY was a similar capability set up in Kandahar. See Para 72.
27 The Joint IED Defence Office (JIEDDO). A large US organisation well funded and set up specifically to deal with C-IED. It formed the C-IED Task Forces TROY and PALADIN and was responsible for spearheading the Research and Development effort. JIEDDO is shrinking from 2500 approx to 500 staff in 2014.
28 Interviewed 22 October 2013.

Figure 3-6-5 Level 1 Exploitation

38. Getting Ahead. Measures were gradually put into place to start to get ahead of the threat. Time was critical and short. Had there been more time then a more measured view could have been taken on developing capabilities that the Taleban could not counter easily. Technically the challenge in Afghanistan was being able to find the IEDs in the ground. The other challenge was to try not to give soldiers too many pieces of kit to carry. Weight on the man was a constant battle and is dealt with in the Combat Chapter 2-1. Electronic Counter Measures (ECM) for example, despite its excellent performance, was often viewed as an extra burden and not a life saver. However ECM delivered significant input to the Prevent, Mitigate and Neutralise aspects of defeating the device. These capabilities continued to successfully contribute to defeating the IED system for both specialists and generalists through exploitation and the targeting process, but will not be further discussed at this classification.

Lesson: C-IED capability development should be part of the soldier System.

39.

40. Offensive Intelligence Gathering. There needs to be a change of mindset, not just for exploitation but in order to better master the Explosive Ordnance (EO) threat. In a future conflict there may be situations where there is a requirement to fight for intelligence in a more structured manner. Positive results from this offensive approach could well help secure the operational initiative.

Lesson: There is a requirement for the Explosive Ordnance (EO) threat to be fully understood from the onset of a campaign to enable detailed tracking of enemy capability development.

Lesson: Requirement for Weapons Technical Intelligence (WTI) and Materiel and Personnel Exploitation (MPE) capabilities to be planned and factored into deployment missions from the start, or before where possible.

COUNTERING THE EXPLOSIVE ORDNANCE (EO) THREAT

41. **Defining the Requirement.** The EO threat was initially exclusively IEDs. The sole capability available deemed 'trained, competent and equipped' to deal with that threat, were specialist high threat IEDD teams. The lack of IEDD teams just aggravated this difficult situation. This led to the difficult decision of who was going to do what to meet the EO threat. That said, the more complex the threat was, the greater the increase in specialist training required and the greater the training burden.

Lesson: The start point in any future campaign will be to determine whether an IED threat is simple, complex or a mix of both. Then there will be the requirement to examine what sort of force elements are available to respond and in what quantity. If there is no ready response for whatever reason, there must be a responsive plan to close the gap.

42. **The Challenge.** The EO threat should be considered as a hazard, an obstacle but also a source of intelligence. EOD contributes to the following functions, which cannot be considered in isolation[30]:
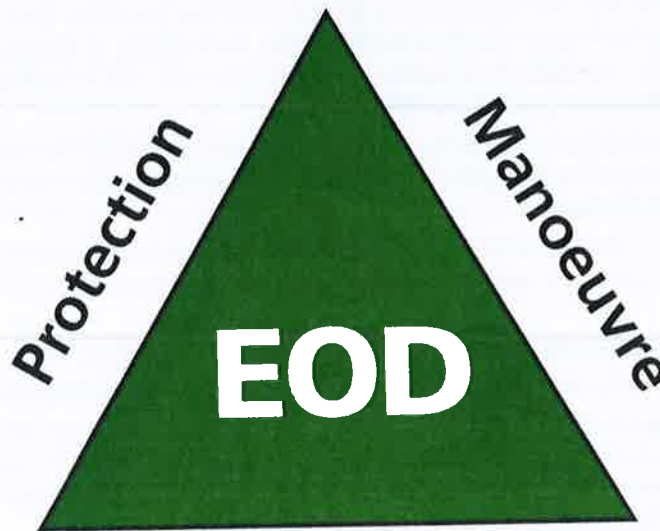
Figure 3-6-6 Enduring Doctrinal EO Tactical Functions

43. Addressing the Problem. DEODS[31] initiated a capability investigation in 2013, which ran concurrently with the main Land Environment Capability Audit.[32] This capability investigation was a detailed look into the ability to counter the EO threat. It identified that, whilst there had been success in addressing the specialist EOD capability area, there remained a large gap below that, in terms of what Combat Engineers and Assault Pioneers were trained and capable of doing. A major capability gap was identified both in training and to a lesser degree in equipment. This was addressed by recognising that below the specialist EOD capability there was a requirement for a basic EOD capability; basic EOD training incorporated into Combat Engineer and Assault Pioneer courses.

44. In order to ensure that there will be no exposure to such a capability gap in the future, countering the EO threat work identified a 'pyramid' representation of training needs and target audiences. The activity must no longer be seen as just a specialist activity. Once ratified it will identify which groups require targeting, which in turn will lead on to the capability requirements.

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30   ADP Operations, Chapter 7, Para 0724
31   DEODS. This is the Defence EOD and Search tri service organisation commanded by an AD and sits inside the Army CS Capability area. DEODS was established in 2011 from a combination of the Land Forces EOD Branch and the Joint EOD and Search Branch. Source: 2011DIN01-170 released August 2011. Joint Capability EOD and Search Staff (JCES) were absorbed in 2012.
32   The Land Environment Capability Audit. This was the big examination across the Army HQ to establish where the capability gaps lie. DEODS TNA as part of this investigation: Ref R-DHCSTC_1376990_P_ T3_031/005 version 2/30th July 2013.
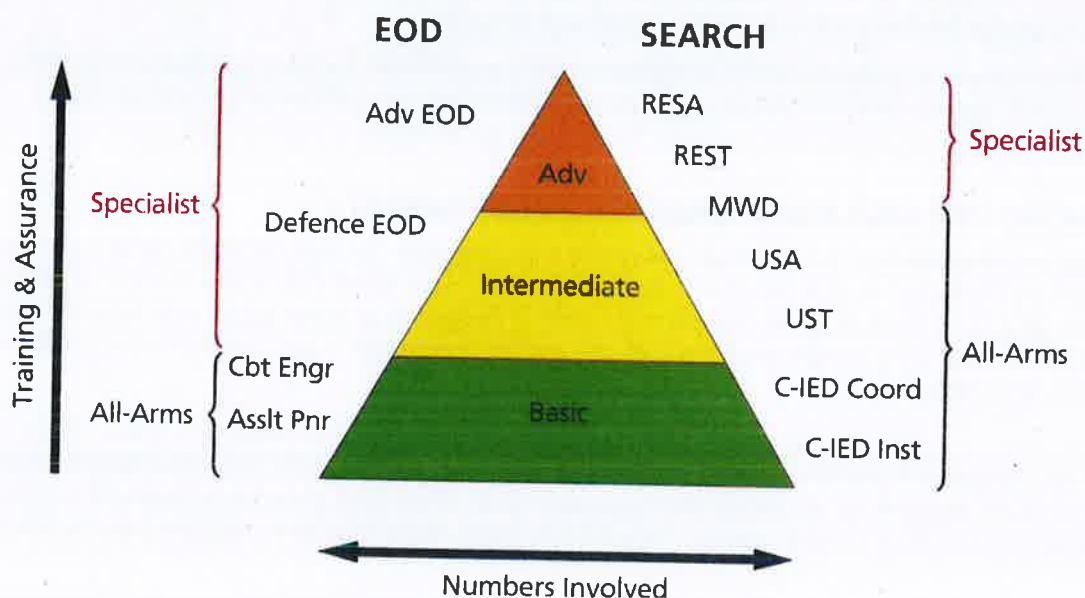
Figure 3-6-7 C-EO Capabilities within the Force.[33]

45. A key recommendation from the C-EO capability investigation was that the governance of all land environment EOD activity (Basic, Intermediate, and Advanced) should come under the authority of Assistant Director DEODS in CD CS. This would include: Doctrine, Capability Development, Training Definition and Assurance responsibility. The levels shown in the pyramid in Figure 3-6-7 above are defined as:

   a. Basic EOD. All activity currently conducted by Combat Engineers and Assault Pioneers that falls under the definition of EOD. It is the ability to conduct a specifically-trained Render Safe Procedure (RSP) against a known and positively identified EO threat.

   b. Intermediate EOD. This is the equivalent to the current Defence EOD level of capability. It is the ability to conduct EOD from first principles with the capability to NEUTRALISE in a low-threat environment and DESTROY in a high threat environment.

   c. Advanced EOD. This is the equivalent of the current Advanced EOD capability. It is the ability to conduct EOD from first principles with the ability to NEUTRALISE and DESTROY in a high-threat environment

46. The capability audit investigation results referred to earlier have broadened the approach. It recognised the totality of the response to C-IED, such as the use of Military Annual Training Tests (MATT) 9[34] and wider. It comes from EO awareness, back to understanding the threat, and permeates up through the various layers of Defensive C-IED capability shown above in Figure 3-6-7.

47. The lack of trained Assault Pioneers in All Arms Search Teams (AAST) has been identified separately by Capability Directorate Combat as a weak point. The Capability investigation has identified this and sees the utility of the Assault Pioneers as an essential part of the solution.

Lesson: Our force elements were ill prepared to deal with the IED threat in Afghanistan. C-IED was not just a specialist business. Looking forward to the Future Character of Conflict (FCOC) era there is a requirement to counter the Explosive Ordnance (EO) threat by ensuring that both specialist and generalist force elements are utilised.

SCIENCE AND TECHNOLOGY (S AND T) CAPABILITY AWARENESS[35]

48. **Moving Closer Together.** There are a number of unique or specialist areas in Defence such as the Capability sponsors, Defence Science and Technology and Defence Industry. Early in the campaign there was a lack of corporate awareness between this triumvirate of capabilities and the detect capability shortcomings were not identified sufficiently early in the campaign. This corporate awareness needs closer structured cooperation so that there are more regular and agreed programmes for updating, including secure briefings. Wider briefings have taken place but it is particularly important with C-IED, especially as the threat is likely to keep changing, to meet regularly.[36] More needs to be done and this should be subject to a separate survey.

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33 Some Definitions: RESA: Royal Engineer Search Adviser, REST: Royal Engineer Search Team, MWD: Military Working Dogs, USA: Unit Search Adviser, UST: Unit Search Team.
34 MATT9 – Military Annual Training Tests 9 for C-IED described in 2014 DIN07-083 dated May 2014.
35 See Equipment Chapter 6-2 and Science and Technology Chapter 8-1.
36 Good Practice example. A C-IED capability development briefing day was held by DE&S for Industry at Shrivenham on 26 March 2014. Part of the day was devoted to briefing the outline requirements for the new RCV, STARTER, requirements and the tight 2020 timelines. AD DEODS 2012-2014 interviewed 27 March 2014.

49. Continuity. The ⬛⬛⬛ VALKERIE and HERCULES (PVH) Transition Boards were established with Dstl and other stakeholders.[37] They were all very successful and corralled the effort in UOR grouped areas.

> **Observation:** The Transition boards (PVH) was an area of good practice and needs to be captured for possible future use as an example of a joint mechanism of successful cooperation.
>
> **Lesson:** There is a requirement to ensure that Industry is kept regularly briefed on C-IED developments and operational requirements. Articulation of the changing threat requires regular engagement.

ABILITY TO MANOEUVRE - EOD AND SEARCH (EOD&S) ASSETS.

50. ⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛

51. The lack of ability of teams to manoeuvre around the battle space in their own protected mobility platforms (PM) had existed since 2006. Teams in Afghanistan had to rely on supported formations. The issue had never been resolved satisfactorily before, was apparent in the homeland security context, the Balkans, Iraq then finally in Afghanistan. Mastiff was eventually selected both to be compatible with other TFH force elements and to offer the same degree of protection. However the delivery time for EOD and ECM Mastiff 3s was lengthy and they were not available until March 2010 (the end of Operation HERRICK 11).

> **Observation:** One of the fundamental principles of EOD, borne out from experience, was to use 'remote means where possible'. The lack of effective protected mobility vehicles pushed IEDD teams to a far more 'hands-on approach' and increased their risks. Far less capability could be transported and teams worked on 'light scales' only. It meant that teams were often physically degraded by the time they reached their task location. Overall this led to the worst loss of IEDD operators and Royal Engineer Search Team members since the early 1970's in Northern Ireland.[39]

52. A Capability Approach. Enduring mobility deficiencies for contingency remain, but are being addressed. Ideally a whole capability solution is the answer: a suitably protected vehicle with a capable RCV that can fit into it. The challenge remains that a capability is required both for homeland security support and contingency. Short term solutions are being sought like the 6x6 PINZGAUR for contingency, but there is a need to look at whatever the Multi Role Vehicle Programme (MRVP) delivers to the force for a longer term contingency.[40]

53. There are linkages between mobility capability and RCVs. Whilst the desire is to seek a common fleet of RCVs wherever possible between the homeland Military Aid to the Civil Power (MACP) environment and overseas contingency environments, the mobility requirement in the UK in support of the Police and partly funded by the Home Office, drives a slightly different mobility solution. In the UK the national road infrastructure is used to get to a task, so there is some sense to have a bespoke specialist 'white vehicle' solution for MACP operations that will not necessarily be utilised on operations abroad.

> **Lesson:** There is a requirement to ensure that teams for both Homeland (MACP) and Expeditionary Intervention (Contingency) are equipped with suitable non signature vehicles to enable the deployment of remote capability. This was the biggest capability gap in EOD and Search in Afghanistan and indirectly led to the high attrition rate.

REMOTE CONTROLLED VEHICLES (RCV) DEVELOPMENT.

54. The High Risk. There was constant concern about operators using manual techniques in Afghanistan. Quite often in some areas there was not a requirement to put someone at such risk. Experience has shown that some devices could have been dealt with without going near them. Had a more reliable remote means been available, then the personal risk to these critical operators may have been reduced.

> **Lesson:** There is a requirement to develop more remote means of dealing with IEDs. This was a key learning point from experiences in Northern Ireland. The US understood this and used remote means whenever possible.

55. A Capability Compromise. Some form of more modern Remote Controlled Vehicles (RCVs) i.e. robots were needed, but could not be considered in isolation from overall team mobility. If an RCV could not be moved to a task area easily, there was usually a problem and the risk to the operators increased. A less capable, lighter RCV UOR, DRAGONRUNNER[41], was fielded to try and mitigate the weight that had to be moved around, which was a huge

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37 See Equipment Chapter 6-2.
38 ⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛
39 See Annex I for chart of C-IED Task Force casualties. Note IEDD and Search Team KIA.
40 For our MACP capability our vehicle fleet (WEDGEWOOD) has an out of service date of 2017. Project GASKET seeks to solve our UK mobility issues and this has received further funding to proceed beyond Concepts and Assessment (C&A) under ABC 14.
41 Requirement for the development of a more robust lightweight RCV that was man portable was first raised in a H12 DLIMS lesson #13330

improvement. When Mastiff 3 became available it enabled the use once more of the older, but more capable Mark 8 WHEELBARROW.

> **Observation:** Historically home and contingency RCV capabilities have been treated as two separate, stovepipe capability areas. Commonality must be the way ahead, whenever that can be achieved and that must be subject to continued investigation.

56. The STARTER project is the most recent RCV under development for contingency operations. However this does not get away from the combined home and contingency requirements, where the longer term future research and developments for synergies need to be focussed. In the long term, a single RCV solution will have training DLOD benefits and will reduce deployment times.

57. This is complicated by the reality that RCV capability continue to change and develop technologically more quickly than before and there is a need to keep pace. RCVs are getting smaller and more capable. (DRAGONRUNNER was smaller but less capable). More agile procurement processes are addressed in the Equipment Chapter 5-2. There are many possibilities such as buying COTS[42] and modifying it, which is the direction STARTER is heading in now.

> **Lesson:** Requirement to ensure that the capability gap is identified and the requirement fixed to develop a Remote Controlled Vehicle (RCV) capability for both MACP and contingency operations, seeking convergence where possible[43].

CAPABILITY INTEGRATION WORKING GROUPS (CIWGS)[44]

58. **Dynamic Requirements.** C-IED CIWGs were constantly challenged as the threat developed and then rapidly changed; there was a constant need to catch up in order to counter with new capabilities. This meant that solutions being considered had to be dealt with in a different way from a mobility platform type CIWG. A platform CIWG would have been more deliberate; C-IED required a more dynamic approach. Equipment capability pressures had to be resisted and going for an intelligent 80% solution was often not the CIWG readiness answer with C-IED UORs. Often a critical area was down to training, because if a capability was delivered without any training in place, it stood a chance of failing when fielded.[45] Time remained the constant enemy and sometimes UORs were overtaken by the migration of the threat and had to be discarded.

> **Observation:** C-IED CIWGs were very challenging. The IED threat changed rapidly and capabilities often straddled various DLOD boundaries. There was a constant drive to catch up.

59. The Fielding Risk Balance. There was a balance to be struck: did you deliver a capability in the heat of the moment for the roulement just about to deploy, or did you wait and give it to the following roule about to start their Mission Support Training (MST). Trying to achieve the latter with a sufficiently mature capability meant that it stood a better chance of being successfully integrated in Theatre. There was always a risk judgement, which reinforced the need for CIWGs to be run at AD level. The use of contractor support became essential, but there were disruptions to MST which sometimes led to an elongation on RSOI in Theatre.[46]

60. Furthermore, the C-IED area capabilities often straddled several boundaries. Some could be managed within Army HQs or across Front Line Commands (FLC), whilst others were with Joint Force Command (JFC) and cross governmental, like exploitation in AtN. Therefore the need for coherence and capability integration was paramount.

61. Concept Demonstrators were often utilized within the UOR process where equipments were tested and developed in theatre.[47] This enabled the acquisition process to be fast tracked. However, there were examples of failures caused by frenetic development and delivery timelines. ~~████████████████████████~~

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42   COTS. Commercially Available and Off The Shelf.

43   The Future. Where possible for the future, there should be a continued drive to utilise the same equipment for both homeland EOD and contingency. However this has been complicated by the introduction into service in 2012 of the large, long overdue CUTLASS RCV. Whilst it is an acceptable solution for homeland security tasks, it has little to no utility in most contingency environments, not least because it can not fit into any existing vehicle.

44   The CWIG process is covered in Equipment Chapter 6-2 Page 7-2-7

45   Percentage breakdowns for capabilities were often referred to as: 30% on the equipment, 60% on TTPs and 10% luck. A common criticism within CIWGs was that too much time was spent on the equipment itself and not other DLODs part of the 'capability'.

46   HORN detector training was a particular example where initially no UK based training solution could be found, so the Brigade Commander from Operation HERRICK 14 onwards held the risk in theatre for the training at RSOI.

47   Both QUARREL, a fan based ancillary designed to remove surface debris to delineate IED pressure plates for DRAGONRUNNER, and MORTBEAM, a hand held short wire diagnostic tool for EOD operators, were life savers.

48   UORA01494G Project CULPRIT – Learning from Experience. Reference DES SSP/SPSCM/365/03 dated 31 October 2013

49   ~~████████████████████~~

Lesson: There is a requirement to ensure that C-IED CIWGs are formed and run in such a way that they minimise the risk from the integration of the capability. Terms of Reference (TORs) need to be regularly reviewed. Any risk in short cutting the process must be transparently and actively managed.

SIMULATION

62. Ground used for training has got to reflect, as far as is possible, the operational environment. This was often difficult to achieve. Trying to detect IEDs in snow on SPTA for Operation HERRICK 12 was a particular low point. It was always difficult to replicate the threat in training and a way forward is to maximise the use of simulators. This is wider than just detect for C-IED, although the simulation packages and use of C-IED lanes on RSOI were of use. A more comprehensive approach is required. Project BATHIC is one such initiative and it is likely that further funding will be made available from 2020 for ten years to develop simulation[50]. There is also a drive to ensure that when future training solutions are investigated simulation must be considered.

Lesson: There is a requirement to explore available training simulation methods in support of All Arms C-IED training, particularly for hand held detectors, with a view to delivering systems that will offer the user more valuable training.

EXPLOITATION AND THE CRITICALITY OF ISR TO ENABLE 'ATTACK THE NETWORK' AND OFFENSIVE C-IED

63. Intelligence Exploitation Force (IEF). The IEF had a single command chain within the C-IED TF and was based in a single location, Bastion. Biometrics, including DNA, were being collected and cross matched and intelligence was being gathered. There was close liaison with US intelligence exploitation forces. The IEF was not just there to contribute to C-IED, but to any threats as they were identified.[51]

64. The entire ISTAR capability was able to provide information to contribute to the understanding of any network that required attacking. ISTAR was a 'whole force' capability and could work with any part of any organisation. Exploitation was only one of the tasks usually undertaken, so collection plans for 'areas of specific interest' were key drivers for the most efficient use of the capabilities.

50   Project BATHIC CONEMP: 20140821-BATHIC_CONEMP-AD_Level_Draft-OS.DOC
51   The three levels of exploitation: 1 – Tactical (Unit), 2 – Operational (IEF) and 3 – Strategic (UK) are covered in detail in Chapter 5: C4ISTAR.

Vignette – Exploit Tactical Opportunities - A Platoon Commander's View

Observation: There is a continued requirement for coherent, multi-sensor ISTAR packages which include EW/SIGINT, IMINT, HUMINT and MPE capabilities to defeat future threats, not just from IEDs.

65.

Observation: It is important to understand that a comprehensive exploitation capability abroad can reach outside the theatre of any operation and be used domestically to exclude persons of interest from entering or returning to the UK. This has increasing importance.

66. **Wider Exploitation Coordination Benefits.** In some areas there remains an ad hoc approach to exploitation which is heavily caveated and constrained by the security and releasability of information and data. The databases are not tactically interchangeable with security and freedom of information protocols heavily constraining management of biometric data. The biometrics database work is still incoherent, partly due to the lack of clear ownership in Defence. Doctrine and policy as well as an operational perspective are required.

67. The model used for Operation HERRICK is unlikely to exist in the same format in the future. It can be managed in different ways. In contingency there is likely to be a greater reliance on electronic and physical links between forward and rear. However Information Management/ Information Exploitation (IM/IX) remains fundamental

Observation: All the hard work and the risks taken by operators will be for nothing if exploitation is not underpinned by a common, coherent exploitation system which must be interoperable with our key allies. This was never achieved in Afghanistan.

68. Accreditation of exploitation is both an issue and a financial hurdle, which is cross Governmental to the Home Office, Foreign Office and wider. There is a greater need post Operation HERRICK to keep working with the US and NATO.

Observation: The message must continue to be that if tactical exploitation is correct in a theatre, then this could link all the way back to the UK, as some of it did in Afghanistan and Iraq.

Observation: There are exploitation problems with national caveats, security caveats, different equipment, software, versions, and the whole IM/IX piece. Within the C-IED Attack the Network arena, truly effective exploitation can never be achieved if the IM/IX construct is not addressed and resolved.

Lesson: The 1* and 2* Working Group and Steering Group structure used to support the continuing need for the Defence Exploitation Capability and an Expeditionary Exploitation Capability should be retained.

69. **Contingency Targets.** In any future conflict, there will be a need to start biometrically enrolling people as soon as possible. Exploitation is part of the essential initial requirement to be offensive in C-IED, rather than automatically going out onto the defensive.

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52   70% of the world's biometrics have already been captured due to the prevalence of biometric data on national ID cards and voter registration.

75. **Defence Authority.** Currently the focus for Defence C-IED governance for assurance, capability development and operational risk sits in the nascent C-IED Institutional Programme. This is a two star led forum under Director General Capability (DG Cap) with a three star mandate from Deputy Commander Defence Staff (Military Strategic Operations) (DCDS (MSO)). With initiation of the programme in February 2014 the C-IED Institutionalisation Programme has a pan-TLB remit to execute a Defence wide change agenda to re-set levels of ambition and capability for C-IED. This is to be achieved in accordance with Force Protection Policy and the overall intent is to embed C-IED good practice across the Commands, influencing doctrine development and training DLODs as a matter of priority. There is also a requirement to develop an appropriate and coherent long term C-IED suite of capabilities and to manage these capabilities by adopting a portfolio approach. This action would establish an effective pan-TLB governance framework for enduring C-IED capability. A Defence Authority for C-IED has been proposed for establishment in 2015, whereby authority for C-IED would rest with DCDS MSO and he would report to Permanent Under Secretary of State (PUS).

76. Within the Land Environment at the one star level, the combined attention of CD Information, CD Combat, CDCS, DEODS and Military Engineering is necessary for the successful development of C-IED capability. In the early stages of establishing firm leadership and strong coherence at the working level for C-IED, the Defence Authority is the only body capable of driving success in this area.

Lesson: There is a need to create a Defence Authority in order to maintain C-IED governance to reflect the post Defence Reform and Transformation landscape. This will ensure greater enduring coherence across defence as well as offering capability assurance, particularly for our international partners and PAGs.

THE INSTITUTIONALISATION OF C-IED

77. **Background.** Institutionalisation remains a cross DLOD issue and governance will continue to be complicated. The MOD lead for Institutionalisation is the Ops Directorate in the MOD, but DG Capability is responsible as the director of the C-IED Institutionalisation Programme for 'PtF' and 'DtD'. JFC owns AtN and delivers this function in close harmony with DG Capability to ensure the appropriate synergies.[53]

78. **Training Lapses.** Despite efforts made to include C-IED training at every level, experience up to Operation HERRICK 14[54] showed that training, or the failure to adhere to the All Arms TTPs taught, continued to play a significant part in injuries and loss of life. Errors were still occurring and there was a need for greater threat assessment training. ~~████████████████████~~ It reinforced the requirement that all force elements needed to be capable of operating in an IED threat environment. Unit C-IED skills were still recorded as poor from the Operation HERRICK 15 POR.[55] Efforts were made to address this, principally aimed at the battlegroup level key staff and commanders early in the tour with the EOD&S Task Force leading.

Figure 3-6-8 Search team on Operation HERRICK 9

53   See Annex K for C-IED Governance Structure and how the Institutionalisation process interfaces with it.
54   H14 #15535 'There is a requirement to improve Threat Assessment Trg for All Arms commanders, in particular to include elements of the RESA / EOD Op Threat Assessment and Red Teaming and to be prepared to get Situation Awareness (SA) updates (TiGR, B-ISTAR) from base location when patrol routes change.' Lesson still remains open two and a half years later.
55   DLIMS lesson #16756 'There is a requirement to institutionalise C-IED planning at all levels across the Army.' Lesson remains open two years later.

Observation: It is likely that in the future UK will routinely expect to work in some form of coalition or alliance construct, most likely as part of the NATO alliance or with the US in a bespoke coalition. Therefore it would be prudent to look at investing in a NATO/5 EYES or a bilateral 2-EYES IM/IX model.

Observation: Given the pan-Defence, pan-Governmental and international nature of MPE, it is essential that this capability is retained and that future force design facilitates the essential electronic and physical reach-back and pull forward, between Forward and Rear MPE elements.

Observation: An ad hoc approach to exploitation, without a lead sponsor, leads to incoherency. Future systems must be interoperable with our key allies and 'skill fade' needs to be addressed between operations.

Lesson: There is a requirement to have a developed, sophisticated and effective ISTAR force package with an end to end exploitation capability consisting of Materiel and Personnel Exploitation and (MPE) and Weapons Technical Intelligence (WTI) capabilities.

MILITARY WORKING DOG DEVELOPMENT.

70. The formation of a Military Working Dogs Regiment (1MWD Regt) during Operation Entirety was a success and enabled the Field Army to sustain the force generation and preparation of successive MWD Squadrons throughout Operation HERRICK. In NI arms and explosive search (AES) dogs existed as well as a generalist sniffer dog. That capability had not been developed in any way to keep a track of the requirements during Herrick.

71. The introduction of new capabilities such as IED Detect Dogs (IE3D) (BEEK) and High Assurance Search Detect (HAS(D)) (STAMP) enabled the Regiment to field MWD capabilities that addressed the Operation HERRICK needs. The requirement was set for dogs to help with both the specialist and generalist but the problem was that the capacity to expand quickly did not exist. These capabilities were developed as UORs, in tandem with the training of new handlers who were drawn from across the three Services. They were both first fielded during Operation HERRICK 11, but needed considerable development to become fully effective.

72. BEEK were mainly procured from the US and were used as a dismounted manoeuvre asset working to provide a standoff detect capability for patrols and to provide an additional level of assurance. They were not trained to detect arms or ammunition. STAMP were only operated with an Advanced Search Teams (AST' ~~████████████~~ ~~████████████~~ There was sufficient capability during Operation HERRICK 14 and every advanced EOD team was able to deploy with STAMP dogs and there were sufficient BEEK dogs. Capability peaked at Operation HERRICK 17 with a total of 114 dogs deployed.

Lesson: There is a requirement to further develop the canine detect capability with an enhanced cross Capability Directorate focus.

FUTURE OF THE C-IED CAPABILITY

73. **Complexity.** C-IED is a complex cross DLOD, cross Capability and cross Governmental capability. It was important to look at the development of the Operation HERRICK C-IED Task Force in the context of our previous experiences of both Iraq and NI. The problem with C-IED remains that it is not a capability that can be stood up quickly: it takes time to grow.

Observation: Forces are likely to encounter similar C-IED capability development issues in a future enduring COIN operation as Defence meets the new EO threat.

74. **Current Governance.** The 2* C-IED Institutionalisation Programme Board, now joint chaired by DG Cap supported by 2* Capability Director JFC and DLE from DE&S and works well. This body is supported by 1* C-IED WG chaired by D Cap CS and must continue to play an active part in steering and managing Defence's C-IED capability across all the lines of operations. See the Defence Governance Structure at Annex K. The responsibility for C-IED policy should also be aligned with recently disaggregated capability management responsibilities, whether in Army HQ or JFC. This is particularly pertinent for the AtN aspect.

Observation: If C-IED does not continue to be treated as a capability, there will be no focus for the forward thinking required to keep ahead of the threat.

Observation: Institutionalisation will cut across every single educational and training establishment: it covers individual, collective training and wider education. Senior commanders will need to remain engaged to ensure success here.

Observation: Cross force understanding of C-IED was initially poor. C-IED training at every level has been introduced and should be maintained.

79. **Training Progression.** Following the TNA work from 2013, and now with a revised MATT 9[56], the assumption should be that soldiers will be completing the annual essential training to a better common standard. A mini cycle of MSTs continues for such defence engagements as Mali and Pakistan. There is a requirement to acknowledge that readiness training will need to be shaped as part of an institutionalised approach. If the threat assessment agility can also be mastered, when the threat gets higher or changes, then more tailored and advanced training can be inserted into any MST at an appropriate time. The requirement always existed to be accurately briefed ahead of the threat, not to learn about it on arrival in a theatre of operations.

80. **Future Planning.** Current planning includes a requirement to force generate a sliding scale of EOD and Search capability to respond to such an eventuality, making best use of the available force, and maintaining freedom of offensive manoeuvre.

81. **The Defence Institutionalisation C-IED Mandate[57].** The Defence C-IED Strategic Plan[58] generated and owned by the 3* Ops Directorate in the MoD was established in 2012 to achieve 3 goals:

    a. To correctly resource Operation HERRICK with a C-IED capability.

    b. To ensure Operation OLYMPICS and MACP commitments were correctly resourced.

    c. To ensure hard won gains were not lost in the same way many had been on the conclusion of Operation BANNER.

THE C-IED CAPABILITY END-STATE WAS DEFINED AS:

"A sustainable coherent and agile UK Defence C-IED capability, responsive to changes in threat, co-ordinated across Government and with international partners, able to meet Defence's Strategic Objectives".

Figure 3-6-9 Mastiff IED strike.

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56 MATT9 of course is going to get you the IED protect bit. That is a must and a given. My view of the broader understanding of managing and dealing with an IED threat environment, which you can operate in, is born of planning exercises, map exercises, study days, thinking about it rather than training a drill. Training a drill is going to keep soldiers alive and must be done'. Interview Sub unit commander Operation Herrick 11.

57 See Defence Institutionalisation C-IED Programme Management Office Mandate - C-IED PMO/MOSS/C-IED/Command/O&I/02 dated 20 Feb 14.

58 Defence Strategic C-IED Plan, endorsed by DCDS (Ops) on 12 January 2011, owned by Ops Dir Op Cap & FP.

82. **The Lead.** The C-IED Project Management Office (PMO) in DE&S has now been mandated to adopt a programme level approach to the institutionalisation. The C-IED Training Needs Analysis (TNA) work undertaken by Dstl for DEODS [59] supported this programme. It is assessed that this institutionalisation plan will be achieved by 2017. [60]

Lesson: There is a requirement to institutionalise C-IED at all levels across the Army. [61]

HUMAN FACTORS MENTORING AND STRESS

83. **The Problem.** Stresses and strains affected everyone on operations to some degree; some were better than others in dealing with it. There was an extant system, Trauma Risk Management (TRiM), for dealing with this both on operations and post operations. [62] However for specific C-IED staff, in particular operationally critical assets such as IEDD teams and High Risk Search teams, their removal from an operation is likely to have a disproportionate effect. Replacements cannot be force generated quickly, courses are demanding, progressive and it takes years to grow such capabilities. Post operational periods have different challenges and individuals change units, return to their reserve posts or leave the services. During Operation HERRICK the requirement to generate a four or five fold increase in C-IED team capacity quickly, added additional stresses and heightened the risk. Some teams met in Theatre for the first time.

84. Attempts to gain traction on this issue post Operation HERRICK 11 failed as there was no empirical evidence at the time to suggest that this group was at any greater risk. This should now be revisited and further research is required to ensure this niche capability is maintained in the best possible operational state. The disproportionate effect a casualty has on the overall capability is sufficiently important to justify further study. [63]

85. **Better Monitoring Mechanisms.** The requirement exists to provide a better mechanism to monitor these specialist, critical assets through their service life. Training is monitored closely, but different monitoring is required during any future pre-deployment training, during an operation and the time in between operations. Teams will vary from being deployed on operations to working on homeland security, to returning overseas in support of upstream capacity building, usually with key different equipments. For these specialists there are two main issues:

    a. Operational monitoring to ensure they remain effective.

    b. Longer term monitoring over and above that offered currently to other parts of the Army; in effect a 'through life management' requirement.

Figure 3-6-10 IEDD operator confirming an IED using manual techniques with RCV in support.

59   TNA. Ref R-DHCSTC_1376990_P_T3_031/005 version 2/30th July 2013.
60   The revision from 2015 to 2017 was endorsed at the C-IED Institutionalisation Working Group on 5 March 14.
61   There is an existing lesson with this title from Operation HERRICK, DLIMS 16756, but it needs widening and reinforcing.
62   See Personnel Chapter 5-6 paragraph 16 for further details.
63   Operation HERRICK was supposed to deploy with 6 teams and deployed with 5. Due to casualties this was reduced to four teams as the Op Entirety planned effort was to allocate a total of 20 teams, one team per sub unit. This was never met due to Force Generation challenges.

Lesson: Requirement to have a sound mechanism in place to monitor operational performance and psychological wellbeing of critical C-IED personnel[64] prior to, between and after operational tours. More should be done to track individuals' psychological health both in and after their Service career.

C-IED INDIGENOUS FORCES TRAINING, OVERSEAS ENGAGEMENT AND CAPACITY BUILDING

86. **Initial Shortcomings.** ANSF C-IED training had been delivered in Mazar-e-Sharif in RC(N). Training there was lengthy, complex, reliant on kit and largely inappropriate for Afghanistan. The course lasted nearly a year, had a high failure rate and produced no trained operators within HELMAND in an 18 months period prior to Operation HERRICK 11. Little or no indigenous force C-IED training by the UK took place until Operation HERRICK 12 (May 2010) as there was neither sufficient ANSF capacity nor UK capacity available to assist. This was further complicated by the fact that the Theatre effort initially was too involved trying to understand and counter the threat.

87. **An Over Complicated Solution.** After full ISAF scoping, the solution chosen was for an NATO Training Mission (Afghanistan) (NTM (A)) delivered equipment and training package. Initially it was never really given the attention it deserved, was over ambitious and arrived too late.[65] However, the UK did provide an OF3 staff lead in HQ RC(SW) and there was a joint US-UK effort to deliver the chosen training package. UK equipment was lent to do ad hoc training, when there was spare capacity. In hindsight hi-tech solutions proved inappropriate for the ANSF. It was not until more low tech means were adopted such as GSA training[66], joint patrolling and more human intelligence work, that real progress was made and a useful capability was developed. This had fully matured by Operation HERRICK 18 and UK C-IED was able to step back.

Vignette – ▬ :CM for the ANSF

▬ was developed by the RC (SW) C-3 C-IED Team and provided the ANSF vital life-saving Electronic Counter Measure (ECM) Force Protection (FP) from 2013. It offered protection from the most prevalent Radio Controlled IED (RCIED) threats in Afghanistan, which were 95% of the RCIED threat. Before its introduction, RCIEDs IEDs had been used to target ANSF. Similar to ISAF ECM, the introduction o ▬ did not did not mean that ▬▬▬ ▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬ ɔ.

Whilst ECM did not make ANSF invincible to IED threats, it did offer a protective " ▬▬▬▬▬ for all those inside. It could be used mounted in vehicles or by dismounted patrols when searching or confirming an IED. When dismounted it was not necessary for the lead searcher to carry it.

Its introduction provided the ANSF with a life saving capability which boosted morale and confidence at an important moment as they expanded their forces.

Observation: The application of UK and NATO standards to the ANSF training problem became an issue. What was really required was an 'ANSF Good Enough' solution which could endure.

Lesson: There is a requirement to develop a more practical indigenous C-IED threat capability in the future rather than looking solely for an overcomplicated equipment solution.

Lesson: There is a requirement to commence understandable indigenous forces C-IED Training as early as possible in a campaign. ·

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88. **Defence Engagement** – Overseas Capacity Building. A natural extension of mentoring was the requirement to help other nations to develop their skills. Upstream capacity building is embedded in Army 2020, but will require forces to remain fully trained and focussed. There is a direct link between these activities and the wider understand[67]. C-IED is a high demand niche area to try and build indigenous capacity. Providing some support enables a country to deal with IED threats, and can improve their domestic stability. [68] Countries like Pakistan are natural choices currently to help, but for the future it would be wise to establish a plan to ensure there is priority coverage in other in parts of the world of interest. Defence Engagement and upstream capacity building ought to be a justification for producing more trained high threat operators to use in this role between deployments. This is of key importance to the C-IED community and the UK is currently engaged in C-IED Capacity Building across the globe[69], but demand has outstripped supply.[70]

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64 Critical Personnel will include High threat operators, IEDD team members, Royal Engineer Search Teams and Search Advisers.
65 DLIMS lesson 12098 (H11) 'ANSF C-IED policy and capability needs to be addressed urgently, or their C-IED capability will fall further and further behind the TLSR curve. There may be value in establishing a C-IED mentoring team to develop their specialist capability with the CS Kandaks'.
66 DLIMS lesson 17086 (H15): Greater Emphasis on GSA
67 This will not be developed further at this classification
68 This is consistent with CONTEST – The United Kingdom's Strategy for Countering Terrorism Dated July 2011. http/www.homeoffice.gov.uk/counter-terrorism
69 DG Cap/Strat/4-2-9 dated 21 October 2013: 'The Army's Contribution to Defence Engagement Draft Doctrine'
70 Commander 29 EOD and & Search Group at Cap CS Annual Conference 30 June 2014

Lesson: There is a requirement for a permanent C-IED training cadre for indigenous force training, which was not taken into core. There is now no training cadre with the reduction of the Collective Training Advisory Cell (CeTAC).

Observation: Defence Engagement and Overseas Capacity Building should become a formal driver for C-IED organisational structures and capability development.

Figure 3-6-12 ANSF EOD Team

COOPERATION – RELATIONSHIPS WITH PARTNERS ACROSS GOVERNMENT (PAGS), PARTNERS AND ALLIES.

89. **The International Dimension.** A key principle of EOD, Search and C-IED capability is to ensure that with the fast pace of technological change and migration of the threat, that UK does do not adopt a 'go it alone' approach to capability development. A wide approach is required as costs escalate. Defence Engagement strategy stresses the need to reinforce our relationships with the US and France, whilst strengthening our multinational relationships, in particular with NATO and the '5 EYES'. Capability sponsors will need to meet expenditure in order to continue international cooperation and collaboration in C-IED post Operation HERRICK and Defence Transformation. Successful C-IED in the future will need to rely on much better capability interoperability and increased collaboration.

Observation: C-IED Defence engagement with nations is prioritised over a number of levels. High priority is given rightly to engagement with US and now France. However it is likely that more will be learnt about new and emerging threats from nations such as ████████████████████

90. **Sharing.** Sharing with our key allies, such as the US was pivotal. We were able to share some of the research and costs. This was reinforced by the continual drive to liaise closely and foster sound working relationships. It was not just a 'one way street' and often we were offering the Americans more than they could offer us, because our detectors were really good.[1] We did rely heavily on the US expertise after they formed their C-IED Task Forces (TFs) and they were very keen to pass lessons across to us. In particular a great deal of work was done to improve training; it was not solely equipment solutions. Strong links were formed with JIEDDO and the US defence industries. It was possible to do this with close allies as there was the confidence that the technology would be managed carefully and sensitively.

Observation: As a general principle it became essential to look at how a substantive difference could be made with C-IED development. The requirement was to get relationships well established with the US and share as much as possible with other key allies.

91. **PAGs.** Previously liaison with PAGs worked well in NI with counter terrorism internal security issues. Engagement to make that relationship work was at a strategic level and the lessons learnt from that campaign should not have been dismissed, much was lost. The Home Office is responsible for achieving cross government and department collaboration to meet the threat. The Olympics was a good example of successful cooperation. This work now has an 'upstream prevent' focus and what the Foreign Office is doing is important and needs reinforcing.

92. **Joint IED Analysis Centre (JIEDAC).** JIEDAC is a sound Cross Government champion now and focuses on (AtN) activity. Their mission is to look at the Cross Government application of national levers across Diplomatic, Information, Military, Economic lines and multi agency techniques. It is extremely challenging to achieve genuine cooperation as there are many vested interests. However they are helping lead this approach. JIEDAC will move in late 2014 from MoD to sit under the Cabinet Office. MoD relationships with the FCO and Home Office are critical in pursuit of wider C-IED goals both now and in the future.

Lesson: Requirement to focus on strengthening international relationships, particularly '5 EYES' and fostering genuine C-IED capability interoperability through Memorandums of Understanding (MOUs) and Working Groups (WGs).

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[1] The HORN detector in particular was well liked because much work had been done to upgrade it and to make it easier for the non specialist to use.

THE BURLEY REVIEW - SUMMARY OF RECOMMENDATIONS EXTRACT

1. **The Visits to Iraq.** It was not until late 2008, that the Burley Review Team visited Basra, HQ MND (SE), and Baghdad to investigate what C-IED changes were needed. The team visited Task Force TROY, a C-IED Brigade. The US had developed a set of structures that looked at C-IED in the round. They looked at integrating 'Defeat the Device' with 'Attack the System' and had developed a Combined Explosive Exploitation Cell in Baghdad, the CEXC. They were looking at not just defeating the device in play, but had put a lot of effort into vehicles, equipment, counter measures and training operators. However their main effort was focussed on targeting: how do to you get something useful from the IED components that had been recovered, and from any electronic intelligence gathered. The system of Exploitation Forensic Investigation (EFI) was also being very successfully implemented by the Special Operations Component based on the effective 'Find, Fix, Finish, Exploit and Analyse' (F3EA) cycle General Stanley McCrystal developed for going after Al Qaeda networks. Key was the dynamic integration of taking what you got from exploitation into the analysis, to re-feed into the targeting cycle, with the aim to put the enemy on the back foot. What the Americans were doing with Task Force TROY in Baghdad and what the Special Operations Task Forces, set the model for what was required.

2. **In Afghanistan.** The team moved to Afghanistan and visited all the principle organisations, including the Americans from the Task Force PALADIN. PALADIN was a mirror image of Task Force TROY in Iraq. The team realised that the doctrinal lines of development were not being followed by the UK Forces and that changes had to be made quickly. The main report recommendation was to create a C-IED Task Force that had force elements embedded within it solely attributed to dealing with IEDs and an exploitation capability. This capability was created in two phases: firstly TORCHLIGHT supported ▬▬▬▬▬ in HELMAND and secondly VARSITY supported the ●▬▬ A WIS Coy was already operating but only in a limited capacity. The planned exploitation capability would include WIS Coy, TORCHLIGHT, VARSITY and a Biometric Support Unit (BSU).

3. CJO was asked to note:

   a. Since January 2008, IED's in Helmand Province have accounted for 79% of UK Killed in Action (KIA) and were responsible for significant constraints in Task Force HELMAND. The dynamic evolution of Enemy Forces (EF) tactics and their increasing use of IED as a weapon of choice[1] threatened to continue to inflict significant casualties with the potential to undermine UK and ISAF objectives and coalition political resolve.

   b. The current level of defensive C-IED assets[2] is insufficient to deal in a timely fashion with the existing level of enemy attack and will be overwhelmed by mid 2009 if IED activity continues to rise at the anticipated rate.

   c. Winning the C-IED battle can no longer be considered as a niche or specialist activity – it is the very essence of the current fight in Helmand. It is thus commanders' business, a conceptual change that has, reassuringly, not been wasted on 3 Commando Brigade (Operation HERRICK 5).

   d. There is no silver bullet in the C-IED fight.[3] Investment to date in Protected Mobility (PM) and particularly our Tactics Techniques and Procedures (TTPs) is saving lives, but is rendering our efforts defensive and predictable. We must put Enemy Forces (EF) under pressure and transform our C-IED effort to the offensive.

   e. Task Force (TF) Troy is an American-led operation, supported by some embedded UK C-IED specialist staff, based in Baghdad and represents current best practice in the C-IED fight. The strategic context and threat in Afghanistan however is different and thus it would be inappropriate and unrealistic to adopt every aspect of their remit. Nonetheless, the key principles of C-IED (appropriate command focus, shared data, in-Theatre training support and the flat command and control (C2) necessary to generate tempo, both for defensive and offensive counter-measures) must be applied in Operation HERRICK.

   f. Notwithstanding the need to increase specialist C-IED capability as outlined above, the numerous urgent capability requirements including Urgent Operational Requirements (UORs) tackling the equipment-focused efforts of DETECT, NEUTRALISE and MITIGATE are being well managed by processes being established by the C-IED Senior Reporting Officer (SRO[4]). Improvements in PREDICT, PREVENT and particularly EXPLOIT offer the greatest potential effect and will require the application of considerable additional resource.

   g. This report thus focuses on structures, specialist C-IED capability enhancements, training and the invigoration of a more focussed, command-led approach to the problem as the most significant levers to enable the Force to go onto the offensive.

4. CJO was requested to agree the following recommendations:

   a. A change of approach to the C-IED fight ensuring the Force transitions from defensive to offensive C-IED.

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1. The employment of IEDs within Helmand has risen by 400%. DIS, PJHQ and Theatre assessments are that this trend will continue to rise.
2. IEDD and advanced search teams.
3. A broadly held metric is that 60% of effectiveness is due to TTPs, 30% equipment and 10% luck – all driven by leadership.
4. CM (BM).

b. The (incremental) embedding of an additional 6 High Threat IEDD (HT IEDD) teams, 6 High Risk Search (HRS) Teams and 2 Conventional Munition Destruction (CMD) Teams within the UK Forces, thus providing a dedicated capability to each manoeuvre BG (including Regional Command (South) Battle Group (RC(S) BG) and an element to train and develop the Afghan National Security Forces (ANSF) C-IED capability. This would be a quick win and deliver a very significant enhancement to the tempo of delivery of defensive C-IED capability (force protection).

c. Restructuring of the existing weapons intelligence structures in TF HELMAND (TFH) to support the prosecution of effective offensive C-IED operations through: timely exploitation of recovered materiel, all-source intelligence fusion, and the proactive targeting of IED networks. The principal changes include the creation of 5 Weapons Intelligence Detachments (WID) and enhancements to the TFH Weapons Intelligence Section (WIS) to support analysis and IED network targeting in order to support PREDICT, PREVENT and EXPLOIT. In the medium term, a joint and combined Level 2 exploitation facility is being established by TF PALADIN at Kandahar (or Camp Bastion) to support Regional Command (South) (RC(S)), TFH and ▬▬ UK must take-up the offer from Commander TF PALADIN[5] to support this initiative with appropriate embedded staff.

d. The need for a comprehensive review of the existing UK C-IED embedded staff at HQ ISAF, TF PALADIN and Headquarters RC(S) in order to ensure the appropriate national influence and benefit is guaranteed. Principal Ammunition Technician Officer (PATO) Land Forces has offered to lead this review so as to inform the next Troop Capability Review (TCR).[6]

e. The need to generate the requirement for a comprehensive individual and collective C-IED education and training regime that seamlessly builds from the Adaptive Foundation through Pre Deployment Training (PDT) to In-Theatre Training.[7]

f. PJHQ acting as the 'supported' HQ in the delivery of operational C-IED effect, with MoD staffs (notably CM (BM), ACDS (Ops) and DGIC, whose efforts could be appropriately integrated and coordinated by DCDS(C)) 'supporting'. This will require a review of the PJHQ C-IED Task Force's existing Terms of Reference (TORs) and its place within the emerging Defence C-IED governance structure.

g. The adoption of the lines of operation as outlined in draft NATO doctrine[8], to provide the required structure and staff focus and to enable an integrated C-IED Campaign Plan. Furthermore, a more synergistic counter-threat[9] approach, similar to that being taken in theatre, should be considered.

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5   Discussion Burley/Comd TF PALADIN of 31 October 2008.
6   This became 'The Land EOD Review final ver 4.7, 8 Bde dated 18 March 2009'
7   For Operation HERRICK In-Theatre Training includes RSOI, the Helmand Training Package and Continuity Training.
8   AJP 3-15, Draft 4 – proposes as a useful conceptual tool to consider all C-IED activity as falling within 3 lines of operation (attack the device, attack the system and training and education) within which there are six key operational activities (Predict, Prevent, Detect, Neutralise, Mitigate and Exploit) that form the basis for an integrated and holistic approach to defeating the adversaries IED campaign.
9   In Afghanistan, IEDs and IDF are simply different tools employed by the same insurgent networks and both represent possible start points to attack EF.

OP ENTIRETY REORGANISATION EXPLANATION

1. Op Entirety for many units and organisations required many changes. These are summarized below:

   a. 29 (Land Support) Engineer Group[1]. This was renamed 29 Explosive Ordnance Disposal (EOD) & Search Group and restructured to enable:

   - Five regular Royal Engineer EOD squadrons.
   - Two RE EOD Regimental Headquarters (RHQs) to command and force generate regular and Territorial Army (TA) EOD sqns and deploy as the Counter Improvised Explosive Device (C-IED) Task Force (TF) HQ in rotation with other organisations.
   - A single centralised HQ and Support Squadron to deliver common functions to both 33 Engineer Regiment EOD and 101 Engineer Regiment EOD
   - Manpower enhancements to 11 EOD Regiment Royal Logistic Corps (RLC). Regt remained under command of 29 EOD& Search Gp. The 83 liabilities included Ammunition Technicians Officers (ATOs), Ammunition Technicians (ATs), Electronic Counter Measure (ECM) Operators, Drivers as well as the bulk of G1/G4 personnel It was a seismic change in the organisation and structure of the entire Regt that allowed it for the first time, to support home and away operational outputs. It rectified years of neglect.

   b. 2(Military Intelligence) (MI) Battalion. An uplift of 105 Intelligence Corps, Royal Military Police and RLC personnel for Weapons Intelligence Staff (WIS).

   c. 1 (MI) Brigade. An uplift of 25 personnel for Intelligence Exploitation.

   d. 1 Military Working Dog (MWD) Regiment (Royal Army Veterinary Corps), 1 MWD Regt, was created as part of 29 EOD & Search Group[2]. 1 MWD Regt took command of all the Army's 5 x MWD squadrons.

   e. 36 Engineer Regiment Regt rerolled to become a 36 Engineer Regiment (Search). The Regiment accepted the Talisman Route Proving and Clearance (RP&C) UOR capability.
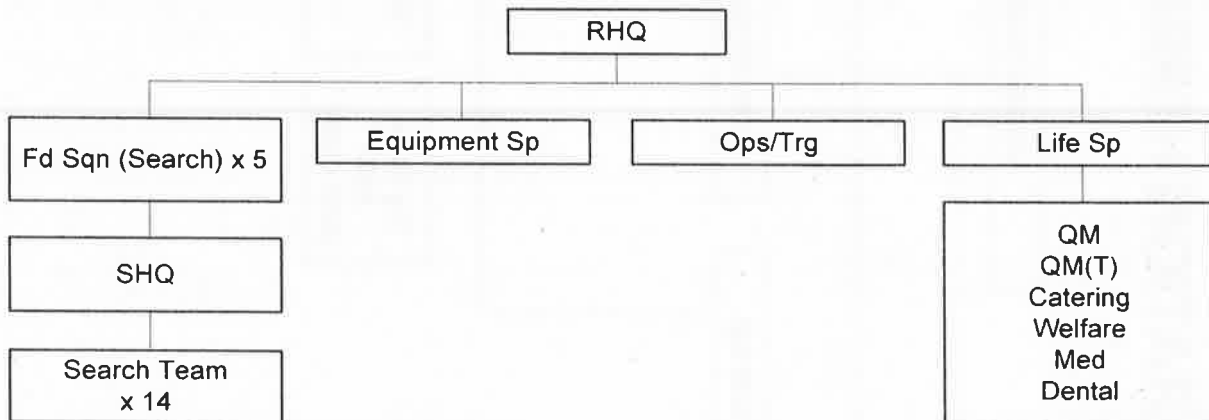

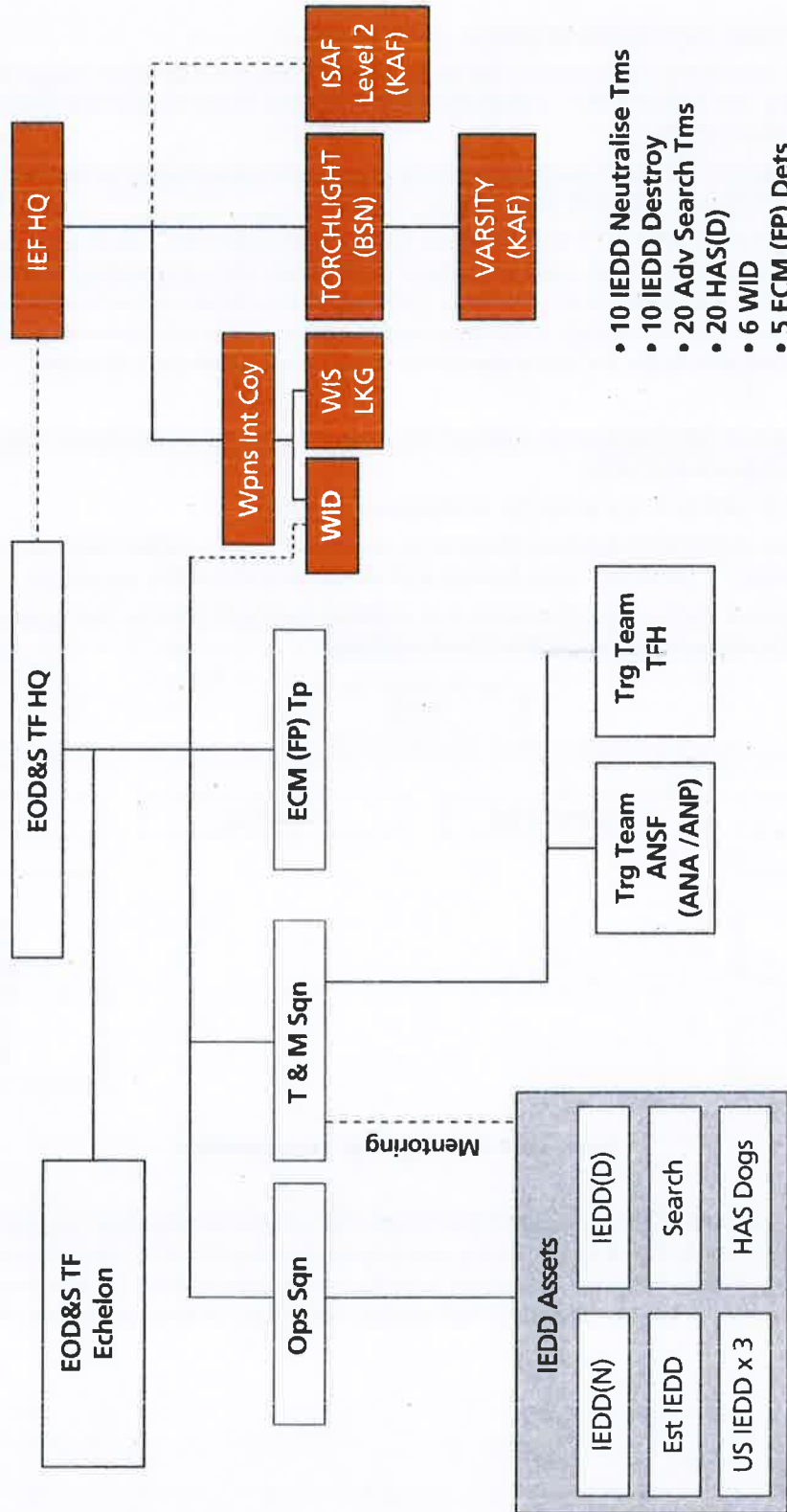**Figure 3-6-B-1. 36 Engr Regt Reorganisation.**

   f. Creation of a 5th regular STRE (Works) in 170 Engr Works Gp. Additional manpower headroom was created from within the existing technical roster liability, primarily by re-rolling 517 STRE (Bulk Petroleum) to 517 STRE (Works), re-hypothecation of internal manpower, such as utilising gapped STRE 2IC PIDs to create additional OC positions. Further manpower was created by 'taking posts from Regional Brigades and the then Defence Estates.

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[1]   29 Gp Restructuring Implementation Order LF/Org/3/3/4/3/3 dated 01 August 2009.
[2]   1 MWD Regt Implementation Order LF/Org/3/3/4/10/2 dated 08 December 2009.
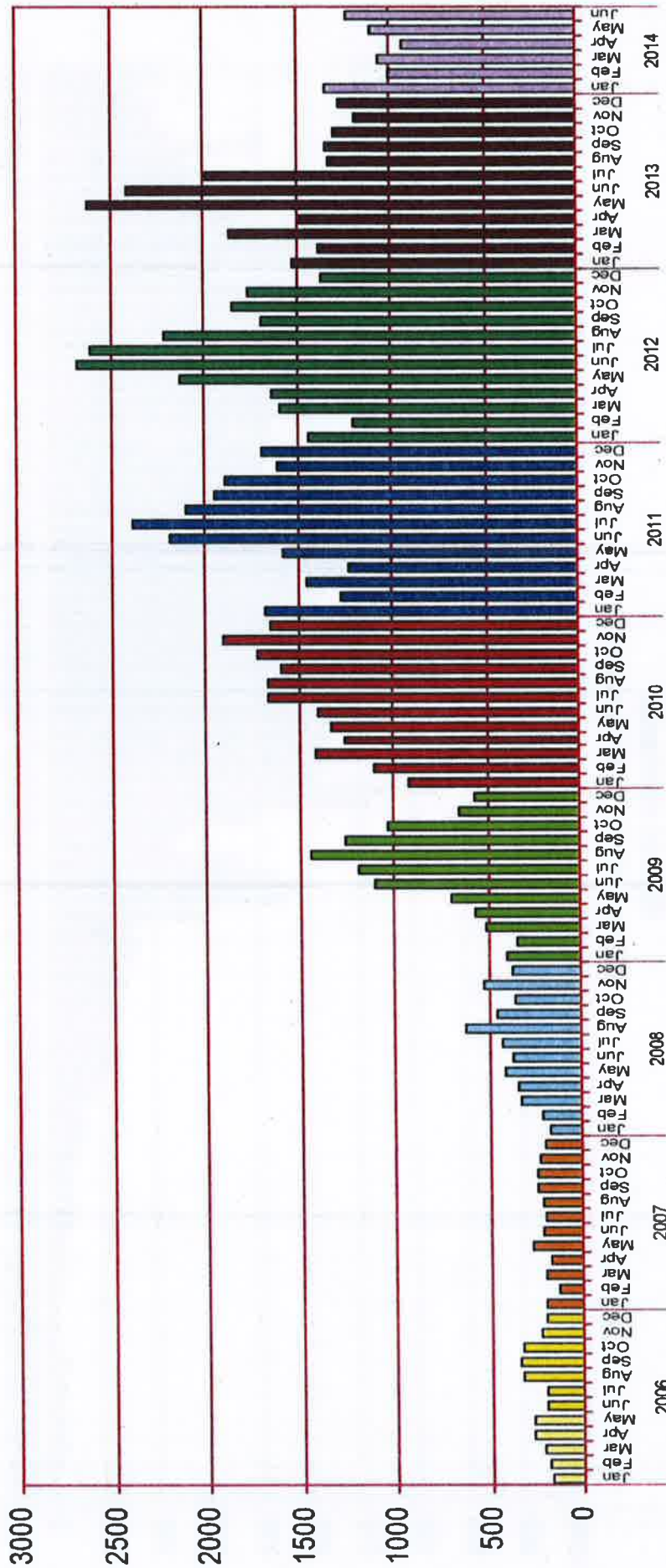
EOD AND SEARCH TASK FORCE ORBAT FOR OPERATION HERRICK 15

Note: Task Force was at maximum capacity and would reduce thereafter

OPERATION HERRICK 15 ORBAT

- 10 IEDD Neutralise Tms
- 10 IEDD Destroy
- 20 Adv Search Tms
- 20 HAS(D)
- 6 WID
- 5 ECM (FP) Dets

IEF HQ

ISAF Level 2 (KAF)

TORCHLIGHT (BSN)

VARSITY (KAF)

Wpns Int Coy

WIS LKG

WID

EOD&S TF HQ

ECM (FP) Tp

Trg Team TFH

Trg Team ANSF (ANA /ANP)

T & M Sqn

EOD&S TF Echelon

Ops Sqn

Mentoring

IEDD Assets

IEDD(N)

IEDD(D)

Est IEDD

Search

US IEDD x 3

HAS Dogs

IEDs in Afghanistan
(Source: HQ ISAF C-IED Database)

IEDs in Helmand
(Source: HQ ISAF C-IED Database)

3-6-E_1
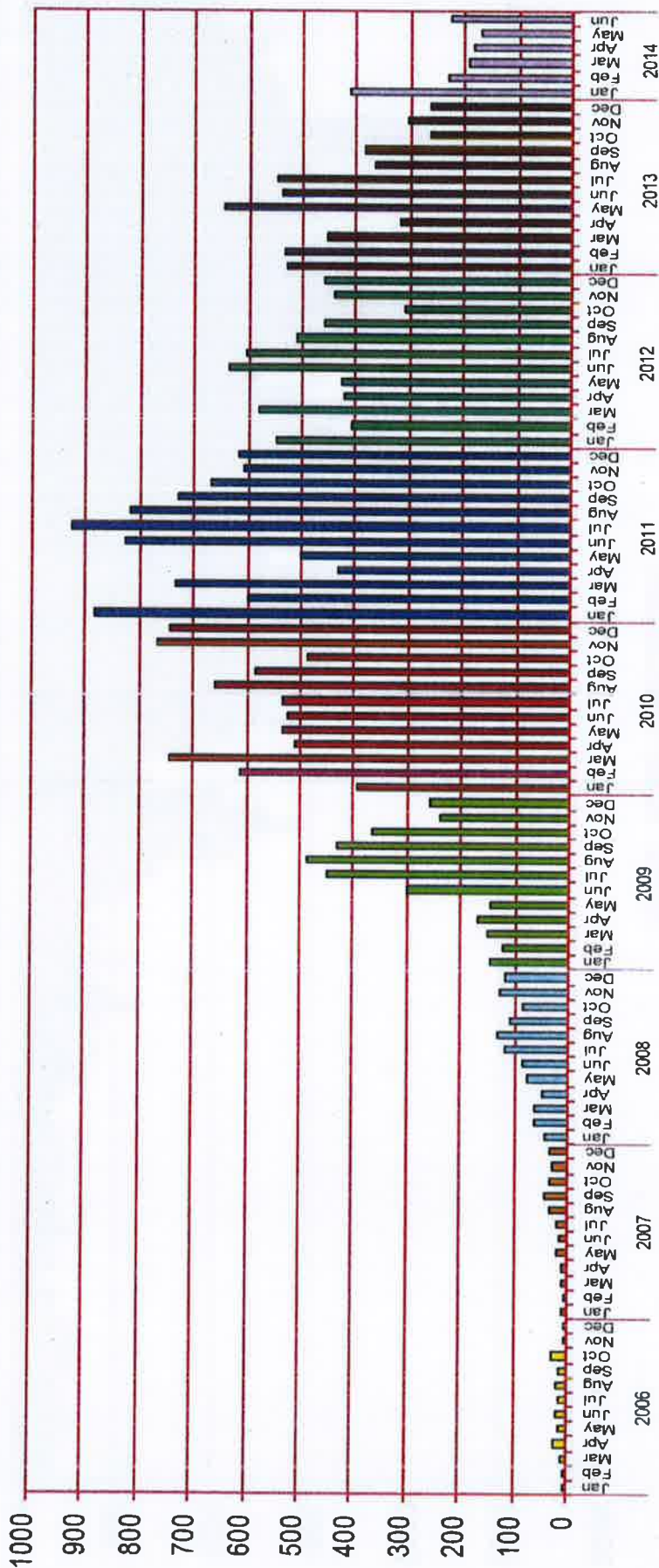
IED Breakdown by Type

2010 – 2011

Key to IED Type

CW	Command Wire
PB	Person Borne
RC	Remote Controlled
SVB	Suicide Vehicle Borne
T	Timed
VB	Vehicle Borne
VO	Victim Operated

Helmand 2010

- PBIED 0.5%
- RCIED 6.8%
- SVBIED 0.2%
- TIED 0.0%
- VBIED 0.3%
- CWIED 13.5%
- VOIED 78.7%

Helmand 2011

- PBIED 0.1%
- RCIED 5.9%
- SVBIED 0.2%
- TIED 0.2%
- VBIED 0.4%
- CWIED 9.9%
- VOIED 83.4%

Afghanistan 2010

- PBIED 1.5%
- RCIED 12.3%
- SVBIED 0.7%
- TIED 0.3%
- VBIED 1.6%
- CWIED 17.5%
- VOIED 66.2%

Afghanistan 2011

- PBIED 1.2%
- RCIED 12.7%
- SVBIED 0.5%
- TIED 0.2%
- VBIED 1.4%
- CWIED 17.4%
- VOIED 66.4%

IED Breakdown by Type

2012 – 2013

Helmand 2012

RCIED 10.6%
SVBIED 0.2%
TIED 0.1%
VBIED 1.6%
PBIED 0.6%
CWIED 10.2%
VOIED 76.7%

Helmand 2013

RCIED 17.5%
SVBIED 1.4%
TIED 0.2%
VBIED 5.0%
PBIED 1.6%
CWIED 7.0%
VOIED 67.2%

Afghanistan 2012

RCIED 17.8%
SVBIED 0.3%
TIED 0.2%
VBIED 1.8%
PBIED 1.3%
CWIED 13.7%
VOIED 64.8%

Afghanistan 2013

RCIED 29.4%
SVBIED 1.2%
TIED 0.6%
PBIED 3.3%
CWIED 11.9%
VOIED 48.9%

Key to IED Type

CW	Command Wire
PB	Person Borne
RC	Remote Controlled
SVB	Suicide Vehicle Borne
T	Timed
VB	Vehicle Borne
VO	Victim Operated

3-6-G_1

IED Breakdown by Type

January 2014 - June 2014

Helmand 2014

RCIED 16.7%
SVBIED 1.3%
TIED 0.0%
VBIED 11.4%
PBIED 2.2%
CWIED 7.9%
VOIED 60.5%

Afghanistan 2014

RCIED 33.2%
PBIED 5.5%
CWIED 6.6%
SVBIED 2.5%
TIED 0.6%
VBIED 9.0%
VOIED 42.6%

Key to IED Type

CW	Command Wire
PB	Person Borne
RC	Remote Controlled
SVB	Suicide Vehicle Borne
T	Timed
VB	Vehicle Borne
VO	Victim Operated
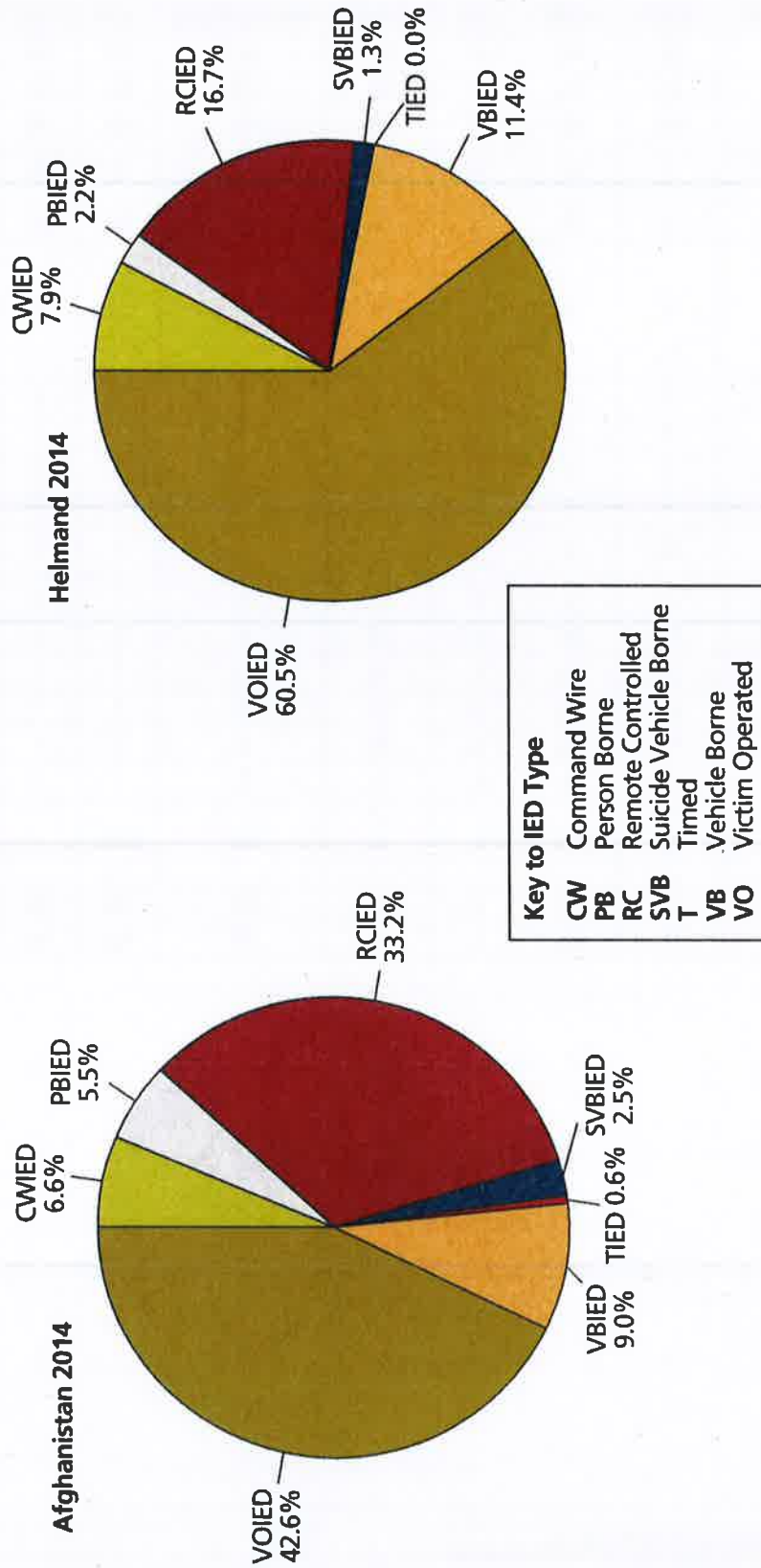
C-IED TEAMS ACROSS OPERATION HERRICK[1]

HERRICK	SEARCH	IEDD[4]	CMD	WIS	HASD	PALADIN (US)	EST	DA	NOTES
1	NIL	NIL	NIL	1[2]	NIL	NIL[3]	NIL	NIL	
2	NIL	NIL	NIL	1	NIL	NIL	NIL	NIL	
3	NIL	NIL	NIL	1	NIL	NIL	NIL	NIL	
4	2	2	NIL	1	NIL	NIL	NIL	NIL	4 were still on OPERATION TELIC.
5	2	2	NIL	1	NIL	NIL	NIL	NIL	
6	2	2	3	1	NIL	1	1[5]	2	EOD&S Gp based in Bastion and commanded by JF Engr Gp until H11. (See H18 below for reversion to this model)
7	2	2	3	1	NIL	1	1	2	
8	2	2	3	1	NIL	1	1	2	
9	4	4	4	1	NIL	1	1	2	DA: 1 x IEDD and 1 x CMD
10	6	6	6	3	NIL	1	1	1	C-IED TF Assembling
11	10	10	8	6	2	2	1	1	C-IED TF first Operation HERRICK
12	14	14	4	6	9	2	1	1	
13	17	18	NIL	6	12	2	1	1	
14	20	20	NIL	6	20	2	1	1	
15	21	22	NIL	6	22	2	1	1	
16	18	19	NIL	6	20	2	1	1	
17	13	17	NIL	6	11	2	1	1	EOD&S Gp starts folding
18	8	12	NIL	6	8	NIL	0 NIL	1	JF Engr Gp took back under command 1 x MWD Sqn and 1 x EOD&S Sqn
19	8	10	NIL	2	8	NIL	NIL	NIL	
20	2	2	NIL	2	4	NIL	NIL	NIL	

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1   Sourced from Unit POR and POP presentations rather than FGen Orders for accuracy.

2   Figures include TACON Danes, US and Estonian assets.

3   WIS WO +1 capability. This was the post in Lashkar Gar and did not include a separate post in Kabul.

4   US PALADIN assets were only ever TACON: there were teams in country which were task organised (TASKORG)' for specific operations before OPERATION HERRICK 9.

5   CMD only.

C-IED TEAM CASUALTIES

HERRICK	Wpn	IEDD Op, WIS and Team				RESA and REST				RP and C				Dog Handlers				Notes
H4		T1	T2	T3	KIA	T1	T2	T3	KIA	T1	T2	T3	KIA	T1	T2	T3	KIA	
H5																		
H6																		
H7																		
H8	IED				1													
	SAF																1	AES and also dog
H9	IED																	
	SAF																	
H10	IED		2		1	7	10		1									
	SAF																	
H11	IED	2	1	1	4	1	3	10	4									1 x US IEDD Op KIA in Sp UK
	SAF																	
H12	IED				1	9				1		1						
	SAF		1			2			1									
H13	IED	1				8	1	2	2							1		
	SAF	1							1								1	
H14	IED				1	4	3											1 x US IEDD Op KIA in Sp UK
	SAF						1											
H15	IED	1				2		2						1		1		BEEK Dogs KIA, T1 and T3
	SAF					1												
H16	IED					1	2	2	1									
	IDF⁶					5	1	1	2									
H17	IED									1		1						
	SAF																	
H18	IED					1					3							
	SAF																	
TOTALS		5	4	1	8	41	21	17	12	2	3	2	NIL	1	NIL	2	2	

6   IDF FOB OULETTE

DEFENCE C-IED GOVERNANCE

Defence C-IED Governance

Key:

	Key Meetings
▌	C-IED Governance
—	Chain of Comd

VCDS
Def Lead for C-IED
4* Stocktake

DCDS(MSO)
C-IED SRO
3* FP SG

MOD Centre
Ops Dir

HQ Army
C-IED Prog Dir
2* C-IED Prog Board

DJW
JFC

D cap
HQ JFC

Cap C4ISR

Cap SP

CD CS
HQ Army
C-IED LE Lead
1* C-IED CWG

CD Info

ACOS LLM
Mar C-IED

ACOS FP
Air C-IED

**C-IED PMO
Programme Head**

CD Combat

CD CSS

D Med
Cap(A)

C212
CPG

Collect
CPG

ECM
CPG

LEC4ISR
CPG

EOD&S
CPG

Mil Eng
CPG

DCC
CPG

MCC
CPG

LE Log
CPG

MWA
CPG

3-6-J_2

CHAPTER 3-7
MILITARY ENGINEERING

"We lacked engineers across the board; particularly Infrastructure and Combat Engineers as well as project managers and planners. It was surprising how much the engineers were in demand. They were required for everything; from building new military infrastructure as part of the troop increase, construction of new patrol bases and the Security Ring Protection Force, design for stability projects; and road/route construction/improvement. Additionally combat engineers were required for all assault operations in HAMAKRI; be it for assault breaching either mechanically or explosively, or route clearance provision"

██████ ████████ *HQ Regional Command South (RC(S)) November 2009 to November 2010*
Post Operational Interview (POI).

BACKGROUND

1. The level of engineer effort during Operation HERRICK varied considerably, demanding the full range of both combat and force support[1] engineering skills. This is best summarised by the ████████████████ supporting 19 Light Brigade on Operation HERRICK 10

Figure 3-7-1. Final preparations for compound wall demolition

"We had three main roles:

Close Support; providing Combat Engineers to conduct activities such as explosive method of entry (EMOE), bridge building, "quick and dirty" Patrol Base construction and intimate support on every patrol (using explosives, Vallon and BARMA drills.)

The second role was Force Support (construction) of Forward Operating Bases, Patrol Bases and Check Points; the delivery of the Infrastructure Development Plan (IDP); a long-term PJHQ-owned plan to put us on a better expeditionary infrastructure footing; deciding which bases were to be held onto longer, and substantially improving them.

The third role was to contribute to the Counter IED (Improvised Explosive Device) campaign providing EOD (Explosive Ordnance Disposal) support.

We conducted over 450 EMOEs, built 13 bridges, 58 Forward Operating Bases/Patrol Bases/Command Posts (FOBs/PBs/CPs), conducted IDP in four locations, spent £17.5 million on aggregate, let £22 million of contracts and dealt with over 1,500 IED incidents. We were involved in facilitating the arrival of US Forces into Helmand, Operation Panchai Palang, the Elections and then a series of Battlegroup surges to create the conditions for the relief in place with 11 Mech Bde.

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[1] Often referred to as Close and General support.

Figure 3-7-2 Operation HERRICK 5 Sangar - Sangin

2. Before Helmand. During the early stages, Operation TELIC was still running and therefore the need to reconcile competing requirements between theatres inevitably caused capacity difficulties; Operation TELIC concluded at the start of Operation HERRICK 10. From March 2002 to March 2006 (Operation HERRICK 1-3), deployments were limited to the Afghanistan Infantry Roulement Battalions (AIRB), with minimal Specialist Team Royal Engineers (STRE) [2] engineer support. In 2004, surge squadrons built a 250 man tented camp in Mazar-e Sharif for the PRT and established the infrastructure to enable the Harrier deployed operating base at Kandahar airport. 39 Engr Regt had completed the initial construction of Camp Bastion by mid 2006, but whilst Operation TELIC continued, there was no deployed spare capacity to deliver any stabilisation effect simultaneously. [3]

3. Intervention into Helmand. On Operation HERRICK 4, 51 Para Sqn deployed in support of 16 A A Bde. Despite a strength of 300, this proved insufficient for the volume of tasks required by the Bde and from Operation HERRICK 5 onwards an engineer regiment was force generated. This was known as the Joint Force Engineer Group (JF Engr Gp), with an enhanced mix of additional capabilities such as a Joint CIMIC (Civil-Military Cooperation Group) and Explosive Ordnance Disposal (EOD) and Search.

4. However, as force levels increased, engineers were only able to provide brigades with limited manoeuvre support, and force support, including construction, development and maintenance of bases. Specialist capabilities, such as water development, fuel, power construction, and inspection, were held at readiness and surged into theatre as required [4].

5. The JF Engr Gp grew in size and capability over successive deployments, but Force Preparation was under-developed and UORs were not well coordinated. Increasing numbers of contractors were employed to build and operate facilities. [5] Infrastructure development was logistically challenging, with lengthy supply chains and a heavily regulated system for justifying infrastructure requirements to Permanent Joint Headquarters (PJHQ). The long term benefits of delivering significant repair and development of local infrastructure to achieve campaign effect was not well understood and was still not widely accepted by PJHQ.

6. Consolidation in Helmand. The proliferation of Improvised Explosive Devices (IEDs) from October 2008 fixed the force and prompted a Counter IED (C-IED) reorganisation. It took time to increase the EOD and search training throughput and to adjust structures in theatre in order to force generate the enhanced capability. The EOD and Search capability moved from the JF Engr Gp, but from Operation HERRICK 11 (November 2009 to April 2010) the C-IED Task Force was established. [6]

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[2] STRE. Specialist Team Royal Engineers: examples of which are: Works, Bulk Petroleum, Well Drilling, Utilities and Materiel.

[3] "The difficulty I had as was that we had lots of engineers building military camps and building infrastructure and filling Hesco Bastion and building runways, but we had very few engineers delivering a reconstruction environment effect". Chief Engr of ISAF (2006) Interviewed 22 November 2013.

[4] In addition, Operation BAM was one example where up to a squadron was surged for four months at a time to provide Forward Operating Base (FOB) winterisation work.

[5] See Chapter 4-3 Integrating the Contractor Capability and Chapter 4-4 on Camp Bastion.

[6] The C-IED Task Force, or EOD and Search Group as it became known, continued until Operation HERRICK 17, when it reverted to being a squadron under command of the Joint Force Engineer Group. See C-IED Chapter 5-3 Annex E.

7. Pre-deployment training matured and arrangements were made for the Talisman[7] route proving and clearance UOR training to be conducted in Jordan. This later expanded to include the complete EOD and Search Group. Jordan provided a representative environment for final testing of UOR capabilities and the delivery of Collective Training Level 2 (CT2). It was vital for engineers who were rarely properly tested on the brigade Mission Rehearsal Exercise (MRX).

8. Comd 8 Force Engr Bde and the bulk of his staff deployed as the Headquarters Joint Force Support Afghanistan (JFSp (A)) core from June – November 2009. Home base delivery of the 8 Force Engr Bde role suffered as a result and the Operation ENTIRETY business of transforming the force generation, re-roling and creating substantial enhancements lost some traction for a while.[8] From 2009 in theatre an OF-5 Joint Force Engineer (JF Engr) post was established in Theatre in HQ JFSp (A) to give the expanded engineer contribution better Command and Control (C2).

9. Manoeuvre support remained a challenge throughout as much of the engineer inventory was not suitable for Green Zone operations. A particular capability shortfall was the inability to cross short gaps in the Green Zone which resulted in the creation of some improvised aids to crossing gaps.[9] This was subsequently addressed with the introduction of various UORs to provide capabilities that would enable short (- ███ , medium ███████ and long (██████ . gaps to be crossed. Trojan[10] and Python[11] were deployed for Operation HERRICK 11 and were used to great effect on a number of occasions, including with US military engineers during Operation MOSTARAK 3.[12]

Figure 3-7-3 Trojan ploughing.

10. Further UOR capabilities were introduced. The Talisman capability was introduced from Operation HERRICK 11 and added a significant capability for Route Proving and Clearing (RP and C), to support Combat Logistic Patrols (CLPs), where the majority of logistic lift was dedicated to engineer materiel. Although Talisman was both equipment and manpower intensive it was an excellent example of integrating a new UOR capability into the operation.[13]

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8 See Annex B for full Operation Entirety details.
9 DLIMS lesson: 26171: Mobility Support Requirements. See also Combat Chapter 2-1 Para 67.
10 Trojan, a tracked armoured vehicle designed to breach obstacles, has an excavator and grab arm, can carry fascines on the rear of the vehicle and can be fitted with a full width mine plough or dozer blade. It was approximately 90 tonnes at Theatre Entry Standard. ██████████████████████
11 ████████

12 The deployment of these heavier capabilities had been requested by engineers in earlier HERRICKS, but had refused as too sensitive for the overall force footprint.
13 "The TALISMAN UOR was successful because the CIWG was well run at AD level and it truly looked at the capability". AD DES Land Equipment CMP, interviewed 26 September 2013.

11. Transition to ANSF. The engineer effort started to stabilise and momentum was maintained from October 2010- October 12 (Operation HERRICKs 13 -16). Stricter controls were imposed on the number of bases being built and effort began to switch towards the Afghan National Security Forces (ANSF) to develop their future basing requirements. The emergence of the insider threat required further concurrent work to segregate mixed UK/ANSF bases. The employment and supervision of local contractors continued and expanded.

12. The requirement to look ahead to eventual redeployment and plan for the disposal of bases started in earnest during Operation HERRICK 15 (November 2011 to April 2012). Designing structures from first principles and the greater use of local materials were encouraged as more sustainable solutions for the ANSF. The Afghan Government approved plan for bases with Regional Command (South West) (RC (SW)) and the Base Re-alignment and Closure and Transfer (BRAC/T) instructions were issued during Operation HERRICK16. It was complex but incorporated other stakeholders and identified the GIRoA and ANSF responsibility to own and manage the plan for their future basing.

13. ANSF in the Lead. BRAC/T was further developed and adjusted from October 2012 (from Operation HERRICK 17 onwards), with Afghans taking the lead.[14] Engineer directed work did not decrease significantly as threats still remained and bases could not just be removed or converted piecemeal. Significant efforts were made to ensure steady progress with BRAC/T to avoid a back-log that would require additional resources

KEY LESSONS

Campaign Continuity – The Joint Force Engineer Operating Policy and Doctrine

14. The most significant issue highlighted in Post Operational Reports (PORs) and Post Operational Interviews (POIs) was the importance of achieving campaign continuity across a range of military engineering functions and activities, such as the infrastructure development plan. The existing engineer operating policy was outdated, although the concept had been proven on Operations TELIC and before.[14] The policy described command relationships and advice available at each level, from PJHQ downwards, as well as giving an outline of the military engineering support that could be provided.

15. Engineer Advice. The enduring requirement for Commander 8 Engineer Brigade, as Standing Joint Force Engineer, to provide military engineering advice to PJHQ and Chief of Joint Operations (CJO), needs to be mandated, the responsibilities defined and delivery method clearly identified. Engineers must be involved in operational planning from the outset, to enable early identification of operational requirements, the inclusion of an appropriate balance of engineers on the Force Element Table and the timely Force Generation of the necessary capability packages.

16. Below PJHQ, military engineering advice and support must continue to be available to commanders at all levels. As described in the engineer operating policy, this should be achieved by having engineer commanders and staff within HQs or, if external to the HQ Order of Battle (ORBAT), with a mandated responsibility to provide appropriate advice and support to the HQ planning process. Coordination of engineer capability across all components operating in the Land Environment is most effectively achieved by having a Joint Force Engineer at the highest level of deployed HQ (for example an OF-5 in a 2* HQ). The Joint Force Engineer must be responsible for balancing the competing requirements for engineers, in accordance with the priorities set by the Joint Force Commander, to support the full range of operational activities such as manoeuvre and sustainment, as well as stabilisation and reconstruction[15].

17. Provision of higher level advice to PJHQ and the effective balancing of engineer effect across the deployed force must be underpinned with comprehensive doctrine and TTPs. Sufficient information about military engineering capabilities and C2 should be included in appropriate all arms publications to provide commanders with enough detail to provide a basic understanding of the support available.

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14   BRAC/T. "Engineers became pivotal to all BRAC/T planning activities. Battlegroups did listen to us and take our advice; some did not initially understand that they needed to engage with us early, in order for us to buy-in to their plans. However, by the end of the tour it was pretty slick and almost became an SOP. One of the most important things about BRAC/T planning was to understand who all the stakeholders were, and the part they had to play in the operation. The other was to identify a single lead for the task that was empowered to make decisions. In most cases this was the engineer Battle Group Liaison Officer (BGLO)". Operation HERRICK 17 POI Jt Force Engr Comd.

14   DLIMS Lesson 25848: Joint Force Engr Doctrine, raised on Operation HERRICK16.

15   Campaign Continuity. "You have got more continuity in (170 Infra Sp)Engr Gp as part of 8 Engr Bde, than you have from a normal brigade that just happens to go every 2 or 3 years. Towards the end they have focussed force generation on one of the divisional HQs, so that has provided more continuity. I think it is more in training and force generation than in the actual campaign plan. I have discussions about what our procurement strategies might be and how we are going to provide the maintenance contracts 5 years from now and things like that. I don't think there was a Brigade Comd talking or a divisional comd talking to his brigade comd about what they were going to be doing 5 years from now". Comd 170 (Infra Sp) Engr Gp. Interviewed 13 September 2013.

Lesson: To ensure future campaign continuity, the Joint Force Operating Policy must be revised in the light of recent experience and the A 2020 contingency force requirements. Specifically the protocol for Comd 8 Engr Bde, as Standing Joint Force Engineer, to provide advice and support to PJHQ/ CJO must be clearly stated.

Lesson: Each level of command below PJHQ down to battlegroup must have a clearly identified Military Engineer C2 node, preferably embedded, or on-call, to provide military engineering advice and command engineer assets.

Observation: The principle of having a single engineer point of contact at Battlegroup level, the Battle Group Engineer (BGE), must not be broken. The role has become more complex and in future will require a small team of specialists to support it. Development work should continue. Continuity and C2 of base infrastructure planning (the infrastructure development plan) and governance

18. Forward Planning. The infrastructure development plan was a PJHQ led responsibility, but there was insufficient emphasis placed on the 'long-term' in the early stages of the campaign. Infrastructure planning should not be managed on a short term, often 6 month basis, because it could lead to wasted resources and possibly greater risk to military engineers and contractors from insurgents as infrastructure was built, dismantled and new bases constructed in different locations. Such changes, with the associated inefficient use of manpower, had an impact on the engineer output in theatre and diverted capacity away from new tasks. A 6 month battle rhythm was not well suited to taking a long term view as it focused mainly on a single Bde deployment period. Too often the infrastructure requirement was altered by the following Bde, although the actual situation had not changed significantly. Latterly PJHQ took firmer control of the infrastructure development plan giving TFH clearer guidance about freedoms and constraints for any additional works. This enabled successive commanders TFH to conduct their own estimates and develop the infrastructure based on the strategic direction.

19. BRAC/T Planning. There were tensions with PJHQ, HQ RC (SW) and HQ ISAF later in the campaign as BRAC/T became a driving force in Transition. BRAC/T was a J3/J5 ISAF owned process supported by the national chains of command with GIRoA. National caveats have always existed and these have made tensions in combined operations which have to be managed. In order to achieve this, consideration should be given to bid for some additional specific key posts in higher headquarters to help manage this friction out, although the national view may be that there are other higher priority posts to fill.

20. A Continuity Viewpoint. In addition, a long term view was required in order to influence balance of investment decisions on matters such as design life and the need to incorporate capacity for further expansion or development, such as additional protective measures. It was essential to have engineer advice available at all levels of command to ensure that an appropriately long term view of the infrastructure requirement is taken as part of the routine planning process.

Figure 3-7-4. Camp Bastion development by 2008.
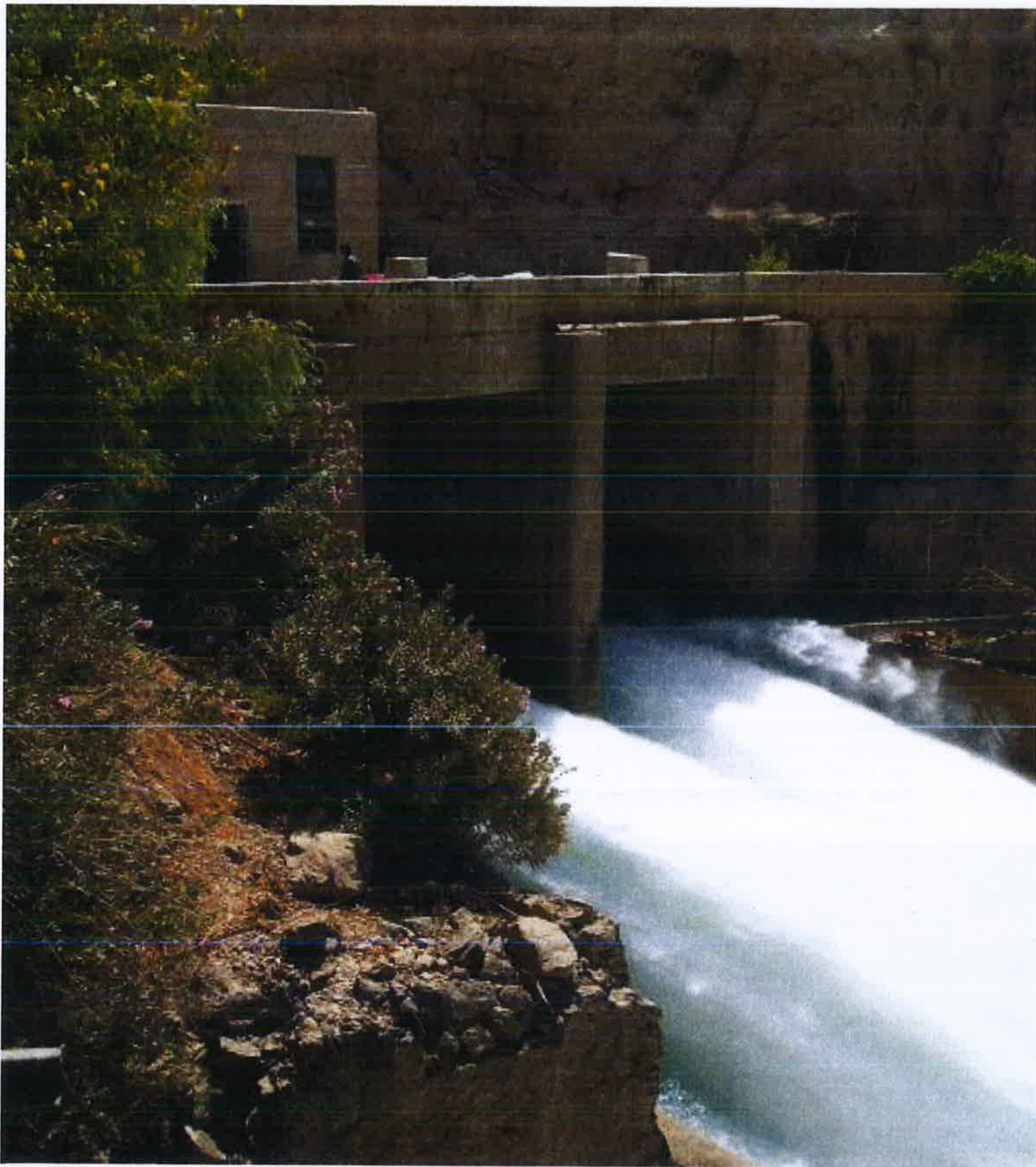
Figure 3-7-5. Kajaki dam in full flow.

Observation: A lack of political will to commit to a longer term horizon will always be a constraint, often preventing the release of funds sufficiently early for a durable infrastructure solution, relying instead on provision of a series of short term measures. This made it difficult to achieve value for money with provision of infrastructure over the life of a campaign.

Observation: Operational infrastructure should have a single owner, controlling both the requirement and the resources; this is being addressed in A2020 structures.

21. **Stakeholder Governance.** In addition, there were poor coordination priorities. Stakeholders such as PJHQ, Defence Infrastructure Organisation (DIO) and Defence Equipment and Support (DE&S) were all involved with the C2 of infrastructure planning. There was better coordination when C2 responsibilities and resources were properly aligned.

Lesson: Requirement for PJHQ1, to have the lead for infrastructure planning and coordination, with appropriate support from other stakeholders. Within the constraints of the short term political planning horizon, it is essential for PJHQ to take a long term campaign view of infrastructure development as well as better managing the 6-monthly changing aspirations for infrastructure in the deployed formation.

DEVELOPMENT OF LOCAL INFRASTRUCTURE TO ACHIEVE CAMPAIGN EFFECT

22. Operation HERRICK experience demonstrated again that stabilisation (Phase 4) planning must begin at the same time as early entry forces are generated. A balanced decision has to be taken as to whether this subsequent phase is limited to supporting the development of governance, with some infrastructure repair, or a significant stabilisation operation requiring a major effort to (re)build forces of law and order as well as a serious programme to repair, rebuild or build the local infrastructure.

Figure 3-7-6. Improvised sustainable bridging.

23. **Early National Infrastructure Focus.** Effort expended on improving national infrastructure can have a disproportionately positive influence on the outcome of a campaign. This was especially so if sufficient resources can be applied early to demonstrate the benefit of the external intervention and before any insurgency has a chance to take hold. There will be competing demands for engineer resources to support the Force, by providing facilities such as runways, camps and associated infrastructure, at the same time as trying to deliver early reconstruction effect for local nationals. However, the need to deliver this campaign effect must not be ignored simply to provide force support to establish a theatre. Achieving the most effective balance will not be easy, but it is essential that the long term implications of not allocating sufficient early effort to improving national infrastructure is properly understood when decisions on force levels are made. This should be part of the comprehensive approach in which military engineers have an important part to play.

24. Quick Impact Projects (QIP) Balance. QIPs become less effective if they are continued with for too long. They should be replaced by a longer-term approach requiring careful planning and normal contracts with indigenous and international suppliers. It essential that local infrastructure projects are not undertaken in order just to 'do something'. The likely impact of any project must be clearly understood and there must be a tangible benefit. Whenever possible, additional engineers should be deployed specifically to generate a reconstruction development effect. Such engineer work and the likely impact should feature on the Joint effects matrix.

Observation: QIPs can deliver low level indigenous consent winning activity during the early stages of stabilisation or capacity building operations. However, they must be carefully thought through and integrated with the wider plan in order to avoid having a negative effect.

25. Understanding Effects. A number of lessons have highlighted that current policy does not allow for 'campaign effect' to be a force driver or justification for spending money on infrastructure projects. It would appear that the benefits of achieving this early 'campaign effect' are not widely understood across the force or the MoD, but such effort may at least stabilise a fragile situation or, at best, contribute to delivering stability or improving the situation. Achieving cross-Government support for delivering this campaign effect requires a sound understanding of the operational environment and the many civilian actors present such as Department for International and Development (DfID), Other Partners in Government (PAGs), charitable organisations and Non Governmental Organisations (NGOs). This must be done before the start of the campaign and should be part of training for contingency.

"We need to open our eyes in defining the military operational requirement and look outside the military chain of command. We must understand better who else is doing what and why in a particular bit of the Area of Operations"

(Operation HERRICK 7) interviewed January 2014[16].

26. MACE (Military Aid to the Civil Effect).[17] The value of an STRF and general construction engineer support in the form of QIPs projects and other low level design and construction activities within the civilian framework should not be underestimated. The balance of the effect of over supporting local organisations and local government, with the value that delivering quick wins to have disproportionate effect on the campaign outcome, should be considered.

Figure 3-7-7. NEOWEB in use: A sustainable solution for Route TRIDENT construction

Lesson: There is a requirement for the engineer contribution to the stabilisation and regeneration phase to be part of planning from the very outset. This might require guidance and education to enable the military, including engineers, to understand where engineer effort can deliver campaign effect.

Lesson: Early targeted engineer engagement repairing or developing local infrastructure as part of an integrated plan has a significant positive campaign effect. Early action can achieve significant long term savings in terms of lives and other resources. Force elements should be generated for this specific purpose and resourced.

Lesson: Military engineers must train for contingency with DfID, PAGs, and NGOs and engage early in a campaign to improve situational awareness and enhance planning. The continuity of provision of Liaison Officers to these organisations and working with the Security Assistance Group (SAG) for contingency planning in peacetime is essential.

SPECIAL TO ARM (STA) COLLECTIVE TRAINING

27. Often engineers often do not get tested sufficiently rigorously during CT 3 as engineer serials may be minimised to allow the focus to be on combat arms training. Therefore, it is essential that engineers are able to conduct robust CT2 training in a representative and challenging environment to ensure that the necessary support can be delivered effectively on operations[18]. The engineer CT2 in Jordan has been developed to deliver high quality training to all elements of an engineer group. Such training will remain an essential component of preparing engineers to support

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16   See also Chapter 5-4 on Stabilisation Operations and http://en.wikipedia.org/wiki/Route_Trident.
17   Capability Directorate Combat Support Doctrine Note 11/06: MACE CONEMP.
18   In general the MST package was superb, but very busy. We were the first engineer regiment to have our own bespoke package. We had a three week window for the exercise, called PASHTUN SAPPER. This gave us the chance to run our own specialised engineer training, which otherwise we would have had to run alongside the more infantry based exercises. That model has now continued on subsequent HERRICKs. HERRICK 16 Commanding Officer Joint Force Engineer Group (JfE Engr Gp) interviewed 06 November 2013. Also see DLIMS 17282 Special to Arm exercises in future CT2 training

the contingent force. In addition, in order to ensure that a high quality of engineer training can be conducted at CT2 and CT3, there is a requirement to man engineer training posts with individuals of the right quality and experience, to ensure that sufficient demanding engineer serials are included in CT3 activity. In the future there is likely to be a particular problem for A2020 Adaptive Force (AF) training, because there are insufficient engineer units in the current orbat to support all battlegroup training.

Lesson: There is a requirement to retain the capacity/funding for military engineers to conduct representative STA training up to CT3, preferably in representative and challenging environments, in order to properly prepare the contingent force.

ENGINEER CONTRIBUTION TO UNDERSTANDING

28. The physical environment, both natural and man-made affects manoeuvre for all components. Royal Engineers lead on the developing understanding of the physical environment and analysing its effect on the Land domain. Despite being the recognised lead, the engineer contribution to and exploitation of the Intelligence Cycle was sub-optimal and can be improved. Collection, collation, storage, retrieval and reuse of information on areas or points of interest were not done well during Operation HERRICK.[19] At worst this led to information having to be re-captured, imposing delays and exposing ground troops to additional risk. Even though the problem was recognised early in the campaign, efforts to improve were complicated by the fact that the Force collection and data management processes were not aligned and linked into the Information Communication Services (ICS).[20] The advent of GEOVIEWER[21] on DATAMAN[22] allowed intuitive integration of multiple information and analysis streams. By Operation HERRICK 18 the Hazardous Area Route Threat System (HARTS) demonstrated the ability to integrate threat based J2 with engineering assessments of trafficability to provide planners with optimal route selections. The broader issue of engineer integration with the wider J2 cycle still needs to be addressed and is being driven by 8 Engineer Brigade. The three lines of development required are:

   a. A continuous process of engineer information requirements management.

   b. Improve individual skills and collective training.

   c. Improve engineer information architecture: for example hardware, software, people, and processes (CD Combat Support lead).

Lesson: Engineer participation in the J2 cycle must be fully integrated in order to better plan, refine and execute all arms manoeuvre.

WIDER UNDERSTANDING OF THE PRACTICAL APPLICATION OF ENGINEER CAPABILITIES.

29. Those all arms commanders with experience of operations in Afghanistan understand engineer capabilities and how they need be used to support the brigade or battlegroup, as well as the impact of not having the necessary assets available. Experience has suggested that such understanding was only acquired through practical experience on operations. As a result this hard-won awareness will soon perish and commanders will be less able to use engineers to greatest effect on future contingency operations.[23] There is a requirement to mitigate this. However there is sometimes a reluctance to include sufficient engineer activity in all arms collective training to alleviate this. Inclusion would also ensure that engineer commanders gain experience of supporting and communicating with all arms commanders to achieve best effect.

Lesson: Military engineer activity in all arms collective training activity must be increased to ensure that all arms commanders maintain sufficient understanding about the practical application of engineer capabilities to support brigade and battlegroup operations effectively and engineer commanders are given the experience of supporting all arms commanders at that level.

Lesson: Relevant doctrine must be updated to include pertinent vignettes and appropriate examples in study periods of military engineer support to the manoeuvre ballet/operations. Such vignettes should ideally be written by, and from the perspective of, all arms commanders using personal experience.

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19   DLIMS 17725 (HERRICK 16) ORIENT, the Engr J2 tool has now been brought into core. Developmental history described in #DLIMS 3122: Engineer Intelligence Information Management.
20   See Information Chapter 5-2.
21   GEOVIEWER. This is hosted on DATAMAN. GEOVIEWER is an application that allows the user to create maps on screen by turning on and off different layers on a line map or image background.
22   DATAMAN. Delivered by the Overtask Network Geospatial Support (ONGS) project, DATAMAN is a server that allows information with a location tag to be displayed on a map interface.
23   Coherent engineer planning needs to be enabled at brigade level, but you need to give the battlegroups the tools to state their requirements in a mutually understood way. That allows the engineer side to design, resource and construct effectively. Tie in the Force Protection for the move forward and the execution of the task with them in detail too. Commanding Officer Joint Force Engineer Group (JtF Engr Gp) HERRICK 11 Post Operational Report (POI).

MOBILITY SUPPORT – THE MAINTENANCE OF OPERATIONAL FREEDOM OF MOVEMENT

30. During Operation HERRICK, maintaining freedom of movement tended to focus on countering roadside bombs, using search equipment and techniques, the Talisman Route Proving and Clearance capability[24] and other means of countering explosive threats. Maintaining freedom of movement was about much more than countering just roadside bombs. The contingent force mobility support requirement must be clearly articulated and the means by which this will be met must be identified. Providing mobility support is about overcoming all manner of natural and man-made obstructions. A key requirement will be to understand the physical environment and the adversary threat in likely areas of operations. 8 Engr Bde is already working on describing what the future mobility support will look like and how it will be delivered.[25]

Vignette: Operation HERRICK 15. Commanding Officer 1 Logistic Support Regiment (LSR) view of Talisman.

"The Talisman Squadron was closely integrated into planning from the start with their Route Proving and Clearance (RP&C) skills used to good effect in the desert and high threat sectors of the green zone. The addition of RE expertise to the LSR planning team provided enormous benefit; a thorough understanding of ground, crossing points, going and C-IED expertise were critical enablers for planning moves across Brigade Battlespace over harsh and often channelled terrain. The LSR was often the only callsign that regularly transited large areas of the Area of Operations (AO) and so could not rely on others for intelligence and support. The fact that the bulk of an LSR's transport tasking was in support of RE, supporting engineer resources and C Vehicle moves, further increased the utility of an embedded Battle Group Engineer (BGE). In the event of an incident the BGE enabled instant contingency planning which was demanded dozens of times on Operation HERRICK 15.
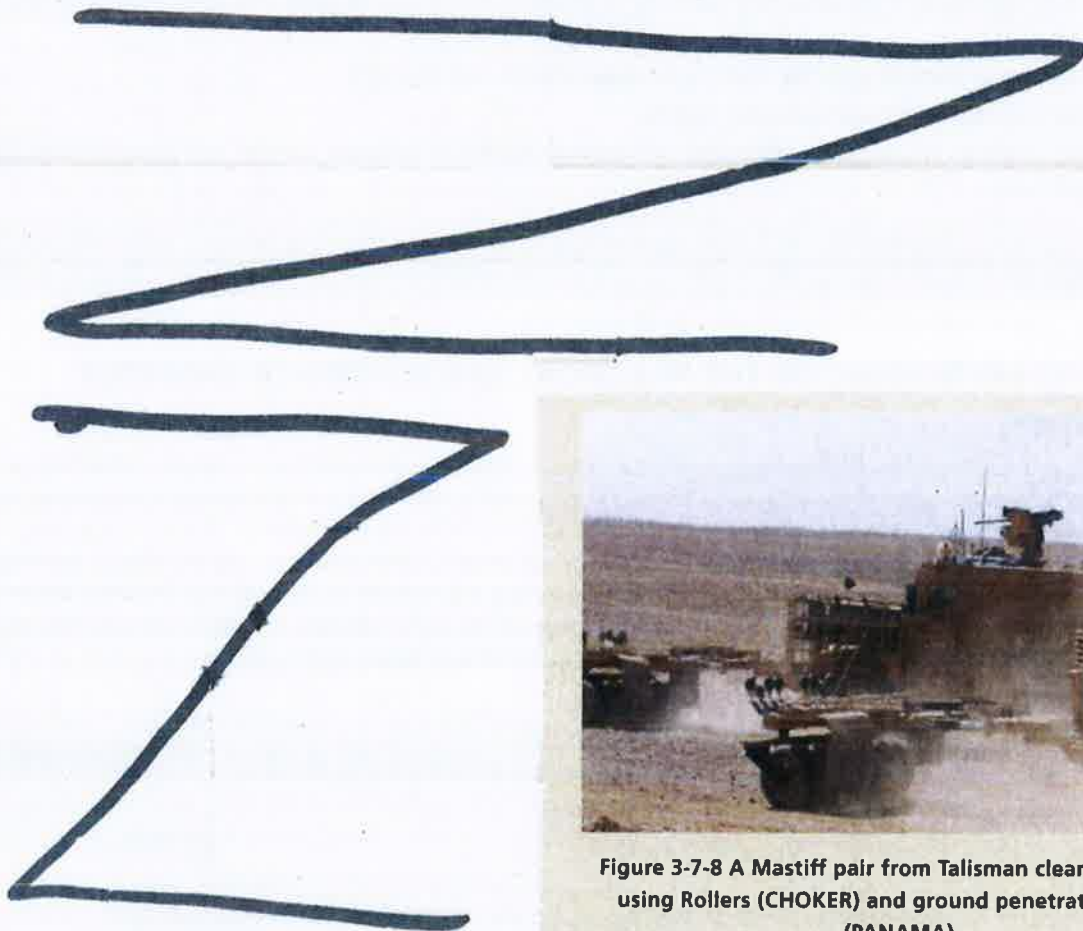
Figure 3-7-8 A Mastiff pair from Talisman clearing a route using Rollers (CHOKER) and ground penetrating radar (PANAMA)

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24   Talisman: Capability introduced in HERRICK 12. See DLIMS 15562(HERRICK14), 17727 (HERRICK 16) and 26454 (HERRICK17).

25   "Talisman in the future, whether or not it has an EOD capability within it, which it did have on Herrick 12 and my understanding for the future it may not have the EOD capability. In which case it is very much a finding a decent route and if need be call in a dedicated EOD asset. If that's the case, then it is very firmly Engr manoeuvre support, work in progressing that doctrine is still developing". CO JF Engr Gp Operation HERRICK12 and now Comd 8 Engr Bde 2013, interviewed 04 October 2013.

Lesson: There is a requirement to identify the full spectrum of mobility support that will be required by a contingent force as well as the capabilities and force structures necessary to deliver it.

AVAILABILITY AND USE OF CLOSE SUPPORT CAPABILITIES

31. The deployment of a limited range of close support capabilities, such as Trojan, fascines and Python line charges from Operation HERRICK10 had some success, but probably did not meet the full spectrum requirement to provide a close support manoeuvre capability. In particular, the lack of short and medium gap-crossing capabilities was a recurring theme in the early stages of the campaign and was only partially resolved.[26]

32.

Lesson:

Observation:

TACTICAL BASE ARCHITECTURE – DESIGN 'FIRST PRINCIPLES'.

33. The concept of an 'off-the-peg' design for bases of different sizes is no longer in use. Instead the approach is for a 'generic base architecture', a consistent design method allowing various features and capabilities to be incorporated in a compatible way to deliver bases of different sizes for diverse uses.[28]. One of the issues is the balance between equipment solutions (modular, pre-fabricated, 'Meccano' style) and bespoke designs built with raw materials, preferably available locally.

34. **Materiel Sourcing Choices.** It was difficult, often impossible, to get the quantity and quality of materiel needed through local resourcing in Afghanistan. As a result a great deal was resourced from the UK.[29] This was a sub-optimal approach because all materiel, no matter what the design, had to be delivered over a lengthy logistic bridge with limited capacity. This tended to force designs towards a known equipment solution because, logistically, this was the easiest way to source from the UK. Alternatively, a bespoke design, built with locally sourced bricks and mortar for example, would have been far easier to resource and less of a burden on the line of communication from UK (as well as being more acceptable to 'gift' when no longer needed).[30] Contractors in Afghanistan sourced materiel from Dubai and other places within the region. We should have done the same.

35. **Timely Design.** An over-emphasis on equipment solutions places a heavy burden on the logistic chain and undermines the purpose of having an infrastructure capability, such as 170 (Infra Sp) Engr Gp, which can design from first principles using local materials. If a logistics node or field support squadron had been established along the strategic lines of communication, it would have significantly shortened the supply chain and it would have been easier to get local materiel forward. It is important that engineers have the ability to design from first principles, in order to deliver solutions quickly and efficiently. It was acknowledged that, in some cases quality materiel had to be sourced from outside theatre and often this meant from UK.

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26   Operation HERRICK 16 Engineer Commanding Officer, Post Operational Report.

27

28   Concept of Employment (CONEMP) for Tactical Bases: CD Cbt/04/36/05V0 6 dated 11 February 13 It is a CD Combat lead to set the future requirement in the CONEMP. It is linked to Combat Chapter 2-1 paragraph 104 on Power Management.

29   DLIMS 11848: A construction materials testing facility was set up in Lashkar Gah (LKG) during HERRICK11, but did not clear the problem.

30   Lack of guidance for gifting has been steadily recorded from earlier HERRICKs Comd JFSp(A) Operation HERRICK 13-14, Nov 10-Jun 11 stated in his POI 'There will be a time to "lean out" what you do not need, and hence a need for early decisions (from CJO) as to what is going to come back to the UK into core That will help gifting decisions too' DCOS 3 Cdo Bde H14 also covers this in his POI

Lesson: There is a requirement to continue to develop the 'Generic Base Architecture' concept for contingency operations, in order to ensure a consistent approach to design.

Observation: There is a requirement to build Infrastructure in the local style, using local materials where possible as this will be more acceptable to be 'gifted' at the conclusion of an operation.

Observation: DE&S produced what was known as 'the Screwfix catalogue' of materiel that was available off-the-shelf, already 'competed'. Whilst commercially this was an acceptable solution, with materiel delivered to RAF Brize Norton and then flown to theatre, it placed the emphasis on an equipment, rather than a bespoke, locally resourced design.

Lesson: The capability to design from first principles must be practiced and should be used on future operations, particularly if this enables local materials to be used and reduce the burden on the line of communication from UK.

Figure 3-7-9 Bridge deck stripping with ANSF Engineers

OP ENTIRETY ENGINEER REORGANISATION EXPLANATION

1. Op ENTIRETY for many units and organisations required considerable change, summarized below:

   a. 29 (Land Support) Engineer Group[1]. This was renamed 29 Explosive Ordnance Demolition (EOD) & Search Group and restructured to enable:

   - Five regular Royal Engineer EOD squadrons.
   - Two RE EOD Regimental Headquarters (RHQs) to command and force generate regular and Territorial Army (TA) EOD sqns and deploy as the Counter Improvised Explosive Device (C-IED) Task Force (TF) HQ in rotation with other organisations.
   - A single centralised HQ and Support Squadron to deliver common functions to both 33 Engineer Regiment EOD and 101 Engineer Regiment EOD.
   - Manpower enhancements to 11 EOD Regiment Royal Logistic Corps (RLC). Regt remained under command of 29 EOD& Search Gp. The 83 liabilities included Ammunition Technicians Officers (ATOs), Ammunition Technicians (ATs), Electronic Counter Measure (ECM) Operators, Drivers as well as the built of G1/G4 personnel ranging from Captains (Quartermaster Technical, Welfare Officer, Padre and Administration Officers and Quartermasters in Squadrons) down to Junior Non Commissioned Officers (JNCOs). It was a seismic change in the organisation and structure of the entire Regt that allowed it for the first time, to support home and away operational outputs. It rectified years of neglect.

   b. 2 Military Intelligence (MI) Battalion. An uplift of 105 Intelligence Corps, Royal Military Police and RLC personnel for Weapons Intelligence Staff (WIS).

   c. 1 MI Brigade. An uplift of 25 personnel for Intelligence Exploitation.

   d. 1 Military Working Dog (MWD) Regiment (Royal Army Veterinary Corps), 1 MWD Regt, was created as part of 29 EOD & Search Group[2]. 1 MWD Regt took command of all the Army's 5 x MWD squadrons.

   e. 36 Engineer Regiment Regt rerolled to become a 36 Engineer Regiment (Search). The Regiment accepted the Talisman Route Proving and Clearance (RP&C) UOR capability.

Figure 3-7-A-1. 36 Engr Regt Reorganisation.

   f. Creation of a 5th regular STRE (Works) in 170 Engr Works Gp. Additional manpower headroom was created from within the existing technical roster liability, primarily by re-rolling 517 STRE (Bulk Petroleum) to 517 STRE (Works), re-hypothecation of internal manpower, such as utilising gapped STRE 2IC PIDs to create additional OC positions. Further manpower was created by 'taking posts from Regional Brigades and the then Defence Estates.

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1   For detail see 29 Gp Restructuring Implementation Order LF/Org/3/3/4/3/3 dated 01 August 2009.
2   For Detail see 1 MWD Regt Implementation Order LF/Org/3/3/4/10/2 dated 08 December 2009.

OFFICIAL-SENSITIVE

HERRICK ENGINEER UNIT CHRONOLOGY

HERRICK	Dates	Unit	Unit/Bde	Composition	NOTES
1	Oct 04-Mar 05	Nil	1 WFR		STRE elements. Construction of 250 man tented camp for PRT in Mazar-e-Sharif.
2	Apr-Sep 05	Nil	2 RGR		39 Engr Regt construction of Bastion 1 as 3000 man camp. Engr Sqn in Kandahar established a deployed operating base for Harrier Force.
3	Oct 05-Mar 06	Nil	1 RGBW		
4	Apr-Sep 06	51 Fd Sqn	16 AA Bde		Approx strength 300. Elements of 28 Engr Regt arrived before the end of the tour to overlap and reinforce.
5	Oct 06-Par 07	28 Engr Regt	3 Cdo Bde		28 Engr Regt were in theatre when 3 Cdo Bde deployed on Herrick 5 and took 59 Indep Cdo Sqn (230) and 1 x Coy RM under command. Regt remained until the handover to Herrick 6. Since then the Engineer contribution has been based on an Engr Regt Gp with an HQ, two "manoeuvre" Sqns, a Sp Sqn along with EOD, Geo and Infra elements. In order to sustain a Regimental Group in Afghanistan it required a fundamental look at innovative ways of generating capability. Key was the re-roling the two General Support Regiments to provide Close Engr Sp. 28 Engr Regt started this to some extent on Herrick 5. The process was then formalised with the re-roling of 36 Engr Regt to support 52 Inf Bde on Herrick 7.
6	May-Oct 07	26 Engr Regt	12 Mech Bde	2 x Close Sp Sqns, 1x Sp Sqn, HQ Sqn.	Commanded JF EOD Gp based in Bastion and CIMIC Group of 15 in Lashkar Gar. Surge STRE (Well Drilling). STRE (BP) and Elements 39 Air Support Engr Regt. Op BARMA TTPs developed.
7	Nov 07-Apr 08	36 Engr Regt	52 Inf Bde	2 x Close Sp Sqns, 1 x Sp Sqn, HQ Sqn.	Regt re-roled from General Support to Close Support. Commanded JF EOD Group, Jt CIMIC Group, Geo Det, STRE based in Kandahar and not under command.
8	May Oct 08	23 Engr Regt	16 AA Bde	2 x Close Sp Sqns, 1 x Sp Sqn, HQ Sqn.	Commanded JF EOD Gp; Jt CIMIC Gp, Geo Det, STRE based in Kandahar and not under command.
9	Nov 08-Par 09	24 Cdo Engr Regt	3 Cdo Bde	3 x Close Sp Sqns (incl 59), HQ Sqn	Engr Tp element to OMLT. Joint CIMIC Gp which became MSSTs, R&D elements (which became a ½ STRE/LK Works Gp during tour), and Jt Force EOD Gp. Op BAM sqn minus reinforcement for 4 months to do FOB winterisation. First ABLE request rejected. Development of C-IED Task Force continued.
10	May-Oct 09	38 Engr Regt	19 Bde	3 x Close Sp Sqns, HQ Sqn	Strength 826. Attempted introduction of C-IED TF postponed. BGE shortages. Number of Bases from 20 to 55. Op Panchai Palang. OP BAM.

OFFICIAL-SENSITIVE

3-7-B_1

HERRICK	Dates	Unit	Unit/Bde	Composition	NOTES
11	Nov 09-Apr 10	28 Engr Regt	11 Mech Bde	3 x Close Sp Sqns, HQ Sqn	Op BAM. An armoured Tp reinforced with its integral armd engr assets. Number of Bases rose from 55 to 99. Lessons learnt from Op Panchai Palang with TROJAN, ABLE and Python available. First Comd Engr Jt FSp deployed into Jt F Sp. C-IED TF up and running. Op Mostarak. Road through Babaji built (Route TRIDENT). Tp With OMLT. ½ STRE in the PRT.
12	May-Oct 10	21 Engr Regt	4 Armd Bde	3 x Close Sp Sqns (1x Talisman Sqn), HQ Sqn,	650 pax. Geo Gp, Development of Geo Viewer. Op BAM. Route TRIDENT extension. Talisman deployment.
13	Nov 10- Apr 11	23 Engr Regt	16 AA Bde	2 x Close Sp Sqns, 2 x Gen Sp Sqns, HQ Sqn	'Roads and Forts'. STRE in PRT. Route TRIDENT completion. Trojan use in battle for Kandahar. Further development of TALISMAN capability. OP BAM.
14	May- Oct 11	24 Cdo Engr Regt	3 Cdo Bde	2 x Close Sp Sqn, 1 x Talisman Sqn, 1 x Gen Sp, HQ Sqn.	650 from 6 sub units. Op OMID HAFT. Tp (20 pax) to Bde Recce Force. More detailed development of capacity of ANA engineers. Op BAM sqn (4 months)
15	Nov 11-Apr 12	35 Engr Regt	20 Armd Bde	3 x Close Sp Sqns (1 x Talisman Sqn), 1 x Gen Sp Sqn, HQ Sqn.	Transition focus. Closed /Handed over 63 bases. Built 15-20 new bases. 272 vehicles and 40 different platforms. OP BAM. Recce Tp between BAG and BRF. Exponential growth of Support to ALP. ANA construction work done by contractor. 1482 ISO containers in Bastion.
16	May - Oct 12	26 Engr Regt	12 Mech Bde	2 x Close Sp Sqns, 1 x Talisman Sqn, HQ & Sp Sqn.	Ex PASHTUN SAPPER first bespoke MST package – model for future.. BR 90 withdrawn. Lack of armoured bridging cap (US assisted). Project ORIENT rolled out. BRAC/T planned and ratified.
17	Nov 12- Apr 13	21 Engr Regt	4 Armd Bde	2 x Close Sp Sqns, 1 x Talisman Sqn, HQ & Sp Sqn.	478 pax. Surge Tp held over from H16. Accelerated BRAC/T in action: 33 bases closed, 25 ISAF. Upsurge in Insider threat (Op Cardel to counter). REBS challenges/trialling.
18	May -Oct 13	22 Engr Regt	1 Mech Bde	2 x Close Sp Sqns, 1 x Talisman Sqn, Sqn, 1 x EOD&S Sqn, 1 x MWD Sqn, HQ & Sp Sqn.	Base redesign and closure continued. EOD&S TF disbanded and elements taken under command.
19	Nov 13-May 14	32 Engr Regt	7 Armd Bde	2 x Close Sp Sqns, 1 x Talisman Sqn, 1 x EOD&S Sqn, 1 x MWD Sqn, HQ & Sp Sqn..	Base redesign and closure continued. EOD&S elements under command.

1   For Afghanistan it was within the framework of ISAF, Coalition direction for BRAC/T.

2   "The key thing to take away is the understanding of what it is we are doing and why and who feels the impact and the effect. The effect is the key part". Commander Jt F Engrs (Operation HERRICK 12), Interviewed October 2013.

AN EXAMPLE TFH ENGINEER GROUP ORBAT (Operation HERRICK 15)

COMD TFH

HQ TFH Engr GP

CS Tolay

RCC Mentors

Regimental Support Group

TFH Engr Gp Log Node

Engr HQ Sqn
44 HQ & Sp Sqn

TFH Engr GP LAD

Cbt Sp Tp

Force Protection Multiple

ABLE Section

Deployable Engr Workshop

Fd Sqn 1
37 Armd Engr Sqn SHQ

Sqn Ech

Troop — X3

Fd Sqn 2
29 Armd Engr Sqn SHQ

Sqn Ech

Troop — X3

TFH Geo Sp Gp

PRT STRE ASOs (Helmand)

Fd Sqn 3
11 Fd Engr Sqn SHQ

Sqn Ech

Troop — X3

TALISMAN
77 Armd Engr Sqn SHQ

Sqn Ech

Troop — X3

TFH ENGINEER GROUP ORBAT Post EOD & Search Re-Subordination (Operation HERRICK 19)

CONTENTS

SUBJECT   **PAGE**

Four - Combat Service Support

CHAPTER 4-1
SUPPORTING THE FORCE

BACKGROUND – THE EVOLUTION OF JOINT FORCE SUPPORT

1. From a logistics perspective Operation HERRICK presented a particular set of challenges due to its location, the distance from the strategic base and the very nature of the operating environment. However, despite these very real impediments to supporting a deployed force, the logistic and equipment support to UK Forces in Afghanistan was - despite the occasional interruption - a success. Unlike many modern conflicts, at the height of operations commanders were not generally constrained by logistics - being able to execute complex operations without the traditional limitations imposed by limited supplies and support resources.

2. The scale of the logistics challenge is best appreciated by looking at a map. Afghanistan is land-locked ▬▬▬ ▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬ In terms of distance, RAF Brize Norton to Kandahar Airfield is around 3,500 miles; the sea route from Marchwood port to Karachi in Pakistan is over 6,500 miles (around 28 days sailing time) which is then followed by a 500 mile road journey to the Afghan border. The map at Figure 4-1-1 illustrates the geographic scale of the support chain and the initial, rather tortuous, strategic Lines of Communication[1] (LoCs).
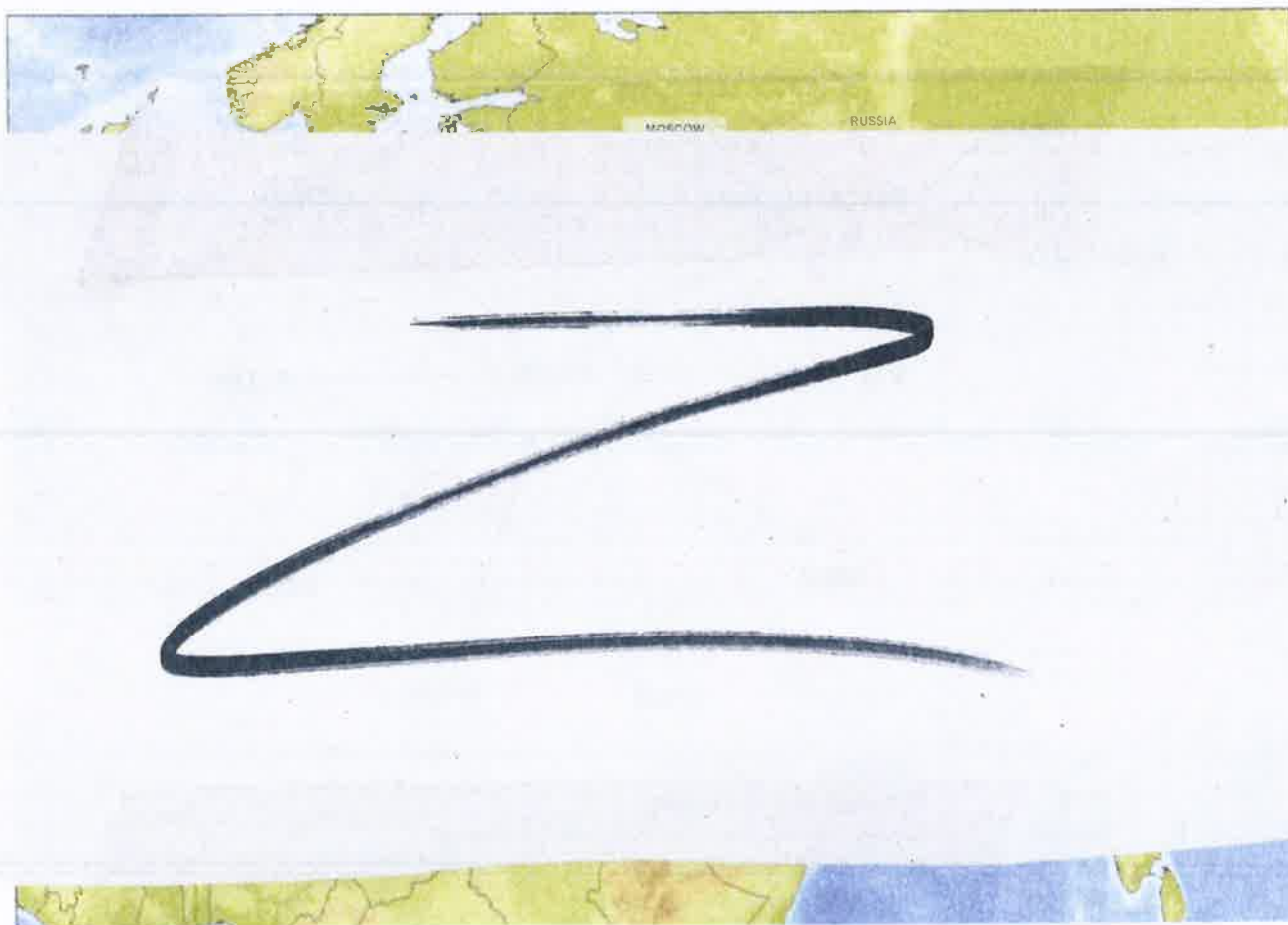
Figure 4-1-1. The Initial Operation HERRICK Strategic Lines of Communication

3. As well as being at the end of lengthy LoCs, the support demands of the deployed force continually changed as the force adapted to meet the tactical situation; moving from a predominantly light role into a larger and more logistically demanding Protected Mobility based force. At its height, the deployed UK force totalled over 9,000 military personnel and over 6000 civilian contractors, operating from a network of fixed bases using a large, complex and fuel-hungry[2] vehicle fleet all of which had to be shipped into theatre. By 2012 there were nearly 3,000 military vehicles of 176 different types being operated by UK forces, 17,000 weapons of 21 different weapon types and 450 ISTAR platforms of 18 different types. Such a dynamic, complex and multinational theatre located at the end of lengthy - and frequently interrupted - LoCs called for a pragmatic sustainment framework that evolved to meet the demands placed upon it.

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[1] The development of these LoCs is shown graphically at Annex A.
[2] Using 100 tons of fuel per day by Operation HERRICK 8 (compared to 30 tons per day on HERRICK 4).

4. As the campaign progressed the support footprint moved from an expeditionary structure into a more enduring campaign laydown characterised by large, well-founded, static facilities supporting forces arranged in a series of Forward Operating Bases (FOBs). At the same time the support organisation moved from an initial component framework to become a Joint National Support Command (NSC), focused on supporting UK forces, before finally evolving into a Joint Force Support organisation. Joint Force Support (Afghanistan) (JFSp(A)) represented the culmination of this evolution, responsible for a diverse and demanding range of support functions. Its remit included all aspects of Combat Service Support (CSS), capability integration, campaign infrastructure development, inter-theatre movement, personnel administration and national support planning functions. In addition it held key responsibilities for detention, contractor management and the provision of Reception, Staging and Onward Integration (RSOI).

5. The JFSp(A) Headquarters was a 1*, augmented, organisation created around the core of the four standing Logistic Headquarters[3] and bespoke 'Individual Augmentee' (IA) Headquarters[4] which rotated on a six month basis. As the Theatre enabler, JFSp(A) was part of operational-strategic support 'troika' which included the Permanent Joint Headquarters (PJHQ) and the Defence Supply Chain Operations and Movements (DSCOM) organisation – enacting policies from the former while supported by the latter to deliver logistic effect. The complexity of supporting Operation HERRICK called for a network of command and supporting/supported relationships as illustrated in Fig 4-1-2 below.
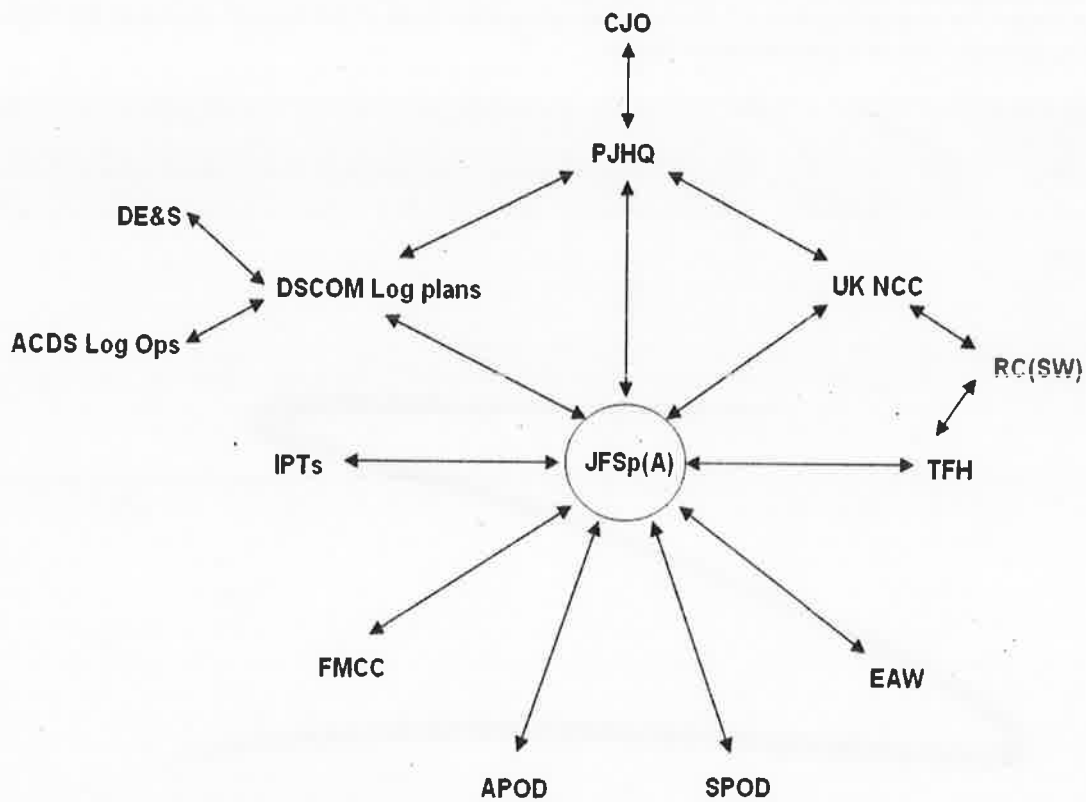
CJO	Commander Joint Operations
PJHQ	Permanent Joint Headquarters
DSCOM	Defence Support Chain, Operations and Movements
DE&S	Defence Equipment and Support
UK NCC	UK National Contingent Component
RC(SW)	Regional Command (South West)
TFH	Task Force Helmand
EAW	Expeditionary Air Wing
SPOD	Sea Port of Disembarkation (Karachi in Pakistan)
APOD	Air Port of Disembarkation (Camp Bastion since 2009, previously Kandahar Airfield)
FMCC	Force Movement Control Centre
IPT	Integrated Project Team

Figure 4-1-2. JFSp(A) Relationships

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3   101, 102, 104 Logistic Brigades and 8 Force Engineer Brigade.
4   Navy and RAF based Individual Augmentee HQs.

6. At the tactical level JFSp(A) provided support through its organic force elements. At maturity the JFSp(A) units included the Theatre Logistics Group (TLG), the Close Support Logistic Regiment (CSLR), the Theatre Equipment Support Battalion, the Joint Force Medical Group, HQ Camp Bastion, the Kabul Joint Support Unit, the Intelligence Exploitation Force and the Engineer Works Group.

7. In essence the tactical supply chain involved the TLG, who were responsible for reception of materiel into theatre from the Air and Surface LoCs (ALOC and SLOC respectively) and preparation for onward movement, and the CSLR who distributed materiel forward to the Battlegroups. A key element of forward distribution was the introduction and use of Combat Logistic Patrols (CLPs). These were deliberate, planned in-depth, operations involving joint, all arms, integration of forces. A CLP could be a line of up to 100 vehicles stretching to 10km and covering multiple Battlegroup Areas of Operations (AOs). When deployed they would be the largest independent manoeuvre group operating in the battlespace and often delivered J3 effect – due to their presence and integrated capabilities – notwithstanding being a J4 activity.

8. At the high watermark of Task Force Helmand (TFH) operations, around 2009-2012 (Operations HERRICK 9 to 15), the tactical distribution laydown reflected the schematic at Fig 4-1-3.
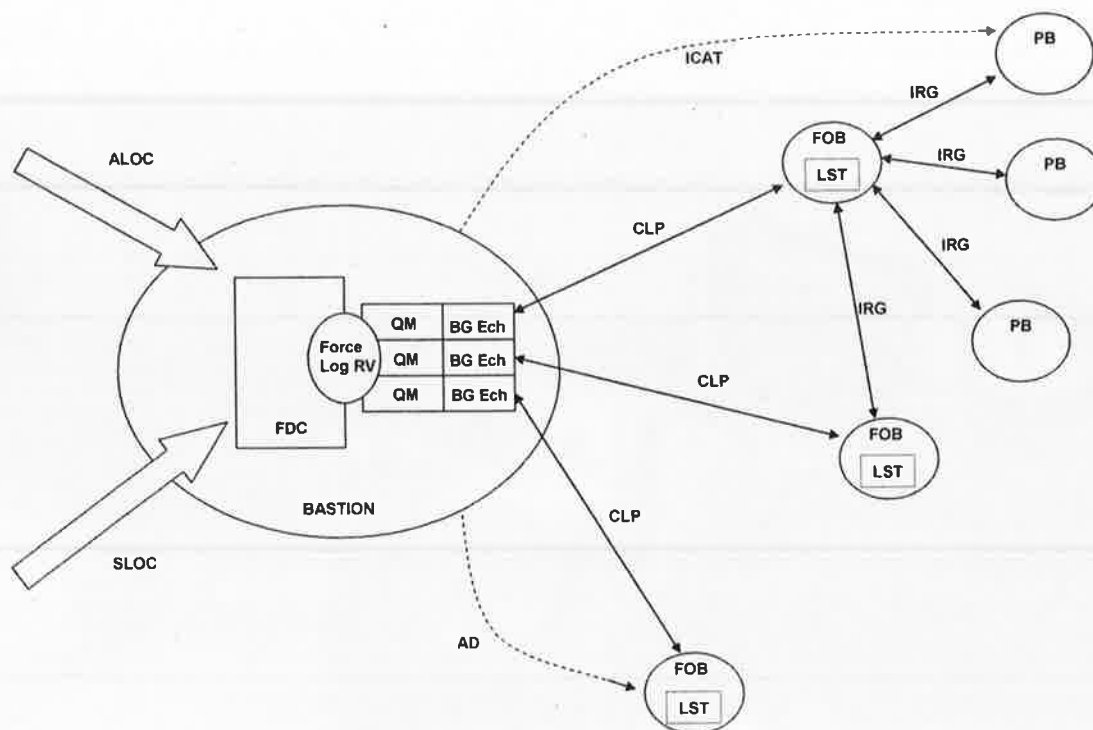
ALOC	Air Line of Communication
SLOC	Surface Line of Communication
FDC	Force Distribution Cell (the single point of contact for the QMs which allows prioritisation and optimum use of limited distribution assets)
QM	Battlegroup Quartermasters
BG Ech	Battlegroup Echelons (Elements)
CLP	Combat Logistic Patrol (now 'Protected Logistic Manoeuvre')
ICAT	ISAF Contracted Air Transport
AD	Air Despatch
FOB	Forward Operating Base
LST	Logistic Support Team (logistic specialists deployed forward to compliment forward QM staff)
IRG	Immediate Replenishment Group (Battlegroup and Logistic personnel)
PB	Patrol Base

Figure 4-1-3. The JFSp(A) Supply and Distribution Network

THE LESSONS

9. The relevant lessons are covered below. These are grouped into ten themes which are covered in priority order with their associated key lessons summarised.

10. The ten themes are:

    a. Command and Control

    b. Integrating the Contractor Component

    c. Optimise the 'Logistic Balance'

    d. Downstream Capacity Building

    e. Criticality of Logistic Situational Awareness

    f. The Provision of End-to-End Equipment Capability

    g. Equipment Support

    h. Protected Logistic Manoeuvre

    i. Optimise Tactical Supply and Distribution

    j. Training

Figure 4-1-4. The Combat Logistic Patrol

COMMAND AND CONTROL

PROVIDE SUPPORT NOT JUST LAND COMBAT SERVICE SUPPORT

11. The logistic Command and Control (C2) structure evolved throughout the campaign to meet the demands of a dynamic operating environment at the end of long and vulnerable LoCs. This saw the C2 framework move from a 1* National Support Command (NSC) to an OF5 National Support Element and then to a 1* Headquarters as Joint Force Support (Afghanistan) which endured for the remainder of the campaign. This reflected changing demands as the support framework moved from an expeditionary footprint to an enduring campaign laydown.

12. As a result, JFSp(A)'s span of command covered not only the traditional Combat Service Support (CSS) remit of a Logistic Brigade but, as mentioned earlier, also capability integration, campaign infrastructure development, inter-theatre movement, personnel administration, personnel redeployment, national support planning, detention, contractor management and the provision of RSOI. The fundamental lesson is that a future Joint Force Support organisation must deliver a full spectrum of support to the force - not just conventional land environment CSS.

13. This requires a scalable headquarters framework whose size will be dictated by the required Joint, J1-9, capabilities as well as any bespoke theatre requirements to meet the operational need. Depending on the nature of the operation a single Headquarters may initially be deployed but then divide into a Tactical Support Headquarters and a Theatre Support Headquarters as the scale of the operation increases.

14. Whatever the C2 framework, it must be robust, enduring and fully understood throughout all vertical and horizontal stakeholder relationships.

REACH BACK, SUPPORT FORWARD

15. As well as providing support to the deployed force, the JFSp Headquarters will always be a two-way facing organisation. The importance of 'Reachback' should not be underestimated as the Headquarters needs to inform and enable the end-to-end support chain, for example updating the Sustainability Statement (SUSTAT) requirements to meet ground-truth theatre needs. In theatre, the headquarters will also function as 'PJHQ fwd' and 'NCC Rear', carrying out J1/4 functions for the deployed National Contingent Component.

FORCE GENERATING THE SUPPORT HEADQUARTERS

16. Given its diverse role, a JFSp Headquarters requires an agile and sophisticated Force Generation process reflecting a 'golf bag' approach based on functional requirements. Operation HERRICK experience has also shown the value of campaign continuity in the Support Headquarters, driven by the need to enable roulements of the deployed task force, maintain continuity of contracts and manage longer term infrastructure development. A nine month tour length may be optimal, with staff 'trickled' into the Headquarters after deployment[5] in order to maintain coherence and continuity rather than the stop-start impact from a full Headquarters Transfer of Authority.

17. Staff selection must also reflect operational need, placing the operational imperative above availability and personal requirements. Operation HERRICK has also clearly demonstrated that Logistic headquarters at Brigade and Unit level should be established with their own J2/3 Cells and high quality Liaison Officers – again requiring sufficient high quality personnel to be identified and deployed.

Lesson: The structures and establishments of Deployable Logistic Headquarters must be re-written to ensure that they scalable for small, medium and large deployments and adaptable by being able to accept the 'plug in' capabilities required to meet contingency scenarios. The Headquarters must be able to provide joint sustainment to all deployed forces in order to prevent inefficient duplication of supply chains.

Lesson: From the outset of campaign planning through to the conclusion of the operation, the Logistic C2 framework must be clearly understood and unambiguous. Logistic structures should endure and not be changed to suit the peculiarities of individual formations. The doctrinal sustainment framework of 1st, 2nd and 3rd line echelon based system remains valid for contingency as this system is readily understood and remains flexible enough to be adapted for operational conditions.

Lesson: Sustainment activity throughout the depth of a 360 degree battlespace requires logistic headquarters at brigade and unit level to have their own J2/3 Cells. These should be established posts.

Lesson: Headquarters staff need to be selected and trained in order to perform in role from the start of their deployment. This applies particularly to the selection and integration of augmentees. Selection for the key posts needs to be looked at in detail – placing the operational imperative above availability and personal need.

Lesson: In order to ensure logistic and operational situational awareness across all national, international and coalition activities, good quality LOs need to be put into all key ▇▇▇▇▇▇▇▇▇▇ Headquarters.

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5   Notwithstanding the training implications

INTEGRATION OF CONTRACTORS

UNDERSTAND THE HIGH LEVEL RISKS

18. The use of contractors characterised much of the support to Operation HERRICK and it is expected that future expeditionary operations will continue to be dependent on contractor solutions, not just for UK Forces but also for our coalition partners.[6] During the early stages of an operation military capability may be all that is available, therefore enabling capabilities must be deployed accordingly. However, as the operational environment matures, contracting will become the default solution as part of the Total Support Force (TSF) concept. Nonetheless over-reliance on contractors carries risk if there is no alternative military capability. We therefore need to get better at understanding where the risks are when we use contracted solutions in order to ensure that we build appropriate risk mitigation into our planning.

BRING CONTRACTORS INTO PLANNING, DO IT EARLY AND THEN PROPERLY INTEGRATE THE CAPABILITY

19. Contractors need to be in our force design and generation from the outset. This will ensure integration at the earliest opportunity and allow better planning to make certain that the contractor provides the desired military effect. A longer-term partnering approach is therefore key, and those contractors that are identified as likely to support future operations should be kept current on emerging contingency themes, scenarios and plans.

20. At the tactical level, we need processes in place that allow us to share information with trusted contractors and integrate them into tactical planning. This ensures coherence of understanding, clarity on the required of support effects, commonality of tactics, techniques and procedures and opportunities for sharing intelligence.

21. All of the above requires those military personnel with responsibilities for establishing and monitoring contracts to be professionally competent and for headquarters contracting coordination cell functions to be formalised. This calls for appropriate training and potentially longer tour lengths in order to maintain continuity of oversight and to ensure seamless capability integration.

22. Contracting staff must be able to articulate the effect that the contractor is to provide through detailed Statements of Requirement (SoRs). It is this critical document that the contractor uses to deliver the requirement/effect, but production of this document is a skill which is currently lacking across the military members of Defence.

Lesson: Some enabling capabilities may not be available from contracted solutions to meet the scales of deployment specified in the VANGUARD readiness instruction for at least the first 6 months of a deployment. Therefore deployable capabilities need to be reviewed to ensure that there is sufficient military manpower to provide all enabling functions.

Lesson: Contractors need to be in the force design from the outset. The Army must develop a partnering approach with those contractors that we identify as likely to support future operations.

Lesson: Under the Total Force Concept the requirement for military personnel to be competent in the management of civilian contracts is more acute. There must be a review of the through life competencies required to professionalise contracting skills.

OPTIMISE THE 'LOGISTIC BALANCE'

23. We must do more to optimise the 'logistic balance' – that is the balance of support efficiency, assurance, anticipation and risk. This will be enabled through providing end-to-end assurance and inculcating an 'austerity mindset' that expects and drives a leanness throughout the support chain. Supporting operations in Afghanistan highlighted the challenge of achieving such a balance; by the time the support chain had adapted to the demands of the operational and tactical circumstances the situation would then change (for example the rapid uplift in Protected Mobility, the move to Camp Bastion or the transition to redeployment) and upset any logistic elegance that had been put in place. Therefore early planning direction must be provided to allow better anticipation of evolving demands.

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6   Further details on the use of contractors during Operation HERRICK can be found in Chapter 4-3.

PROVIDE END-TO-END ASSURED SUPPORT

24. Assured end-to-end support firstly requires the early receipt of a coherent Campaign Plan to allow longer term planning and anticipation of requirements. The designated Joint Support Headquarters must have the ability to engage early with the strategic base (DSCOM, DE&S, ACDS Log Ops) in order to have visibility of, and be able to influence, the strategic and operational supply chains.

25. Projecting military effect across significant distances dictates that risks will always be present. These risks should be mitigated through the provision of a variety of Military and Civilian -provided LoCs thereby providing robust, flexible and resilient support to the font line. Consequently, the provision of Ground and Air LoCs, using a mix (if necessary) of Land, Air and Maritime capabilities will need to be considered at the earliest point of any force development planning.

START LEAN, STAY LEAN

26. As the theatre reached maturity the support framework became based on large, static, well-founded facilities. This will not be the norm for contingency and support enablers must understand and expect austere conditions for future operations. This requires logistic efficiency provided by accurate anticipation, the integration of J3/4 plans and assured supply/distribution mechanisms. Stock levels must be set at an appropriate level throughout these chains in order to provide support when required without impairing logistic agility or overly-constraining tactical activity.

27. Providing the right materiel, in the right place at the right time without the need for over-insurance at 1st Line, or the holding of large reserves at 3rd Line, needs reliable information flows and robust Logistic IT to be in place from the earliest point. Maintaining a lean supply chain is only possible if planners know where stock is held. This also calls for robust accountability on Unit handover/takeover of accounts aided, if necessary, by forward deployed logistic specialists (for example the use of HART/CSAT[7]). In addition, a lean support chain necessitates balancing inflow with outflow and planners must open the reverse support chain from the outset of any deployment. This ensures that only what is needed in theatre is held in theatre.

28. Depending on the nature and intensity of operations, preparations for redeployment will need to be synchronised and prioritised. The requirement to prepare vehicles to Theatre Exit Standard (TXS) may impose a significant burden on vehicle availability and Equipment Support resources. In some cases a reduced TXS will significantly increase availability and accelerate redeployment but a balance of work will be required once vehicles have returned to the UK or deployed to another theatre. Preparation for redeployment must be balanced with maintaining support to current operations.

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7   HART: The HERRICK Account Reconciliation Team. CSAT: Closed Stores Accounts Team.

Lesson: The sustainment enabling headquarters must be provided with a coherent campaign plan at the earliest opportunity in order to allow longer term planning and anticipation of requirements.

Observation: Expeditionary operations require redundancy in the Strategic Lines of Communication. Our desire to project military effect across significant distances dictates that risks will always be present when operating at the end of lengthy and complicated LoCs. These risks should be mitigated through the provision of a variety of Military and Civilian - provided LoCs thereby providing robust, flexible and resilient support to the font line.

Observation: Just-in-time logistics did not work at the tactical level and failed at the operational level a number of times. Critical stocks need to be held forward and sufficient flexibility needs to be built into the supply system to allow rapid re-prioritisation at short notice. However stock levels held forward must not be at a level where forces are overburdened and logistic agility is impaired.

Lesson: Joint Logistic Headquarters must have visibility of, and be able to influence, the strategic and operational supply chains including:

a. The SUSTAT should be regularly reviewed and adjusted to cope with changes in the operating environment and to prevent excessive inventory stock levels from building up in Theatre and thereby reduce the volume of materiel required to be disposed of/ returned to UK during the Redeployment phase.

b. The Joint Logistic Headquarters must be given the Desired Order of Arrival Staff Table at the earliest opportunity.

Observation: As the theatre transitions to drawdown the theatre infrastructure will revert to increasingly austere conditions with a corresponding increase in logistic risk. Such logistic risk during drawdown must be mitigated through agility and acceptance of austerity.

Lesson: Doctrine must reflect that the reverse support chain should be in place from the outset of any deployment notwithstanding that preparation for redeployment must be balanced with maintaining support to current operations.

Lesson: Austere expeditionary environments should be anticipated as being the future norm. The requirements, frictions, deprivations and expectations of such an environment should be inculcated across the force through doctrine and training.

DOWNSTREAM CAPACITY BUILDING: TRAIN TO CONDUCT SUPPORT, NOT JUST LOGISTICS

29. Successful transition at the conclusion of enduring operations requires the development of indigenous military capability. From a UK perspective Operation HERRICK focussed on combat and police mentoring, however for future operations we must understand that developing the enabling functions of indigenous forces is required if we are to provide genuine military capability. These should extend beyond logistics, equipment and medical capabilities into providing the full range of required support activities.

Observation: Developing the enabling capabilities of indigenous forces is key to success in transition

CRITICALITY OF LOGISTIC SITUATIONAL AWARENESS

LOGISTIC SITUATIONAL AWARENESS IS VITAL FOR ANTICIPATING LOGISTIC REQUIREMENTS

30. Support planners need to anticipate the probable course of future operations and forecast the likely requirement for personnel, material, equipment and services. They therefore require a detailed understanding of: available resources and movement assets; the intended location of deploying force elements; and anticipated environmental conditions. Operation HERRICK reinforced this requirement, calling for close coordination between J3/5 staffs and J4 staff since support requirements will often have a direct impact on strategic, operational or tactical activities and planners should ensure that future plans are fully integrated with operational intentions.

31. To ensure that the right materiel is provided at the right place and the right time requires a full understanding of what is available, where it is or how long it will take to get if you do not have it - especially in a theatre with long LoCs and correspondingly long supply lead times. This situational awareness (SA) allows the timely identification of shortfalls, surpluses, perishing items and where particular logistic risk is being held. At present the capability to provide this SA is lacking, Defence still lacks a common, reliable, IT system to provide accurate asset tracking and inventory management.

LACK OF LOGISTIC SITUATIONAL AWARENESS LEADS TO WASTE THROUGHOUT THE SUPPLY CHAIN

32. Aside from impacting the ability to anticipate support requirements, reliable logistic SA prevents waste. Operation HERRICK was characterised by over-insurance at 1st line due to a lack of confidence in the support chain. This was manifested in the holding of 2nd line stock levels (or considerably more) at 1st line – leading to continuous accounting and stock management issues. In addition, poor asset visibility led to stock being 'misplaced' throughout the supply and distribution chain.

33. These issues contributed to considerable waste as stock perished in FOBs or sat for months (in some cases years) in ISO containers – all of which had to be re-supplied through the expensive and lengthy strategic LoCs. Once more, a reliable asset tracking and inventory management IT system combined with effective information management processes would provide a capability to prevent this waste and inefficiency.

Lesson: The deployed sustainment network needs a reliable logistic IS system that will ensure asset tracking and accountability down to Battlegroup level.

Lesson: Logistic Headquarters should be established to deploy a logistic Information Management Team. The requirement remains for an effective Logistic Information Management Team who can synthesise the information from the various Log Information Systems to produce a true Real Time Logistic Picture.

THE PROVISION OF END-TO-END EQUIPMENT CAPABILITY

34. A deployed force is unlikely to deploy with the ideal equipment for a particular operation, and may face an enemy who possesses the ability to quickly adapt their tactics in a dynamic operational environment. Therefore the provision of Urgent Operational Requirement (UOR) equipment needs to be responsive, fast and agile to provide the equipment/ modifications required to achieve sustainable success on operations.

35. To deliver end-to-end Equipment Capability (EC) in an austere theatre requires early identification of the EC C2 structure from Theatre level reaching back into the strategic base. This is enabled through: clear articulation of the user requirement[8]; unambiguous ownership by the relevant Army Directorate as the Competent Army Authority and Inspectorate; provision of relevant training; and, at Theatre level, an Equipment Capability Integration Cell which benefits from the synergy and broad situational awareness with Equipment Support (ES) and EC combined. This would see EC staff combined with ES Elements including Operations and Plans, ES Materiel, assurance and Scientific Advisor staff (SCIAD) as required.

36. In addition, the Project Teams (PTs) must remain engaged until the equipment reaches full Theatre Entry Standard; this is a prime function of the EC Branch and the more that can be done to prepare UOR equipment and vehicles in the UK the more time and ES effort will be saved in theatre. Likewise, deployed UORs must be backed up with the necessary training, spares and technical support to ensure the required capability is delivered.

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8   Improving defence stakeholders ability to write, interpret and deliver UORs and successfully integrate capabilities across all DLODs remains essential.

Observation: A critical success factor with contingency will be how quickly we can adapt or supplement our current equipment to the challenges of the next campaign. Improving defence stakeholders ability to write, interpret and deliver UORs and successfully integrate capabilities across all DLODs remains essential.

Lesson: Rapid deployment of UOR equipment into theatre does not always equate with rapid provision of the required capability. To reduce the burden on in-theatre ES capabilities, UORs need to be as close to Theatre Entry Standard (TES) as possible before arrival in theatre.

Lesson: Sufficient spares for UOR vehicles/equipment must be provided from the outset of the training and integration programme. UORs should deploy with a comprehensive spares package, support publications, codified spares with NATO part numbers, specialist tools and test equipment.

Observation: The requirement for an Equipment Capability Integration Cell endures for future operations since, to deliver joined up capability in an austere theatre, requires an Equipment Capability Integration Cell made up of EC, SCIAD and J4 elements.

EQUIPMENT SUPPORT

37. Experience in on Operation HERRICK confirms that ES doctrine remains fit for purpose and that the principles[9] of Equipment Support remain valid. For UORs it was found that the use of 1st to 4th line repair lacked agility and required robust in-theatre filtering before items are returned to the UK for repair. Therefore Support Contracts should allow REME soldiers to repair faulty UOR equipment as far forward as possible rather than being obliged to return it to the manufacturer/ contractor. At the very least REME must have a screening capability to remove the burden of 'no fault found' items being returned on the LoC.

38. Nonetheless 1st to 4th line repair may be an option in some cases - but only when it is of value to defence; it works when equipment is plentiful, repairs are cheap and the LoC is not burdened by the movement of heavy of large equipment. However, the use of Field Service Representatives (FSRs) and in-theatre recuperation proved successful and should endure where deemed necessary but not to the detriment of investment in REME Trade Training.

Observation: Equipment Support doctrine remains fit for purpose having been extensively tested on operations in both Iraq and Afghanistan. The principles of ES remain valid (Repair Forward, Echelons of Support, C2 at every echelon and Stability).

Observation: For UORs, the use of 1st to 4th line repair lacks agility and requires robust in-theatre filtering before items are returned to the UK for repair. However, the use of FSRs has proven successful and should endure where deemed necessary (limited time, specific to rapid/UOR fielding) but not to the detriment of investment in REME Trade Training.

Lesson: Equipment Support manoeuvre remains essential which requires the provision of appropriate Repair and Recovery variants of new vehicles when they are introduced into service.

Lesson: Processes must be put in place to ensure that ES training is undertaken on UOR fleets at the earliest opportunity. Future equipment projects must ensure cross-DLOD planning to enable the training of REME tradesmen; initially in conjunction with the fielding of new equipment but also as an enduring capability.

PROTECTED LOGISTIC MANOEUVRE

39. The future utility and operation of Combat Logistic Patrols (CLPs, now referred to as 'Protected Logistic Manoeuvre' (PLM)) will rely on combined arms integration and the fusion of J3/J4 effects. Therefore, logistic headquarters therefore must have the capability to synchronise planning, coordination and exploitation of the array of J2/3/4 resources to execute combined arms, potentially multi-national, partnered, PLM.

40. PLM is essential to deliver a range of J4 and J3 effects[10] along a LoC which will likely require manoeuvre independent of the combat force through ungoverned, contested battlespace. This requires exploitation of fused intelligence, Battlespace Management, Joint fires, ISTAR, C-IED/Route Proving and Clearing capabilities as well as task-organised Force Protection. The ability to exploit such effects will become increasingly important as the supported force operates at reach, and where the ability of combat force elements to protect the line of communication may be routinely exceeded.

9 Repair Forward, the ES Echelons, C2 at every echelon and Stability.
10 Common G4 effects (SUSTAIN, DELIVER, RESUPPLY, RECOVER) will be supplemented by a range of deliberate and opportunistic G3 effects including CLEAR, PROTECT, DETER, INTERDICT, HOLD and – if necessary – DEFEAT.

41. For all sustainment personnel the principle of 'Soldier First, Specialist Second' has been confirmed. Logistic enablers need the right integrated all arms training, equipment and vehicles to fight (or 'protect') logistics through when required to ensure that Logistics can deliver even when under direct threat.

Observation: PLM is essential to sustain forces in a 360° battlespace by providing the capability to deliver a range of vital G4 and G3 effects along a FLOC-compliant line of communication, often through ungoverned, contested battlespace independently of combat force elements.

Lesson: Sustainment enablers need to be able to protect themselves. The nature of the threat in the 360 degree battlefield requires CSS personnel to be trained and competent to provide organic Force Protection. Likewise CSS vehicles must be suitably protected to meet likely threats.

Figure 4-1-5. Protected Logistic Manoeuvre in a Complex Environment

OPTIMISE TACTICAL SUPPLY AND DISTRIBUTION

42. Operation HERRICK showed that stockpiling at 1st Line reduced logistic risk; however it also fixed forces (in FOBs) and the accounting/stock control of holding 2nd line stock levels at 1st line did not work since battlegroup personnel are not trained to manage, rotate or account for such large stock levels.

43. This was addressed through providing supply and distribution specialists to deliver logistic effect at 1st line (e.g. Logistic Support Teams). They complimented, rather than replaced, the QM Staff and key activities would include: opening the reverse supply chain; appropriate logistic prediction/forecasting; and providing accounting assurance/ POGO[11]. 1st line CSS expertise also prevents over-stocking, therefore enabling manoeuvre and tactical CSS agility, as well as providing tactical commanders with advice on any logistic constraints to tactical activity.

44. A linked issue concerns the need for increased support activity during the deploy and recover phases. In addition, an increase in effort is also required during large scale tactical actions. The JFSp Headquarters and support chain must understand and anticipate steady-state, seasonal and surge demand in short, medium and long term operational cycles and surge logistic capability when required.

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11   Proof Of Good Order

Lesson: Processes must be in place to ensure that logistic manpower and capability can be surged when required.

Lesson: RLC technical accounting advice needs to be available down to 1st line in order to provide technical advice and auditing. This ensures robust accountability throughout the echelon system.

Lesson: The importance of accurate logistic accounting endures throughout all operations and robust logistic accounting governance must be set in place, understood and resourced as early as possible. Until replaced by guaranteed Logistic Information Systems, the requirement for Logistic Reports and Returns (R2) remains and this must be inculcated into those involved in the supply chain from battlegroup level upwards.

TRAINING

45. Experience in Afghanistan demonstrated that deployed CSS Headquarters and personnel require a more sophisticated training baseline. Preparation for future deployments calls for: more integrated Joint and All Arms training to better reflect the nature of contemporary operations; CSS units being able to focus on mission relevant training rather than just providing training support; access to theatre specific equipment; and more focus on operating in austere and contested environments, including training in the necessary combat skills.

46. Training also needs to reflect the complexity of the wider support chain not, for example, just 2nd to 1st Line distribution. This requires sufficient turnover/consumption against which to test the support chain. This may mean starting an exercise on day one without full stocks and potentially significant logistic constraints – requiring real logistic choices and priorities to be made.

OPERATION HERRICK SUSTAINMENT CHRONOLOGY SUMMARY

Dates	Operation	Log HQ	Comd	Events
HERRICK 4- 8				
• Evolution from PRT to TFH.				
• UK LOC through KAF and KBL contractor to KAF.				
• Initial focus on Helmand (HMD) with establishment and rapid growth of Bastion.				
• UK LOC through KAF and BSN to HMD and Upper Gereshk river valley. (Developing AO: Now Zad, Garmsir, Kajaki dam, Maiwand (ISAF Regional BG task); later, west into Nad Ali)				
• Increasing use of contracted rotary wing and contracted ground movement. (Initially to serve BSN from KAF, then to push out to FOBs with in order to reduce convoy casualties.)				
• Increased mechanisation leads to higher demands for fuel (H4 30 tons/day, H8 100 tons/day)				
Oct 05 - Jul 06	HERRICK 4 (16 Bde)	UK NSC	Brig JAS Downes Comd 104 Bde	• Deployment into Helmand • Establishment of Camp BASTION
Jul 06 - Jan 07	HERRICK 4-5 (16 Bde - 3 Cdo Bde)	NSC 'downsized' into an NSE under an OF5	▬▬▬	• Control of C130s passed to HQ ISAF
Jan 07 - Jul 07	HERRICK 5-6 (3 Cdo Bde - 12 Bde)	UK NSE	▬▬▬	• Leaned out BG echelons • Shortages of some ammn types (81mm) • Karachi – Kandahar GLOC 'fragile' • Implementation of (temporary) common fuel policy
Jul 07 - Jan 08	HERRICK 6-7 (12 Bde – 52 Bde)	HQ NSC(A), based around HQ JFLogC staff	Air Cdre GJ Howard – now a 1* Logistic Formation	• Introduction of MASTIFF, REAPER, GMLRS, HERMES 450 begins • Construction starts on Bastion strat lift runway
Jan - Jul 08	HERRICK 7-8 (52 Bde – 16 Bde)	NSC now becomes JFSp(A)	Brig J Henderson 102 Log Bde	• Introduction of JACKEL • PM Bhutto assassinated in Pakistan and strike in Pakistani oil refinery – fuel restrictions in theatre. • Introduction of ISAF Contracted Air Transport • High tempo CLP activity
Jul 08 - Jan 09	HERRICK 8-9 16 Bde – 3 Cdo Bde)	JFSp(A) 6	Navy IA HQ	
HERRICK 9-12				
• Tipping Point: Shift from Expeditionary to Campaign footing.				
• Shift of logistic effort to BSN from KAF: new runway, hardened facilities in BSN – store-sheds, ES Mat warehouse, ESS facility, accommodation. (ENTIRETY era: UOR influx with shortened acquisition lead-time, equipment & logistic risk accepted; maximisation of bayonets alongside reduction of supply expertise).				
Jan - Jul 09	HERRICK 9-10 (3 Cdo Bde - 19 Bde)	JFSp(A) 7 RAF IA HQ	Air Cdre O'Dea	• JFSp(A) directed to move from Kandahar to Bastion • TOA of northern and southern Helmand to USMC • Reduction in length of tactical LoCs

Jun - Dec 09	HERRICK 10 -11 (19 Bde - 11 Bde)	JFSp(A) 8	Brig Tickell 8 FEB	• JFSp(A) move to Bastion completed • Strategic AT now flying directly into Bastion • SV introduced as UOR • Op PANCHAI PALANG
Dec 09 - Jun 10	HERRICK 11-12 (11 Bde – 4 Bde)	JFSp(A) 9	Brig Fay 101 Log Bde	• Volcanic ash cloud impacts strat AT • Established posts of Comd Med, JF Engr and Comd EC
Jun - Nov 10	HERRICK 12-13 (4 Bde – 16 Bde)	JFSp(A) 10	Brig Nitsh 102 Log Bde	• Completed the drawdown of Kajaki and Sangin. • GLOC closed for twelve weeks due to problems with Afghan Customs

HERRICK 13-16

- Support focus shifts to redeployment
- Tipping Point: ANSF take greater charge

Dec 10 - May 11	HERRICK 13-14 (16 Bde – 3 Cdo Bde)	JFSp(A) 11	Brig A T Davies	• Increasing role of the Reverse Supply Chain • DSG ESS capability established in Bastion
Jun - Nov 11	HERRICK 14-15 (3 Cdo Bde – 20 Bde)	JFSp(A) 12	Cdre Walker Navy IA HQ	• Tactical CIS amnesty unearths £6m worth of CIS eqpt. • Prohibition on further infrastructure development
Dec 11 - May 12	HERRICK 15-16 (20 Bde – 12 Bde)	JFSp(A) 13	Brig Mitchell 101 Log Bde	• Introduction of FOXHOUND UOR • Deployment of Comd EC (OF5) • Pakistan GLOC closed Nov 11 – Jul 12
Jun - Nov 12	HERRICK 16-17 (12 Bde – 4 Bde)	JFSp(A) 14	Brig McLay 102 Log Bde	• Focus now on reduction of 1st line holdings, BRAC and 'precision battlefield clearance'

HERRICK 17-19

- Transfer of security responsibility to Afghans
- Increasing role of the Reverse Supply Chain and POGO, frictions with sustaining current ops.

Dec 12 - May 13	HERRICK 17-18 (4 Bde – 1 Bde)	JFSp(A) 15	Brig Capps 104 Log Bde	• COMISAF's revised direction: complete withdrawal by Dec 2014 (vice 2015) • MJDI rolled out on a limited basis
Jun - Dec 13	HERRICK 18	JFSp(A) 16	Air Cdre Bessel RAF IA HQ	

CHAPTER 4-2

HEALTH SERVICE SUPPORT

'The medical system was almost unbeatable. Without doubt I brought back over half a dozen of my soldiers who survived because of the medical professionalism that currently exists in Theatre; that is humbling.'

Operation HERRICK 13[1]

BACKGROUND – HEALTH SERVICE SUPPORT TO OPERATION HERRICK

1. The overall delivery of Health Service Support (HSS) to all UK Force Elements (FEs) in theatre was the responsibility of Joint Force Support (Afghanistan) (JFSp(A)). This included Force Health Protection (FHP) - including the provision of medical intelligence to support operational planning, Primary Health Care (PHC), Pre-Hospital Emergency Care (PHEC) and Deployed Hospital Care (DHC). In addition, deployed healthcare provided Medical Force Protection advice and support to minimise the impact of Disease and Non-Battle Injury (DNBI) on combat effectiveness.

2. This was enabled thorough the J1 Medical Cell in HQ JFSp(A) and the UK Medical Group consisting of the Role 3 Hospital in Camp Bastion and the deployed Close Support Medical Regiment. At the height of the operation, in this example during operation HERRICK 15-16, these enablers carried out the following functions:

   a. **The J1 Medical Cell.** The J1 Medical cell in HQ JFSp(A) interfaced with PJHQ J4 Medical, Regional Command (South West) (RC(SW)), Regional Command (South) (RC(S)) and Task Force Helmand (TFH) in order to provide medical subject matter expertise and medical intelligence into the operational planning process. This ensured: the appropriate implementation of NATO, UK National and Defence Medical Services (DMS) medical policy; casualty regulation (including the co-ordination of Strategic AEROMED); the provision of specialist advice and direction on FHP and medical capability; and monitoring ANSF Medical Development. J1 Medical was also responsible for Theatre Healthcare Governance and assurance in accordance with CJO's governance and providing Commander JFSp(A) with advice on medical ethics and the application of the Medical Rules of Eligibility. It also provided Environmental Health advice across the UK Medical Area of Operations (AO) and provided the branch lead on medical capability development and medical infrastructure.

   b. **The Role 3 Hospital.** A Role 3 Hospital[2] was established in Camp Bastion and was a UK-led multinational Medical Treatment Facility (MTF) which provided Role 3 DHC for ISAF Force Elements across RC(SW) and for Afghan patients in accordance with ISAF Medical Rules of Eligibility.

   c. **The Close Support Medical Regiment.** A deployed Close Support Medical Regiment (CSMR) provided medical support in the TFH AO and wider Role 1 support to all UK forces deployed throughout Afghanistan. It consisted of a Regimental Headquarters (RHQ) and three squadrons:

      (1) **RHQ.** The RHQ was charged with delivering healthcare support forward of the hospital, primarily to TFH. Within the RHQ, planning activity was conducted by the Medical Group Operations Cell having been triggered by the TFH Medical Liaison Officer (Med LNO). MEDEVAC[3] missions were then monitored, supported by Med LNOs in HQ Join Helicopter Force (Afghanistan) to warn the hospital of incoming casualties. The Operations Cell then monitored casualties from point of injury, through the hospital, to the UK via the hospital Aeromedical Evacuation Liaison Officer.

      (2) **A Sqn.** A Sqn provided Medical personnel in support of Combined Forces (CFs), manoeuvre sub-units and Combat Logistic Patrols. Combat Medical Technicians (CMTs) and Medical Officers (MOs) were integrated into tactical base locations to provide local primary healthcare and pre-hospital emergency care.

      (3) **B Sqn.** B Sqn provided Primary Healthcare Centres (PHCs) at Camp Bastion, Kandahar Airfield, Kabul and Lashkar Gah. This included the provision of visiting dental, field mental health and rehabilitation teams from Bastion. A High Readiness Team (HRT) was available at ▓▓▓▓▓▓▓▓▓▓ to respond to a major medical Incident in the AO. The Sqn also deployed primary care personnel and high readiness response/ mentoring teams to the Afghan National Army.

      (4) **Support Sqn.** The Support Sqn provided support and enabling personnel to the UK Med Gp including an Environmental Health Team (EHT) that provided hygiene and EH support to the Force.

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1   ▓▓▓▓▓ Operation HERRICK 13, September 2010-April 2011, quoted from his Post Operational interview, 17 June 2011.
2   A Role 3 Hospital can provide primary surgery, intensive care, surgical and medical beds with dedicated nursing and diagnostic support.
3   Medical Evacuation (MEDEVAC) refers to the transfer of a casualty from point of injury to an initial medical treatment facility.

3. Forward and tactical AEROMED was provided by UK and US rotary and fixed wing assets which were coordinated by the Patient Evacuation Co-ordination Cell (PECC) within the HQ RC(SW) Combined Operations Centre.

4. Conceptually, Medical Support in theatre was deployed as a continuum of healthcare from the point of injury to subsequent strategic medical evacuation. This process is shown graphically at figure 4-2-1 below:
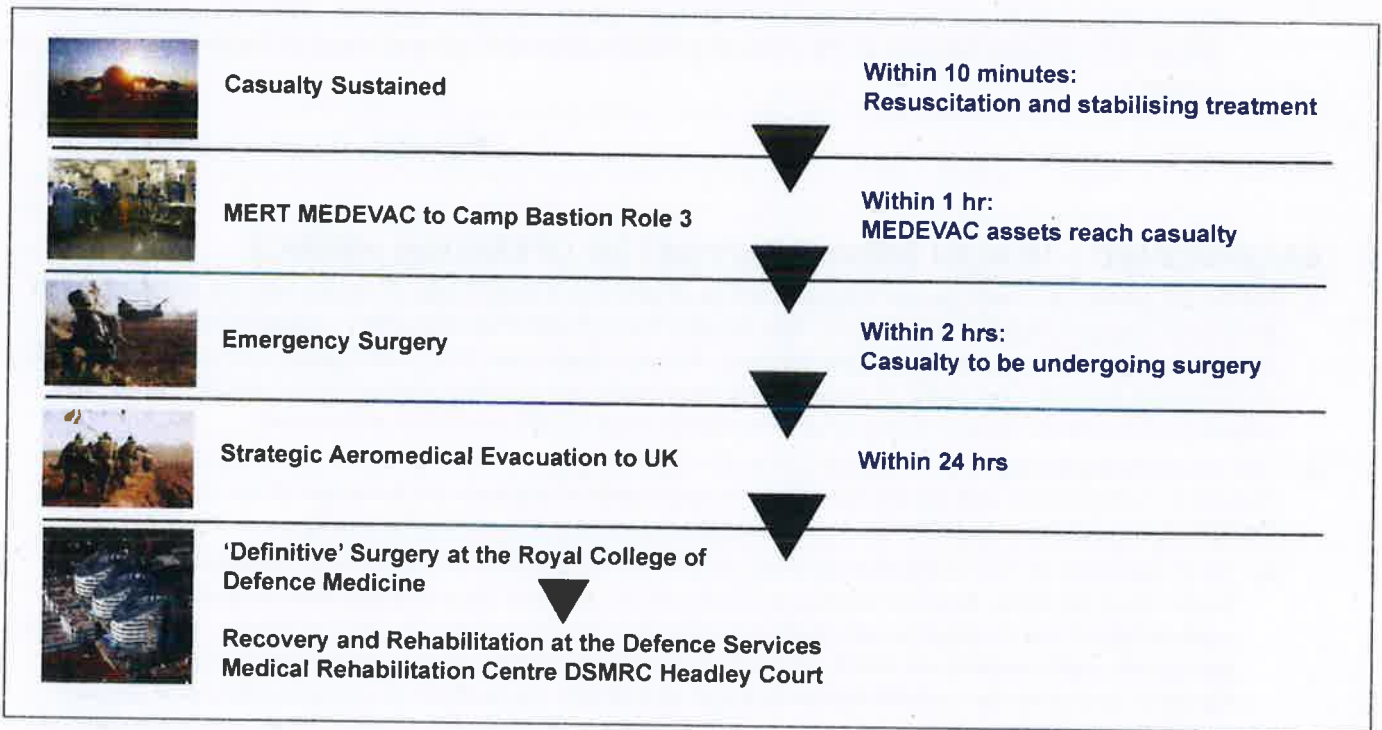

Casualty Sustained	**Within 10 minutes:** **Resuscitation and stabilising treatment**
MERT MEDEVAC to Camp Bastion Role 3	**Within 1 hr:** **MEDEVAC assets reach casualty**
Emergency Surgery	**Within 2 hrs:** **Casualty to be undergoing surgery**
Strategic Aeromedical Evacuation to UK	**Within 24 hrs**
'Definitive' Surgery at the Royal College of Defence Medicine **Recovery and Rehabilitation at the Defence Services Medical Rehabilitation Centre DSMRC Headley Court**	

Figure 4-2-1. The Operational Patient Care Pathway

THE OPERATION HERRICK STANDARD OF HEALTHCARE - THE GOLDEN THREAD[4]

5. The standard of healthcare delivered on Operation HERRICK and resultant patient outcomes provide the baseline that the Defence Medical Services (DMS) and Army Medical Directorate (AMD) aspire to deliver on future operations.

6. It is recognised, however, that political, operational, tactical and financial constraints may prevent its achievement. Any shortfall in medical capability or capacity that results in poorer patient outcomes during future operations could have an adverse impact on public support and negative political consequences. Should such risk be identified by medical planners it must be highlighted to operational commanders in order that it is properly mitigated, or a decision taken to tolerate it.

7. The exceptional patient outcomes achieved on Operation HERRICK[5] were the result of the Operational Patient Care Pathway (OPCP)[6] being managed as a single and coherent End to End (E2E) healthcare system; from point of injury/ illness to Role 4. Step changes to clinical practice within the Operation HERRICK OPCP led to the evolution of that E2E system. The step changes resulted from the development of the conceptual understanding of the physiology of trauma. This led to advances in training and education of deploying clinicians, whilst financial investment led to better clinical infrastructure, clinical equipment and Personal Protection Equipment (PPE) and greater availability of rotary wing MEDEVAC platforms crewed with physician-led patient retrieval teams. The National Health Service (NHS) plays a vital role in the partnered provision of Role 4 healthcare for military casualties on return to the UK. The NHS also remains a key strategic partner for the MOD in order to maintain an appropriately prepared pool of military secondary healthcare professionals to meet the operational demand.

8. These clinical gains have necessitated significant infrastructure, equipment and MEDEVAC enhancements. Such enhancement is unlikely to be available during the early stages of future operations because of constraints on our ability to move medical mass; competing priorities for use of rotary wing platforms restricting their availability for MEDEVAC; and the (current) limited environmental tolerance of some key clinical equipment. These enhancements will have to be built incrementally as the capacity of the Joint Supply Chain allows and the Theatre matures. Consequently clinical research should be directed towards the following goals:

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4   These HERRICK Study HSS lessons are the outcome of detailed research and analysis conducted by AMD and extracted from the 2* endorsed HERRICK Campaign Study Joint Health Services Support Lessons paper (Army HQ/AMD/Cap&Trg/30-09) dated 14 February 2014.

5   32 unexpected UK survivors occurred on Op HERRICK over the period September 2010 – December 2013.

6   JSP 950, Leaflet 1-4-1.

a. The development of miniaturised and ruggedized imaging and laboratory capability that has better tactical transportability and environmental tolerance and reduces logistic drag, and which if realised, potentially, may offer the opportunity to use imaging and laboratory support 'further forward' within the OPCP.

b. The development of clinical interventions and protocols that enhance our ability to sustain patients more effectively during Prolonged Field Care[7] in order to mitigate the impact of potentially longer clinical timelines. From this will cascade DLoD requirements such as Concepts & Doctrine (how to deliver it), Training (BCD, Team Medic, BATLS & MIMMS course content), the equipment (for oxygen, blood, stretchers, analgesia, infra, power, cold chain), and the personnel necessary to deliver it.

Lesson: Laboratory and diagnostics capability needs to be further ruggedized and miniaturised to enable early, entry-level deployment.

Lesson: MTC[8] and CT2[9] scanners need to be supported into core cross-DLoD.

Lesson: Radiologists should be attributed at all scales of DHC.

Lesson: Team Medics must remain a core tactical capability at a force ratio that meets the deployed requirement, and that can be sustained through the training and assurance pipeline.

Lesson: The surgical procedures dataset from the Camp Bastion Role 3 hospital should be analysed to determine the future structure of deployed Surgical Teams, with the inclusion of specialist capabilities such as Burns and Plastics. General Physicians must be included for all scales of DHC.

Lesson: Critical to PHEC is identifying what interventions are required in the FLOC pre-hospital environment to meet the 1 hour timeline, and for Prolonged Field Care.

Observation: Research must be supported into novel bleeding control agents, with particular focus on internal, non-compressible haemorrhage.

Observation: Pain management is a core competence of DMS anaesthetists and intensivists;

Observation: The quality of advanced resuscitation capabilities on Operation HERRICK must be retained for contingency.

Observation: <C>ABC[10] techniques and equipment must also continue to be developed as a core capability for Emergency First Aid (MATT 3), and remote patrol medics.

Figure 4-2-2. Transfer of casualty from MERT to Emergency Surgery

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7 JSP 950, Leaflet 1-4-1, Prolonged Field Care is provided to patients if there is likely to be a delay in meeting the 10-1-2 Medical Planning Guideline.
8 MTC: Massive Transfusion capability.
9 CT: Computerised Tomography.
10 <C>ABC: Catastrophic Bleeding, Airway, Breathing, Circulation

THE SILVER BULLETS – ACTIONS AND WORK REQUIRED TO INSTITUTIONALISE, RETAIN OR SUPPORT THE GOLDEN THREAD

9. Eight specific actions and work-streams were identified by the 1* Military Judgement Panel as necessary to institutionalise, retain or support the Golden Thread. These too are a synthesis of all the recorded lessons and insights, and impact on the totality of the OPCP and within multiple Capabilities of Healthcare. All are referenced within Annex A and are set out below; they are not prioritised.

DEVELOP ROLE 1 TRAINING PROCESSES

10. Acknowledging that it pre-dates Operation HERRICK, Role 3 collective training has been institutionalised and appropriately resourced through the Role 3 Hospital's Mission Specific Validation Hospital Exercise (HOSPEX). The utility and benefits of HOSPEX are manifest. It provides the exemplar process for delivery and assurance to Collective Training (CT) level 3, has facilitated the integration and orientation of multinational staff elements into UK practice and provides Comd 2 Med Bde, as the Competent Medical Authority (CMA) for DHC, with a detailed, reproducible and auditable mechanism of assuring and validating the capability. Role 1 collective training and validation is however significantly less institutionalised and inadequately resourced. To validate contingent medical capability effectively and thereby provide the assurance it is capable of delivering the required standard of healthcare, Role 1 validation must be adequately resourced and institutionalised. The synergy and interdependence of Role 1 and Role 3 must be acknowledged by bringing coherence and commonality to the assessment and validation of Role 1 and Role 3 collective training so that they become a single effective Quality Assurance process.

Lesson: Exploit our expertise and experience in Role 3 training validation to develop a comparable Role 1 process. The Force Generation pathway for contingency operations must have defined and resourced CT capabilities to support Role 1 (for CT 1 and 2), and Roles 2 and 3 (for CT 1, 2 and 3). The same rigour must be applied to Role 1 CT as it is to Roles 2 and 3. Multinational

Lesson: Medical and military-medical collective skills should be validated as part of a Combined military exercise rather than in isolation. 2nd party assurance should be provided by the relevant Medical Commander, and 3rd party assurance at least comparable with Care Quality Commission/NHS standards that extends into the deployed space. CT for medical elements for contingent operations must also be validated within the training pathway of the unit / formation they will support.

Observation: Clinical Governance must underpin all DMS activity.

DEVELOP MULTINATIONAL HEALTHCARE INTEROPERABILITY

11. Since 2009, the Camp Bastion Role 3 Hospital has demonstrated that a multinational-staffed facility, albeit under UK command, utilising UK military clinical protocols and subject to UK military Healthcare Governance and Assurance, can deliver exceptional patient outcomes. Predictable cultural and clinical differences between nations were partially mitigated through HOSPEX. Multinational operational medical provision offers the advantage of burden sharing. However, to ensure we deliver the required quality of healthcare during the early stages of future operations, we must invest in understanding potential medical partners by developing and sharing with them our clinical practices and protocols. Our future international medical engagement strategy should be focussed on interoperability and be delivered through Combined Exercises and mutual exchange posts.

Lesson: Multinational Medical Unit CT1 to 3 must include cultural and procedural awareness between troop contributing nations.

DEVELOP HEALTHCARE RECORD MANAGEMENT AND IM/IX FUNCTIONALITY

12. Significant improvement in the management of healthcare records is required pan-DMS[11]. Whilst strategic policy has recently been published[12], experience from Operation HERRICK shows that a significant number of DMS personnel do not understand, or are failing to comply with the individual and corporate responsibilities (statutory, professional and ethical) associated with healthcare records. More developed and didactic training and education of DMS personnel is required to address this. Better Medical Information Systems (MIS) are required to ensure the fidelity and timeliness of the transfer of Primary Healthcare Care (PHC) records to and from Theatre, and that episodes of Deployed Hospital Care (DHC) are captured with the required fidelity. We must be able to exploit clinical data more effectively. This has particular significance with regard to Force Generation to prevent the deployment of individuals with inappropriate

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11   In this context 'management' includes the creation, security, storage, handling, movement, archiving, retrieval and disposal of healthcare records irrespective of media type.
12   JSP 950, Leaflet 1-2-11, The Defence Health Record, dated 17 December 2013.

medical conditions. Programme CORTISONE[13] potentially offers an appropriate vehicle to achieve all this. There is also a generic Communications and Information Systems (CIS) requirement. To facilitate patient transfer (whether own forces, coalition, Captured Persons (CPERS) and indigenous) we must be able to communicate and transfer clinical data between UK deployed Roles of healthcare, between Theatre and the Firm Base and with indigenous, coalition, International Organisation and Non-Governmental healthcare providers.

Lesson: Develop healthcare C4I[14], record management and IM/IX[15] functionality currently utilise a mix of tactical CIS and patient MIS that are not integrated throughout the Operational Patient Care Pathway. This requires:

CIS. Integration with the tactical and operational battlespace CIS network to ensure effective command and casualty regulation. The ability to communicate one-to-one medical-in-confidence issues by voice, data and imagery within theatre and with reachback to the Firm Base to enable clinical decision making.

MIS. An assured tactical patient data MIS that supports Force Health Protection (FHP), patient tracking, research and audit. A paper based revisionary system to mitigate against denial of MIS must be retained.

These must extend throughout the Operational Patient Care Pathway for combined, joint and key multinational allies, including (for MIS) the Firm Base.

THE REQUIREMENT FOR CLINICAL DECISION SUPPORT TO SUPPORT MULTIPLE MEDEVAC TASKING

13. Effective MEDEVAC tasking, particularly when multiple MEDEVAC capabilities are available, requires clinically qualified and current staff to provide decision support within a PECC, to ensure the patient is retrieved by the most appropriate capability. To provide necessary situational awareness, the PECC must be collocated within the Joint Operations Centre (or equivalent) that tasks and authorises the execution of MEDEVAC missions.

14. The DMS needs to re-generate the C4I processes, including R2, that are required to manage higher volumes of casualties through the Operational Patient Care Pathway (including into the UK) than experienced on Operation HERRICK. This must include a joint and multinational approach focussing on our key allies (US and France).

15. Ground based MEDEVAC must be considered as a tactical activity controlled by the battlespace owner at all levels and intimately supported by the function of casualty regulation linked to allied and host nation healthcare networks. Establishing dedicated clinical leadership roles at unit level (Deployed Medical Director and Senior Medical Officer) and clinical staff input to the PECC will enhance casualty regulation, as will the integration of appropriate medical C4I nodes with tactical and operational battlespace owners. This must be underpinned by a Joint Role 1 Concept of Employment to ensure coherence.

16. Aviation based MERT[16] should be the gold standard for MEDEVAC, wherever the threat and casualty numbers permit. MERT capability, able to provide early transfusion (includes blood warming capability) needs to be available to support Land, Littoral, and Maritime operations.

17. Aeromedical Evacuation (AE), including Critical Care Surgical Team (CCAST) capability, must be maintained at a level that is able to support Defence Strategic Direction. Alternative plans and resources to cope with a loss of Strategic AE will need prior allocation to manage these situations when arising e.g. Memoranda of Understanding with other nations, temporary holding facilities, contracted solutions etc. UK AE Teams and airworthy medical equipment (AME) should be recognised as approved when operating on other nations' aircraft.

Lesson: Effective MEDEVAC tasking requires qualified and current staff to provide decision support within a PECC in order to ensure the patient is retrieved by the most appropriate capability.

Lesson: The DMS needs to re-generate C4I processes, including to manage higher volumes of casualties

Observation: Aviation based MERT should be the gold standard for MEDEVAC, wherever the threat and casualty numbers permit. .

Observation: Aeromedical Evacuation capability, must be maintained at a level that is able to support Defence Strategic Direction.

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13   The purpose of the CORTISONE programme is to provide a health and healthcare information capability that delivers the right information to the right people, at the right time and in the right format, in order to enable effective delivery of health and healthcare advice, health and healthcare services and medical operational capability, and thus support the Aim of the Defence Medical Services.
14   C4I: Command, Control, Communications, Computing and Intelligence
15   IM/IX: Information Management/Information Exploitation.
16   MERT: Medical Emergency Response Team

RELEVANCE OF MILITARY COMPETENCIES

18. The majority of DMS personnel and in particular Secondary Healthcare staff deployed into a mature Theatre with well-found clinical, technical and living accommodation and were not required to utilise military skills (such as navigation, Counter-surveillance, tactical movement) Military skills will have increased relevance during future operations and will be required of clinical staff to enable them to deliver clinical care. Individual competence is achievable through completion of MATTS[17] and their single Service (sS) equivalents, if conducted at the appropriate levels and with appropriate rigour. Clinical staff must however, regularly practice these competencies collectively during training and high-readiness years to ensure competence.

Lesson: Force generation of Regular and Reserve IAs for the RF and AF needs to be assured at an individual level to ensure that the military, medical and military-medical individual skills are commensurate with their RF or AF role. This is particularly important for the Reserve DMS medics.

COMBAT MEDICAL TECHNICIAN CLINICAL EXPOSURE

19. Throughout Operation HERRICK, Combat Medical Technicians and their sS equivalents have demonstrated exceptional pre-hospital trauma skills, but have been relatively weak in providing primary healthcare. This systemic weakness is due to a prolonged institutional failure to provide them with appropriate pre-deployment clinical exposure within the Firm Base that will allow them to develop the clinical experience and currency to deliver adequate primary healthcare on operations. The requirement for appropriate clinical exposure must be formalised and regularised. The nascent Defence Medic programme potentially offers an appropriate vehicle to achieve this.

20. During operations in Afghanistan it was found that the requirement for autonomous practitioners to support forces in patrol bases/FOBs exceeded the number of doctors on unit establishments. This resulted in the employment of doctors above doctrinal ratios, and nurses or medics practising at a higher level of autonomy than usual. Therefore the need is to develop Treatment Teams and medical individuals, including non-DMS remote patrol medics, with sufficient scope of practice and reachback to operate effectively in isolated locations.

21. The DMS needs to develop policy that describes the overlap and also the professional separation between doctors / nurses / Defence Medics employed within primary care in an autonomous clinical role. Clinical supervision policies in the deployed space and the Firm Base must be more closely aligned. A Tri-Service approach to the Defence Medic career structure should be developed – mirroring all other DMS professional groups.

Lesson: The requirement for Combat Medical Technicians to undergo appropriate clinical exposure must be formalised and regularised.

Lesson: Develop Treatment Teams and medical individuals, including non-DMS remote patrol medics, with sufficient scope of practice and reachback to operate effectively in isolated locations.

MEDICAL COMMAND AND CONTROL (C2)

22.

Lesson: Medical C2 and planning capability must be appropriately resourced to be effective.

17   Military Annual Training Tests.

MEDICAL RULES OF ENGAGEMENT

23. There are legal, ethical and political reasons to treat a population at risk (PAR) wider than just the combatant forces. Operation HERRICK demonstrated the diversity and complexity of the patient population that required, and will require, treatment on future operations within UK Medical Treatment Facilities. Individual and collective medical training must encompass the clinical, cultural, ethical and legal requirements of the entire patient suite including paediatrics and CPERS.

Lesson: Train to treat the entire operational patient suite. This will require HSS capabilities and Medical Rules of Engagement beyond those needed for PHC and PHEC for combat forces, including CPERS. The DMS requires the minimum clinically and ethically appropriate capability to treat indigenous children on operations.

Figure 4-2-3. MERT in Action

4-2_8
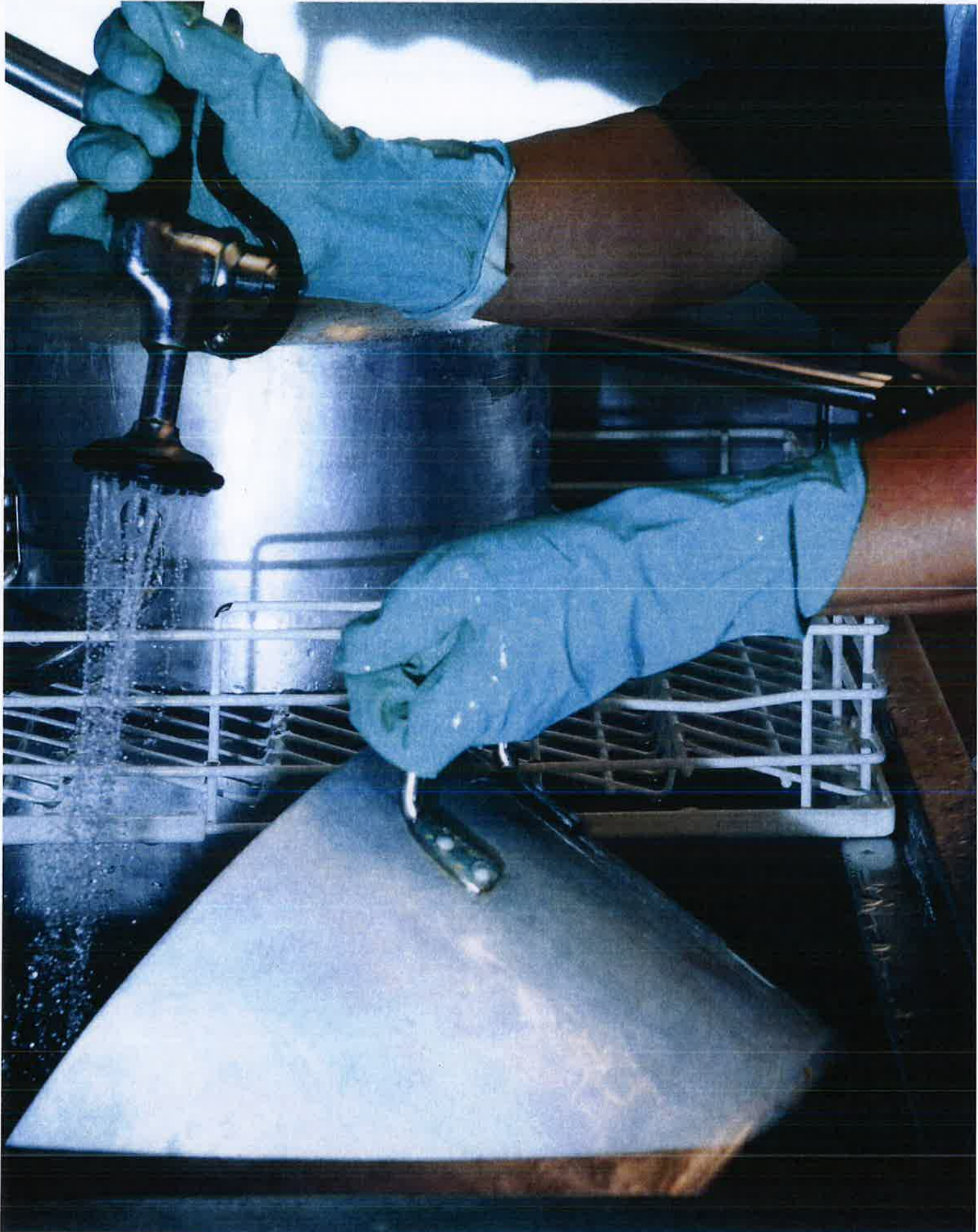
CHAPTER 4-3

INTEGRATING THE CONTRACTOR CAPABILITY

BACKGROUND – CONTRACTOR SUPPORT TO OPERATION HERRICK

1. One notable aspect of Operation HERRICK was the high level of contractor support provided to the deployed force. Contracted tasks ranged from the important but mundane, for example the maintenance of ablutions and the supply of rations, to the operationally critical – such as the construction of airfields and the provision of fuel. The majority of contractors were not 'employed' by Joint Force Support (Afghanistan). Contract Management teams exercise Authority control, but the contractors remain employed by the parent company. Contractor support peaked during Operation HERRICK 15 during (JFSp(A))13, with 5453 contractors[1], broken down as follows:

   a. 526 UK National.

   b. 2515 Third Country National.

   c. 1544 Locally Recruited Worker[2].

   d. 568 Out Of Theatre.

2. Another characteristic of operations in Afghanistan was the establishment of a number of large-scale support contracts. The Contractorised Logistics contract (CONLOG) and subsequently the Operational Support Capability Contract (OSCC) are MOD contracts set up to provide logistics and infrastructure support services to Permanent Joint Force Headquarters (PJHQ) to support UK Joint operations overseas. These contracts were in place before Afghanistan. In Afghanistan the two big contracts set up were the Infrastructure Support Provider (Afghanistan) contract (ISP(A)) for hard Facilities Management (FM) and the Afghan Multi-Activity Contract (AMAC) for soft FM. Many smaller requirements were incorporated into the AMAC contract. FM was run with as a JFSP(A) Infrastructure desk (an HQ staff branch) which covered the "requirement" and exercised Financial Authority. The RE Wks Gp covered the "delivery", exercising a commercial licence. All key staff were career trained in this work. The AMAC contract sponsor is based in PJHQ J4(CSO). There was significant reachback available from JFSp (A). Additionally there were also bespoke contracts in Theatre. They were just referred to by the name of the project, such as the 'Bastion Remediation Project'. Such contractors were locally sourced and the contracts were short lived and project focussed, not service focussed. All such contracts were run by the RE Works Group.

3. Overall, the number of contractors used on Operation HERRICK represented a considerable increase in the proportion of the force compared to previous operations. Some idea of the increasing use of contractors as part of a deployed force during recent operations is shown at Figure 4-3-1 below:
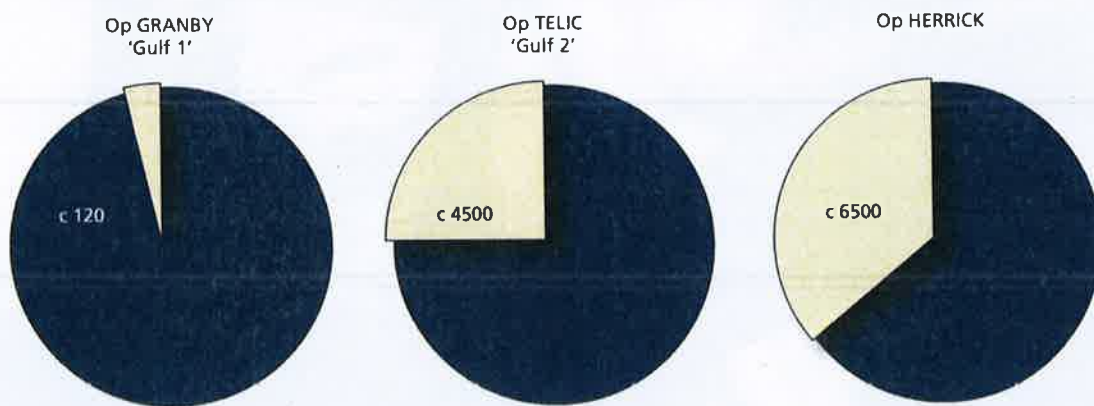

Op GRANBY 'Gulf 1' — c 120

Op TELIC 'Gulf 2' — c 4500

Op HERRICK — c 6500

Figure 4-3-1. Illustrative Proportions of Contractors to the Whole Force from Recent Operations[3]

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1   Source: PJHQ J4 CSO SO1 from Theatre Contract Management Cell (TCMC). This figure only takes into account MoD sponsored contractors and does not reflect UK reliance on other partner nations contracted solutions, or contracted solutions provided by the NATO Support Agency (NSpA), i.e. UK reliance on NSpPA provided catering services at Kandahar (KAF)

2   Locally Recruited Workers (LRWs) are defined as local nationals employed by the contractor either directly or through a recruitment company. LRWs are not to be confused with Locally Employed Civilians (LEC); local nationals who are employed directly by the MoD. The latter are recruited and managed by the Labour Support Unit.

3   Source ACDS Log Ops Force Pol

4. Contractor Support to Operation HERRICK came from four primary sources: Private Security Companies, Sponsored Reserves, locally engaged indigenous contractors and CONDO. CONDO are private sector company employees who deploy as civilians. They are used to enhance Defence capabilities by providing deployed support to operations from a commercial source, fulfilling a wide range of support functions.

5. At any one time the UK employed several thousand contractors of three main types: Locally Recruited Workers (LRWs) who were locals employed by contractors rather than directly by the MoD; Third Country Nationals (TCNs); and UK Nationals (UKNs). In addition UK Forces used a significant number of Afghan LECs who were directly employed by the MoD through the in-theatre Labour Support Unit.[4]

6. There were two principal types of contract used in theatre; Theatre Support Contracts and External Support Contracts. Theatre Support Contracts were UK-only contracts placed through PJHQ and JFSp(A) and often depended on Defence Equipment and Support (DE&S) and the Defence Infrastructure Organisation (DIO) commercial arrangements. These included equipment support, logistic and infrastructure contracts. External Support Contracts sat outside JFSp(A) control. Examples included contracting arranged through the NATO Maintenance and Supply Agency (NAMSA) who managed some key theatre contracts (e.g. fuel supply).

7. In addition, the UK Works Group Royal Engineers delivered infrastructure projects in support of JFSp(A), the wider force and the Provincial Reconstruction Team (PRT) through its own contracting systems. Their Contracts Officer was supported by the DIO to deliver a range of tasks from the small to the large and complex. Permanent Joint Headquarters (PJHQ) also had the facility to place contracts through the DIO to manage and maintain infrastructure ('Hard' Facilities Management) and provide life support activity through 'Soft Facilities Management' Contracts.

8. The utility of contracted support solutions, and the reliance of UK forces on them, was proven on Operation HERRICK. However, if contractors are to truly become engaged in the Total Support Force (TSF) as part of the Whole Force Concept (WFC)[5] then Defence planning for future operational contract requirements, and its relationship with potential contractor partners needs to become much more mature. Afghanistan showed that contract sourcing, governance and management processes were often uncoordinated, convoluted and inefficient.

THE LESSONS

9. If Defence is to rely on contracted support to enable the Force, then it needs to treat it as an element of capability and integrate it professionally. This is reflected in the identified themes of the lessons from Operation HERRICK: Doctrine and Governance; Force Generation and Force Preparation; Information; and Development of Contracting Competencies.

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4   These terms are explained in detail in JSP 908 The Defence manual of Deployed Labour Support
5   The TSF is one of eight components of the WFC which aims to deliver the sustainable capability and manning of a balanced, resilient and fully integrated force structure, comprising Regular and Reserve Service Personnel, contractors and civilians. Source: JSP 567

DOCTRINE AND GOVERNANCE

10. Throughout the operation contract ownership, top-level direction, and processes lacked clarity and coherence. Defence must address these issues through the provision of a Defence level Contractor Component Concept of Employment (CONEMP). This is required in order to codify the strategic approach to the use contractors on future operations. A suitable CONEMP will be required to inform:

    a. Force structures – including how contractors are integrated at readiness alongside military Force Elements.

    b. The governance of contractors, stating the relevant UK and in-theatre responsibilities.

    c. The issues relating to balancing the use of UK-based contractors with indigenous contractors - noting the potential stabilisation effect and reduced costs of local contractors.

11. The CONEMP must also provide top-level direction on the scope and content of contracts in order to deliver a common approach throughout Defence. Using this direction, DE&S and DIO will be able to construct contracts that can be used in a common way on operations, bringing consistency to our approach.

12. Experience on Operation HERRICK also showed that governance of CONDO lacked consistency. Therefore governance of contractors on operations should be clarified and it is recommended that PJHQ should provide top level governance, holding the appropriate financial and commercial responsibilities. PJHQ should be supported by DE&S and DIO as required, through a simplified process using a clear, single, PJHQ focal point.

13. In-theatre management of contracts is not a staff responsibility; rather deployed governance responsibility should be delegated to the appropriate commander, with contractors managed by the appropriate Commanding Officer (CO) / Officer Commanding (OC) alongside their complimentary military force element. For example both logistic contractors and military logistic force elements should fall under command of the same logistic commander.

14. From an Army perspective a designated proponent for the Contractor Component of the Whole Force is required. It is recommended that, as this is a required capability, this should sit with Director General Capability. They should develop (using the Directorate of Land Warfare) the Army CONEMP which will ultimately be nested within the Defence CONEMP to provide a framework that allows the Army to influence the content of Defence level contracts.

> **Lesson:** Defence must provide a Defence level Contractor Component Concept of Employment to codify the strategic approach to the use contractors on future operations.
>
> **Lesson:** A single commander should have delegated responsibility for each capability whether provided by military or contractor resources. Such responsibility should sit with the appropriate commander, with contractors managed by the appropriate Commanding Officer /Officer Commanding.
>
> **Lesson:** Governance of contractors on operations should be clarified and it is recommended that PJHQ should provide top level governance, holding the appropriate financial and commercial responsibilities, supported by DE&S and DIO as required.
>
> **Lesson:** There is a requirement for clear POCs for control of both in-theatre and Home Base contracts. These should be grouped together where there are synergies and where the military has the competence to manage them.
>
> **Lesson:** There is a continuing requirement for Defence to provide a CONLOG/OCSS type contract in order to deliver initial effect quickly for short periods in order to buy time for a more effective procurement mechanism to materialise.
>
> **Lesson:** There is a requirement to study and make clear recommendations on Land Forces contracting in order to make the most efficient use of the forces available to conduct this activity.
>
> **Lesson:** Deployed forces need an established reachback facility to DIO in order to obtain SME advice and DIO require the capability to deploy elements forward for short periods to provide advice if required.

FORCE GENERATION AND FORCE PREPARATION

15. Contractors need to be in our force design and generation from the outset. This will ensure integration at the earliest opportunity and allow better planning to make certain that the contractor provides the desired military effect. This requires consideration of:

    a. Pre-planning for required contractor capability and contractor force elements.

    b. Identification and augmentation of the Military FE with responsibility for contract management, ensuring that designated Unit HQs are provided with an appropriate contract management staff to support the CO.

    c. Assurance that Military FE are able to deliver contractor responsibilities when contractors are not appropriate (e.g. for high readiness or high risk activities). Therefore Military capability must be retained for the early stages of an operation to avoid over reliance on contractors – even if the intent is to use contracted solutions later.

16. A longer-term partnering approach is therefore key. Contract requirements should be defined in advance, and contractors trained appropriately so that they can be held at readiness. This also requires that they should be kept current on emerging contingency themes, scenarios and plans as well as be involved in study events, military planning and collective training – both as a matter of routine and during mission specific training.

17. This requires a structured approach to the force generation of the contractor component. It is recommended that Force Troops Command, as the Army lead on Force Generation/Force Preparation, should lead on contractor component generation and preparation.

Lesson: Some enabling capabilities may not be available from contracted solutions to meet the scales of deployment specified in the VANGUARD readiness instruction for at least the first 6 months of a deployment. Therefore deployable capabilities need to be reviewed to ensure that there is sufficient military manpower to provide all enabling functions.

Lesson: Contractors need to be in the force design from the outset. The Army must develop a partnering approach with those contractors that we identify as likely to support future operations.

Lesson: UK-based contractors should be involved in routine collective training to ensure they are integrated in preparation for future operations.

Lesson: Defence needs to establish a pre-deployment contractor database to capture competences, costs, concerns and an understanding of where in the operating theatre payments are being made. Such a database should also maintain a record of UK-based contractors who are prepared to deploy forward and early as part of the military force.

Lesson: There is a requirement to ensure that appropriate MoD Civil Servants can continue to be embedded in the Works Groups and other units and held at readiness to deploy, including a requirement to be involved in collective training.

Lesson: Further work is required to address the issues of how best to employ sponsored reserves and inform the Army Strategy (Whole Force Concept) against the potential contracting capacity which may be available.

Lesson: There is a requirement to indentify key skill sets across both regular forces, reserve forces and retired military personnel, in order to be able to source particular skills when required.

INFORMATION

18. The Army requires the ability to gain a better understanding of in-theatre contractors. Aside from security/corruption issues we need to properly appreciate their limitations, competences and any possible unintended consequences of their employment (for example local market distortion, cultural/tribal frictions etc.).

19. At the tactical level, we need processes in place that allow us to share information with trusted contractors and integrate them into tactical planning. This ensures coherence of understanding, clarity on the required support effects, commonality of tactics, techniques and procedures (TTPs) and opportunities for sharing intelligence. These processes are best codified into doctrine and established as a matter of routine, on pre-deployment and on operations.

Lesson: Contracting personnel need to better understand the impact of contracts on local economies. Although the stabilisation effect of using local contractors puts money back into the local economy' further study is required to ensure that the wider aspects of market distortion by our contracts are considered. This needs to be better reflected in doctrine.

Lesson: ▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬
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DEVELOPMENT OF CONTRACT COMPETENCES

20. All the issues above require those military personnel with responsibilities for establishing and managing contracts to be professionally competent. This calls for appropriate training and potentially longer tour lengths in order to maintain continuity of oversight and to ensure seamless contractor capability integration.

21. The military need improved contract competences gained through a relevant Knowledge, Skills and Experience (KSE) programme and as part of routine career development. This is to ensure that the Army can act as a much more intelligent customer. Key skills are required in:

    a. Requirement setting, being able to articulate the effect that the contractor is to provide through detailed Statements of Requirement (SoRs).

    b. Preparation of financial business cases and investment appraisals.

    c. Contract letting.

    d. Contract management and performance management

    e. The administration of contractors: briefing, welfare and training as required.

MILITARY CONTRACT KSE SHOULD BE DEVELOPED THROUGH:

    a. Improved, broad-based, contract education and training – including an understanding of business ethics – at various stages during an individual's career.

    b. Routine contractor engagement in collective training.

    c. Industry embedding/secondment for selected personnel.

    d. Granting of commercial licences to selected personnel; but only once they have gained appropriate training and experience.

Lesson: Those military personnel with responsibilities for establishing and monitoring contracts need to be suitably qualified and experienced, in particular able to articulate the effect that the contractor is to provide through detailed SoRs. This requires appropriate training and potentially longer tour lengths in order to maintain continuity of oversight and ensure seamless capability integration.

Lesson: The Army needs to identify the number of posts that would benefit from further contracting competence development, potentially achieved through industry/DIO secondment and embedding.

Lesson: There is a need to examine the requirement for contract training for those who deal with contractors particularly for Forward Enabling Contracts (FECs) and for contractor supervision. This is required for both specialists and generalists. Recommendations are needed for what changes should take place in existing training and career development.

CHAPTER 4-4
CAMP BASTION

1. **Introduction.** Camp Bastion has been the main UK operating base in Afghanistan for the campaign. It was positioned in central Helmand in a remote desert area away from population centres, northwest of Lashkar Gah, the capital of Helmand Province. Kandahar continued to be the main logistics hub due to its runway being suited to wide bodied jets. The Joint Aviation Group and HQ Joint Force Support relocated from Kandahar in 2009.

2. **Original Requirement.** The initial requirement was for a base accommodating up to 3000 troops and an austere landing strip for C130 Hercules transport aircraft operations. The site was chosen in 2005 as a forward operating base because it was in a secure location, allowed the construction of a runway and importantly the land was owned by the Afghan Government. Furthermore it would be next to Camp Shorabak which was then also under construction. Geological surveys had confirmed that water was available at a drillable depth. In 2006 the footprint was 2 square km with added facilities for logistic and medical support and attack helicopters. The initial build was executed in late 2005/early 2006 by 62 Works Group Royal Engineers supported by 39 Engr Regt and a number of local contracting firms.

Figure 4-4-1. First C130 lines up for landing at Bastion Airfield.

3. **Development Stages.** Although designed for 3000 people initially, the joint operating base expanded gradually to accommodate 28,000 people at its peak, spread across 35 square kilometres. It was the largest British overseas base built since the Second World War. But in 2006 it was clear that Camp Bastion was not going to be big enough and expansion was required. It was built in sections. The first sections were Bastion 1 and 2 for working and living: Bastion 3 was used for in-theatre receipt, staging and onward integration training (RSOI) and Bastion 0 was added in 2010 to consolidate contractor accommodation. There were also headquarters buildings[1], a water bottling plant, a field hospital and an airport. There were many other facilities.[2] Camp Bastion became a town with a population and footprint similar to Aldershot plus an airfield as large and as busy as Gatwick. The whole complex became known as Bastion, Leatherneck and Shorabak (BLS).

   a. **Leatherneck.** Camp Leatherneck, this US camp-within-a-camp adjoined Camp Bastion, built to accommodate the USMC and HQ Regional Command (SW), a 2 Star HQ.

   b. **Shorabak.** This housed HQ 215 Maiwand Corps and HQ 3/215 Bde. Camp Tombstone was a small area adjacent to Shorabak which housed both US and UK ANSF Brigade Advisory Group, with a separate entrance into Shorabak. In 2013, the UK opened a training school, in Shorabak, for the Afghan National Army (ANA).[3]

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[1] HQ JFSp(A), Bastion Joint Operating Base HQ, 903 EAW, JFCIS (A), and in 2014, HQ TFH.

[2] Bastion had 3 churches, a mosque, 2 police stations, detainee handling facilities, a Role 3 hospital complete with 64 slice CAT scanners, an FCO compound, deep base repair workshop with 3 overhead gantry cranes up to 20T, 12 incinerators, a heliport, separate facilities UAV launch and recovery, fast air and heavy air transport, bio-wash facilities, underslung load handing areas, 3 borehole farms, environmentally controlled ammunition storage buildings, several EFI shops and local trader villages, internet cafes, observation balloon (US), logistic processing and convoy marshalling areas and a vigil site. The incinerators were installed in order to close the burns pit which had become a health hazard. There were also range complexes; air delivered, vehicle mounted and small arms.
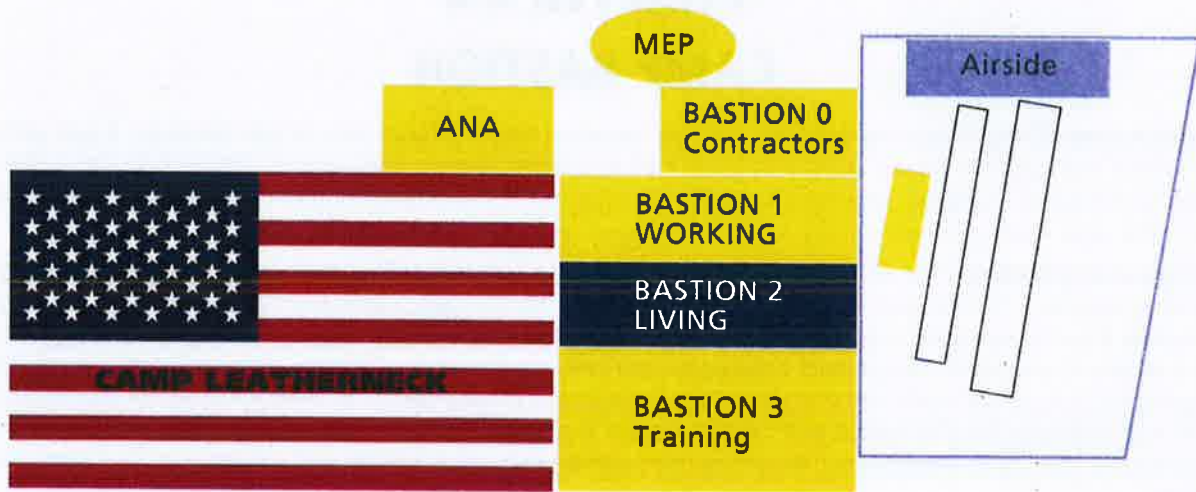
[3] The Regional Corps Battle School.

Figure 4-4-2. Bastion, Leatherneck and Shorabak conceptual layout

4. **The Population.** The maximum UK force level was 9,500, of whom 5,000 lived in and operated from Bastion, which was jointly operated with the Americans and the ANA. Denmark, Estonia, Tonga, UAE, Jordan, ▄▄▄▄▄ had camps within Camp Bastion and Leatherneck. There were up to 2,000 contractors actually living in the camp providing a wide range of services, from building maintenance to catering. Initially the contractor population was very large, almost as big as the military, but was not well controlled and was only later consolidated into a single location for administration and security. The Americans, in the fully incorporated Camp Leatherneck, numbered 14,000 at their peak. By September 2014, the military and contractor population of Camp Bastion had dropped below 3000 for the first time since it opened, as preparations continued for the redeployment. At the end of 2014, Camp Bastion will be transferred to the ANSF.

5. **Major projects.** A key constraint on initial infrastructure delivery was the three-year window constraint. This took several years to achieve through PJHQ, a point which seriously constrained sensible and Value for Money (VfM) development. As the majority of the projects have an average of 18 months from concept to completion and handover, it was necessary to work to tight timelines to plan, design, resource, construct. There were a number of projects worthy of mention:

   a. **The Role 3 hospital.** Initially a tented facility, this was replaced by a more permanent Tier 2/3 structure. The field hospital provided the key piece of infrastructure required to support operations. It was a 21st century facility in a developing country with long supply lines; able to deliver a service equal to that expected of a NHS hospital in the UK. Once the requirement was set the construction was managed by the military with a contract let in Theatre. When the US forces arrived in Helmand the capacity of the hospital had to double. The expansion project comprised building permanent headquarters for command and control, and reorganising the internal layout of the hospital. All this had to be done while the facility remained fully operational with staff continuing to rotate.

Figure 4-4-3. The hospital accident and emergency facility, 24/7 operating bays and the Nightingale HLS

b. **Water bottling plant.** A safeguarded supply of water is critical to the sustainment of any base. Boreholes were sunk at Camp Bastion initially whilst the first tented camps were built. A high quality aquifer beneath the base provided all the water it required. As demand increased, bottled water for drinking was being driven in from Pakistan, a huge logistic commitment. In 2007 a water bottling plant was built under contract by KBR. Overall consumption was just over 150 litres per person per day. Boreholes were grouped into "farms" of 4 and a borehole farm was established at Bastion 1, 2 and 3. Water was chlorine dosed and collected into central tanks before being pumped around discrete ring mains in each of part of Camp Bastion. Nevertheless, many parts of the base were not connected to the ring main and relied on a daily supply of tankered water from the borehole farms. Water quality monitoring throughout the life of Camp Bastion ensured that the Total Dissolved Solids remained below the UK drinking water regulation threshold of 1500 ppm.

Figure 4-4-4. Camp Bastion Water bottling plant

The plant provided bottles specially designed to meet military requirements. Each bottle was 1 litre in size and designed to fill a standard military water bottle. The plastic bottle "blanks" however were commercially designed to expand to 1.5 litres. Therefore by blowing them up to only 1 litre, their walls were considerably more robust than commercially produced bottles. Furthermore they were square in cross-section, allowing more water to be packed per each pallet. These robust, tightly packed bottles could then be air-dropped to Forward Operating Bases. When it ceased production in June 2014 the plant had produced over 72.5 million bottles. This equated to over 6,400 vehicle moves and consequently is likely to have saved lives.

c. **Airside development.** The airfield was the principal logistic lifeline. At its peak in terms of aircraft movements it ranked as one of the busiest airports in the UK behind Heathrow, Gatwick and Stansted.[4] These movements were handled by a very small number of individuals.

Figure 4-4-5. Airside operations

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4   Heathrow deals with about 40,000 movements per month, Camp Bastion had up to 13,000 fixed- and rotary-wing aircraft movements, operating combat, medical and logistic flights movements (average 400 a day) per month.

The first runway, built in April 2006, was designed to handle no more than three aircraft movements per week. However by late 2007, a 2,350 metres (7,710 ft) long, 28 metres (92 ft) wide concrete runway had been built. This increase in capacity was designed to ensure that the runway could cope with a C17 landing at maximum weight. It also increased the capacity to 5,000 movements per month. Despite this expansion in capacity, it proved to be insufficient and by February 2011 the construction of a new, separate 3,500 metres (11,500 ft) runway was completed, which could handle almost all commercial and military aircraft. The old, shorter runway was then used as a parallel taxiway. A new air traffic control tower to cope with the increased demand was opened in June 2011.

Figure 4-4-6. The new air traffic control tower

The four storey air traffic control tower was designed and project managed by 529 STRE (Air Sp). It was a technically complex project and having a UK-based STRE manage it from start to finish, provided the continuity needed by this type of project. It was designed to work to UK and US aircraft standards for the US Marine Corps, Air force and Army. A new passenger handling facility was also added to cope with the increased personnel movements. This final airfield expansion was a complicated undertaking as it had to control the required clearances and distances between aircraft on an airfield that had to remain fully operational during the construction. Though the Royal Engineers had a significant capability to deliver, the US laid 2 million sq ft of AM2 (composite airfield matting) in three months. This increased the static parking facilities from 3 to 100 aircraft. Furthermore it enabled the US to bring in a mix of aviation fast jets, attack helicopters, UAVs, support helicopters and strategic lift aircraft. From a UK perspective, it enabled strategic lifts of materials and personnel up to the capacity of a Boeing 747.

    d. **Headquarters Buildings.** Two Headquarter buildings were constructed using K Span buildings. This type of structure had been installed in Kandahar and proved to make excellent open-span structures. They each had false floors for cabling and were augmented by external cabins for conference rooms and offices. This type of open plan office provided far greater cross-branch interaction than other traditional tented structures could offer. To counter their vulnerability from IDF, they were equipped with armoured desk tops under which staff could shelter.

6. All infrastructure projects in Camp Bastion were controlled and delivered by a team of Royal Engineers: a total of 75 (Military 60). This reduced as UK forces redeployed with the consequent reduction in infrastructure. Around 400 contractors were involved in the routine maintenance and minor new works at Camp Bastion. Maintenance was through the Infrastructure Support Provider (Afghanistan) contract, held by KBR throughout.

7. Key Lessons Identified.

Lesson: Contract management is important to deliver outputs, but contractor administration like accommodation, welfare, security and movement also needs careful consideration and should be planned from the outset.

Lesson: For key deployment, command, logistics and recovery infrastructure, best Value for Money (VfM) is achieved by planning for enduring use from the outset.

Lesson: Contractors, managed and guided by qualified and experienced military personnel, are significant force multipliers in enabling, sustaining and de-mounting operations.

Lesson: Contracts let in-Theatre are a significant element of overall contract support. In-Theatre indigenous contractors are required in addition to UK-based or international contractors.

Lesson: Delegated responsibility to the appropriate unit commander to direct and manage contractors alongside military force elements is key.

Lesson: Qualified and experienced military personnel are required at unit level to manage contractors effectively.

Lesson: Commercial timelines for contracting can be a limiting factor and should be built into plans.

CONTENTS

SUBJECT   **PAGE**

CHAPTER 5-1
TRAINING

BACKGROUND – THE EVOLUTION OF TRAINING FOR OPERATION HERRICK

1. Outwith operations, training is the most important activity that an Army can undertake. At its height the training for operations in Afghanistan marked a highly evolved, integrated and progressive training process that, although not without its problems, successfully delivered capable, prepared, Force Elements into theatre. As the Army now sets for contingency operations, it needs a subtly different training approach and mindset compared to that needed to train for a known campaign. However, Operation HERRICK provided many lessons relevant to the delivery of training for contingency.

2. The development of training delivery from Operation HERRICK 4 to Operation HERRICK 18 was characterised by an increasing specialisation of the training content to match theatre conditions and capabilities. This called for training and mission exploitation to be integrated as part of the operational design for formations/units, allowing the training delivery organisation to deliver relevant and, more importantly, situationally current information to force elements about to deploy. This was enabled by the forward basing of training organisation personnel in theatre, coupled to an agile operational short lessons loop. Together these closed the gap between the training environment and operational reality, enabling the most up-to-date Tactics, Techniques and Procedures (TTPs) and situational awareness to be delivered whilst also maintaining an agile training delivery organisation focussing on the future deployment rather than the last.

3. A key aspect of the development of training for Afghanistan was the evolution of the readiness cycle from the Formation Operational Readiness Mechanism (FORM) into the Campaign Formation Operational Readiness Mechanism Cycle (C-FORM). The deploying units during C-FORM would undertake a period of Foundation Training (FT) that would include the conceptual package of the Command, Staff and Tactical Training Exercise (CSTTX) and then an overseas or UK based Collective Training (CT) 3/4 level exercise delivered at the British Army Training Units at Suffield or Kenya (BATUS and BATUK respectively) or on Salisbury Plain.

4. This FT provided a high level of preparation[1] for Collective Mission Specific Training (cMST). During FT the units would start to conduct individual MST (iMST) so personnel could become qualified on specialist skills, allowing them to subsequently cascade these down within units. Concurrently the unit would then enter the cMST phase and start the cMST cycle. The C-FORM cycle is shown in Figure 5-1-1 below:

FT	Foundation Training
iMST	Individual Mission Specific Training
cMST	Collective Mission Specific Training

Figure 5-1-1. The C-FORM Cycle

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1 'Knowing what we now know, by the end of HFT on Salisbury Plain we had achieved at least 80% of what was needed at subunit level'. Source: Post Operation Interview (POI) - CO 4 SCOTS Operation HERRICK 14, April – October 2011.

5. The continuous development of MST was driven by a series of procedures and processes over the length of the campaign. Lessons learnt from the units were recorded on the Lessons Observed From Training system and internal reviews by the Collective Training Establishment (CTE) staff. This and information gained through a series of Mission Exploitation processes (the Initial Deployment and Post Training Report (IDAPTR), Post Operational Reports, Post Operational Interviews, Post Operational Presentations, and the Mission Exploitation Symposium) shifted the delivery of cMST events from a very basic delivery package in 2004 to the final PASHTUN series of progressive exercises which took deploying troops from an initial unit level live firing package through to a full integrated battlegroup, instrumented, field training exercise in a detailed, simulated Afghan environment. The MST training progression exercises are detailed at Annex A.

6. As well as these 'bottom up' drivers, MST was a campaign driven from a high level through the implementation of Operation ENTIRETY beginning in 2009. Operation ENTIRETY was directed by the Army Command Group and set the Army to meet the challenges of operations in Afghanistan more robustly, setting Operation HERRICK as the Army's Main Effort. Operation ENTIRETY is covered in detail in Part 1 of this study.

7. The impact of Operation ENTIRETY on training was demonstrated through the investment in Headquarters Collective Training Group (CTG) and the development of the Operational Training and Advisory Group (OPTAG). Other Operation ENTIRETY training measures included:

   a. Training immersion[2] became an essential element of training design.

   b. Training establishments were enhanced with campaign-specific facilities and training deliverers.

   c. The production of bespoke tactical doctrine.

8. Adopting the lessons learnt process and training the large number of deploying troops - as well as developments in threat, Force Protection and Command and Control - all influenced what was being delivered on MST. Training delivery required more time and, as will be seen from the following lessons, there were other challenges to the smooth delivery of MST that will need to be addressed as we look ahead to a future of training for contingency.

THE LESSONS

9. The training lessons that were identified and prioritised through the HERRICK Campaign Study process are set out below. These are broken down as follows:

   a. The Capstone Training Lesson: Training must be part of Operational Design.

   b. The Lessons. The remaining lessons have been divided under eleven thematic headings:

       (1)   Train as you Fight.

       (2)   Integration of Training.

       (3)   Stabilisation of the Training Audience.

       (4)   Professionalise the Training Organisations.

       (5)   Training the Enablers.

       (6)   Equipping Training.

       (7)   Driver and Crew Training.

       (8)   The Training Environment.

       (9)   Balancing the Delivery of Training.

       (10)   Conceptual Training.

       (11)   What We Train.

THE CAPSTONE TRAINING LESSON:
TRAINING MUST BE PART OF OPERATIONAL DESIGN

10. British Joint Doctrine sets out that, at the outset of operational planning, the Joint Commander will issue his Directive to empower the Joint Task Force commander and direct the enabling functions of Deploy, Sustain and Recover.[3] What has been learned throughout the Operation HERRICK campaign is that training must be an integral part of the overall operational design. It must be seen as the first of five enabling functions, or phases, of an operation: Train-Deploy-Sustain-Recover-Exploit; noting that training also overlaps into the deployment phase.

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2   Immersion Activity: 'For staff appointments or tactical roles that require an intimate understanding of the environment in which they will be operating, there might be utility in immersion activity, in which individuals are deployed into the operational theatre for a short period of time. This will enable them to develop their mission specific training requirement and also gain some familiarity with the environment into which they will shortly deploy'. Source: AFM Volume 1 Part 7 Training.

3   JDP 5-00 Campaign Planning (2nd Edition Change 2) page 2-9.

11. By being integrated into operational design from the outset, training will be better placed to ensure that the force is ready for deployment. It can then be informed and shaped to meet the requirements of the operating theatre in sufficient time to generate the appropriate MST programme, equipment levels and simulated environments.

12. This was not the case in the early Afghanistan deployments. However, as Operation ENTIRETY took hold, the training delivered for Operation HERRICK rapidly improved to ensure that the force was better prepared. This dramatic evolution required investment in the training deliverers (for example CTG, its Collective Training Establishments and OPTAG), available equipment and the lessons exploitation system.

13. Such experience demonstrated that training enablers need to be engaged at the beginning of operational planning. This will set the conditions for early immersion and the vital theatre recces that are needed to shape relevant, complex and credible training.[4] Such reconnaissance by the training delivery organisations will allow them to bring back fresh material and frame the exercise programme within a current, ground-truth, operational 'bubble'. In addition, providing units with bespoke immersion periods in theatre will allow them to deliver internal, cascaded, training on return. Theatre reach-back and an increase in SECRET connectivity also helped to ensure that training remains current. This practice must be maintained for future operational deployments.

14. Early integration into operational design should also ensure that the deploying force becomes a stabilised training audience – meaning that all those who require training undergo the full training package - in order to provide the maximum return on training; if not, the provision of training cohesion and assurance is extremely difficult.

Lesson: If training is to remain credible, complex and current then it must be part of the operational design.

THEME 1: TRAIN AS YOU FIGHT

15. One of the key training lessons from experience on Operation HERRICK is not a new one and reflects current doctrine[5]: an army must train as it will fight. However, operations in Afghanistan presented a particular challenge in meeting this requirement in that they brought together such a diverse range of Combined, Joint, Inter-agency, Inter-governmental and Multi-national (CJIIM) elements operating in a highly complex cultural and adversarial environment with UK Forces adapting and incorporating a wide range of new equipments and procedures to defeat an agile and evolving enemy.

16. This lesson reflects the absolute necessity of training to match the operating theatre in terms of environment, deployed capabilities, force structures (in particular Combined Arms Integration) and to accurately reflect the wide range of actors – including red, green, blue and white forces – that are likely to be encountered.

17. During much of Operation HERRICK, formations, units and individuals often found themselves deploying without having trained with deployed/theatre equipment, assets and other capabilities and organisations such as allies, indigenous forces and Partners Across Government (PAGs, formerly Other Government Departments – OGDs); as a consequence they did not fully understand how to operate with or alongside other organisations or capabilities – all of which carried potential risks.

18. Other issues included the lack of available indigenous forces (or a realistic substitute), air and aviation assets, ISTAR assets, key equipment (particularly Urgent Operational Requirements such as vehicles, weapons and Counter-Improvised Explosive Device (C-IED) equipment) and the 'black bag' issue of clothing, load carrying equipment and Personal Protective Equipment (PPE). These issues are explored further in the subsequent lesson themes.

Lesson: Train as you fight. To gain the maximum benefit from training, soldiers must have access to the range of resources that they would expect to receive in theatre in order to: understand the capabilities and limitations of equipment; the doctrine and capabilities of other forces/actors in theatre; and to understand how best to employ and mitigate any restrictions imposed by personal and protective equipment.

19. In order to 'train as you fight', training must accurately reflect the state-of-the-art operating procedures from theatre. Changes in Tactics, Techniques and Procedures (TTPs) and in the political and social conditions in theatre must be quickly passed to the training organisation and to units in order to minimise the requirement to adopt different TTPs on arrival in theatre (e.g. during RSOI[6] or in-theatre training). Experience on Operation HERRICK proved that resourced, forward based, trainers and lessons personnel enabled a coherent short lessons loop which ensured the delivery of theatre relevant and specific issues to troops under training within a matter of days or weeks.

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4   Interview Commander OPTAG March 2010 – November 2011. Note that references to individual sources only reflect where significant comment was raised by a commander. For clarity these references only refer to comments by 1* sources although they reflect a wide number of observations and comments from across a range of sources.

5   AFM Vol 1 Part 7 Training states:

'Training must be relevant to the needs of the individual or unit and designed to prepare them for likely tasks. It must prepare them for the most likely and challenging operational tasks. As a force element nears deployment on an operational task, it should be task organised, equipped, trained, acclimatised and conceptually prepared for the task it is about to undertake.

'Training must reflect, as closely as possible, the operational environment and be as realistic as safety permits. Throughout a training progression, the complexities of the contemporary operating environment should be introduced by degrees. Training should be set against credible scenarios and should be adversarial, to enable the achievement of standards of operational effectiveness achieved when engaged with and defeating a real enemy.

6   Reception, Staging and Onward Integration.

Lesson: Training must be informed through effective feedback from theatre and adapt at speed to reflect theatre conditions. Good Practice may be to deploy suitably qualified representatives from the training organisation (e.g. HQ CTG1) to the operational theatre to capture the information and relay it to the Lessons Exploitation Centre2 and training organisations in the UK.

THEME 2: INTEGRATION OF TRAINING

20. Integration of training refers to the need to train with all the actors and Force Elements (FEs) that will be encountered in theatre as well as being able to effectively employ all capabilities available to the deployed force. On Operation HERRICK the inclusion of both joint and multinational partners throughout the training progression greatly increased the operational capability of formations and units immediately on deployment.

21. Preparation for future operations requires rehearsing interoperability with the Joint, Air and Maritime components, Allies, PAGs, Indigenous Forces (IF) and the various likely specialist capabilities (such as C-IED, C4ISTAR etc.) that will deploy.

Lesson: Training must reflect integration with Allies, Indigenous Forces, Air, Maritime and Partners Across Government. Mutual understanding between services, allies, Partners from Across Government and Indigenous Forces can be radically improved by training and educational opportunities. The training must be cross-DLOD and focus on equipment capabilities and limitations, interoperability of C4ISTAR and ECM, doctrine and military language.

Lesson: Where appropriate, British forces must train alongside allied forces with whom they are to deploy in order to gain a better understanding of their doctrine and capabilities. The participation of allied forces in Mission Rehearsal Exercise activity is very important - alternatively OPTAG and formation/unit reps could travel to allied nations to train/liaise/advise/learn alongside their forces in their own training events.

Lesson: Units need to understand the capabilities and employment envelope of specialist units (e.g. C-IED and Search teams, J2 teams) alongside whom they are likely to work. Therefore regular opportunities must be created to allow coordinated training to take place which is of benefit to all parties.

Lesson: It is important for Commanders and Fire Support Teams to understand and, if possible witness, the full range of Offensive Support systems available to them and the effect that each weapon has on a target / potential for collateral damage.

Lesson: In order to ensure that Land units are properly prepared to integrate with air and aviation assets, live joint training, as provided by Exercise MOUNTAIN DRAGON4 must be conducted on a regular basis.

THEME 3: STABILISATION OF THE TRAINING AUDIENCE

C-FORM and remarkable stability enabled a degree of cohesion and mutual understanding that was a key factor in generating tempo and TF level effect.

Commander 20 Brigade Operation HERRICK 15.[7]

22. If the Army is to train as it will fight then it must ensure that those who require specific mission training receive it. However this cannot be achieved if elements of the training audience – for whatever reason - are unavailable to undertake the full range of necessary mission training. This calls for a training audience that is established and trained with as little change to its composition as possible. This, in turn, provides the vital team cohesion essential for fighting power.[8]

23. However, experience on Operation HERRICK demonstrated that this stability was continually undermined due a variety of reasons. In particular:

   a. The requirement to backfill posts up to establishment with deployable personnel.

   b. Planned and unplanned manning 'churn'.

   c. The late integration of Reservists into the training process. Under current practice Reserve soldiers can be mobilised for a nine month period. If they are to complete the full six month tour, reserve soldiers must either miss part of the collective training or unit decompression but they cannot complete both.[9] The risk is that reserve soldiers will not be fully trained and integrated into the unit or will not participate in post tour activities such as Mission Exploitation and medal parades, nor will they have the full opportunity to receive the correct level of Trauma Incident Management (TRiM) and Post Operational Stress Management (POSM). Therefore Reserve Forces

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7   20 Bde worked together for almost 18 months before MST.
8   POI Comd TFH Operation HERRICK15, September 2011- April 2012.
9   POI Comd TFH Operation HERRICK15, September 2011 – April 2012.

legislation must be reviewed to examine ways of maximising: training and integration opportunities; deployment windows; and post tour recovery procedures for reserve forces personnel.

   d. **Training authority over other Services.** When a designated single service is responsible for producing a Mounting Order for training that requires participation from the other services then the training deliverers must be empowered to exert training authority over those services. Operation HERRICK experience showed that Army-organised MST routinely lacked participation from the other services despite their presence being required.[10]

   e. **Collective and Individual Training Tensions.** The requirement for, and overlap between, collective and individual Mission Specific Training frequently led to training frictions. This issue is covered in more detail later in this chapter.

Lesson: In order to ensure maximum attendance on training courses and serials, it is essential that the training audience should be stabilised as early as possible within the training progression.

Lesson: Reserve Forces legislation must be reviewed to examine ways of maximising training and integration opportunities with regular forces, deployment windows and post tour recovery procedures for reserve forces personnel.

Lesson: When the Army has designated responsibility for training other services then the training deliverers must be empowered to exert training authority over those services.

THEME 4: PROFESSIONALISE THE TRAINING ORGANISATIONS

24. During the early Operation HERRICK deployments, Pre-Deployment Training (PDT) was very much driven and run by the deploying brigades. Consequently, as individual brigades took a leading role in training themselves for Afghanistan, the training became 'boxed' into disconnected 6-month periods. As a result the very early PDT exercises, in particular PDT for Operation HERRICKs 4 to 6, were potentially less effective due to this 'stand-alone' tour view of training.

25. This was addressed as part of Operation ENTIRETY, which called for training to take a much more professional, long term, campaign driven, approach and to integrate the training processes and activities into a wider Force Generation (FGen) and Force Preparation (FPrep) programme.

26. This led to the establishment of operationally focused training providers, for example the formation of the Collective Training Advisory Cell (CeTAC) and the Brigade Training Advisors (BeTAs) while synchronising training with the activities of the FGen and FPrep organisations. These were highly successful initiatives and the principle should be retained; either with the current organisations being maintained or with the framework in place to allow rapid regeneration. The development of a single point of contact (SPOC) within the training delivery organisation (CeTAC and the Core Planning Team) afforded both a deeper involvement and understanding of the formation commanders' intent as well as a more coordinated and cohesive training progression and content. This then allowed for 'bespoke' training to reflect both the environment and the commander's vision. 19 Lt Bde was used to stabilise training delivery through establishing the Core Planning Team. The Brigade delivered training from HERRICK 15 to HERRICK 18 which stabilised training deliverers and ensured a more coherent, cohesive and theatre relevant training package.

27. A key feature that evolved as the C-FORM cycle matured was the development of the role of OPTAG and Reserves Training and Mobilisation Centre (RTMC)[11] in delivering PDT in support of iMST and cMST. During the campaign OPTAG's reputation achieved a strong pedigree, variously described as: 'a jewel in the crown'; 'the premier training establishment for all Army personnel, individuals and units deploying on operations in the Land environment'.[12] OPTAG and the RTMC delivered training to all Army personnel, individuals and sub-units deploying on operations in the Land environment. It mobilised and de-mobilised all deploying reservists, designed adjusted and delivered the operational PDT and MST mandated by Defence to ensure that individuals and sub-units deployed current, competent, qualified and confident in the Theatre specific TTPs providing assurance to the chain of command. It achieved this by the delivery off the all ranks brief and tactical commanders' cadre (ARB/TCC), Train-the-Trainer (T3) specialist courses, Ex PASHTUN PANTHER and support to Ex PASHTUN DAWN (FTX).[13] In-Theatre, OPTAG also supported the Bastion Training Centre (BTC) delivering the RSOI package in support of Formation RIP thereby ensuring greater coherency with PDT. Currency was maintained by involvement in the in theatre short lessons loop and relevance maintained by deploying OPTAG personnel in longer term 'muddy boots' immersions within TFH and including OPTAG personnel in the deploying formation's initial reconnaissance. To enable this to occur the ORBAT of OPTAG developed to that shown in Figure 5-1-2.

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10   POI Comd TFH Operation HERRICK 6, April – October 2007.
11   RTMC is a subordinate organisation to OPTAG and currently based in Chetwynd Barracks, Chillwell. RTMC is responsible for the mobilisation and demobilisation of all Army Reserve soldiers, and training of all Individual Reinforcements and MOD sponsored Civilians deploying on operations.
12   The Future of OPTAG – A Straw-Man Proposal, Paper by Comd OPTAG dated 02 Feburary 2004.
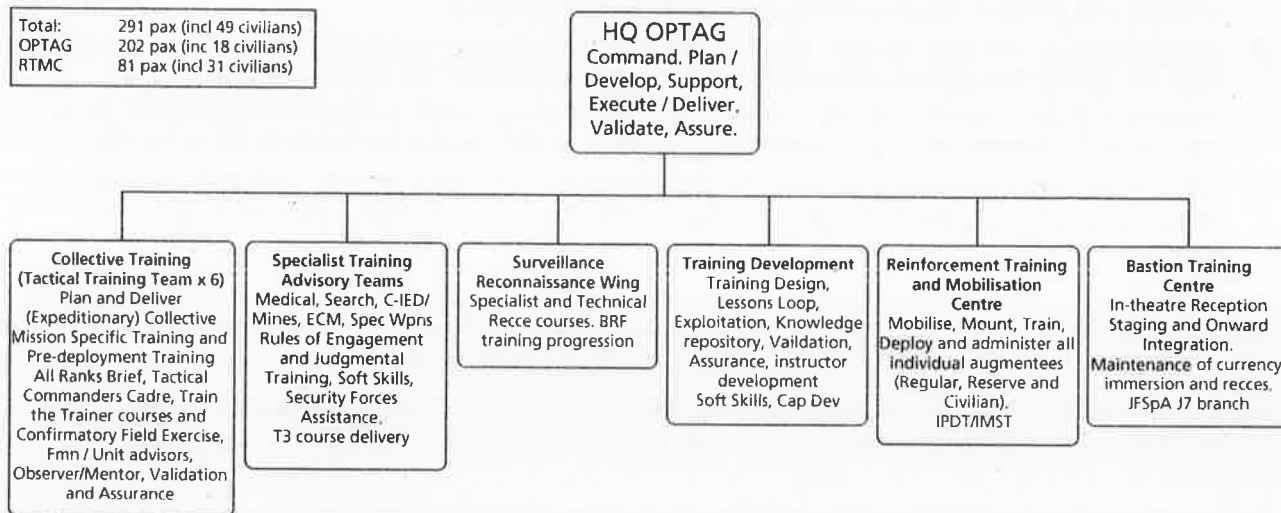13   For further detail see Annex A to Chapter 6-1.

Total:	291 pax (incl 49 civilians)
OPTAG	202 pax (inc 18 civilians)
RTMC	81 pax (incl 31 civilians)

HQ OPTAG
Command. Plan /
Develop, Support,
Execute / Deliver,
Validate, Assure.

Collective Training
(Tactical Training Team x 6)
Plan and Deliver
(Expeditionary) Collective
Mission Specific Training and
Pre-deployment Training
All Ranks Brief, Tactical
Commanders Cadre, Train
the Trainer courses and
Confirmatory Field Exercise,
Fmn / Unit advisors,
Observer/Mentor, Validation
and Assurance

Specialist Training Advisory Teams
Medical, Search, C-IED/
Mines, ECM, Spec Wpns
Rules of Engagement
and Judgmental
Training, Soft Skills,
Security Forces
Assistance.
T3 course delivery

Surveillance Reconnaissance Wing
Specialist and Technical
Recce courses. BRF
training progression

Training Development
Training Design,
Lessons Loop,
Exploitation, Knowledge
repository, Vaildation,
Assurance, instructor
development
Soft Skills, Cap Dev

Reinforcement Training and Mobilisation Centre
Mobilise, Mount, Train,
Deploy and administer all
individual augmentees
(Regular, Reserve and
Civilian).
IPDT/IMST

Bastion Training Centre
In-theatre Reception
Staging and Onward
Integration.
Maintenance of currency,
immersion and recces,
JFSpA J7 branch

Figure 5-1-2. OPTAG Organisation Diagram as at February 2014.

28. Such an established, structured and professionalised training delivery framework has the ability to develop a longer term outlook and 'campaign perspective' - recognising trends and building on success created by previously deployed Headquarters and formations - which will provide robust training coherence and continuity through an organisation that understands 'what good looks like'. This, in turn, requires stability of the training framework, for example continuity of Headquarters Collective Training Group (CTG), OPTAG and the RTMC. The relevant training organisations should be linked directly to a clearly articulated training policy and to any higher formations – usually the Division Headquarters - responsible for preparing the force. OPTAG has archived the sophistication of MST and RSOI for future operations, contingency and Forward Engagement. This is far wider than simply capturing the operation specific development of TTPs such as Operations BARMA and CARDEL, and includes capturing how and why training was developed and managed in order to inform future requirements more quickly. There have been significant achievements in terms of learning and the training architecture, and it is essential that Mission and Training Mobilisation Centre (MTMC) retains the structures and processes that have underpinned this transformed learning system.

Lesson: The training organisation must be established, stabilised and properly resourced to design, deliver and enable training that is driven by appropriate policy and is integrated with wider FGen and FPrep delivery.

Lesson: OPTAG and its subordinate command, RTMC, delivered training to all Army personnel; mobilised and de-mobilised all deploying reservists, individual augmentees and sub-units deploying on operations. It provided the assurance that both individuals and units deployed current, competent, qualified and confident in the Theatre specific TTPs providing assurance to the chain of command. The OPTAG concept should be developed and expanded beyond those individuals or units deploying on operations to also train those tasked to undertake Defence Engagement activity or UK resilience operations.

Observation: Tasking a brigade to stabilise training delivery ensured a more coherent, cohesive and theatre relevant training package worked. This should be taken as Good Practice for future operations.

29. An interim Task Order[14] has been produced by OPTAG into how a new MTMC might deliver mission training and mobilisation to individuals and forces for specified operations and deployments in order to deliver A2020 operational outputs. A proposed Operation Model is shown at Figure 5-1-3.

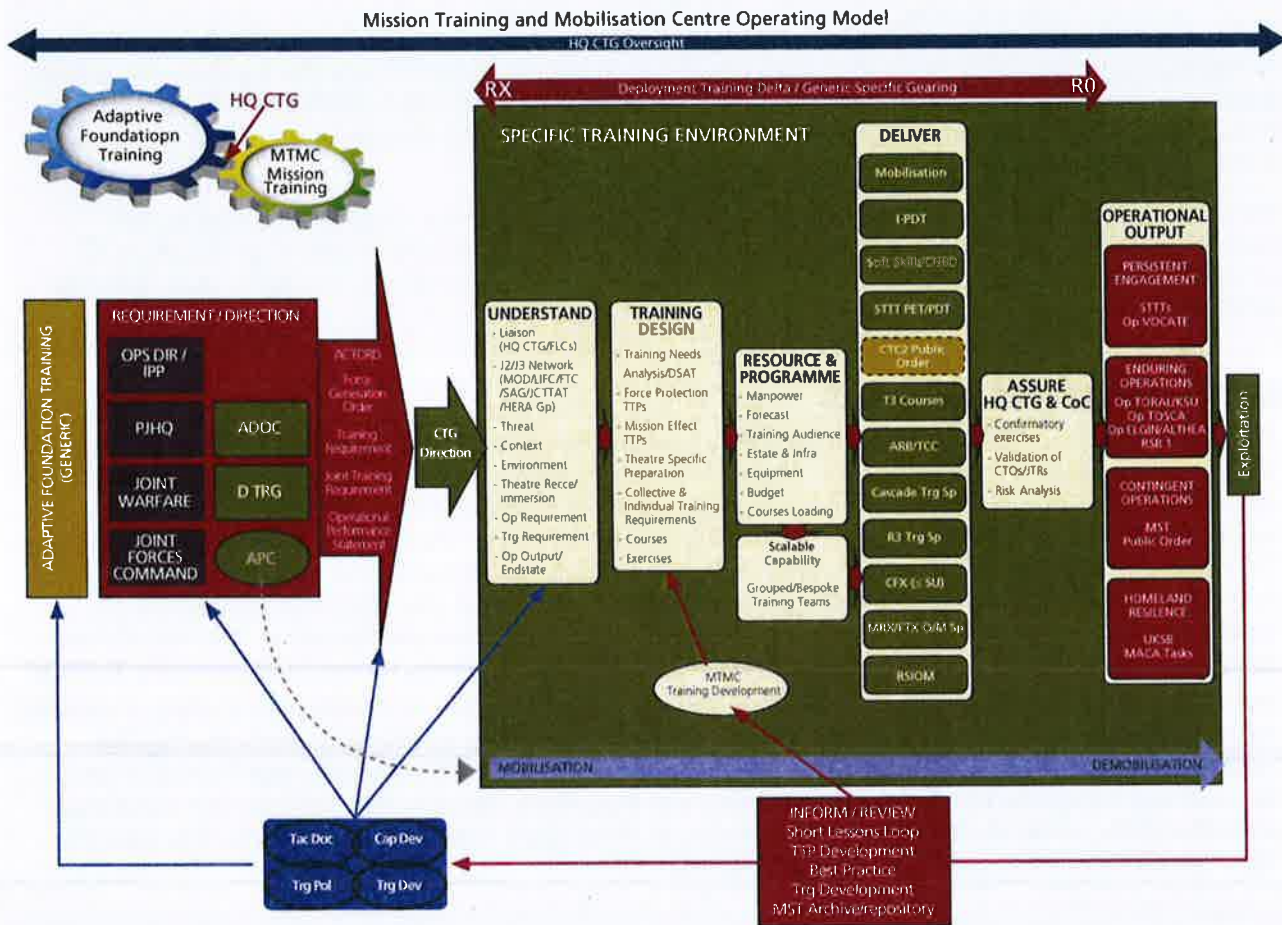14   OPTAG/MTMC 001/14 – Reorientation To A2020 Outputs – Interim Task Org Order, dated 23 July 2014.

Figure 5-1-3. Proposal for a MTMC Operating Model[15]

THEME 5: TRAINING THE ENABLERS

30. To train as you fight - even with a well integrated training programme, a stable training audience and a fully professionalised training organisation – requires the training to be supported by: the relevant enablers; appropriate equipment; properly qualified personnel to use that equipment (e.g. qualified drivers); and that the training environment replicates the anticipated operating theatre. These are covered in detail below.

31. All Force Elements (FEs), irrespective of Arm or Service, must have the opportunity to fully complete MST in their deployed roles and structures. Many of the deploying Combat Service Support (CSS) and Combat Support (CS) units were directed to provide non-tactical Real Life Support (RLS) for other deploying units at a number of points during the campaign. Therefore CSS units found themselves supporting training to the detriment of their own Special to Arm (STA) training and any wider combined arms collective training; whereas CS units found that the need to conduct intensive STA training (i.e. C-IED and Military Engineering tasks) prevented full participation in the combined arms collective training. This situation ran counter to the philosophy of 'train as you fight' since 'stove piped' STA training does not provide the necessary combined arms collective training required for operations, leading to potential gaps in competence and a greater risk on operations.

32. Therefore such enabling units should not be expected to provide RLS to other units other than in a relevant exercise scenario where realistic training objectives can be met. For all other RLS should be provided by non-deploying FEs. A good example of this in practice was the RLS provided by 19 Lt Bde's CSS units when the Brigade performed a designated training support role for a number of MST events towards the end of the campaign.[16]

Lesson: The CSS elements of battlegroups, and the CSS and CS units that are to operate in support of the battlegroups, must be part of the training audience. They must be enabled to 'Train as they Fight', in order to prevent gaps in competence (and confidence) and greater risks being taken on operations.

Lesson: Although RLS can be useful training for G4 personnel and units to a certain extent, they require training serials that will train and test them in conducting the roles that they will perform in theatre; RLS is very often a distraction from that task.

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15 Ibid: page 9.
16 POI Comd TFH Operation HERRICK 15, September 2011 – April 2012.

Lesson: Training resources from other units and formations (instructors, providers of RLS (Equipment Support, Logistic Support, Medical Support etc.) should be employed in training support to ensure that the maximum number of personnel from units which are to deploy are able to devote their attention fully to training. The same units and formations can also provide support to the deployed units by assisting the Rear Operations Group and maintaining Battle Casualty Replacements at readiness.

Lesson: Training Enablers (such as COEFOR, contractors, Infra, additional driving instructors and training fleet equipment care capacity) either add significant value to training (by adding realism) or allow more training to be conducted in a shorter period of time. Therefore there must be mechanisms in place to provide for these resources rapidly for contingency and enduring operations.

THEME 6: EQUIPPING TRAINING

33. Throughout Operation HERRICK, MST was constantly hampered by a lack of Theatre Entry Standard (TES) vehicles, weapons and equipment on which to train. With an imperative to deploy these to theatre, usually to fulfil an Urgent Operational Requirement (UOR), the result was a paucity on which to train and the need to conduct additional training once in theatre – to the detriment of delivering operational effect.[17] Therefore sufficient mission-specific and TES equipment, from large vehicle systems down to individual 'black bag' and protective equipment (e.g. OSPREY[18]), must be available to allow those undergoing training to learn how to operate that equipment competently; for vehicles this applies to operating as individual platforms as well as in combined arms groupings. This must be well managed in terms of allocation and Equipment Care to ensure that the maximum number of platforms are available.

34. This reinforces the lesson that UORs must be delivered across the Defence Lines of Development (DLODs), in particular the Training DLOD. Delivery and integration of UORs requires that personnel are trained to deliver the required capability and this, in turn, calls for delivery in sufficient numbers to facilitate the comprehensive training of user/ operators and maintainers to high levels of confidence and competence. Failure to fully integrate UOR capabilities across the DLODs will lead to significant risk into theatre as, for example, vehicle crews may not be fully trained to 'fight' the platform. This issue is examined further below.

Lesson: Sufficient equipment must be available to units in training to allow them to learn how to operate that equipment competently (both as individual platforms and in combined arms groupings where necessary). The equipment must be well managed (in the process of allocation to units and in terms of equipment care) to ensure that the maximum number of platforms is available for training at any one time.

Lesson: It is vital that sufficient quantities of UOR weapons and specialist weapon systems are held in the Operational Training Equipment Pool along with the associated ammunition.

Lesson: UORs must be delivered across the Defence Lines of Development (DLODs), in particular the Training DLOD. UOR funding, for example through NACMO,[5] must include funding for operationally-specific training on the UOR equipment.

THEME 7: DRIVER AND CREW TRAINING

35. With the introduction of the Protected Mobility (PM) fleet during Operation HERRICKs 6 to 7 (2007 into 2008), the requirement for suitably qualified drivers increased rapidly. This brought into sharp relief the challenges of training to meet the needs of demanding UK peacetime driver licensing; indeed licence acquisition resulted in many individual soldiers being unable to attend vital individual and collective training events.[19]

36. By Operation HERRICK 17 (2012-2013) it was clear that driver training was still being framed by UK licensing arrangements, not by the needs of operating PM fighting vehicles in a hostile environment. The four week intensive training package was considered to be sufficient for gaining the appropriate licence, but not necessarily for providing the force with suitably experienced and confident vehicle operators.

37. The requirement to provide military drivers with the ability and the competence to drive large, heavy vehicles (Large Goods Vehicles and/or Protected Mobility Vehicles) will endure and therefore suitable driver training should be incorporated in initial or Foundation Training and a review should be conducted to explore the relative merits and costs of such an approach. Where this is not possible, a surge capability should be considered (perhaps through a contractor solution).

38. Driver training is only one training element for providing the PM capability. Drivers must work as part of a tight-knit vehicle crew to deliver the full potential operating capability of a vehicle platform; they must be able to 'fight' the vehicle, not just operate it. Operation HERRICK saw the introduction of the Crew Training School (CTS) which sought

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17 POIs: Comd TFH, Operation HERRICK 7, October 2007 – April 2008; Comd TFH, Operation HERRICK 9, October 2008 – April 2009; Comd TFH, Operation HERRICK 10, April – October 2009; Comd TFH, Operation HERRICK 13, April 2010-October 2011 Comd TFH, Operation HERRICK15, September 2011-April 2012.

18 As an example, the delay of issuing of OSPREY body armour until deployment meant that soldiers could only adapt to new firing positions and techniques (due to the nature of the equipment) once in theatre.

19 POIs: Comd TFH, Operation HERRICK 11, October 2009-April 2010; Comd TFH, Operation HERRICK 15, September 2011-April 2012.

to minimise the detrimental effect that having too small a training fleet had on Individual and Collective Training. The CTS conducted coordinated training for drivers, commanders and gunners (depending on vehicle type) in a centralised location where resources were pooled and equipment maintained more efficiently.

39. The establishment of a CTS should be considered as Good Practice. It provides a single point where resources can be co-located (instructors – both vehicle-specific and tactical, platforms, weapons, EC, training facilities, RLS etc.) within economic reach of a suitable training area where day and night training can be conducted with minimal constraints.[20]

Lesson: The size of the training fleet has very often been too small to allow for comprehensive training. A training fleet is required of a size which is sufficient to enable collective training events to be conducted while allowing individual and continuation training to continue.

Lesson: Suitable driver training should be incorporated in Initial or Foundation Training and a review should be conducted to explore the relative merits and costs of such an approach. Where this is not possible, a surge capability should be considered (perhaps using contractors to deliver the training or by brigading unit instructors and vehicles). Under these circumstances, NACMO funding should be justified earlier in order to support training.

Lesson: Where the pool of vehicles to be employed by a force is not sufficiently large to generate a suitably sized training fleet for crew-served vehicles, a Crew Training School (CTS) should be established. Under such circumstances, the establishment of a CTS should be considered Good Practice.

THEME 8: THE TRAINING ENVIRONMENT

40. Soldiers should train in an environment that closely resembles the theatre of operations. Buildings and urban areas in particular should be constructed which mirror the type that will be encountered on operations. This infrastructure is required on UK-owned training areas and should be developed at an early stage in the operation.

41. The use of simulation must be maintained post-Operation HERRICK and for contingency; it has provided a means of incorporating capabilities into training which would be restricted in live training because of their expense or safety considerations. Although not all types of training should be simulated, simulation does allow for the repetition of training serials inexpensively when compared to 'live' training, particularly those serials involving high cost munitions and aircraft.

Lessons: Buildings and urban areas in particular should be constructed which mirror the type that will be encountered on operations.

Lesson: The use of simulation must be maintained for contingency. It has provided a means of incorporating capabilities into training which would be restricted in live training because of their expense or safety considerations.

THEME 9: BALANCING THE DELIVERY OF TRAINING

42. Doctrinally[21] individual, collective and mission specific training form part of an integrated, progressive, training and readiness cycle which provides the necessary structure to ensure that the right training is provided to the right audience at the right level at the right time. In essence, individual Foundation Training[22] precedes collective Foundation Training which is then followed by MST. MST comprises additional individual and collective training to generate the particular skills and competencies for a specific operation with a representative Order of Battle (ORBAT), using any different or UOR equipments, structures, processes and adapted procedures. In order not to detract from MST it is highly desirable that all required individual and collective Foundation Training competencies are achieved prior to MST.

THE IMPORTANCE OF FOUNDATION TRAINING

43. For most of Operation HERRICK MST was considered to be very good for the combat arms, providing the right level of theatre training prior to deployment through a progressive exercise programme culminating in Exercise PASHTUN DAWN on Salisbury Plain. Although it was considered successful, the MST focus on the ground-holding companies could detract from the delivery of MST to the specialist groupings (e.g. the BAG[23] and PMAG[24]).

44. Despite the overall success of MST, it was repeatedly remarked by commanders that Foundation Training was more valuable as it was essential to get the 'basics' of warfare right.[25] Experience demonstrated that Operation HERRICK,

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20 Comd TFH, Operation HERRICK 13, April –October 2010.
21 AFM Vol 1 Part 7 Training, p 1-7.
22 Foundation training. Foundation training allows units to achieve tactical competence on core equipments, through progressive individual and collective training to a common scenario, thereby achieving a generic operational readiness.
23 BAG: Brigade Advisory Group.
24 PMAG: Police Mentoring and Advisory Group.
25 For example see POIs: Comd TFH, Operation HERRICK 8, April – October 2008; Comd TFH, Operation HERRICK 14, April – October 2011.

even though it was a counter-insurgency operation, required an understanding of the doctrine of manoeuvre and a deep and clear understanding of Combined Arms Manoeuvre at brigade and battlegroup levels.

45. The use of BATUS[26] and BATUK[27] was repeatedly singled out as being vital in developing these skills even though it lacked the complex terrain found in Helmand. It provided an environment that demanded endurance and applied pressure to commanders that could not be replicated elsewhere. It also reinforced the importance of dynamic and flexible task organisation between and even during missions.

Lesson: Foundation Training as delivered in BATUS or BATUK, proved vital in the preparation of force elements for operation HERRICK. Repeatedly cited by commanders, at all levels, as the most valuable form of training. This type of training should be retained and reinforced for contingency.

INDIVIDUAL VERSUS COLLECTIVE TRAINING.

The multifarious requirements for Individual Training drove a coach and horses through the given staff solution. Most of us underestimated the deleterious impact the huge impact mandatory individual training would have on our collective training opportunities.

Operation HERRICK 13

46. Throughout much of Operation HERRICK a proportion of the training audience missed collective Foundation Training and, in particular, collective MST due to having to attend further individual training. Although pre-deployment training was assessed as being of a very high standard, it was often seen as 'too busy' due to the loss of personnel to conduct individual training in what was considered to be Foundation Training skills; for example Heavy Machine Gun training, drivers' courses, search courses, CIMIC (Civil/Military cooperation) courses and so on. The scheduling of these courses during MST made it difficult to send people on them at any other time and, because most of those took part were commanders, this adversely impacted on collective training events.[28]

Figure 5-1-4. Camp Bastion RSOI tent

47. Therefore the requirement is to sequence individual training in order not to undermine collective training. This may call for a detailed re-evaluation of the individual MST requirement (SOTR) with a robust approach as to what is mandatory and what is desirable.

48. An increased level of collective training support from the 2* Headquarters, as well as appropriate designated ownership of courses, will improve the sequencing and delivery of individual and collective training, and will better relieve the pressure on individuals.

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26 British Army Training Unit Suffield, Canada.
27 British Army Training Unit, Kenya.
28 POIs: Comd TFH, Operation HERRICK 10, April-October 2009; Comd TFH, Operation HERRICK 11, October 2009-April 2010; Comd TFH, Operation HERRICK 13 April –October 2010.

THE ROLE OF RSOI

49. The provision of in-theatre training is regarded as essential to complete the operational training cycle. The training element of RSOI[29] should therefore provide in-theatre training based around the '4 Rs' of Remind, Revise, Rehearse and Reassure. This takes place in the deployed theatre, using the types of environment in which they will operate, trained by soldiers who have current or recent experience of that theatre and with the UOR and other equipment which they will employ once they deploy into their AO. It should also provide the most realistic opportunity to train alongside indigenous forces.

50. During Operation HERRICK it was found that frictions between individual and collective training, the lack of OTEP equipment and vehicles and a rapidly changing operating theatre meant that in-theatre training during RSOI had to shift focus from refreshing already mastered competencies to teaching new skills to recently arrived personnel.[30]

51. Although carefully tailored RSOI training can make up for certain training shortfalls (for example where troops have not had sufficient exposure to UOR-based capabilities to develop competence and confidence), it must not be seen as a panacea to make up for missing individual or collective training that should have been completed prior to deployment.

UNIT TRAINING

52. A unit should be able to organise and carry out its own training to the appropriate collective training requirement. However, due to the nature and complexity of Operation HERRICK they were unable to do so and as a result the Army now has a generation of people who have only experienced delivered training and do not necessarily understand that training can be self delivered within units. As the Army moves to contingency it must rediscover the value and processes in carrying out their own collective training notwithstanding that the complexity and integration of assets does become more complicated as training moves up through the collective training levels.

> **Lesson:** Where possible, individual training must be de-conflicted with collective training activities. The requirement (within limited resources) is to meet individual training objectives while ensuring that sufficient collective and joint training is conducted to allow unit/sub-unit to operate within a Joint Battle space. Commanders must have an understanding of the risks involved in placing more emphasis on one element of training to the detriment of another.
>
> **Lesson:** Training during RSOI should not be a substitute for missed pre-deployment training.
>
> **Observation:** Units will have to relearn how to conduct their own collective training.

THEME 10: CONCEPTUAL TRAINING

53. As a force element nears deployment, it should be task organised, equipped, trained, acclimatised and conceptually prepared for the operation it is about to undertake.[31] A key element of the conceptual preparation for deployment to Afghanistan was to gain an in-depth understanding of the environment and, in particular, its culture. Such conceptual training was essential for those required to work alongside indigenous forces.[32]

54. Conceptual training was provided on an individual and collective basis with activities varying from the provision of a pre-deployment reading list on the Army Knowledge Exchange (AKX) through to the provision of accurate, fully immersive, simulated complex Afghan environments during MST using large numbers of contracted 'actors' to provide a representative population.

55. Another example of Good Practice was the running of HERRICK Study Weeks by the deploying Brigades assisted by Afghan COIN Centre[33] to conceptually prepare deploying personnel using the latest theatre-specific doctrine, feedback and experience. This 'HERRICK Study Week' is covered in more detail from a doctrine perspective in Chapter 6-8.

56. The continual development of theatre reading packs and the development of Tactical Doctrine Notes (TDNs) ensured a greater intellectual understanding amongst commanders and soldiers at all levels. This allowed better depth of knowledge about the context of the ever changing campaign.

57. An element of conceptual training that proved to be highly valuable was for troops preparing for partnering roles to be 'immersed' with indigenous forces.[34] Ideally this would begin during MST however, where this was not possible, it is recommended that the incoming UK personnel spend time (possibly through an extended hand-over) alongside the British troops who are already partnered with the indigenous force. This provides the incoming troops with an opportunity to better understand the culture and procedures of the indigenous force with whom they will partner.

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29   Reception, Staging and Onward Integration.
30   POIs: Comd TFH, Operation HERRICK 8 April-October 2008; Comd TFH, Operation HERRICK 6, April – October 2007.
31   AFM Vol 1 Part 7 Training p 1-4
32   POIs: Comd TFH, Operation HERRICK 10, April-October 2009; Comd TFH, Operation HERRICK 13, April – October 2010.
33   Now the Land Stabilisation and Counter-Insurgency Centre (LSCC), part of the Directorate of Land Warfare, Warminster.
34   POI: Comd TFH, Operation HERRICK15, September 2011- April 2012.

This proved to be highly successful in Afghanistan and it allowed the partnering/mentoring force to shape their own training.

58. Another aspect of conceptual training related to preparation for 'strategic compression'. The Brigade Headquarters in Helmand delivered a function rather more akin to that of a Divisional Headquarters in an operational theatre; working in the strategic, operational and tactical domains (with significant blurring between them), with multiple operational and national chains of command/influences including the 'London to commander' link. The training challenge for strategic compression was principally conceptual; the requirement to develop a common, deep understanding of the wider context (and associated nuances) in which the Brigade/TF Headquarters was operating. Training the integrated TF Headquarters was command led and command owned and mainly self-taught. Early engagement by the Brigade Command Group (principally the Commander and Chief of Staff) with preceding Brigades/TF Headquarters, PJHQ (J3 OT desk, J5 and the Command Group) and the MOD (Operations Director) was essential to developing mutual understanding, identifying the likely requirements and establishing working relationships.

59. In respect of staff training (enabled through the PASHTUN STAFF series of exercises) it was fundamental to explain and understand:

    a. The higher context in which the operation was nested.

    b. Risk tolerances.

    c. The role of differing organisations, directorates and departments as well as the pressures they were under; and their likely information requirements (including the associated level of detail and timelines).

60. These could be termed the political critical information requirements and this understanding was facilitated by the pre-deployment reconnaissance programme, the early identification and integration of headquarters augmentees into training (critically those in the Command Group such as the POLAD and LEGAD), and proactive engagement. Expanding the Command Group immersion programme (Ex PASHTUN DDALA HOSSIARRI coordinated by the Land Intelligence Fusion Centre (Afghanistan) (LIFC(A)) to include PJHQ, MOD, Foreign Office and key ministerial advisors paid significant dividends. The immersion of the identified POLAD into PJHQ and MOD (for a number of weeks) was also essential. Regular engagement with PJHQ (J3 OT and J5) further deepened understanding, trust and relationships.

61. Having set this foundation, Exercise PASHTUN HORIZON allowed these strands to be consolidated and embedded into the headquarters. Command engagement with the Force Generating 2* Headquarters, CTG and CSTTG allowed collective training objectives to be adjusted and likely scenarios identified to ensure a correct focus was placed on this dynamic and requirement. The use within the Brigade Headquarters of a dedicated Red Team and the involvement of PJHQ including CJO and Chief of Staff Operations in Exercise PASHTUN HORIZON ensured that analysis was detailed, relevant and deeply realistic.

62. At maturity, the Operation HERRICK conceptual training package was assessed as being very effective; however this took time to develop and was founded in experience gained through an enduring campaign. For future operations the training organisations must be supported, at short notice, by a wide range of subject matter experts in order to provide a comparable level of conceptual training for deploying personnel. This calls for integration with regional experts, CJIIM partners and the likes of the Land Intelligence Fusion Centre and the Security Assistance Group.

> **Lesson:** The requirement to deliver contextual training will endure. Information provided to deploying units by the Army Knowledge Exchange, Land Stabilisation and COIN Centre, LIFC(A) significantly enhanced pre-deployment understanding. For contingency, the level of detailed contextual training should be maintained and expanded beyond those units deploying on operations to also inform units tasked to undertake Defence Engagement activity or UK resilience operations.

> **Lesson:** There is an enduring requirement for immersion training for soldiers preparing for partnering / mentoring. Those preparing for partnering roles must be 'immersed' in the culture and method of operating alongside the indigenous forces within the theatre.

> **Lesson:** The requirement to prepare commanders and staff for 'strategic compression' will endure. The Command Group immersion programme provided the essential CJIIM environment for key staff, particularly POLADs, to build understanding, trust and relationships before deployment. This contextual training model should be formalised and developed for contingency.

THEME 11: WHAT WE TRAIN

63. Training for operations in Afghanistan demonstrated that the Army comprehensively evolved its training delivery processes to provide theatre-specific skills: However, as the Army moves to a contingency mindset, the immediate legacy of this training is that we now have a force with an ingrained 'HERRICK-ism' about how it conducts its business. This is reflected most obviously at lower levels, where many of our officers and soldiers only understand warfare in the context of Afghanistan. The expectation of semi-static, FOB based, operations has filtered into our DNA and diluted our expertise in Combined Arms Manoeuvre warfare and ability to operate in austere conditions against a capable combined arms adversary. Essentially – and for very good reasons - we have become very good at training for 'the war', not 'a war'.

64. For contingency we now need to re-focus ourselves upon how to train in the basic martial qualities of move, fight and communicate in an austere environment and often at night. In addition to these, Operation HERRICK has highlighted some additional basics that our training needs to embrace if we are to meet the diverse challenges of contingency:

   a. **Stabilisation.** Training for contingency does not mean a return to training purely for major combat operations against a near-peer enemy. The requirement to be able to conduct stabilisation remains, and experience in Afghanistan shows that this calls for an additional focus on: understanding COIN doctrine and principles; maintaining the importance of gaining cultural understanding; and understanding consequence management.

   b. **Counter-Improvised Explosive Device Training.** Counter-Improvised Explosive Device (C-IED) training should now be a part of Foundation Training. This should include the all arms search and ground sign awareness techniques required to counter ▮ ▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬ ▮).

   c. **Medical Training.** Medical training during operation HERRICK underwent a rapid evolution. At the individual level it saw the introduction of Battlefield Casualty Drills (BCD, replacing the Battlefield First Aid MATT) and the introduction of the Team Medic. Team Medic training was based on the explicit nomination of an individual within a tactical team to focus on the provision of first aid to a casualty using extended medical competence above BCD. The success of Team Medics emphasises that this training be brought into Foundation Training for contingency.

     (1) **HOSPEX.** At the collective level a key improvement was the introduction of Hospital Exercises (HOSPEX) at the Armed Medical Services Training Centre (AMSTC) in Strensall. This was a full-scale hospital trainer that enabled highly realistic Collective Training at Level 3 which also allowed the development of medical processes and appropriate validation.

     (2) **Expectation Management.** The tactical response to casualties has more than ever become an embedded element of all tactical training and must remain a core competence which should be tested within Foundation Training and Mission Specific Validation for contingency. However, such training must reflect a contingency mindset and not raise expectations from training audiences that the Operation HERRICK 'Gold Standard' of pre-hospital emergency care and casualty treatment will be the norm for future operations.

   d. **Rules of Engagement and Judgemental Training.** Rules of Engagement and Judgemental Training remain vital to preparing and sustaining the force in contact. The pressure on our junior commanders is considerable and we must ensure that we continue to prepare them properly.

   e. **Operational Shooting.** Marksmanship from unconventional firing positions and at moving targets should no longer be considered an advanced skill and should be included within mainstream training to all arms. The Annual Combat Marksmanship Test (ACMT) is insufficient preparation for those individuals who routinely deploy 'outside of the wire' since such shooting tests did not reflect the realities of combat engagements during Operation HERRICK. Most of these occurred either at short or long ranges, with targets that were mostly fleeting in nature: 'watch and shoot' training in close/complex terrain at short range (below 100 metres) and observational snap/opportunity shoots from prone and protected locations at longer ranges (above 300 metres and out to 900 metres) should increase. Snap shots at pop-up/drop-down static and moving targets at operationally representative engagement ranges are required, along with training and firing of all weapon systems from sangars and improvised sangars (such as Protected Mobility weapon stations). The current annual tests require a soldier to shoot a tight group from a static position (prone or kneeling); this is only a good indicator of a soldier's ability to apply marksmanship principles, it falls short of training the soldier for battle.

   f. **Command/Staff Procedures.** Staff training and preparation was – providing the training audience was stable – seen as providing a solid foundation for the planning and conduct of operations in Afghanistan. However a number of issues were noted:

     (1) **Staffing resilience.** Staff structures and competencies need to be more resilient to cope with shift working and absences due to leave, detachments etc.

     (2) **Specialists.** The integration of specialists (C-IED, J2, Air etc.) needs to be undertaken as early as possible. Command and staff training will always be one of the first collective training events and is therefore the ideal opportunity to integrate specialists into headquarters and identify capabilities and resource requirements in the early planning cycles.

(3) Environmental Training. Staff training must be carried out in a realistic environment. This requires an understanding of the developing dynamic operational environment to ensure that this is replicated as realistically as possible in all command and staff training.

(4) Staffwork Skills. It was observed that the staff skills of Captains (SO3s) were insufficient to meet the needs of the deployed headquarters which resulted in wasted staff time as SO2s and SO1s were required to check work and conduct on the job training. SO3s should conduct staff skills training as part of their routine military training in preparation for working in unit or formation level headquarters.

g. **C4ISTAR.** The information systems deployed in support of Operation HERRICK were heavily dependant on UOR equipment. However, the core training requirement and foundation training remains linked to existing core systems. This has lead to a disconnect between the C4ISTAR equipment used in training and that actually used on operations. This impairs the train as you fight principle and, as covered earlier, soldiers must train on the C4ISTAR equipment they will be using in theatre.

h. **Depth of Knowledge.** Where training on UOR C4ISTAR equipment was possible it led to the delivery of a small number of personnel qualified on that equipment. This has led to commanders being confronted with the choice of conducting 'deep' or 'broad' training. Broad training leads to communicators who have a shallow knowledge of multiple systems whereas having individuals specialise in one or two pieces of hardware or software leads to a situation where we need many signallers from many units in each location to operate the full range of C4ISTAR capabilities.

i. **Counter-Insider Threat.** The risk of an Insider Threat[35] could emerge in future operations as the mentoring and advising roles become more established in contingency planning. We must therefore:

(1) Retain the skills to develop cultural understanding of indigenous forces.

(2) Conduct training which will help to prevent the circumstances in which this threat could emerge and which will help to counter the threat if an incident should occur.

(3) Counter Insider Threat techniques must be formally taught and tested on mission training and revised in theatre during RSOI. (The Counter-Insider Threat, ███████████ , is considered as Good Practice and is covered in more detail in Chapter 7-3).

j. **Level 1 Materiel and Personnel Exploitation.** Material and Personnel Exploitation (MPE) incorporates the comprehensive and systematic collection, processing and dissemination of intelligence obtained as a result of Tactical Questioning and extraction of data from recovered materials. This multiple source process makes extensive use of non-traditional intelligence collection, including the collection of biometric and other forensic information, data recovered from electronic devices and digital systems, as well as hard copy documents. However there is, as yet, no bespoke Level 1 training so such operations have made use of existing capability based around the Weapons Intelligence Specialist (WIS) Company. This capability now requires specific training and a framework is reflected in Doctrine Note 09/16 LEVEL 1 Materiel and Personnel Exploitation.

k. **Captured Persons (CPERS).** Operation HERRICK, as previously in Operation TELIC, once again demonstrated the potential adverse operational, and sometimes strategic, issues raised due to the adverse handling of CPERS. Therefore it remains essential that all personnel must receive appropriate CPERS training prior to deployment. This should include having an understanding of their overall CPERS responsibilities introduced during Foundation Training and then theatre specific CPERS training prior to deployment. This was achieved during Operation HERRICK during MST and Combined Arms Staff Training. Further detail on wider CPERS training issues can be found in Chapter 7-4.

l. **Air-Land Integration (ALI).** Operation HERRICK witnessed very high levels of ALI which proved vital to tactical success again and again. However, the ability to conduct ALI is a highly perishable skill and to prevent potential skill-fade, the Army needs to maintain a robust conceptual and structural focus from which to expand the ALI capability across formations committed to future operations. Two areas for development are:

(1) Inter-Service Relationships. This can be enhanced through improved formal and informal inter-service relationships between Land and Air units and ALI training synergies developed by synchronising Air training events of the Defence Exercise Programme (DXP) with the Land Operational Readiness Mechanism.

(2) Simulation. The use of simulation is vital in training where assets are scarce. The Air Battle Training Centre at RAF Waddington was utilised to deliver Exercise MOUNTAIN DRAGON[36] and proved to be the single most effective training event for the development of joint fires integration staff.

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35 See Chapter 2-4 for details.
36 Exercise MOUNTAIN DRAGON was a Joint Fires virtual training package which delivered simulation training for Fire Support Teams and artillery Tactical Groups.

Observation: A significant number of army officers and soldiers only understand warfare in the context of Afghanistan. Static, FOB based operations, against a lightly equipped enemy has filtered into the Army's DNA and diluted our expertise in Combined Arms Manoeuvre warfare and ability to operate in austere conditions against a near-peer adversary.

Observation: Operation HERRICK has highlighted the following enduring basics that need to be incorporated into Foundation Training; Stabilisation and COIN, cultural understanding, consequence management, C-IED, counter-insider threat, Level 1 MPE, CPERS and ALI training. Individual training should include; Team Medic, RoE and judgemental and enhanced SO3 staff training.

Observation: The Army needs to maintain a robust conceptual and structural focus from which to expand the ALI capability across formations committed to future operations. More opportunities need to be actively developed through exploitation of the Defence Exercise Programme.

Lesson: Army shooting policy requires review. The ACMT does not adequately prepare soldiers for operations.

Lesson: The Air Battle Training Centre proved to be the single most effective training event for the development of joint fires integration staff. This capability should be maintained and strengthened for contingency.

OPERATION HERRICK MISSION SPECIFIC TRAINING PROGRESSION

Serial	Exercise Name	Nature of Training	Location	Training Deliverer	Remarks
1	PASHTUN HAWK	Unit delivered range package to get units to the start standard for Combined Arms Live Firing Exercise (CALFEX)	Lydd and Hythe	Deliverd by 1*FGen/Prep HQ	The Lydd and Hythe live firing package was used to enhance battle shooting, targeted up to section level, practising theatre Tactics, Techniques and Procedures (TTPs) and weapon systems. The focus was on operational marksmanship and effective fire control in an Afghan tactical setting.
2	PASHTUN PANTHER	Sub-unit Command Field Exercise (CFX)	Stanford Training Area (STANTA)	Operational Training and Advisory Group (OPTAG)	PASHTUN PANTHER focussed on practising theatre life-saving TTPs at sub-unit level in a realistic, simulated, Afghan environment. The focus panred from a normal day in Helmand to the worst-case scenario to ensure that troops were fully confident with their skills and TTPs. The nature of the exercise was generic so sub-units could amend their TTPs to the nature of their deployed role. Units could gain training benefit for their Headquarters and develop their sub-unit / unit connections and, separate from the main exercise, use the opportunity to refine planning procedures achieved on the CSTTX.
3	PASHTUN LION	Battlegroup (CT4) Command Staff Tactical Training Exercise (CSTTX)	Warminster or Sennelager	Command, Staff and Tactical Training Group	The focus of the CSTTXs was to develop and refine staff planning and execution procedures, adapting and integrating these with Afghan National Security Force (ANSF) methods. Additionally, focus was on the management and fusing of large quantities of information and familiarity with theatre Communication and Information Systems. PASHTUN LION often represented the first time that the ORBAT came together and so it provided the opportunity to start familiarisation and integration of other capabilities, including understanding the practicalities of new operating models and attached arms.
4	PASHTUN STORM	Dismounted CALFEX	Castlemartin Ranges	Live Fire Group	Became an element of PASHTUN TEMPEST
5	PASHTUN LIGHTNING	Mounted CALFEX	Castlemartin Ranges	Live Fire Group	Became an element of PASHTUN TEMPEST

Serial	Exercise Name	Nature of Training	Location	Training Deliverer	Remarks
6	PASHTUN TEMPEST	CALFEX	Castlemartin Ranges	Live Fire Group	Exercise PASHTUN TEMPEST was the combination of the Dismounted CALFEX (PASHTUN STORM) and the Mounted CALFEX (PASHTUN LIGHTNING). The exercises were merged as it was deemed best practice and offered better training value. The prime purpose of PASHTUN TEMPEST was to support the integration of fires and manoeuvre TTPs between dismounted troops, platforms and fire controllers and it involved the full range of theatre weapons. A main focus was the refinement of fire control. Although Fires were live (when resourced), providing troops with battle inoculation, this was subordinate to ensuring that procedures between the tactical commander and fires controller were rehearsed. The training was designed against an imaginative, realistic and challenging operational environment that was tailored to meet the changing operational environment. The focus was on platoon execution in a sub-unit context, although the final serial provided the sub-unit commander with an opportunity to exercise.
7	PASHTUN DAWN	Battlegroup (CT4) instrumented Field Training Exercise	Salisbury Plain	Field Training Unit	This was the culminating training event prior to deployment. It concentrated on integrating the totality of the deploying ORBAT, its capability and the use of theatre standard equipment. It allowed units to draw together all of the strands of their training in a highly realistic and well resourced theatre setting. Its focus was on: the complexities of integration; hard and soft targeting processes; and battlespace management. It was designed to stretch units with serials based on an assessment of the nature of operations and threat likely to be faced over their deployment. Troops undertook plenty of 'worst case' training; and PASHTUN DAWN was designed to calibrate troops for the tempo and response they are likely to face in theatre.
8	PASHTUN HORIZON	Task Force Helmand CT5 level Command Post Exercise	Warminster	The Force Generating Headquarters and the Command, Staff and Tactical Training Group	This was a series of three, 5 day, CT5 events. The exercise was set at a 'crawl', 'walk' and 'run' pace to allow the Task Force Headquarters to progressively improve its procedures. The series of events allowed the Task Force Brigade Headquarters to build around the processes of the core Brigade Headquarters, integrate its augmentee staff, and progressively develop and refine its theatre procedures. Exercise success relied on the maximum participation of staff and players from beyond the Brigade, including from the ANSF. The exercise was lead by the 2 * FGen/FPrep Headquarters.

1 HQ Collective Training Group.
2 The Lessons Exploitation Centre (LXC) s a branch of the Directorate of Land Warfare, Warminster.
3 E.g the Company Intelligence Support Team and the Operational Intelligence Support Group.
4 Ex MOUNTAIN DRAGON was a Joint Fires virtual training package conducted at the Air Battle Training Centre at RAF Waddington which delivered simulation training for Fire Support Teams and artillery Tactical Groups.
5 NACMO: Net Additional Costs of Military Operations – refers to additional funding from the Treasury related to the conduct of operations rather than funding from the core MoD budget.

5-1-A_2
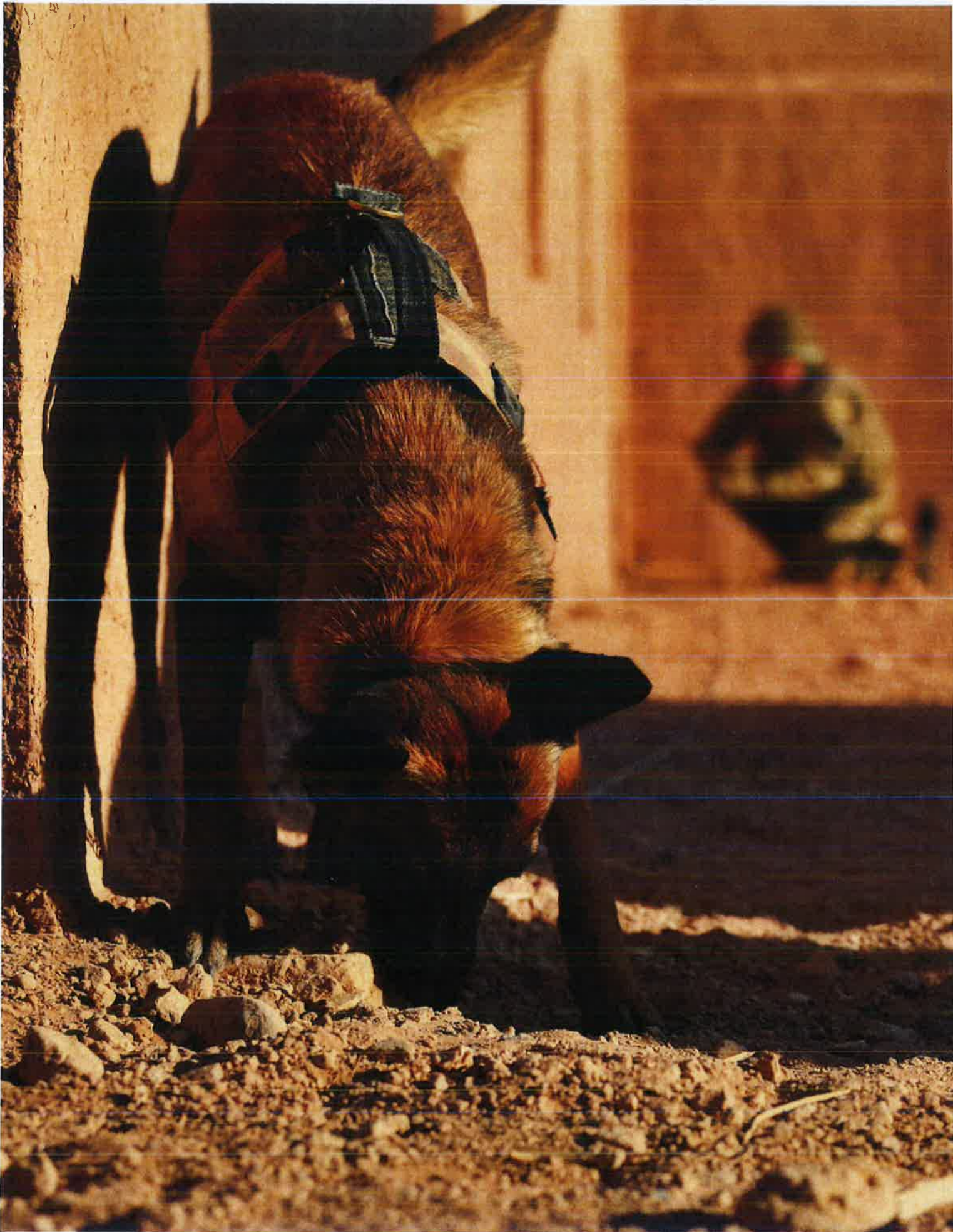
CHAPTER 5-2
EQUIPMENT

"A word of thanks to the Equipment Capability community. To date 11 soldiers from Op HERRICK 13 have been struck by either small arms fire or IED fragmentation in their PPE (4 x strikes to ECBA side plates, 3 x strikes to OSPREY plates and 6 x helmets strike). The protection provided saved all from notable injury"

Comd TFH ASSESSREP 5 Dec 10

Figure 5-2-1. Mk 7 helmet post strike, the wearer of which survived, plus message of thanks from Commander Task Force Helmand, HERRICK 13.

BACKGROUND

1. **Equipment played a crucial role during Operation HERRICK.** The Operation is a story of the successful delivery of extensive quantities of equipment delivered under Urgent Operational Requirement (UOR) procedures against a continually evolving threat and sustained within a deeply challenging environment with complex Lines of Communication. In the Land environment in particular, the Army was configured for major, peer on peer warfare. The war in Afghanistan was very different and required reconfiguration on the move. Operation HERRICK was therefore catalytic in transforming equipment capabilities. The Operation included effective equipment lessons learned procedures and experimentation that then fed spiral development[1] coupled with a powerful delivery network working

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1 'Spiral Development' is a systems engineering process where improvement is incorporated via a continuous feedback loop, as opposed to an 'incremental development' model where improvements are accumulated in a plan and then incorporated as a change.

'flat-out' in making a difference to the capabilities available to the soldier. There was clear evidence[2] to demonstrate that the outputs of this industrious network saved many lives and increased the effectiveness of the force. Moreover, the Ministry of Defence (MoD) and industry formed a powerful partnership in sustaining equipment that saw extensive use of deployed civilians and deep repair and refurbishment taking place in-theatre. In short, during Operation HERRICK the British Army's suite of equipment for Stabilisation Operations became the envy of the world.

2. But there were criticisms also. Vast amounts of money had to be spent on UORs. The total estimated spend on equipment acquired via the UOR process during Operation HERRICK was £5-6 billion[3] with an annual spend of £800 million per year at its peak.[4] Some would argue therefore that preceding predictions of equipment requirements had been wrong and that sufficient breadth and depth of capability had not been preserved. Furthermore, it seemed to take a significant amount of time before realising that existing capabilities were either inappropriate or not good enough. In addition, several equipment systems were delivered without being integrated as a capability across the Defence Lines of Development (DLODs) with Training, Doctrine and Logistic components of the capability often lagging or non-existent. Consequently, users had systems thrust upon them mid-tour and often rejected them accordingly.[5]

Figure 5-2-2. WARTHOG deployed.

2   See Science and Technology Chapter 1-3 Annex A: examples of in Theatre UOR benefits
3   "Over £4.9 billion has been approved through the Urgent Operational Requirement (UOR) process on equipment to meet emerging threats and requirements for Afghanistan since Operation Herrick began". Hansard Source Citation: HC Deb, 30 March 2011, c384W. Peter Luff (The Parliamentary Under Secretary of State for Defence; Mid Worcestershire, Conservative) as at 2011
4   Hansard source Citation: HC Deb, 20 December 2012, c901W. Philip Dunne (The Parliamentary Under Secretary of State for Defence, Ludlow, Conservative) in December 2012.
5   For example, CULPRIT: a low metal content mine detector. Learning from Experience reference: DES SSP/SPSCM/365/03 dated 31 October 2013.

CONTEXT - THE EQUIPMENT NARRATIVE.

3. Those engaged in Land operations in Afghanistan were able to exploit some equipment from experiences in Iraq and other theatres. Operations in Iraq had also started to hone UOR procedures. For instance, 54 Mastiff Mk1 vehicles were delivered into Iraq between June 2006 and May 2007, lessons from which were then exploited in Afghanistan.

Observation: Many superb equipment capabilities were delivered during Operation HERRICK, transforming the Land environment for counter-insurgency / stabilisation operations. The equipment acquisition and support processes applied during Operation HERRICK were iteratively honed and eventually successful. The UOR process, when coupled with strong Capability Integration Working Group (CIWG) chairmanship, worked well.

4. Operation HERRICK started 'light' (with minimal protection, limited manoeuvre and standard firepower capability). The requirement for wheeled Protected Mobility platforms grew from escalating threats and the need to patrol rather than manoeuvre. Iraq and Afghanistan both suffered from the manifest paucity of protection for wheeled platforms in the core equipment programme. Our fixation had been on protection offered by tracked, armoured platforms rather than wheeled platforms.

Lesson: The extensive use of UORs to equip the force indicated significant gaps in the core programme. There was a lack of horizon and neighbour scanning. There is a requirement to develop formal horizon scanning processes via the Capability Planning Groups (CPGs).

5. Even when protection was present on wheeled vehicles its initial design was focused on protecting against small arms and artillery ballistic events rather than under vehicle blast. The Improvised Explosive Device (IED) threat forced the need for under-belly hull protection, V shaped hulls and modularity. Previously the Ministry of Defence (MoD) had not afforded any priority to the protection of wheeled vehicles due to its view of an echeloned battlefield – in which the threat was faced only by those 'at the front end' equipped with armoured vehicles. Afghanistan emphasised the need for a non-linear equipment perspective of the battlefield.

Observation: All platforms may need to be designed with better basic protection in the future.

Lesson: Equipment modularity is key in delivering systems of systems. This must be designed in to future requirements but supportability implications need to be fully understood and risks mitigated. As an example, being able to replace complete sections of vehicles post a blast event is effective, but if this is only possible with extensive use of contractors in theatre there may be a need to balance this risk with larger fleet sizes.

Figure 5-2-2. HUSKY protected mobility vehicles, before and after being subject to an under vehicle IED strike.

6. In the Land environment UORs began to be needed in mounted, dismounted and Information Surveillance Target Acquisition and Reconnaissance (ISTAR) capabilities but the IED became the dominant threat. Something extensive had to be done quickly to counter the threat and hence the majority of UORs were Counter-IED focused.

7. The situation was further aggravated by the change from a highly technical IED threat in Iraq to a low technical threat in Afghanistan[6], and it was effective. It became clear that we could deal with new IEDs, ▬▬▬▬▬▬▬▬▬▬▬▬▬▬

Observation: It took a long time to wake up to the IED threat and to provide capability to counter the threat.[7]

8. Political and public risk appetite also changed and prevented the MoD from being able to balance operational risk via other DLODs which in turn meant that force protection became overly dominated by equipment solutions. There was an increase in pressure from coroners and families, accusing the MoD of not doing its job properly in protecting its soldiers.

9. Equipment sustainability during Operation HERRICK was achieved via a combination of forward deploying vast quantities of spares, employing 1st to 4th Line support solutions, deploying contractors forward and highly capable deployed equipment support facilities. At times availability levels were very low, particularly for new equipments such as ISTAR or Protected Mobility fleets. Eventually these levels were lifted and became impressive. However, the MoD did not know where all of its equipment was in Theatre at anyone time and it suffered heavy criticism accordingly. Eventually, effective procedures were established but this took a long time.

Lesson: An expeditionary mind-set in equipment terms implies emphasis on maintainability and sustainability. These parameters were often sacrificed or neglected during Operation HERRICK. Moreover, it took far too long to resource the correct numbering, packaging and warehousing of spares in theatre or the procedures and technology for accurately accounting for equipment in theatre. There is a requirement for a combined sustainability and Proof of Good Ownership approach to be planned in from the start of any future operation.

Figure 5-2-3. Spares holdings in Theatre, pre and post the establishment of suitable infrastructure and procedures.

DELIVERING UORS.

10. The extensive delivery of UORs during Operation HERRICK forced some changes in behaviour, process, governance and emphasis across the equipment community from which lessons should be drawn:

   a. The knowledge required to deliver UORs was not widespread in the MoD despite Iraq and preceding operations. The whole approach to delivering UORs meant that there was a need to corral the willing and to create mechanisms which either did not exist or were not well bedded in. There was a need to create bodies of people with the right skill sets who drove things faster than the process would normally act. The bespoke structures that were created worked well. Dedicated UOR teams in Theatre, the MoD, Defence Equipment and Support (DE&S) and Permanent Joint Headquarters (PJHQ) were required that operated separately from the normal Equipment Programme (EP) mechanisms. They worked with an ethos driven by time and took risks. Additionally Industry were brought closer and taken into confidence to assist. Defence Science and Technology Laboratory (Dstl) also moved quickly to shrink its production timeframes to keep pace with fast decision making.

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6   "On Operation TELIC a big problem we had was with sophisticated IEDs. We went from the most advanced IEDs we had yet seen, to the simplest possible on Operation HERRICK, and almost at exactly the same time". Land Forces Chief Ammunition Technical Officer, Interviewed 16 September 2013.

7   See Counter IED Chapter 3-5 – 'Getting ahead of the Threat'.

b. The change towards a UOR mentality in which 'time' was the most important parameter and in which some delivery risk was palatable, needed careful command and control. This emphasis on time must remain paramount but be balanced with effective pan-DLOD[8] integration. Operation HERRICK saw the extensive use of CIWGs. These were powerful bodies, most often chaired at OF 5, which drove the careful but aggressive alignment of activities across the DLODs. Despite some failures, on the whole these CIWGs worked extremely well, ensuring that, on delivery to theatre, the equipment formed a useable capability with, for instance, the correct training, doctrine, infrastructure and logistics in place. Often a risk would need to be taken for the sake of time in one or more of these DLOD parameters and it was the CIWG in conjunction with theatre commanders that would decide and control the extent and acceptability of this risk.

Lesson: Of all the equipment focussed meetings and processes, CIWGs were effective and a must when delivering equipment capability to operations. Their use must be sustained and potential chairs trained and developed.

Figure 5-2-4. Clothing comparisons for Operations HERRICK 11 and 17

EQUIPMENT TACTICAL LESSONS

11. People and Structures. Insufficient experts existed initially and organisational structures to deal with UORs were immature.

    a. Establishing Specialist Teams. Initially there was a small UOR team in the Capability area in the MoD but there were very few people in PJHQ and in Theatre directly involved in Equipment Capability (EC) or the fielding of incoming UORs. The DE&S had to change some of its structures to deal with delivering at pace, working closely with Dstl, Industry and the newly formed CIWGs. It became apparent quickly that there were blockages and gaps and an enhanced EC Cell was formed at PJHQ to drive requirement setting, approvals, to monitor delivery progress and to authorise the entry into Theatre of equipment. In Theatre there was also a requirement for a separate EC Cell responsible for requirement identification and articulation, final delivery, acceptance and capability integration. This took time to set up (and was a lesson recalled from Northern Ireland) but once established had a

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8   The Defence Lines of Development are articulated using the acronym 'TEPIDOIL': Training, Equipment, Personnel, Infrastructure, Doctrine, Organisation, Information and Logistics.

significant impact on the way that equipment decisions were made and the final integration of UORs into Theatre. The EC Cell in Theatre (with Comd EC fulfilling a 9 month tour and which also incorporated Equipment Support (ES)) provided greater equipment continuity and understanding for Commanders Task Force HELMAND and enabled the balancing of equipment aspirations.

b. **Governance.** Leaders were required who had the ability to get things done and make things happen. At a higher level there were new requirements for 2* structures and above to shape and deliver the necessary cross stove-pipe governance. This was challenging and met institutional resistance at every turn but paid off in the end.

c. **Getting the Right People.** Technology played a significant role in the prosecution of Operation HERRICK and its exploitation took time to be effective. Appropriately technical military people were needed who could breathe life into process and make things happen both in Theatre and in the UK. Similarly, people were needed who understood the operational concerns of commanders and were able to articulate the requirement sets, drive capability trade-off decisions and integrate capability pan-DLOD. This technical aptitude in military officers needs preserving and not only in those with technical cap-badges.

Observation: The broad effectiveness of the technical career stream is at risk of withering and needs preserving.

Lesson: There is a requirement for the right people, appropriately trained and managed, to be placed into equipment capability organisations in order to capture emerging requirements and oversee and deliver properly integrated equipment capability.

12. **Requirements Definition.** The setting and communication of equipment requirements was of mixed quality:

a. Articulating equipment requirements is a key skill. It requires an understanding of doctrine and an ability to communicate the Concept of Operations (CONOPS) or 'the story'. The latter is a standing requirement in the UOR Defence Information Note (DIN)[9], but was often done poorly or not at all. Often users devised requirements and CONOPS based on having seen some new equipment. This often led to failure because the doctrinal change lagged. If the requirement and CONOPS are well written delivery of a solution will often progress more successfully but it also benefits from freezing or 'locking down' early.[10] UORs that tended to take a long time or fail were the ones that had changing requirement sets or did not have a well articulated story board.

Lesson: Once equipment capability gaps are identified Concepts and Doctrine must be written quickly to support potential solutions.

b. If however a concept was unclear and it was genuinely difficult to lock down the requirement, several lines of activity would be pursued. There was, at times, a need to be very flexible whilst iteratively exploring various ideas as quickly as possible.[11] Often a 'plan B' was required in the event that a potential UOR solution failed. It was critical to establish what the fallback position was, and how the problem and risk could be mitigated if the main proposal did not work. The broad approach to countering IEDs was an example of this. BEEK, an IED detection dog, was initially a fallback plan should ▬▬▬▬ a new detect capability, not work as advertised. Both of these capabilities then evolved into separate but complementary solutions to the problem.[12]

13. **Procurement Time pressures**

a. Time was the key factor in the delivery and sustainment of equipment capability. It was the single biggest driver in changing procurement behaviour in support of the operation. In speeding processes up there was a need to have a clear understanding of associated risks. These were identified and mitigated where possible through the CIWGs.[13] Wherever possible Commercial Off The Shelf (COTS) or Modified Off The Shelf (MOTS) solutions were sought. For UORs, COTS or MOTS should be the default setting for the sake of speed.

b. Spiral development often led to the progressive delivery of capability with users making trade-offs in performance vice time. Flexible contracts allowed changes to be incorporated as the procurement process proceeded. Modifications could be introduced and a better product progressively fielded thus carrying less risk and making better financial sense. Recognising that technology often continues to advance, buying the full quantity of a

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9 Defence Instructions and Notices (DIN) 2013DIN04-127 – UOR Standing Instructions V8 dated 25 Jul 13 - Annex J.

10 "It is important to 'lock down' a requirement. Therefore requirements groups are fundamental. If you look at the type of process required for the future, you need requirements groups at the front end: but they need to be robust, focussed and not too big". Director Equipment, first interviewed 07 August 2013.

11 "Sometimes, it's not a good idea to 'lock down the requirement' because you don't know what the requirement looks like... you can't tie down a requirement unless you understand the consequences of what the requirement will be. You need to have good requirements, but you also need to have a mechanism whereby you understand the implication of that requirement set. So how do you get that feedback loop? You need people who really know what they are talking about. What you need is a cadre of people who understand what they are doing and you need a rapid concept development tool, which we didn't have." AD Cap GM May 2006 - September 2009 interviewed 25 October 2013.

12 ACOS EC Cell, PJHQ from September 2009 to November 2011 interviewed 04 October 2013.

13 "Time was always our enemy and when you look at the procurement Performance Cost Time (PCT) triangle. Historically (in EP) we always trade performance and time to make it cheaper. I would trade everything to reduce the time lag. So I would take increases in cost, I would reduce performance, I would make trade offs all the way through a programme, just so I could deliver the capability in a timely fashion rather than have the panacea in 3 years time. I would be happy to then 'grow' the capability after it had been delivered and have an incremental move along". ACOS EC Cell, PJHQ from September 2009 to November 2011 interviewed 04 October 2013.

system may not be wise. This approach is not applicable to all equipment types, but buying in 'pulses' is an appropriate approach when the threat and possible solutions are continually evolving.

Lesson: There is often a need to deliver an initial equipment capability early and use spiral development or progressive delivery to meet the emerging changes to the requirement.

14. CIWGs.

a. CIWGs need to remain clearly focused and firmly led at OF5 level. The OF5 level was vital because it gave the CIWGs 'teeth', across all DLODs, to coordinate the change in capability being delivered. Usually this entailed changes to, for instance, Concepts and Doctrine, Training and Tactics, Techniques and Procedures (TTPs). CIWG use and understanding appears to have eroded as the quantity of UORs to be delivered has reduced. The UOR DIN[14] states that it is mandatory to establish CIWGs for UORs to enable effective pan-DLOD integration.[15] This DIN needs to remain extant.

b. CIWGs coordinated the integration of capability before PJHQ would authorise release into Theatre. Often the balance of risk varied and was specific to the capability being fielded but if the capability was deemed to be 'life saving' it was fielded as expeditiously as possible, with cognisant recognition and management of risk. Pressures to deploy equipment were at their greatest when soldiers' lives were under threat and the '80% solution' was preferred, with the remaining 20% to follow later. This did often work, but the 80% had to be an intelligent 80%, with careful examination of 'critical' capability needs versus those that were 'nice to have' (lives versus spares for instance). This decision making was achieved far more effectively than for Operation TELIC.

Lesson: There is a requirement to review the Capability Integration Working Group (CIWG) process in concert with Director General Capability (DG Cap) and make recommendations for continuance and improvements.

15. Training Fleets and Risk.

a. The Essential Training Margin Battle. Ideally when a new UOR capability was being fielded, it required a sufficient quantity to be purchased to support the Force Generation process. Both vehicles and equipment were required to achieve individual and collective training. Similar was true of a repair pool. Earlier in the campaign this requirement was not accepted by HM Treasury and risk was taken. An inability to 'train as you fight' was self-evidently detrimental to the effectiveness of the fighting force and corrective action was eventually achieved. Getting the training and repair pools to the required level was immensely challenging but achieved eventually.[16]

Observation: Industry experts, Field Service Representatives (FSRs), would often accompany the equipment to Theatre to complete a training and maintenance package, and to troubleshoot. This was not ideal but often was the only option for a rapid fielding requirement.

b. **Training Equipment coordination.** As the campaign progressed, UORs continued to be introduced at pace and detailed coordination was required when training margins did become available. This was particularly relevant in order to enable two brigades to use new equipments at their differing stages of training.

c. **Training Fleet Management.** In order to reduce the risk of insufficient equipment being available for training, it became essential that what was available was kept serviceable and available for brigades to hand over to each other in their training cycles. The Operational Training Equipment Pool (OTEP) was established, managed by Director Equipment in Army HQ, in order to make sure that equipments were allocated and delivered to the right places at the right time. This complex process required a change in mindset for units used to owning and managing their own fleets of equipment. The equipment was often new to users, it was only on a short term loan to units and if not looked after then it would not be available for subsequent training. Moreover, Equipment Care (EC) knowledge and practice was developed at pace and over short but intense periods of training.

Lesson: There is a requirement to develop and improve EC when fielding new equipments for operations and for contingency

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14 Defence Instructions and Notices (DIN) 2013DIN04-127 – UOR Standing Instructions V8 dated 25 Jul 13 - Annex J.

15 This ensures coherent pan-DLOD delivery and sustainability of capability, including the interface with internal agencies responsible for ensuring the coherency and interoperability of equipment across the MOD (e.g. Network Capability Authority, power management and distribution, fuel consumption/commonality etc). TORs and generic guidance on Capability Integration Plans (CIP) and Fielding Plans are at Annex J to above DIN, although CIWG chairs retain flexibility to adapt these in order to deliver the capability in a coherent and timely fashion.

16 "A rough rule of thumb would be that for every vehicle deployed on the operation, you needed another one and a half vehicles somewhere else. So for every 100 vehicles you had deployed you needed about another 150. That would then be distributed between collective training, individual training, attritional reserve and the reorganisation, recuperation requirement". SO1 Cap GM 2009-11, interviewed 28 October 2013

Observation: The extensive training undertaken for each deployment to Operation HERRICK is unsustainable in a contingent context. There is now a requirement to make greater use of simulation and surrogacy, particularly across mixed fleets of platforms, weapons, ISTAR and C-IED systems

SUMMARY

16. The Army found itself in a position of needing extensive equipment enhancement during Operation HERRICK via the UOR process, the result of which was that the British Army's suite of equipment for Stabilisation Operations became the envy of the world. The Operation is a story of the successful delivery of large quantities of equipment delivered under UOR procedures against a continually evolving threat and sustained within a deeply challenging environment with complex Lines of Communication.[17] In terms of people, extensive demand for UORs led to the need for the equipment community to focus on time as the most important delivery parameter and to take risk. This required new processes and behaviours, the development of new skills, bespoke mechanisms and new governance bodies, pan-Department. All of which proved very effective in the end with the delivery of superb equipment to the Land environment specific to the operation in Afghanistan, but many would say it was a 'hard slog' in which the MoD took a long time to acknowledge and counter the IED threat.

Lesson: There is a continuing need to ensure that the Land environment is equipped with a breadth and depth of capability – predicting where and how forces will next fight is hugely challenging and it has rarely been right. There is a requirement for this lesson to be reiterated during Strategic Defence and Security Reviews (SDSRs) and to ensure that the Capability Audit process tests for both breadth and depth and provides early warning of over-narrowing.

17   See Operation HERRICK Capabilities and Equipment Information note 12/03, produced by 1 Mech Bde for their HERRICK 18 tour. Document was correct at time of publication, but is not now endorsed by Army HQ.

CHAPTER 5-3

INFORMATION ACTIVITY AND OUTREACH (IA&O)

"Traditionally, in the course of conventional operations we use Information Operations to explain what we are doing, but in COIN we should design operations to enact our Influence Campaign."

INTRODUCTION

1. The initial UK Task Force Helmand (TFH) Operational Plan in 2006 stated that the mission of UK forces deploying on Operation HERRICK was to conduct 'Security and Stabilisation operations within Helmand in support of HQ Regional Command South (RC(S))'. The UK also undertook to take the cross governmental lead in the Provincial Reconstruction Team (PRT) in Lashkar Gah. From the start, is was clear that UK forces would be required to deliver soft effect alongside more traditional kinetic military action. However, the first half of the campaign 2006-2009 is really a story of confusion, ad-hocery and evolution as UK forces struggled to re-learn what soft effects actually were, how to execute them and to align them with the wider civilian actors and HQ International Security Assistance Force (HQ ISAF) planning. However, the UK leaves Operation HERRICK having developed Information Activity and Outreach (IA&O) expertise in the Afghanistan model for stabilisation and inculcated a 'feel' for a softer approach across all ranks in the current generation of land forces. This Chapter will focus on IA&O. Influence is discussed briefly below but Stabilisation, Military Stabilisation Support Group (MSSG), the PRT and the integrated approach are covered in detail in Chapter 5-4.

TERMINOLOGY

2. The campaign has seen a lack of understanding and inconsistency in the use of terminology within soft effects. The terms Influence, None Kinetic Effect, Information Activities, Messaging, Capacity Building, Outreach, Stabilisation were all used loosely. Influence was often confused with IA&O; indeed posts in HQ TFH were named and re-named several times depending on the interpretation by the commander.

Observation: A review of POR and POIs[2] leaves a sense that soft effect capabilities lacked ownership. Commanders at all levels often assumed others were responsible for Influence, they lacked Subject Matter Experts (SMEs) and equipment and failed to embed soft actions effectively in wider planning, often adding them in late, as an afterthought.

3. Influence has been seen by many as an activity rather than an outcome. As Commander TFH during Operation HERRICK 10 observed:

'this is an Influence Campaign and as such every operation has an influence thread running through it'

Comd TFH Operation HERRICK 10[3]

Securing influence is a sophisticated art; it will be contested by those who seek it for their opposing aims.[4] Influence is achieved when perceptions and behaviour are changed through the use of power, directly or indirectly. It is not just about messaging and media, but about how deeds and words are interpreted and understood by target audiences. Influence is the outcome of the whole campaign and is therefore everyone's business. Comd 3 Cdo Brigade in early 2009 clearly articulated the target audience as the people of Helmand. He stated that:

"we were thinking too much about kinetic effect against the Taleban rather than building trust and allegiance of the population"

Comd TFH Operation HERRICK 9[5]

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1 ████████ Senior Counterinsurgency Advisor to General Petraeus in Iraq, in AFM Vol 1 Pt 6, COIN, page 6-2.
2 Post Operation Reports (POR), Post Operation Interviews (POI).
3 Brigadier Tim Radford, Commander TFH Operation HERRICK 10, form POI dated 24 November 2009.
4 AC71951 Land Handbook (Influence), paragraph 1-6.
5 Commander TFH 9, Post Operation Interview, dated 23 June 2009.

4. IA&O is just one of the levers of influence utilised to achieve desired effect. IA&O aims to change behaviour, by adjusting the will and understanding of the Target Audience (TA), whether hostile, neutral or friendly. It was achieved through a number of Information methods (Psychological Operations (PsyOps), Key Leader Engagement (KLE), Posture, Presence, Profile (PPP), Operational Security (OPSEC), Deception, Computer Network Action), and should be closely aligned with Media Operations and Civil Military Cooperation (CIMIC) to prevent 'message fratricide'. IA&O was undertaken at every level from the grand strategic to the tactical, as a narrative, that sought to shape a target audience's behaviour and perception of events and thereby gain an advantage by: Promoting and/or Empowering friendly elements; Deterring and/or Attacking hostile elements; Persuading neutral/uncommitted parties to support the mission. The overarching narrative for the campaign became focussed on two messages:

   a. Empower the Afghanistan Security Forces (ANSF) and the Government of the Islamic Republic of Afghanistan (GIRoA).

   b. Undermine both the insurgent and the causes of the insurgency by convincing them of the inevitability of their defeat.

TFH SOI 2051, Information Operations[6]

IA&O ACTORS AND STRUCTURES

5. Operations HERRICK 4 and 5 were immature theatres and UK forces struggled to execute IA&O effectively. Due to manpower caps 16 AA Bde had few IA experts and therefore created soft targeting structures themselves. 3 Cdo Bde faired a little better as CO of the Information Exploitation (IX) Group (a unique and subsequently replicated feature of 3 Cdo Bde) took on 'Influence Coordinator, of the Psychological Support Element (PSE), Media Ops, IA&O, CIMIC. At battlegroup level in 42 Cdo RM soft actor posts were established but not filled with SMEs. They managed to start messaging but made little headway as there was little coordination with an undermanned PRT, little Non-Governmental Organisation (NGO) money, no strategy at RC(S)[7] and a lack of effective GIRoA structures in Helmand to support/partner.

6. With the arrival of 12 Mech Bde in May 2007 on Operation HERRICK 6 soft effects, including IA&O, were better integrated with the core staffs within TFH. An increasing number of the IA&O and Media Ops posts were manned by trained SMEs. The balance of staffs within the PRT much improved with greater representation from Other Governmental Departments (OGDs) and NGOs, bringing increased funding, thereby enabling stability and reconstruction projects to begin. Soft and hard effects were finally brought together in a new Fires and Influence cell, commanded by CO of the artillery Close Support (CS) Regiment, initially titled Chief Fires and Influence but subsequently settling on Chief Joint Fires & Targeting Group (Ch JFTG). This naming convention has been taken forward into A2020 Divisional and Reaction Force (RF) Brigade HQs. The TFH Chief of Staff (COS) chaired a JEM/JEB[8] targeting coordination board bringing together Chief ISTAR Group, Ch JFTG and SO2 representatives from wider Information and Media Operations. The JEB now not only produced a ▬▬▬▬▬▬ but also produced a I ▬▬▬▬▬▬ which was much wider in scope than just fires.[9]

7. At battlegroup level, SO2 fires and influence were established and some battlegroups were even resourced with 4 man Development and Influence Teams (DITs) consisting of qualified CIMIC, Engineer and Psyops staff supported by an interpreter. The TFH Commander used them as 'directed telescope's to gain insight on local populations and to initiate direct engagement with local leaders and communities. Where a DIT wasn't resourced commanders at all levels were encouraged to establish Non-Kinetic Effect Teams (NKETs), effectively 'DIT Lite', resourced with non-specialist staff from within battlegroups own headroom. As such they had to rely on operational experience to gain expertise. Their success was largely personality driven; when individuals were infused they acted as a kind of 'soft effects conscience' for commanders during what was a particularly kinetic phase of the campaign.

8. 52 Light Bde arrived in 2008 with a much enlarged force of 8000, but concerns were mounting within UK military circles over what was perceived as a lack of specifics in direction from the Foreign and Commonwealth Office (FCO) and Department for International Development (DFID). However, the arrival of General McChrystal as COMISAF in June 2009 brought new, and firm direction to what was now clearly defined as a Counter Insurgency (COIN) campaign.

   "Our strategic goal is to defeat the insurgency threatening the stability of Afghanistan. Like any insurgency there is a struggle for the support and the will of the population. Gaining Influence over that support must be our overwhelming operational imperative ... and the ultimate objective of every action we take ... we will not isolate the population from us through our daily conduct and every military action we take".

General Stan McChrystal US Army[10]

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6   TFH Standing Operating Instruction 2051, paragraph 4, dated 09 August 2013.
7   Latterly, during H5 RC(S) evolved the position of DCOS Stability Div (AD) but HQ ISAF did not mirror the J3 soft effects marriage that began at RC(S).
8   Joint Effects Management/ Joint Effects Board
9   ▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬
10   COMISAF Tactical Directive 02 July 2009.

9. The Helmand Plan was subsequently developed in 2010 as the new capstone strategy to better align the Operational Design and Operational Planning for both military and civil effects. As a result of the new strategy, many UK Patrol Bases were changed from company rotational outposts to Forward Operating Bases (FOBs) where a ground manoeuvre company would stay for a full 6 months tour. Other FOBs were moved from desert locations into the Green Zone. This was consistent with the new Petraeus COIN approach of 'living with them in their neighbourhoods' enabling better understanding of the population, development of more sophisticated Human Terrain Analysis (HTA) and, allowing longer term engagement with key/influential local leaders. Consent Winning Activity (CWA) (e.g. water pumps, new bridges) were better targeted at what the people wanted not just what we thought they needed. In some areas people returned from the desert to farm again. This structure meant that UK forces were far better poised to support the now accepted stabilisation strategy in Helmand of Understand-Shape-Clear-Hold-Build.

10. 2009/2010 witnessed a step change in IA&O capability. Firstly there was a surge in HQ RC(S) IA&O capacity. From an initial Information effects branch of only 6 personnel, they were uplifted to between 70 and 100 SMEs.

Figure 5-3-1 Female Engagement Team

Observation: The UK has relied on the US HTA capability throughout the campaign and it remains a UK national capability gap.

11. In 2010, 4 years after the start of the campaign, Cultural Advisors (CULADs) were deployed from the Defence Cultural Support Unit (DCSU) for the first time as a Find, Feel, Understand capability. They also supported the Collect function as their Dari and Pashtu expertise allowed them to pick up atmospherics from the general chatter of Local Nationals (LNS). 8 CULADs were deployed across TFH assigned to HQ TFH, battlegroup HQs, Police mentoring and Advisory team (PMAG) and Brigade Advisory Team (BAT) and quickly became valued assets to local commanders. The CULADs[11] are viewed as best practice for an enduring theatre. Further detail on the use of CULADs can be seen in the Best Practice Chapter 6-9.

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11   CULADS have now been rebranded as Cultural Specialist (Human Terrain) CS(HT).

12. There was an aspiration to deploy 4 Female Engagement Teams (FET) on each tour with the aim of enabling outreach and engagement with Afghan women. However, they were only partially successful in Helmand. Firstly the Armed Forces, the Army in particular, struggled to attract and train enough women (16 on each rotation) to generate an enduring capability. Female soldiers were in demand elsewhere in the support of framework patrols as they were required to conduct searches of Afghan women. Some commanders were forced to take women off other tasks, e.g. RMP personnel and chefs, to generate FETs. A second problem encountered was more specific to Helmand and the cultural status of women. The bottom line was that outside of Lashkar Gah few women were ever encountered by ISAF forces with which the FETs could effectively engage. It was found, however, that the teams were very effective at engaging with children, particularly teenagers, who within a ten year campaign construct were clearly a critical target audience in the efforts to break the cycle of violence.

Observation: For contingency operations an early assessment of the requirement for female linguists, CULADs and Female Engagement Teams must be made in order to allow enough time to force generate and train enough women for what has traditionally been an under resourced capability.

13. Effort was made to put the Afghans up front, with a greater focus on Afghan National media rather than the international press. Initial steps were taken through partnering and mentoring to develop an embryonic IA&O/ messaging capability within the ANSF. During Operation SOND CHARA[12] IA&O ensured that first announcements from TFH were always to Afghan media. National, full spectrum, joint effects messaging campaigns were now feasible. One operation included Afghan Government, including Presidential input, ▬▬▬▬▬ shaping operations and tactical manoeuvre by coalition ground forces all integrated with cultural outreach to the population via MSST Quick Impact Projects (QIPs) and local messaging using the RIAB[13] and the TFH enabled Afghan local radio station, Radio TAMADOON.

14. The PRT capability and capacity under went a marked improvement from 2009 onwards. The narrative evolved to empowering and supporting GIRoA and a split began within the delivery of stabilisation activity. Medium to long term stabilisation was led by the PRT and 'hot stabilisation' in the context of defeating/isolating the insurgent by winning local support, or at least stopping active obstruction, through CWA, becoming the focus of the military over a shorter timeframe. To support the delivery of CWA the numbers of Consequence Management (CM) officers were increased across the force, mandated to intervene immediately with press releases, compensation and apologies if required in an effort to minimise the negative effects of UK operations on the wider non-aligned population. A key messaging strategy developed within the TFH narrative focussed on Presence, Posture, Profile (PPP) of UK forces and exploited the Afghan concept of the 'Honourable Warrior'. IA&O input to the targeting process tried to ensure that operations were conducted with this concept in mind.

15. More changes occurred with the arrival of the United States Marine Corps (USMC) in June 2010 and the creation of HQ RC(SW) in Camp Leatherneck. This enabled a more formal link between the PRT and RC to be established. Under RC(S), in Kandahar Province, the PRT had more autonomy and effectively the Helmand PRT answered directly, and rather remotely, to HQ ISAF in Kabul. The USMC established a greatly expanded J9 branch and in response HQ TFH underwent considerable reorganisation. A new and separate Stabilisation Department was established under SO1 Stabilisation to oversee the 40+ Military Stabilisation Support Group (MSSG) personnel in theatre. The SO1 took over the lead from Deputy Commander TFH for day to day interface with the Helmand PRT. ▬▬▬▬▬▬▬▬▬

16. IA&O reached a peak of sophistication in 2011, from Operation HERRICK 14 onwards. The number of Influence/IA&O actors now required an amended C2 architecture to coordinate activity. CO of the artillery regiment was 'double hatted' as Chief Joint Effects and Chief Joint Fires and Targeting Group (JFTG). A Royal Artillery SO3 from Joint Fires was established in the IA&O Cell as a professional targeteer to better coordinate the 'red, green and white' picture. The structure and staff process of HQ TFH, the bird table, battle rhythm, Principle Planning Group (PPG), was amended to be focused on the 5 levers of Influence: Find and Understand; Messaging; Stabilisation; Manoeuvre; Targeting and Fires. Each lever was represented by a dedicated SO1. This structure represents the peak of IA&O C2 within the Campaign and can be used as a guide for future operations. Figure 5-3-2 shows the optimum HQ TFH IA&O ORBAT.

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12   Operation SOND CHARA an 18 day operation launched in December 2008 against Taliban strongholds near the town of Nad-e-Ali with the intent of making safe the area around Lashkar Gah.
13   Radio In A Box.
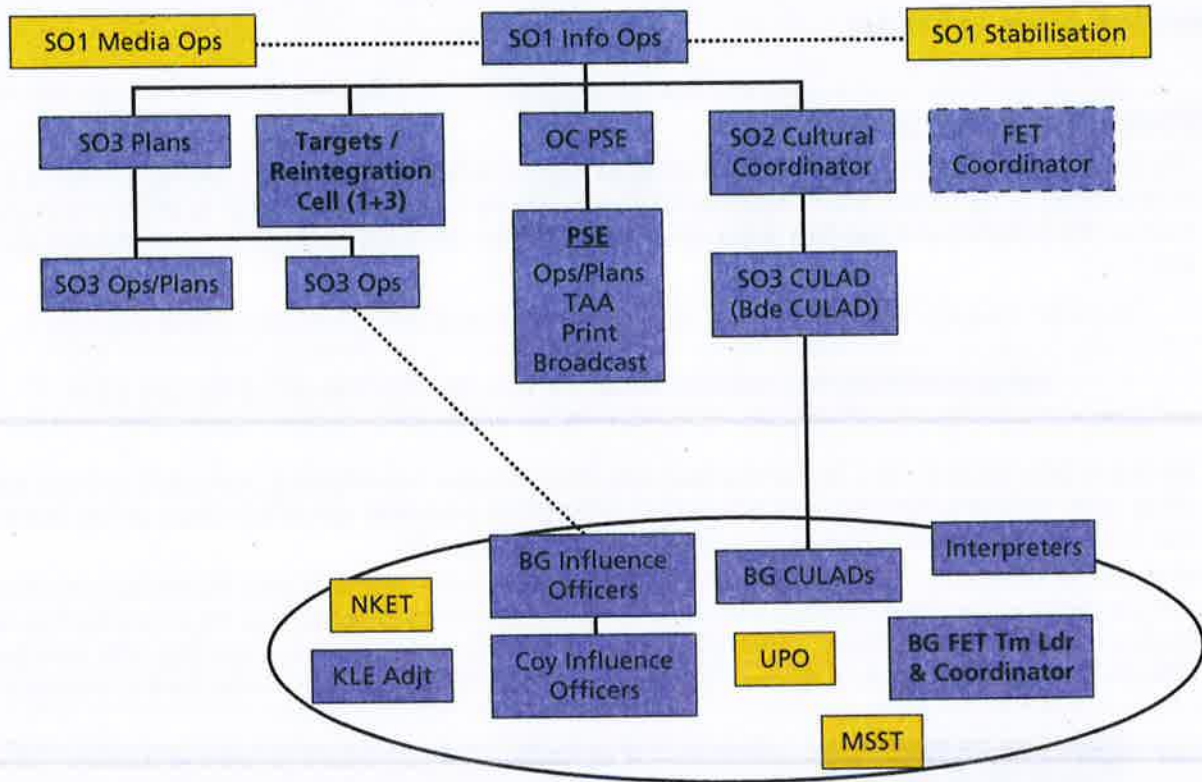
PSE	Pyschological support Element	TAA	Target Audiance Analysis	FET	Force Element table
NKET	Non Kinetic Effects Team	KLE	Key Leader Engagement	UPO	Unit Press Officer
CULAD	Cultural Advisor	MSST	Military stabilisation Support Team		

Figure 5-3-2. Optimum HQ TFH IA&O ORBAT.

17. 2012 and Operation HERRICK 15 saw a change to Afghan primacy. Milestone 13 of the Afghanistan Transition Plan mandated the replacement of ISAF troops in villages with ANSF. The ANSF had become much more capable and now had their own adequate Information and Media capabilities. The ANSF engaged directly with media with their own press officers. Deputy Commander TFH now chaired a broader messaging delivery board to include SO1 Media Operations, SO1 Messaging, SO2/3 J2, J3/J5 Ops/Plans, Strategic Communications, PRT and Afghan Affairs. They used a new conceptual model to coordinate Influence delivery which should endure into UK doctrine.

Lesson: The Operation HERRICK 16 conceptual model for coordinating messaging should be taken forward into core doctrine:

1. Understand the context.

2. Join the conversation.

3. Shape perception.

4. Change behaviour.

PRIORITY IA&O LESSONS

INTEGRATING IA&O ACTIVITY

18. The initial Deputy Commander of TFH in 2006 observed that 16 AA Bde HQ deployed on Operation HERRICK 4 set up to focus solely on the military Line of Operation (LOO) and fight the kinetic battle. It lacked qualified military staff to focus on the comprehensive approach across other LOOs. The Force did not understand the comprehensive approach[14] and

> *'Our IA&O campaign was appalling; poor estimate, lack of people, poorly resourced, poorly executed'.*[15]

▬▬▬▬▬▬ *Operation HERRICK 4, Post Operation Interview (2 February 2007).*

The lack of SMEs coupled with a lack of base level education and wider understanding, particularly amongst the officer corps, resulted in IA&O functions and activities being poorly integrated with other military activity. IA&O was seen as a specialist function addressed as an afterthought during planning.

19. All personnel, particularly commanders, need to better understand how influence activity and the specialist functions involved underpin joint effects planning It was apparent at the start of the campaign that this knowledge had lapsed. Diagram 5-3-3, the Influence Wheel, shows the relationship of IA&O to Manoeuvre and how they both contribute to Influence. All HQ staff on future contingency operations should be familiar with it and understand its implications
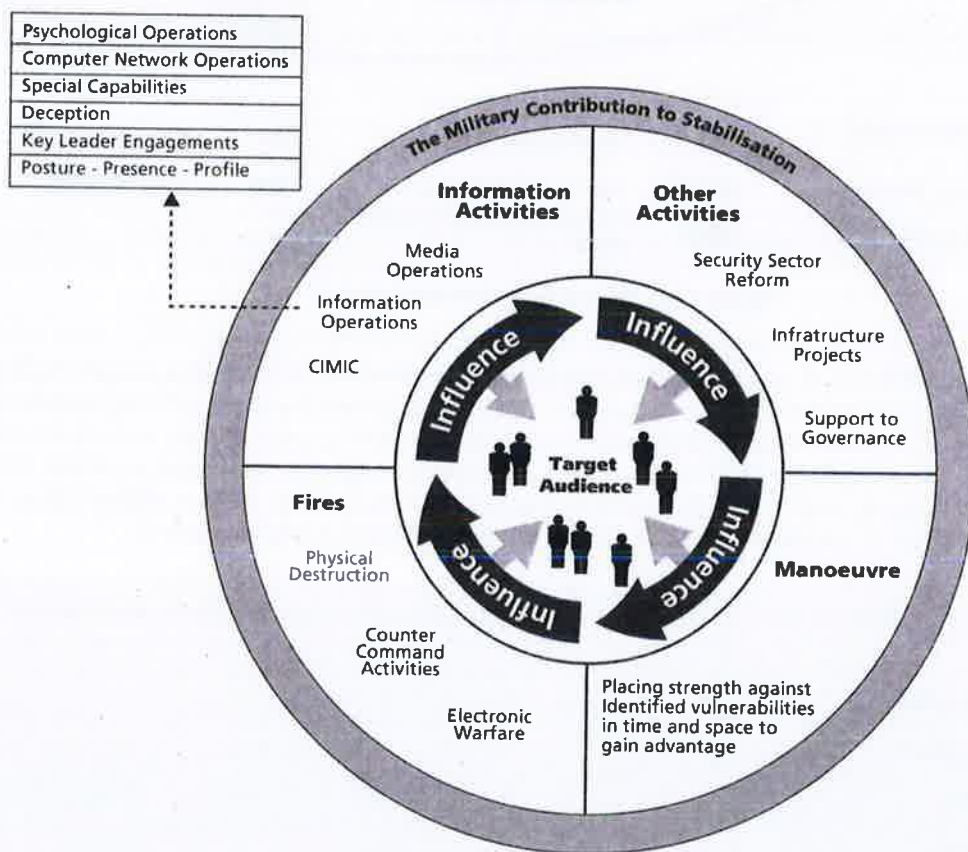
Figure 5-3-3. The Influence Wheel[16]

Lesson: Understanding of Influence as the centre of campaign design was weak. Training Objectives for all personnel, particularly commanders must be amended to ensure that influence doctrine and the specialist functions supporting its execution are better articulated as part of joint effects planning and its relevance to all arms and services.

Lesson: IA&O must be better represented on principle career courses such as ICSC(L) and ACSC2.

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14 The Comprehensive Approach although still used by NATO has become the Integrated Approach and is used cross government.
15 ▬▬▬▬▬ Operation HERRICK 4, Post Operation Interview dated 12 February 2007.
16 Taken from AC71951 Land handbook (Influence).

20. The future A2020 structure has established an additional IA&O staff officer in the peace time establishments of both Reaction Force (RF) and Adaptable Force (AF) Division HQs and also within RF brigade HQs. They must ensure that a 'seed corn' IA&O capability is maintained during HFT and contribute to the education of their formations. No such post exists in the new AF brigade construct which leave the potential for gap in knowledge which must be addressed. Future contingency Task Forces will be reliant on reinforcement from specialist IA&O actors such as MSSG, 15 PsyOps Group, Defence Media Operations Centre (DMOC) or, DCSU, amongst others from Force Troops Command (FTC) within the 'plug and socket' headquarters concept.

Observation: The formation of the Security Assistance Group (SAG) will provide 1 star proponency for IA&O in the Land Force. It must ensure more robust augmentation of core formation HQ staff and, through habitual relationships during training, strengthen the interface of the IA&O specialist staff with the other functional staff.

21. The fusion of hard and soft effects evolved throughout the campaign but only became optimised from Operation HERRICK 12 onwards with the creation of the Joint Effects Cell, a structure that will be taken forward by A2020 implementation. Also, the concept of Full Spectrum Targeting emerged which enforced a systemic approach to the integration of hard and soft effects. New soft effects based language was developed to better articulate alternate targeting options to commanders at the JEM/JEB. However, there were continued tensions throughout the campaign over messaging and psychological targeting between Psyops, Media Ops and the ISTAR Group. Cultural differences between kinetic and soft effects actors still exist, the groups tend to operate to difference time horizons and they operate within different nuances of the Rules of Engagement with different higher authorities influencing their actions. These boundary issues can be mitigated by frequent training and then early liaison on operations to resolve potential difficulties. Diagram 5-3-4 shows the optimum structure of TFH allowing the improved integration of Full Spectrum Targeting.

Lesson: The lexicon of Influence targeting effects (KILL, CAPTURE, RECRUIT, DISCREDIT, ARREST/CONVICT, PERSUADE/REINTEGRATE, UNDERMINE, SUPPORT) developed during Operation HERRICK should be brought into doctrine.

Lesson: PJHQ must ensure that all future operations receive a comprehensive targeting directive including ▬▬▬ ▬▬▬ with clear ROE for IA&O, particularly for black and grey PSYOPS, Military Deception, Electronic Warfare (EW) and Cyber Attack.
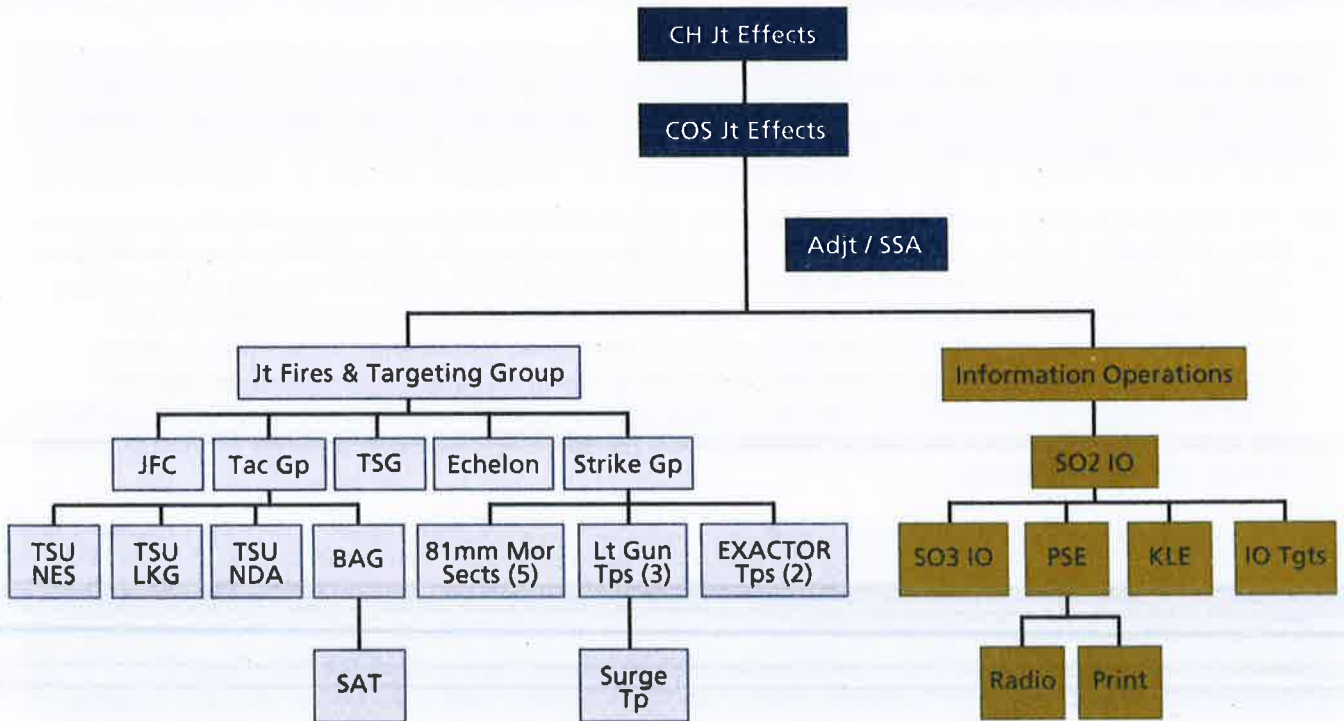
Figure 5-3-4. Integration of Hard and Soft Targeting in HQ TFH

CONTRIBUTION OF IA&O TO INFLUENCE

22. The Future Land Operating Concept (FLOC) Development Agenda confirms that Influence should be placed at the heart of operations, and not as an adjunct to them. Influence is an outcome and not an activity. In practice it is a form of manoeuvre, with the possibility of creating a position of tactical advantage. The UK is highly effective at achieving tactical advantage in the physical domain. The lesson from Operation HERRICK is that we need now to focus much more broadly on achieving advantage in the cognitive and virtual domains. In particular, decision-making processes should articulate the message to disseminate to target audiences, resourcing activity (including the most kinetic of actions) to support it.

Lesson: The Army needs to focus much more broadly on achieving tactical advantage in the cognitive and virtual domains in addition to physical manoeuvre. For contingency operations UK forces and commanders at all levels must develop a mindset of Message-Manoeuvre not visa versa4. Foundation training and MST must be amended as required.

23. Despite growing recognition of "the Centrality of Influence" many commanders failed to embrace the range of soft effects at their disposal. The experience of the HERRICK campaign leaves the perception 'that Higher Command (post HCSC [17]), with their wider political horizons, understood IA&O, but the ACSC cohort needed further persuasion, to convince mid and low-level commanders of its importance in order to drive acceptance across the Army. In some battlegroups it drove the planning cycle in others it was viewed as an irritation getting in the way of manoeuvre and fires'.[18] As a result military action was often taken without thought to the wider military messaging and to the political and economic lines of operation.

Lesson: The understanding of IA&O struggled to move from conceptual understanding to instinctive action. The command chain had a good conceptual understanding of IA&O but when under pressure the more immediate short term perspectives took priority. MST preparation should encourage commanders to make better use of IA&O SMEs to inform their decision making.

IA&O CAREER PATH

24. Throughout the Campaign IA&O posts tended to be filled with 'enthusiastic amateurs'. Senior commanders often personally sought out IA&O and media staff they had served with previously and with experience that they trusted. Info Operations staff largely self-selected, many from Army Reserves, by exploiting a previous non-military talent/interest rather than a managed career path.

Observation: Commanders observed that the talents required to succeed in the IA&O arena were rarely exhibited in core Army staffs: emotional intelligence, listening skills, cultural sensitivity, rapport, negotiation, mediation, language proficiency, psychology, sociology.

25. As a result of an enduring operation we now have some IA&O 'experts' but these are really a reflection of experience having volunteered to return to operations rather than a progressive career path. DComd TFH on Operation HERRICK 10 noted the lack of direction for his Pre Deployment Training as Liaison Officer to the PRT resulting in him creating a totally self-help package of lectures, visits and courses, that he still felt left him unprepared for the role. Non specialists also suffered from a lack of progressive awareness training. CO Battlegroup (Centre) created a Psyops platoon from his sniper/reconnaissance personnel. They acted as snipers on patrol but on securing an objective immediately focused on the information campaign seeking out known influential elders, collecting local atmospherics and as they gained experience were able to facilitate a shura for the CO within 5 hours of arrival. This was an entirely self-help, self-taught capability.

Observation: Individuals tended not to view the IA&O role as career positive, at best, career neutral. This has led to short termism and a loss of hard won skill sets, particularly for linguists. There is a danger that this expertise will be quickly lost as the Army returns to contingency.

Lesson: In support of the Army's wider promotion of 'soft' effects there is an urgent need to bring greater professionalism to IA&O posts and to develop a career and training path in order to develop an enduring capability.

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17   HCSC is attended by newly appointed Brigadiers.
18   Post Operation Interview, SO1 Information Operations, HQ TFH 16.

26. IA&O lacks a recognised career path and the UK MOD lacks a centre of excellence for training. Core IA&O staff at formation level must attend relevant professional and progressive courses. The creation of the Security Assistance Group (SAG) should bring better control. Joint Information Activities Group (JAIG) and the Joint Information Operations Training and Advisory Team (JIOTAT) have launched a career study and Capability Directorate Combat Support (CDCS (IA&O)) has been tasked to produce a Concept of Employment (CONEMP) on improving Culture and Language expertise.

IA&O CAPABILITY OWNER

27. During the early phases of the campaign the provision of the IA&O capability was incoherent. Disparate IA&O elements acted independently as there was no overarching control to ensure coherence. CDCS (AD IA&O) is now the mandated Army Capability Owner. The JIAG in Joint Force Command (JFC) reached Full Operating Capability (FOC) in Apr 13 and now provides defence media and (operational level) IA&O training. They also provide an operational level media capability.

Lesson: An establishment review of the Capability Directorate Combat Support (CDCS) IA&O staff branch is required to resource an establishment within CDCS with the capacity and delegated authority to manage IA&O effectively across all Defence Lines of Development (DLOD.

28. A2020 has created the 1-star SAG which should reach Initial Operating Capability (IOC) in September 2014. This hybrid, tri-service organisation will bring unity of command to currently disparate elements (MSSG, Media Operations Group (MOG), 15 Psyops Group). It will deliver Force Elements at Readiness (FE@R), it will be Army's routine interface with the FCO, Cabinet Office, DFiD and Stabilisation Unit (SU). They also have a permanent link to the Land Intelligence Fusion Centre (LIFC), and Commander SAG will act as the Army Information Activity and Stabilisation Support (IA&SS) proponent. These relationships should enabled the SAG to mitigate many of the shortfalls in relationships with an OGD led PRT and anticipate cultural nuances for likely conflict zones thereby preventing some of the cultural faux pas that occurred in the early phases of the Campaign. Figure 5-3-5, is taken from the SAG CONUSE, and shows the span of related activities within the IA&SS Spectrum for which the SAG will have responsibilities.
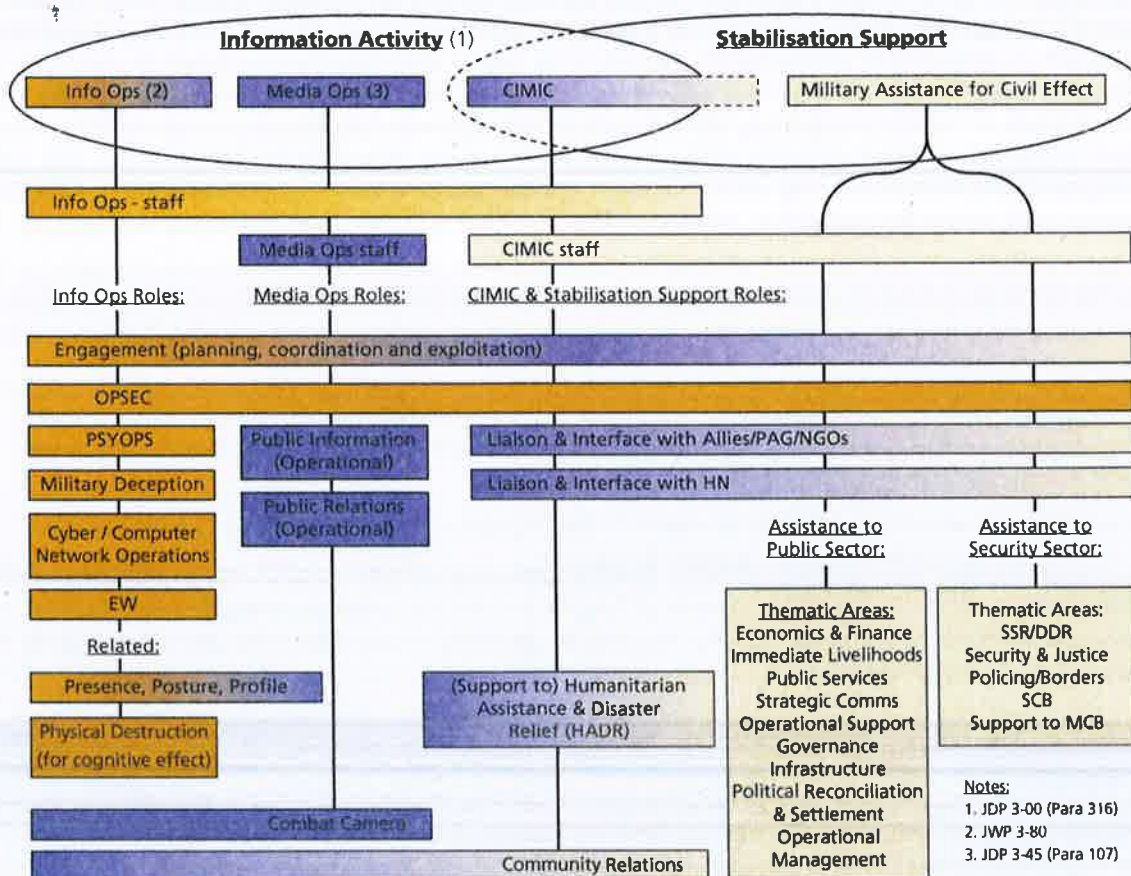
Figure 5-3-5. Information Activity and Stabilisation Support Taxonomy.[19]

(the colour reflects the continuum and interrelationship of the various IA&SS functions).

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19   CDCS Draft SAG CONUSE dated 05 June 2014.

CULTURAL UNDERSTANDING

29. Every Comd TFH emphasised the importance of cultural awareness training during MST. Indeed, General Petraeus during his 2013 speech to Royal United Services Institute (RUSI) focused on 'Cultural awareness as a force multiplier'.[20] The UK's cultural expertise improved during a 10 year enduring operation, as many individuals returned for 2, 3 or even 4 tours. Cultural awareness is absolutely essential to the successful conduct of Influence and IA&O which by their very nature 'aim to ultimately change behaviour, by adjusting the will and understanding of the Target Audience, whether hostile, neutral or friendly'.[21] Operation HERRICK has been a battle to convince the population of the validity of two opposing narratives and, as highlighted in the Chapter 5-4 Stabilisation and the Integrated Approach, the aim is understand what the population believe are the causes of the insurgency and hence provide for them what they want rather than impose what we think they need.

30. Future contingency operations are likely to continue to occur in cultures alien to the western soldier. Accurate cultural advice of the on these alien cultures relies on cultural understanding which in turn requires long term study and immersion. Uncertainty on future theatres for contingent operation and DCSU training times mean that military tactical Cultural Specialist (Human Terrain) (CS(HT))[22] may not be available for initial intervention. Although this could also be mitigated in part by identifying and training military CS(HT) in peace time for core regions within the Adaptive Force and matching their readiness to appropriate Reaction Forces.

31. During Operation HERRICK fully trained CULADS were not available until 2010. In such cases establishing links to host nation locals/translators, academics and expatriates to generate specialist civilian Cultural Advisors (CULADS) should be a priority before and immediately after theatre entry. HQ Prelim Ops were able to involve some UK expatriates and other nation UN personnel who had lived in Afghanistan for many years into the campaign estimate process. Additionally a few Top Secret cleared interpreters were recruited from the UK Afghan Diaspora for use by the highest levels of command. However, many in this cohort considered that their input was hampered by over zealous interpretation of operational security (OPSEC) procedures and poor headquarter design limiting the military staff access to Local nationals (LN). Their advice was further hampered by what many perceived as a negative, aloof and even arrogant, military culture which put many LNs and civilian experts off from making a full contribution. The 'softer' engagement skills, highlighted under the cultural awareness lesson, of emotional intelligence and rapport are equally applicable in staff positions as they are to tactical commanders on the ground.

32. A2020[23] establishes a DCSU Cultural Specialist Team (1 x CULAD, 1 x CS(HT)) to support each Reaction Force Brigade. The requirement for DCSU to train CS(HT) and CULADs therefore remains. DCSU will be transferred to the new Intelligence Surveillance and Reconnaissance (ISR) Brigade but will need to retain strong links to the SAG which will have a key role in generation of Human Terrain Analysts (HTA). Where local expertise was absent an enhanced reach back capability to experts in the UK can also help the cultural understanding of planners within deployed formations. The potential lack of CULADs and necessity of reach back to SMEs has been anticipated with the creation of the LIFC at Bulford to provide a standing cultural reach back capability to building better UNDERSTANDING over time rather than being generated from scratch with each roulement. The LIFC will be responsible for developing a new capability in of Human Environment Reconnaissance Analysis (HERA).

Lesson: The development and deployment of CULADs by DCSU is highlighted as a best practice. They should be deployed in support of all future operations from the outset in order to develop current expertise and begin refining advice given to the Formation.

Lesson: On future campaigns establishing links to host nation locals/translators, academics and expatriates to generate specialist civilian cultural advice should be a priority before and immediately after theatre entry. This principle should be included in developing SAG TTPs and doctrine.

Lesson: An enhanced reach back capability to experts in the UK, such as LIFC, must be maintained to aid the cultural understanding of planners within deployed formations.

Observation: HERA will be developed by the new ISR Brigade and should support Commander Land Force's directive to the Adaptable Brigades to place much greater emphasis on persistent engagement with core regions during Phase '0' of future contingency campaign5.

Lesson: Headquarter design doctrine should be amended to reflect the need for access of Local Nationals as culturally aware advisors to all staff branches. This will need to be balanced against the requirements of Force Protection and OPSEC.

Observation: Many non military experts felt that there was a reticence and negative military culture towards potential civilian/local advice in the early phases of the campaign.

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20 General David H Petraeus acceptance speech on receiving the RUSI Chesney Gold Medal, 10 June 2013.
21 Allied Doctrine Publication Operations 2010.
22 CULADs will be renamed CS(HT).
23 A2020 Internal Report, Annex 7E, dated August 2012.

33. All contact with the local national population must be considered an influence activity and conducted with knowledge of the wider IA&O priorities. Key Leader Engagement (KLE) was a critical force multiplier but many units still viewed KLE as a specialist task. Wider soldier engagement is everybody's business and relies on professionalised soft skills such as rapport, negotiation, perception and culture awareness. Traditional face-to-face communication in societies with poor literacy rates must not be under exploited and all those with frequent face to face contract with LNs (including Locally Employed Civilians within MOBs), should be encouraged to support the wider messaging campaign. Force wide soldier level engagement with LNs is best achieved where every engagement is pre-planned and coordinated. This can be done at the lowest level and is not just the prevue of senior commanders.

Figure 5-3-6. Importance of Face to Face Contact

Lesson: The allocation of oversight of KLE to the most appropriate individual (ideally a linguist) with a battlegroup headquarters (nominally referred to as the KLE adjutant) to coordinate KLE targets and responses proved best practice and should be included in Battlegroup Operations doctrine.

HUMAN TERRAIN UNDERSTANDING

34. For much of the campaign ISR feeds tended to be enemy focused and stovepiped within specialist staff chains which meant that the understand function of wider Human Terrain Analysis (HTA) was poorly executed. US civilian contractors provided the only strategic HTA capability in theatre. They were able to produce sophisticated graphic products to aid strategy decisions. The LIFC will be able to provide an improved UK HERA capability but it will be hampered by the fact it will be executing the process at reach from the UK.

35. Cultural awareness at the tactical level is everyone business. It is best enabled by long term immersion and contact with communities. This was reflected in the Petraeus COIN approach of 'living with them in their neighbourhoods' thereby enabling better understanding of the population. The decision to convert UK Patrol Bases from company rotational outposts to Forward Operating Bases (FOBs) where a ground manoeuvre company would stay for a full 6 months was driven by the need for better Human Terrain understanding and KLE.

Lesson: The UK needs to consider the need to close the capability gap in deployed HTA analysis. The UK is currently reliant on the US to execute this function.

Observation: The long term allocation of ground troops to a particular geographic area is good practice for an enduring stabilisation operation as it enables greater rapport, cultural awareness, human atmospherics and ultimately greater understanding of the population.

Lesson: The extension of tour length for individuals in key stabilisation/information positions such as SO1 IA&O, SO1 Stabilisation and TFH DComd (who all became longer term 9 month continuity posts) is good practice and should be considered by D Pers early in a campaign and amendments made to JSP 760 Tri-Service Regulations for Leave and Other Types of Absence as appropriate.

36. At the tactical level Target Audience Analysis (TAA) was conducted by the UK Psyops Support Element (PSE). This success is recognised in the new A2020 structures as each RF brigade will be supported in a similar manner by a PSE, each with a commander (double 'hatted' as the brigade headquarters SO2 PsyOps), a Target Audience Analysis (TAA) section, and a Production Section. The TAA section will analyse levers of influence, messages, metrics and Measures of Effectiveness (MoE), whilst the Production Section will have print media, radio and web-publishing capabilities. Prior to the formation of the IX Group on Operation HERRICK 9, there was some difficulty coordinating the actions of TAA, HTA, J2 and Influence with a resultant incoherence in messaging. The IX group operating a Joint Action Model should be considered a blueprint for all future operations.

Lesson: The responsibilities and information exchange requirements between J2 staff conducting Human Terrain Analysis (HTA), LIFC, those conducting TAA within IA&O and, those in the wider HQ J2/Targeting cell needs to be better understood and then articulated in relevant doctrine.

37. MoE for Influence and IA&O activity was problematic throughout the campaign. The emphasis was focused too much on output and tangible items e.g. the number of wells dug. This was really just a measure of activity not a change in behaviour and beliefs of the population which would indicate whether the ISAF narratives were effective. 52 Bde on, Operation HERRICK 7, implemented MoE developed by James Derleth[24] in his Tactical Conflict Assessment Framework (TCAF), under pinned by a simple question framework that was used by platoon level patrols in an effort to gather quantifiable information from locals and identify the causes of instability for future targeting. It revolved around 4 simple questions:

    a. Have there been changes in the village population and why?

    b. What are the most important problems facing the village?

    c. Who do you believe can solve your problems?

    d. What should be done first?

38. Although TCAF initially gained favour its weaknesses were subsequently exposed as it was carried out inconsistently. ISAF soldiers posed the questions and then only to those they had access to, this introduced bias and, language barriers led to further misinterpretation.[25] The focus of MoE moved towards qualitative assessment of quality information from known experts. As the theatre became increasingly stable ISAF and UK forces found that Executive Shuras built rapport and understanding over time and these Afghan enabled structures informed our better understanding of local priorities.

Lesson: The means of MoE for Influence and Information activities remain problematic and are likely to be unique to each campaign, change over time and be different of each sector' of the population. Rigorous consideration of how to conduct MoE must form part of the operational design process.

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24 Dr. Derleth was a professor at the Payson Centre for International Development and Technology Transfer at Tulane University. At Tulane he developed courses in International Development, Conflict and Post-Conflict Development, and Political Science and the development of project evaluation methodologies and analysis of development programming in instable and conflict environments.

25 David Wilson and Gareth Conway; The Tactical Conflict Assessment Framework, A Short Lived Panacea; in The RUSI Journal , February 2009, Vol 154, No 1. pg 10-15.

SEIZING THE INFORMATION INITIATIVE

'We are in a battle, and half and more than half of this battle is taking place in the battlefield of the media.'

[26]

39. The Ayman al-Zawahiri quote indicates that enemy forces in future contingency operations are likely to try to seize the initiative in the information campaign both in theatre and in the UK and use it as a central aspect of their strategy. The UK IA&O Line of Operation must be developed within the single Campaign Plan, owned by PJHQ but coordinated with the senior coalition headquarters. It should focus on countering enemy information activity by seizing the initiative and shaping the deployment prior to theatre entry and, where appropriate, building on enduring understanding developed by routine outreach by the future AF in phase '0'. Within the campaign Operation MOSHTARAK was a good example of an IO lead operation where ISAF pre-empted the tactical execution by a widespread and lengthy information campaign to seize the information initiative from the insurgent.

40. Consistency between coalition partners is also important. As Comd TFH, on Operation HERRICK 4[27] observed it was unhelpful for the UK Task Force to deploy during the poppy eradication season and immediately after the US ▆▆▆▆ led Operation MOUNTAIN THRUST. 'We were unable to influence it and the Taleban were able to seize the information initiative'. The effects undermined the UK IA/Influence campaign from the outset.

> **Lesson:** The UK IA&O campaign must start to SHAPE the theatre PRIOR to theatre entry and, if Transfer of Authority is planned between coalition partners, the continuity of the IA campaign needs to be a priority in campaign design.

41. Consequence Management (CM) posts were formally established in within TFH during Operation HERRICK 12 with a mandate to plan for and react to the consequences of coalition activity. The aim was to maintain the information initiative by being the 'first with the truth' in both the UK Media Communications and Afghanistan IA&O arenas. Routine matters were dealt with by an SO3 CM established at within battlegroup HQs and higher. Bigger incidents required a larger team and could also involve Media, Influence, J3, POLAD, LEGAD and C-IED in support of the commander all focussed on managing the consequences of our actions. Staff responsibility for CM varied throughout the campaign but was most commonly executed from within the J3 cell. This appeared to work well but the CM must retain close liaison with the Protect and IA&O teams elsewhere within a headquarters. CM posts are included in Division and Reaction Force HQs in the A2020 construct

> **Lesson:** Consequence Management (CM) is a G3 skill set that will endure into contingency. The training for Consequence Managers proved to be inadequate and needs to be developed in order to professionalise the role. The training for CM should increase the focus on maximising our successes as well as rapidly mitigating crisis events.

LANGUAGE SKILLS

42. Any level of language proficiency proved to be a critical force multiplier for all force elements involved in the COIN campaign. Comd TFH on Operation HERRICK 9 expected everyone to be able to speak a few words to "break the ice". Attendees on the Defence Centre for Languages and Culture (DCLC) 10 week basic language proficiency course proved effective in enabling those with direct contact to Afghans to establish rapport. However, the 18 month proficiency course was thought to be too UK exam specific and interpreters were still required to execute detailed, technical and targeted KLE. A lack of cultural awareness in the early phases resulted in some individuals involved in mentoring arriving in theatre having learnt the wrong language, as it was discovered that within the ANSF, Dari was spoken at Lieutenant Colonel rank and above with Pashtu spoken at the lower levels. This is the type of cultural understanding that the deep dives from the LIFC should avoid in future.

> **Observation:** Operation HERRICK has demonstrated that the mastery of indigenous languages is a significant force multiplier and contributes directly to mission success. This will be taken forward into contingency with a DEd Cap led study into linguists.

> **Lesson:** Due to long training lead times the current linguist career path is inefficient. A review is required into not only creating initial foreign language proficiency but more importantly preventing language competency skill fade over time. Defence will need to give direction on which languages should be a priority.

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26   Letter from . ▆▆▆▆▆▆▆▆▆), 9 July 2005 quoted in AC 71951 Land Handbook (Influence), paragraph 5-15.
27   POR Commander 16(AA) Brigade and Commander TFH, Operation HERRICK 4.

43. The use of interpreters was a skill set in itself. There was a lack of interpreters with high level security clearance throughout the campaign. Military personnel at proficiency level often found their language skills utilised in monitoring the translations of the interpreters. Conversely, many felt that OPSEC criteria for local interpreters were too high. As locals, their cultural awareness was clearly high and, many felt that there could have been wider utility for the trusted individuals in advising on the production of IA&O products and the wider J2 understand function. Additionally, language proficiency provides and opportunity to contribute to a deception plan. Some military personnel found it useful to keep proficiency secret thereby picking up atmospherics better and checking interpreters. CULADs were often used in this role in the background of meetings led by their principals.

Figure 5-3-7. Linguist's Shoulder Flash

Lesson: Doctrine and TTPs for the use of interpreters should be reviewed to include the interpreters' central role in KLE, not just translation, and the role military advanced linguists have in monitoring the actions of local translators.

SYNCHRONISATION OF MESSAGING

"I don't think anything else goes from No 10 to subunit as quickly as media ops does"

Figure 5-3-8. A Psyops Leaflet Drop

44. Media suffered from one of the most convoluted Command and control (C2) chains in theatre with many of the actors answering to different commanders each with very different media agendas and media audiences. Within HQ TFH SO1 Media Ops sat with the J3/5 team and had responsibility to the commander for the execution of media operations. They also had to coordinate with but, remain visibly separate from, IA&O run by the Psyops team. Media Ops maintained detachments at Kandahar and Camp Bastion, ostensibly to conduct media operations on behalf of the units there but, in reality, staging and managing journalists transiting through.

45. External to TFH, SO1 Media had to maintain frequent if not daily links with, Defence Media Operations Centre (DMOC), DACOS J9 Media at PJHQ, SO1 Media in RC(S), ISAF Public Affairs Office, PRT Strategic Communications Office, MOD Press Office, ANSF press outlets and the Helmand Governor Press spokesman. Internal to HQ TFH the C2 arrangements were no less complex. The HQ TFH Media Ops Cell (SO1 Media Ops + 2) at Lashkar Gah also included liaison with SO2 Pashto CULAD. The Press Information Centre (PIC), an SO2 + 9, was also located at Lashkar Gah but not under command of SO1 Media. Close liaison was maintained with SO1 Messaging (responsible for the PSE and IA&O activity) whom they worked closely with but doctrinally must be separated. The civilian Media Advisor to the commander, physically sat within the Media cell but was in fact directly answerable to the Defence Media Centre (DMC) in MOD. However, their experience of the UK national press outlets and personal rapport built up with high profile reporters was a critical enabler to the commander. Finally, the Combat Camera Team (CCT) was located at Camp Bastion but came under command of the PIC, and, latterly the newly established Joint Media Operations Centre (JMOC) commanded by another OF-4 but in Camp Bastion working direct to PJHQ. The change of command of RC(SW) brought in yet another level of coordination as messaging now also had to be synchronised with the United States press machine.

Lesson: Combat Camera Teams (CCTs) are a critical IA&O enabler during the early, often non-permissive phases of a campaign when the military has an opportunity to dominate messaging due to the absence of other media outlets. CCTs were inadequately resourced during Operation HERRICK and their representation should be increased on future operations, possibly requiring an expansion of the RLC Photographic Trade.

46. Many media operations personnel expressed frustration with the synchronisation of messaging across the media domain with many examples of messaging fratricide. The NATO strap line was 'first to the truth' but, in reality, ISAF media direction was often at odds with national direction which was frequently less than supportive of the messaging agenda being conducting in support of troops operating on the ground. The TFH developed narrative, of empowering the GoIRA and undermining the insurgent and causes of the insurgency, was lacking at the strategic communications level. Simple consistent messages were emphasised during MST but, in practice, they were much more muddled. There were too many

parties with different priorities and audiences peddling different messages. For example, the reasons for the UK presence in Afghanistan varied from; protect the streets of London, stabilising Afghanistan, spreading democratic rights for women, defeating Al Qaeda, countering narcotics.

47. In an increasingly interconnected world target audiences in any theatre will be exposed to media stories from global sources. Throughout the HERRICK campaign there was an inherent tension between tactical and operational level information operations. Both required synchronisation with a central messaging agenda as part of the Influence and IA&O campaign. Many commanders felt that the Afghanistan Media Operations Centre had too close a relationship with the DMC and that narratives were focussed on the UK audience rather than the Afghan Audience.

Lesson: Future Task Force commanders must carefully consider the C2 of and coordination for messaging function between theatre IA&O staffs, the UK media staff and themselves. They must ensure that the messaging strategy remains focused on them as the supported commander.

Lesson: Local media outlets are a vital route to Target Audiences in support of the IA&O messaging campaign. Messaging is most effectively received when it was geographically focused and delivered with a local voice. On future contingent operations links to local media outlets would be better enabled by the establishment of a Local Media Information Centre at the earliest opportunity, even before the initial deployment if the security situation allows. Doctrine should be amended as appropriate.

48. Media awareness is a core skill in today's inter-connected battlefield and all commanders need to be comfortable operating under the scrutiny of media. It was felt that we did not empower the lower level of command with the knowledge of how to engage with the media because of the risk that it might 'go wrong'. Although partly the remit of Consequence Managers, it was felt that there was reticence of in place ground troops to engage with the media before the arrival of 'professional' media operations personnel. Although it is imperative we provide reassurance that no-one will engage with the media without appropriate preparation, careful consideration should be given to authorising those who can speak on the record to the press. If it is too restricted it will often result in a negative or defensive media bias.

Lesson: Media training is essential at every level, but particularly the lowest level. Media training needs to be delivered at least down to JNCO level but the delivery team needs to focus on the tangible benefits of getting media operations right rather than focus on the risks of getting it wrong. DMOC courses should be amended as appropriate.

Observation: All officer cadets at RMAS should continue to receive a basic media awareness package. Sub-unit commanders upwards should continue to receive media training as part of core career courses and theatre specific media training during MST.

49. Journalist embeds will continue to be a common sight on operations. During Operation HERRICK, troops were wary of journalists and nervous of handling them in the absence of specialist media staff. Some of the hesitancy was overcome by the creation of Journalist Information Packs (JIPs) by TFH media ops staff. These gave details of specific journalists, likely agendas and any previous experience of them as embeds. Relationships were nurtured with national media during peacetime and MST utilising routine contacts nurtured by the AMC and DMC. During foundation training, some brigades were able to establish relationships with regional and specialist media (e.g. professional journals, academic press) during MST which were exploited as embeds during their deployment.

Lesson: A forward leaning proactive approach to media embeds, with strict ground rules and a media handling team assigned, can foster a better relationship and mutual benefit realised. Journalist Information Packs (JIPs), giving details of specific journalists were well received and should be considered best practice for utility on contingency operations.

Lesson: The establishment of a Civilian Media Advisor to the commander drawn from the DMC, thereby having familiarity with personnel in the national press, was a best practice that should be continued for future operations

BROADCAST MESSAGING CAPABILITY.

50. Direct communication by the military with the wider population has become a key non-kinetic capability within the IA&O Campaign. Radio coverage, assisted by the distribution of wind-up radios expanded from 50% to 85% of population and Radio TAMADOON reached a peak audience of 1.5 million listeners and was considered one the most effective messaging avenues. Where local media is absent and literacy rates are low the use of loudspeaker and radio was a key enabler. Mobile communications are increasingly popular as a means of disseminating messages, from SMS to Bluetooth and access to social media. 3 Cdo Bde had a brief Operational Facebook page with 2.5 million hits/month. It has since been taken down as only the www.mod official site is endorsed. Text messaging and person to person Bluetooth sharing of text/video was extremely popular for insurgent propaganda and proved to be an effective communication avenue even where there was no infrastructure for a mobile phone network. This exposed a capability gap that was left largely unchallenged by ANSF/ISAF messages for much of the campaign.

Figure 5-3-11. UK Radio Tamadoon Flyer and Radio in a Box (RIAB)

Lesson: Key psyops equipment capabilities from the HERRICK campaign such as Radio in a Box (RIAB) and MEGAVOICE 2 should be brought into core and included on the FET on future intervention operations.

Lesson: A capability review is required of social network communications (SMS, Bluetooth, Facebook) as a messaging medium to ensure that on arrival in an operational theatre, PsyOps messages can be disseminated by all means to local target audiences. This will ensure that the UK possesses the means to counter potential adversaries messaging across all communication means.

CHAPTER 5-4
STABILISATION OPERATIONS
THE MILITARY CONTRIBUTION TO THE INTEGRATED APPROACH

"Do not try to do too much with your own hands, better the Arabs do it tolerably than that you do it perfectly"

T E Lawrence, Arab Bulletin (20 August 1917)

INTRODUCTION

1. From a UK perspective, the term integrated approach has replaced comprehensive approach to better reflect terminology used by other government departments[1]. It has been accepted in British Military Doctrine that complex situations, such as that in Afghanistan, require complex multi-agency solutions, involving multiple civilian organisations, possibly a civilian political head of mission, within which the military may only be able to address elements of the desired outcome. An integrated approach requires those dealing with a crisis to be predisposed to collaboration and co-operation, and structured to develop a shared understanding of a situation and its dynamics.[2] While it is unlikely that absolute consistency will be achieved between civilian and military activities, military commanders should nonetheless encourage, as far as practicable, an integrated response around the principles of:

    a. Proactive engagement between all entities ahead of a crisis.

    b. Shared understanding to maximise distinct professional, technical and cultural disciplines between agencies.

    c. Outcome based thinking to deliver a favourable situation consistent with strategic aims.

    d. Collaborative working through personal contact to enhance trust between the agencies.[3]

2. Within the Afghanistan campaign Stabilisation Operations were intricately aligned to the Integrated Approach and central to wider campaign Influence outcomes.[4] As a result of the experience gained during the campaign the cross government (DfID, FCO, MOD[5]) Stabilisation Unit (SU) redefined Stabilisation in 2014 as:

    'an approach used in situations of violent conflict, which uses a combination of integrated civilian and military actions to protect and promote legitimate political authority by reducing violence, re-establishing security and preparing to build an enabling environment for structural stability'.[6]

    Stabilisation Unit: UK Approach to Stabilisation, May 2014.

3. Stabilisation is a long term, complex process led from the strategic level and including pan government actors. The Herrick Campaign Study is mandated to focus on military tactical lessons and hence this Chapter will limit its scope to Land lessons in support to this wider activity. However, to fully understand the complexities of the Integrated Approach some context of the strategic environment is included. More expansive information can be found from the Stabilisation Unit (SU) Afghanistan lessons (www.stabilisationunit.gov.uk). This chapter should also be read in conjunction with Chapter 5-3, Information Activity and Outreach which gives more information on wider related soft effects.

STRATEGIC CONTEXT

4. Stabilisation was a central tenet of the Operation HERRICK campaign. This was articulated right from the start of operations in the initial UK Task Forces (UKTF) OPLAN in 2006 which stated that the mission was to 'To conduct security and stabilisation operations within Helmand and the wider Regional Command (South) (RC(S)), jointly with Afghan institutions, Other Government departments (OGDs) and multinational partners, in order to support Government of Islamic Republic of Afghanistan (GIRoA) governance and development objectives'. The Future Land Operating Concept (FLOC) Development Agenda observes that although 'Krulak's 3 Block War' concept[7], remains valid, there is no longer a binary distinction between intervention and stabilisation operations, with the latter

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1   JDP 0-01 4th edition: NATO uses the term comprehensive approach, which is broadly comparable to the UK's integrated approach; although, integration implies a greater level of collaboration which may not always be possible during coalition operations due to national or organisational sensitivities

2   Definition taken from JDP 0-01:British Defence Doctrine (4th Edition), paragraph 137.

3   Ibid, paragraph 140-141.

4   The UK approach to Influence post Operation HERRICK is captured in AC 71951 Land Handbook (Influence), Jan 2012.

5   Department for International development (DfID), Foreign and Commonwealth Office (FCO), Ministry of Defence (MOD).

6   Stabilisation Unit: UK Approach to Stabilisation, May 2014, page 1.

7   CGS FLOC Development Agenda (Jan 2014), Ch 1, para 8, pg 3.

somehow emerging once war fighting finished. Rather, forces committed to future contingency operations need to be comfortable in delivering the full range of effects from the very start of the operation. This was not the case at the start of Operation HERRICK where military action was not properly integrated with and supported by wider stabilisation action.

5. At the strategic level the integrated approach mandates a civilian lead to cross governmental effort Even when there are military led and implemented stabilisation tasks (e.g. carrying out patrols to bolster local security), their application should occur in the context of an operationally civilian-led, politically engaged, stabilisation approach. The inference is that a Combined, Joint, Interagency, Intergovernmental and Multinational (CJIIM) plan is required. Initial intentions were good and Headquarters Prelim Operations (HQ Prelim Ops) deployed to Kandahar Airfield in the summer of 2006. This was a slimmed down Joint Force Headquarters (JFHQ(-)) from Northwood under an OF-5, tasked to conduct a comprehensive, strategic to operational level estimate. It was a new concept, but in line with the principles of an Integrated Approach that successfully enabled proactive engagement between the military, SU, DFiD, FCO and other actors ahead of the crisis. The Helmand expansion however, was unusual, maybe unique, as the UK committed to the operation in a deliberate manner with a long lead time giving HQ Prelim Ops the time it required. It developed a sound 10 year campaign approach to operations in Helmand. This original campaign plan included governance, security, development and counter narcotics Lines of Operation (LoO) and way points that were aimed at delivering this outcome. The military contribution was envisaged as being largely confined to 2 or 3 waypoints within the security LoO.

6. The initial Prelim Ops campaign plan has been widely accepted as sound, but only as a strategic campaign plan.[8] Essentially it produced an ink-spot strategy, avoiding the creation of new problems, and instead focused on the things that were not yet problems, building outwards from the District Centre at Lashkar Gah with stabilisation activity directed by a cross governmental Provincial Reconstruction Team (PRT). Coalition partners, however, have criticised the approach as being too UK specific with little coordination with NATO allies and the then Canadian 1* HQ RC(S). What happened next is the subject of dispute but the view of many civilian actors is that having designed a good plan 'we then totally ignored it. We dotted ourselves all around the place, responding to things other people told us were problems in a quite non-strategic manner without the resources for delivery'.[9] The military, particularly 16 AA Bde had a different view. From their perspective the weakness of the HQ Prelim construct was that 'it was not structured to develop the security LoO in the detail to enable a brigade deployment and tactical military break-in plan in the light of likely insurgent reaction. This was effectively delegated to the Brigade to be completed in the UK, based on a couple of recces, and conducted with little sight of and no sense of ownership of the developing Campaign Plan.[10] They therefore wrote and executed a separate 16 AA Bde Operational Plan.

Observation: The HQ Prelim Ops construct was a successful attempt at cross government integrated campaign planning. It lacked the structure to develop the security line of operation to the level of tactical detail required for the initial intervention. Consideration should be given to the benefits of a construct whereby JFHQ, or another nominated HQ plan and command all expeditionary break-in operations, and then hand them on to a more traditional Formation Headquarters once the initial foothold has been achieved. This would better achieve strategic to tactical coherence in the crucial early stages.

7. The initial commander of the Helmand PRT was the DComd of HQ TFH who has acknowledged the 'rocky start' at the outset of the 16 AA Bde deployment. Direction across all LoOs should have come from the Helmand Executive Group (HEG), which consisted of the HQ TFH, FCO, DfID and BEDT (British Embassy Drugs Team). In reality this was a paper tiger as initial representation from civilian agencies was poor (DfID only had one representative) and, due to different (arguably prohibitive) force protection requirements and approach to risk, they were frequently unable to leave camp. All actors in the HEG lacked significant funding and were answerable to different chains of commands and organisations. The integrated approach lacked coordination with the military often operating in isolation.[11]

8. Once UK troops were committed it is clear that the stabilisation agenda was far more complex than expected. The UK cross governmental approach and supporting military doctrine proved inadequate for the realities of the early phases of the campaign. The lack of HEG coordination, lack of civilian manpower and money, the lack of military force, the actions the Helmand Governor and, the vote of the enemy, all combined to result in a very different strategy. The subsequent stabilisation campaign developed and matured 'in contact' throughout Operation HERRICK in a very different way to that envisaged. A PRT Director reflected that 'we dug a bloody great hole then we built a ladder; we may now be experts at building a beautiful ladder that gets us out of the hole and in fact gets us much higher up, but actually that is not what we were supposed to be doing. We would have been much better off with a much shorter ladder'.[12] The UK forces took on far more than they were initially resourced to hold. The Afghan Government could never claim to hold Helmand unless they held the central district from Gereshk to Garmsir. The Afghan Government

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8   Post Operation Report Comd 16 (AA) Brigade (2007), POI COS 16 AA Bde (2007), HCS Interview Director HPRT 2008-09, Interview conducted December 2013, HCS Study interview PRT Director 2009-2010, interview conducted December 2013.

9   HCS Study interview PRT Director 2009-2010.

10 Post Operation Interview COS HQ TFH Operation HERRICK 4.

11 Post Operation Interview Comd TFH, Operation HERRICK 4.

12 HCS Interview.

attempts to also hold Sangin was a distraction from efforts to control the centre of Helmand. It was counter to the campaign strategy which emphasised the need for Lashkar Gah to be the initial beacon of stability and success.

9. Stabilisation effects were those designed to support and enhance GIRoA sovereign capacity across all lines of operation and in all areas, thus securing the consent of the population for enduring legitimate governance. It is notable that stabilisation is prominent in Comd TFH Post Operation Reports (PORs) from the outset but is rarely mentioned in the Post Operation Interviews (POIs) from tactical commanders who found that kinetic action inevitably dominated thinking in the early phases of the campaign. However, as the campaign evolved so did the UK approach to wider COIN operations and, within them stabilisation. A new integrated cross government campaign plan, the Helmand Road Map was developed around the time that the PRT transferred to a civilian lead in 2008. The plan worked to deliver a provincial stabilisation and development plan that had been agreed between the GIRoA and international partners. The plan coordinated the efforts of 9 themes: Governance and Politics; Rule of Law; Counter-Narcotics; Population Engagement; Health; Education; Agriculture; Infrastructure and Private Sector Development. The Helmand Road Map evolved and went through several iterations. It underwent a major review in 2010 when a UK 2* took command of HQ RC(S) and was rewritten as the Helmand Plan, a strategy finally more aligned with the wider NATO Afghanistan strategy with the aim of ensuring the transition of all civil governance and development processes to sovereign GIRoA agencies and the transfer of all security to licit indigenous government forces.

Lesson: Stability considerations must be included in the evolution of strategy for all types of contingency operations. The UNDERSTAND-SHAPE-CLEAR-HOLD-BUILD concept within the Helmand Road map proved effective and became central to the UK mindset. It is recommended that this approach is reflected in military stabilisation doctrine.

10. A frequent criticism of Helmand Plan in its first incarnation in 2006 is that it tended to regard Helmand as the far edge of normal Afghanistan. The UK took solutions that worked in the rest of Afghanistan and tried to stretch them to deal with Helmand which was a much more complex and dangerous place. Early directors of the PRT have reflected that the design of PRT in Helmand in 2006 owed too much to the PRT in Mazar-i-Sharif 3 or 4 years before. The SU lessons process has noted that there was a tendency for international actors to utilise experience and lessons from Iraq in Afghanistan without fully assessing the relevance of the Iraq experience to the Afghan context.

> *'For instance, funding the 'Sons of Iraq' may have worked in Anbar Province, but arming militias may prove highly counterproductive in Afghanistan. Lessons drawn from the approach to infrastructure reconstruction in the Balkans were transferred to Afghanistan'.*[13]

This resulted in the reconstruction of buildings such as schools as a priority but in Afghanistan the construction of physical infrastructure assumed the existence of a level of indigenous capacity to administer and maintain that school infrastructure. In Helmand it was lacking.

Observation: Approaches to stabilisation must be tailored to address the specific characteristics of the conflict. This requires knowing when and where not to apply lessons derived from other contexts

PROVINCIAL RECONSTRUCTION TEAMS (PRTS)

11. Provincial Reconstruction Teams (PRTs) are examples of integrated CJIIM structures that enable governance and reconstruction activity to be coordinated where the security situation prevents civilian actors and agencies from working freely. Initially operated under the Post Conflict Reconstruction Unit (PCRU) oversight, before the formation of the Stabilisation Unit in 2007[14], PRTs are central to the UK approach to stabilisation. The UK has contributed a PRT to Afghanistan since 2002, with the UK operating a PRT in Mazar-i-Shariff in Northern Afghanistan.

12. The Helmand PRT was funded by the UK, USA, Danish and Estonian Governments. Initially, the PRT was led by the military and the DComd HQ TFH. In the early phases the wider governmental effort was criticised by the military for a lack of and poor quality staff, a lack of money to back expectations and the constraints imposed by force protection concerns for civilian staff in the largely non-permissive environment. All hindered interaction with the civilian population and the execution of an integrated approach outside the confines of the walls of the FOB at Lashkar Gah. From a difficult start, however, with only a handful of civilian staff the PRT manning grew as the security situation improved. In 2007 the head of the PRT transferred to a 2* equivalent from DfID or FCO, finally adhering to the principle of civilian primacy within an Integrated Approach. The civilian staff rose from around 80 at the time of the US Surge on Operation HERRICK12 in late 2010, rising rapidly to a peak of 200+ on Operation HERRICK 13 in 2011. UK, US and Danish District Stabilisation Teams were located in 11 of Helmand's 14 districts. The size of the PRT contracted on the move to transition and the focus latterly was on returning many of the PRTs functions to the relevant GIRoA civilian department.

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13   Ibid
14   The SU is funded by the Conflict Pool and will move to the FCO, but has stakeholder engagement from DFID, MOD, Cabinet Office, Association of Chief Police Officers (International Affairs), National School of Government (International), other Domestic Departments (including the Home Office and the Ministry of Justice among others).

13. A Stabilisation Team typically comprised of civilian Stabilisation Advisers (STABADs), civilian specialists (e.g. in agriculture, education) and a political adviser all, working alongside a UK Military Stabilisation Support Team (MSST), a US Civil Affairs Team or a Danish CIMIC (Civil Military Cooperation) Support Team. The teams brought together people with a range of backgrounds including development, politics, engineering and project management. Afghan members of the teams also played a vital role, bringing local knowledge and existing local relationships. The Stabilisation Teams worked alongside the District battlegroup headquarters to coordinate civil and military activity.

14. The Helmand PRT director was a civilian 2* from FCO with deputies from DfID and MOD. Its primary direction came from the GIRoA/ISAF Helmand Plan. In turn a province-wide plan was agreed amongst the Helmand Executive Group (HEG). The HEG consisted of the District Governor, Director HPRT, Comd RC(SW), British Embassy Drugs Team and Senior Civilian in the US Regional Platform (Afghanistan). Essentially the PRT had overall lead for delivery of the Helmand Plan. Coordination and mutual understanding between the actors was a perpetual problem. Collocation of the PRT with the TFH Headquarters in Lashkar Gah alongside the Helmand Governor's District Centre was by design in order to facilitate liaison between the principle players. In addition the PRT had a 16 strong Specialist Team Royal Engineers (STRE) attached to it to provide qualified engineering oversight to construction projects. At its peak the PRT was structured as shown in Figure 5-4-1.
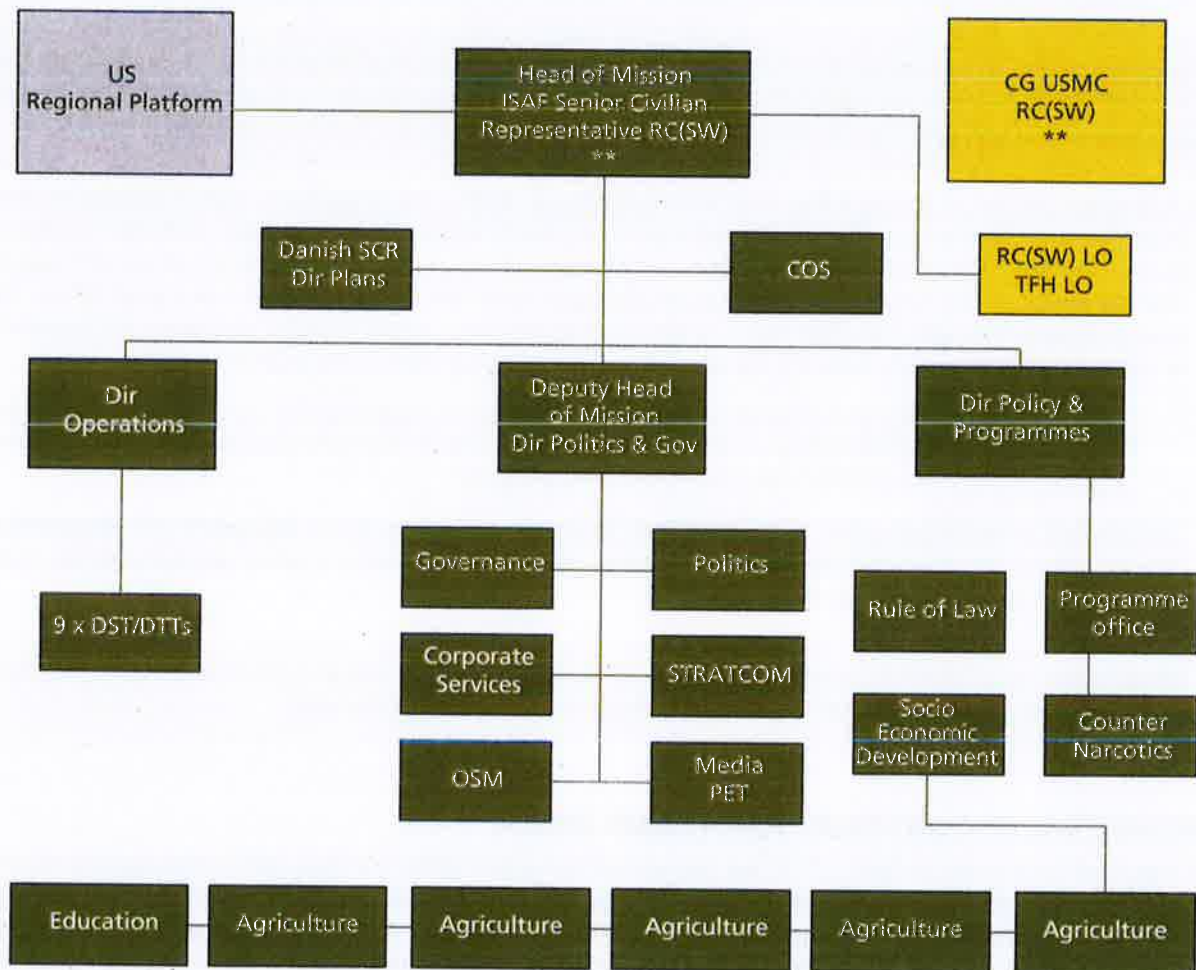
Figure 5-4-1. Helmand Provincial Reconstruction Team Structure 2012

MILITARY STABILISATION SUPPORT GROUP (MSSG)

15. The lead for the military contribution to stabilisation were soldiers, initially from the Joint CIMIC Group (JCG) but latterly SMEs from the MSSG post its formation in 2009. The MSSG is tasked to prepare and deliver stabilisation planning teams and functional specialists, capable of providing stabilisation support to deployed formation headquarters and battlegroups. MSSG deployed individuals on each HERRICK rotation as stabilisation planners and practitioners at every level from the PRT headquarters, the stabilisation cell within HQ TFH and down to each battlegroup. Eventually, even most company locations throughout central Helmand were supported by a MSST each of between 2 to 4 soldiers.

16. In the early, non permissive stages, of the campaign the civilian PRT staff were largely confined to the Main Operating Base (MOB) at Lashkar Gah. At first, military MSSG teams spent most of their time following in the wake of fire fights, running claim clinics and paying immediate compensation for damage to crops, buildings and ditches. They would take over land and compounds needed by ISAF and report back to the PRT, helping it to focus on local needs and on projects that would bring stabilisation and development where it was most needed. As these projects took shape the MSSG would monitor progress, forging links with the locals and building up databases of trustworthy contractors.

Lesson: In order to act as the eyes and ears on the ground for civilian stabilisation staff in non-permissive environments MSSG personnel must be deployed at the outset of all future campaigns giving the PRT remote access to places and people that otherwise they could not reach. MSSG personnel should be included in the ORBAT of future intervention forces.

Lesson: Claims clinics are a great way to interact with local nationals (LN) and start to build trust and relationships. MSSG personnel had not received adequate compensation training. A practical guide to compensation on the how to manage claims is required.

17. Mutual situational awareness between the CJIIM staff was essential, especially with the inherent military/civilian cultural tensions. DComd TFH was the critical post in maintaining mutual understanding as he physically attended the central 'bird table' updates and Principle Planning Groups (PPG) in both the PRT and HQ TFH. He worked mostly within the PRT usually supported by the Officer Commanding of the deployed MSSG as Chief of Staff (COS) and always by a robust MSSG liaison cell. However, throughout the campaign, at the tactical level, there was a conflict of interest between battlegroup commanders and MSSG staff. The former were keen to realise rapid change within their Area of Operation (AO), to mark progress within their 6 month tenure and to foster greater links with the community to deepen dependence, trust and security in order to strengthen their own force protection. At its heart was a misconception of the aims of stabilisation. Up until 2010 the focus from was on reconstruction. It was only in 2010 that stabilisation was redefined to focus on protecting political actors, the political system and the population, the promotion and strengthening of political processes and to preparations for longer-term recovery. Battlegroups therefore failed to differentiate between the role of specialist MSST's, civilian STABADs from the PRT and, their own Consent Wining Activity (CWA) conducted at the tactical level by none specialists. The former delivered deliberately planned longer term stabilisation including enduring projects aimed at building national capacity and developing longer term communities, the latter could undermine this by chasing quick wins to calm the level of violence and free the battlegroup to conduct other military tasks.

18. In an effort to overcome the gap between the MSST staff and battlegroup/company HQs, commanders were encouraged to establish Non Kinetic Effect's Teams (NKET) drawn from their own personnel in order to bring stabilisation into the core of the CF HQ and to better enable synchronisation of STABAD, MSST with core HQ activity.

Lesson: If NKETs are embraced by the commander and properly resourced the integration and coordination of stabilisation effects and planning, particularly at battlegroup level and below is much improved. The best practice for an effective NKET at company level is Junior Officer or Warrant Officer; 1 X SNCO – ideally with experience in intelligence or MACE[15]; 2 X JNCOs – one JNCO with linguistic skills, both with an understanding of basic psychological operations. This construct such be reflected in doctrine.

19. By Operation HERRICK 13 in 2011, Comd TFH felt that there was little coordination of stabilisation in support of the wider military Influence campaign. He felt STABADS once deployed on the ground were kept on too loose a rein by the HPRT and that it required increased central oversight particularly as STABADS and CF commanders naturally looked inwards to their own AOs rather than looking across boundaries. As a result of a lack of wider province understanding there was little to prevent districts pulling in different directions. To overcome these shortcomings a new Stabilisation Cell was established within HQ TFH with an SO1 Stabilisation, SO2 Stabilisation Plans and SO3 Stabilisation Operations taking command of the 4 deployed 8 man MSSTs. The Cell provided the Stabilisation lead within the HQ and the link to the RC(SW) C9 Branch, including engagement via the RC(SW) Stabilisation Working Group. In addition 2 embedded MSSG officers remained within the Helmand PRT to ensure compliance with guidance issued by the PRT in support of the Governance and Development lines of operation. The C2 relationships of the theatre MSST is shown at figure 5-4-2.
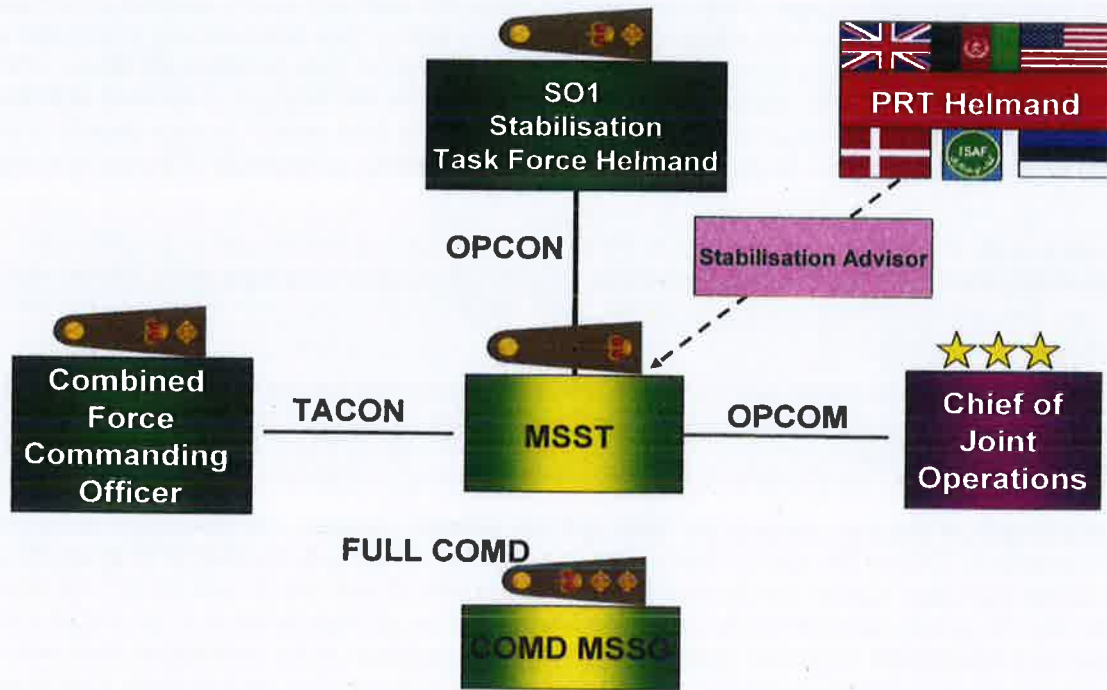
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15   Military Assistance to Civil Affect Mace

Figure 5-4-2. C2 Relationships for in Theatre MSSG Personnel

TRANSITION

20. In 2012 and the start of Operation HERRICK15 Transition planning was well underway. Each district in Helmand produced an annual District Transition Road Map (DTRM), which set out the desired outcomes and priorities of government and development activity. The DTRM was produced with an Afghan lead by the District Governor's staff, with support from the district level representatives of the line ministries. As bases closed and, with reconstruction work increasingly in the hands of the local population, so the numbers of the MSSG personnel reduced. From a peak of 50 working in teams of 8, numbers reduced to 16 split between 4 locations in 2012 and by August 2013 there were only 7 personnel. In mid 2014 there will only be a team of 4 supporting the District Transition Teams (DTTs), Transition Officers (Afghan civilians employed by the PRT) and District Transition Advisors (DTRANAD) whilst also providing stabilisation effect in support of Transition Support Unit (TSU) security operations.

21. By the end of the campaign and transition, progress became Afghan identified, led and delivered. An assessment of community needs was carried out by a DTT in consultation with local representatives in order to identify a practical plan of action which could deliver basic amenities to local people in a culturally appropriate way. Programmes were designed to be sustainable, contribute to improved security, enhance government capacity and improve quality of life as long term effects. DTTs were generally co-located with TSU headquarters and the TSU Commanding Officer, Transition Officer and DTRANAD work jointly through the MSST and TSU force elements to engage with the local population thus reinforcing the homogeneous approach between all LoOs.

ENDURING STABILISATION LESSONS

22. A key development as a result of the experience of Operation HERRICK is the creation of a new 1* Security Assistance Group (SAG) envisaged by Army 2020 (A2020) structures which has an initial operating capability (IOC) planned for 01 September 2014. The SAG will bring unity of command to specialist military Information Activity and Stabilisation Support (IA&SS). It will strengthen and better exploit the functional linkages between existing IA&SS providers (MSSG, 15 Psychological Operations Group (POG) and the Media Operations Group (MOG) and will resource a Security Capacity Building (SCB) capability for the first time as part of a holistic approach to stabilisation support. Comd SAG will ultimately have the lead for resolving many of the stabilisation operations lessons that have emerged from Operation HERRICK.

23. The SAG will be the principal Defence partner for the SU, a relationship intended to underpin the integrated approach. Commander SAG provides de facto liaison between DCDS Military Strategic Operations (MSO) and Head SU. This relationship will enhance shared situational awareness across the relevant departments in MSO without undermining the Centre's policy and strategy role. It will also help ensure that strategic intent is seamlessly linked to tactical output and that specialist stabilisation support advice is readily available at all levels. This is consistent with the principles of an Integrated Approach. The SAG will also be the Land Forces proponent, specialist training centre and conceptual hub for IA&SS. More detail on the SAG is contained in chapter 5-3 Information Operations and Outreach.

Observation: Comd SAG will be the Land Force proponent for IA&SS, responsible for institutionalising the proper execution of IA&SS as part of military Joint Action[16] and integration of military soft effect within a CJIIM Integrated Approach with the intended outcome of an Army better able to deliver agile, robust and affordable soft effect.

24. The following lessons and observations on the UK military approach to stabilisation operations inevitably go wider than a narrow MSSG view, but include lessons and observations that are relevant to campaign planning and operational design at the highest level. They should be read in conjunction with the SU lessons from Afghanistan which covers wider political and civilian learning post the Afghanistan campaign.[17]

TROOP DENSITY

25. There is a strong correlation between force levels and the level of security. Where force levels were high security was higher and more enduring. This in turn gave locals the confidence to engage with ISAF and enabled battlegroups, their MSSTs and, most important of all, Afghan government officials to begin to address their concerns. However, this impact was fragile. Areas could only be considered "held" when the local nationals themselves felt secure and there could therefore be a considerable time lag between the "clear" and the end of the "hold" phase.

26. Sufficient force levels need to be sustained to guarantee security. Reducing force levels too early runs the risk of allowing insurgent intimidation and influence back into an area and undermines the level of trust that has been built up; regaining this trust once lost is harder the second time around. Between the initial intervention in 2006 and 2010 the UK struggled to achieve the necessary force density to hold ground and to protect stability actors resulting in the view that we were constantly 'mowing the lawn'[18] re-taking ground to re-establish security in a cyclical manner. It was only when the UK AO had been drastically cut as shown in Figure 6-5-3, the UK committed five ground holding battlegroups instead of the initial one, the United States Marine Corps (USMC) surge had occurred and the ANSF had the requisite capability to back fill cleared areas that the coalition finally had the troop density to enable PRT stabilisation agencies to begin to deliver effect.
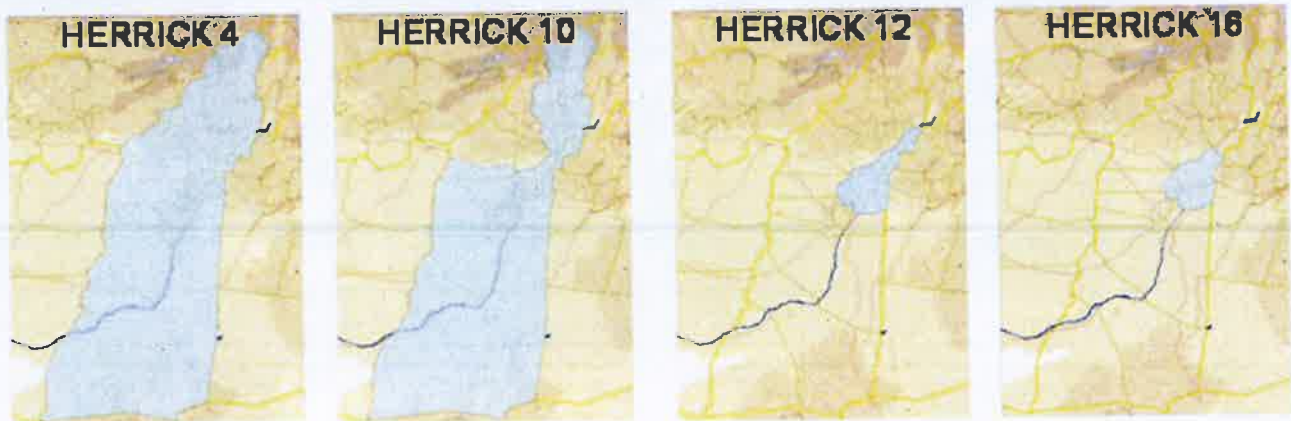
Figure 5-4-3. Shrinking Size of the UK AO (in Blue) resulted in Increased Troop Density

SECURITY

27. LNs were often unwilling to commit to fledgling GIRoA institutions until they felt safe and confident that emerging security would endure. For future operations the UK will need to focus on delivering a secure environment (with our own troops or enabling indigenous forces) but be ready to immediately exploit the stabilisation space that this creates as it emerges. It is the perception of security that local people have that matters rather than our own; it cannot be forced and attempting to do so is likely to prove unsuccessful. People behave differently when they feel secure, typically they are more likely to get out and about, to allow their families to travel, to say what they think and to invest in new capital projects such as buildings or equipment. As discussed in the IA&O Chapter the UK has yet to develop reliable Measurements of Effectiveness (MoE) for soft effects and establishing ground truth of population atmospherics rather than simply measuring tangible 'things' (e.g. attacks on ISAF, shot reports, tomatoes on sale in markets). It must be recognised that there will be set backs caused by a range of external factors so it is therefore important to look for longer term trends rather than respond slavishly to every shift in numbers.

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16 CDCS Draft SAG CONUSE Feb 14.
17 Stabilisation Unit Report: Responding to Stabilisation Challenges in Hostile and Insecure Environments: Lessons Identified, November 2010, http://www.stabilisationunit.gov.uk/stabilisation-and-conflict-resources/stabilisation-unit-publications.html
18 Post Operation Report, Comd TFH, Operation HERRICK 6.

Lesson: There is a strong correlation between force levels and the perceived level of security. Where force levels were high security was higher and more enduring. Areas can only be considered "held" when the local nationals themselves feel secure and therefore there can be a considerable time lag between the "clear" and the end of the "hold" phase. Sufficient force levels need to be sustained throughout this extended period to guarantee security. Stabilisation doctrine should be amended accordingly.

Observation: People were unwilling to commit to engagement with developing GIRoA institutions until they felt safe and confident that emerging security would endure. It is the perception of security that local people have that matters rather than our own. On future contingency operations we must deliver a secure environment but be ready to immediately exploit the stabilisation space that this creates as it emerges.

Lesson: Understanding how local people might act in an environment where they feel secure is critical to MoE. It is the changes in behaviour which indicate success rather than objective data and numbers which in themselves indicate very little. They need to be put in context and causes identified. Assessing progress while it should be informed by objective data and analysis is largely a subjective process. The SAG in conjunction with LIFC3 must develop more effective MoE for security but recognise that they will be specific to every campaign and even every location within a theatre.

Figure 5-4-4. Availability of Perishable Goods in Markets Has Been Used as a Stabilisation MoE.

UNDERSTANDING OF STABILISATION

28. From a poor start the Army now has a generation within the chain of command who have a good conceptual understanding of stabilisation. Much has been captured in new and updated doctrine.[19] However, when under pressure this understanding was usually trumped by more immediate short term perspectives and, as a result, stabilisation rarely drove the final actions. Whilst understandable there is an inherent danger that we simply deal with symptoms and never engage with the core issues. There remains a tension between the desire to conduct security focussed counter insurgency and the need to adopt a broader stabilisation approach. Not all commanders had a good understanding of the role or the capacity of the MSSTs and so did not immediately understand how best to make use of them. MSSTs are specifically tasked to plan for the longer term, beyond the more usual 6 month rotation horizon. They aim to bridge the gap between the immediate and downstream development, to try and find interim solutions and, within this, act as a long-term conscience for the commander encouraging them to step back, to reflect and to look longer and more broadly.

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19 AFM 1-9 Tactics for Stabilisation Operations (2005); AFM 1-9 Tactics for Stability Operations (2007); JDP 3-40 Security and Stabilisation (2009); AC 71951 Land Influence Handbook (2012); JDP 05 Building Stability (2014).

29. There should be a step change in the quality of advice between, none specialist organic NKETs and MSST SMEs. However, for this relationship to be effective it is essential that those directly involved in stabilisation, both as members of MSSTs and as civilian STABADs are of sufficient experience or quality. Without it they lacked credibility with their battlegroup military commanders. They needed quality advisers with the experience, knowledge or gravitas to hold their own in fraught situations. Currently stabilisation posts tend to be filled by 'enthusiastic amateurs' who self select for posts. The Army currently have a cohort of experienced stabilisation specialists as a result of 10 years on operations which will be rapidly lost on return to contingency if a more formal career progression within the stabilisation role is not identified.

Lesson: There remains a fundamental tension between the desire to conduct military security focussed counter insurgency (COIN) and the need to adopt a broader stabilisation approach. When under pressure military commanders' commitment to the campaign stabilisation outcomes was often trumped by more immediate short term perspectives and, as a result, stabilisation rarely drove the final actions. The new stability doctrine must remain within core Hybrid Foundation Training (HFT) for all forces with both the Reaction and Adaptable force and the Army must not return to position where stabilisation is viewed as somehow separate with knowledge only understood by specialists.

PROCESS CAN OFTEN BE MORE IMPORTANT THAN THE PRODUCT ITSELF

30. The military are trained to focus on delivery; it is the output that matters and the army is often disdainful of process. In stabilisation, however, commanders often mistook a tangible product, a bridge, well or culvert for the output when, in reality, the real stabilisation output was the sense that local people had that their views were being taken into account, that they had a say in their future and the connections that may have been established between people and their official representatives. To achieve this, the manner in which projects were addressed was vital; the process, and the associated 'soft' impact on perceptions, mattered even though it sometimes lead to a slower and less efficient way of delivering the product. In the view of the initial 2* FCO Director of the PRT in 2008,

> 'culturally the military can be over ambitious, in comparison to the more sceptical civilian staff, with a 'Bob the Builder, we can fix it attitude' to everything.[20]

Engagement with Afghans was slow and delivering through Afghan processes was time consuming, causing frustration and yet, it is this process that is most likely to deliver a lasting impact. Some civilian actors noted a striking change in the military approach by 2010, that the military were no longer rushing around just doing things. "It was quite clear that they now understood that success looked like sitting and watching what the Afghans were doing, identifying the point at which there would be a critical failure and only intervening then, but, not in the way of 'you are not doing it the way I would do it, so I am going to shove you aside and do it for you'.[21] This observation may well stem from the 2010 COMISAF COIN Directive and in turn the Helmand Road Map which placed the Afghan population and transition at the heart of the Campaign design. Afghan ownership was paramount.

Observation: In stabilisation the process by which projects are addressed can often be more important than the product itself. In stabilisation commanders often mistake a tangible product (e.g. a bridge) for the output when, in reality, the real stabilisation output is the sense that local people have that their views are being taken into account, that they have a say in their future and the connections established between people and their official representatives.

Lesson: In support of the Army's wider promotion of 'soft' effects there is an urgent need to bring greater professionalism for stabilisation posts and to develop a career and training path in order to maintain an enduring capability. The SAG should be directed to develop a broader base of stabilisation expertise in both the Reaction and Adaptable Force and a through career progression for identified SMEs.

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20   HCS Interview Director PRT 2008-09.
21   HCS Interview Director PRT 2009-2010.

MAINTAINING MOMENTUM DOES NOT NECESSARILY MEAN HIGH TEMPO

31. The military aims to conduct military operations 'at tempo' in order to keep our adversaries off balance. This principle does not work so well in a stabilisation campaign. During the campaign there were several examples of gaining a temporary tactical advantage through opportunistic Quick Impact Projects (QIPs) and CWA activity that were exploited due to a lack of longer term stabilisation capacity. The Understand-Shape-Clear-Hold-Build construct is good practice, however if executed in a rush can expose weaknesses in the host government authorities or, due to a lack of Human Terrain (HT) understanding cause commanders to be tricked into completing a project that only benefited one element of society thereby further alienating the population from their leaders. Seeing stabilisation as a series of deliberate operations with the engagement, follow up and exploitation carefully planned and prepared as part of the shape phase, though slower, may well prove faster in the long term and is likely to generate greater momentum, a sense of inexorable process.

Observation: Maintaining momentum does not necessarily mean high tempo. High tempo stabilisation action can generate unrealistic expectations amongst the population that if dashed reinforce their doubts about the wisdom of siding with the government authorities. Sometimes going slower will get you there faster.

CJIIM STAFF INTERACTION

"you could not underestimate the way it is possible for a military machine to paralyse both Afghan and civilian matters by pestering them with questions turning up to visit them and being a bit sceptical about how they do things, rather than working on how to surge support where necessary"

PRT Director[22]

32. The co-location of the PRT and HQ TFH was seen as beneficial. However, geographical proximity was not the only barrier to overcome. Throughout the campaign the PRT suffered from cultural differences in expectation, experience and working practises of both the civilian, multinational and military staff which, coupled with very different tour lengths of the various actors, made working relationships difficult. There was a resultant lack of mutual understanding, particularly amongst the non-specialist military staff and units. They did not intuitively think of each other during a crisis and talked at cross purposes when trying to establish common goals.[23] There was military frustration at the initial lack of staff and structures committed to Helmand by the FCO, DFID and others. It was a perception that persisted even after the PRT reached critical mass in 2008 onwards. Conversely, amongst the civilian staff there was a perception that Army HQs, not just the TFH, saw themselves as the thing that 'everybody else needed to bend towards, rather than something that needed to bend towards anybody else and do it their way'.[24]

33. Current British Military Doctrine (JDP 0-01) acknowledges that the Integrated Approach requires a civilian lead[25] which was a mindset not intuitive to many commanders. Some military personnel found it difficult to culturally accept that the "PRT process was just like that process you run, which you call whatever; but we're just doing it a little differently".[26] Some of the short comings were mitigated, for example during Operation MOSHTARAK when the headquarters element of the Theatre Reserve Battalion was placed under command of the PRT, partly to make sure it had enough planning capacity but also to relieve the PRT staff of the distraction of turning out staff work in the form that military headquarters staff expected before they took it seriously. It has previously been observed that the military have in the past struggled to effectively integrate civilians into all aspects of the HQ.[27] Civilians tended to be 'accommodated' in particular cells or even separate tents. As previously discussed, HQ Prelim Ops had shortcomings, but both DFID and FCO staff reflected on the positive experience of joint planning, with a 'big tent, consultative approach to planning' that the civilian staff valued. HQ 16 AA Bde had been somewhat isolated from the planning process but the civilian staff reflected on their perception of a much more adversarial relationship. Although matters had improved when 16 AA Bde returned in 2008, the structures for an effective integrated approach were really only finally resolved with the arrival of HQ 6 Div as the 2* RC(S) HQ in November 2009. The structure, planning horizons, span of command and longer tour lengths of the divisional staff was reported as being a much easier relationship by the Directors of the PRT than that of the more tactically focussed 1* HQ TFH. This perception continued with the subsequent transfer to the US 2* RC(SW) HQ.

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22   ibid
23   Stabilisation Unit Report: Responding to Stabilisation Challenges in Hostile and Insecure Environments: Lessons Identified; November 2010. http://www.stabilisationunit.gov.uk/stabilisation-and-conflict-resources/stabilisation-unit-publications.html
24   ibid
25   JDP 0-01 (4th edition) British Military Doctrine (2014), paragraph 141.
26   HCS Interview Director PRT 2009-2010.
27   Operations in Iraq, An Analysis from the Land Perspective, Chapter 5, Tactical Contribution to the Comprehensive Approach, paragraphs 519 and 528.

Lesson: Differences in culture, expectations, and even arrogance of military headquarters will detract from effective CJIIM execution. This is exacerbated by very different operating processes. Military training and exercises need to better reflect the need for civilian primacy. Headquarter design should be adjusted to improve the execution of the integrated approach required during the execution of stabilisation.

Lesson: Unity of effort between the military and cross government actors must be a priority from the outset of future interventions. Integration will not work if nothing is done until there is a need for an integrated team. Staffs from different backgrounds must train together, attend common courses and read each other's guidance to promote a basic level of common understanding. Military access to SU stabilisation courses and greater exposure of the SU staff within routine MSSG training events and representation at Formation MST would enhance the base line of mutual understanding. Director Training should amend relevant policy and practices accordingly.

Observation: The co-location of elements of the civilian and military stabilisation headquarters is a good practice to enable closer liaison between the chief parties and better unity of effort.

TACTICAL MONEY

34. Money is a potent tool and if used wisely can have a significant positive impact. The challenge in Helmand was not one of securing more financial resources, even for costly infrastructure, it was one of rationalising what was available and simplifying the rules that governed its use, while ensuring accounting procedures were followed. Many ground commanders complained of the pitiful levels of money they felt they had access to. However, this was more a reflection on their lack of knowledge on the role of MSSG personnel who had specific training on stabilisation funding. The PRT reported that that finance was available for QIPs and other local initiatives through the Conflict Pool which served its purpose well.[28]

OPERATIONAL MONEY

'It is important to align the level of ambition with resourcing. There is no point in pretending stuff is possible within minimum resources, if it is not. don't wing it.'

PRT Director[29]

Figure 5-4-5. Typical House Construction in Rural Helmand.

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28   SU Case Study: Infrastructure in Helmand 2008-2010, lesson 5.
29   ibid

35. At the operational level procedures were more complex. Given that at no point did the Afghans raise enough from their own revenue to pay for their own central Government; they were very donor dependant. There was a lack of discussion early on, at a strategic level, about where to spend money and over which would have been the better option: for the UK to increasingly surge our and other donor's resources in to Afghanistan, or for the UK to work out how to surge Afghan resources into what they could afford".[30] While there were mechanisms for joining up donors, there were many instances of the same projects being pursued along two or more channels of prospective funding.

36. It is important that tactical commanders do not make promises to locals that cannot be resourced into the longer term. This was yet another tension between tactical level military CWA and longer term STABAD led development. Successive heads of the PRTs noted the need to consciously think about limiting ambition and about not getting sucked in to trying to solve problems that could not be resourced to solve. All development projects must be sustainable. Many of the builds were to high 'Western' standards that have large through life costs and are hungry on resources such as electrical power. A locally designed and built building, using 'mud brick' technology is easy to maintain, does not require out of area contractors, costs considerably less (and therefore is less susceptible to corruption) and does not rely on a large operational and maintenance budget for such things as air conditioning.

Observation: If not used wisely money can cause considerable 'collateral damage'. There is a need to focus expenditure from the strategic through to the tactical level. Complex drivers of instability that have developed over many years cannot be solved simply by spending money. It can exacerbate tensions, raise unrealistic and unsustainable expectations, divert effort from more constructive issues and fuel corruption. Expenditure needs to be carefully and intelligently focused based on a good understanding of the conflict dynamics.

Lesson: There is a need to find ways for major donors, who are not used to co-financing, to coordinate their expenditure. Commanders and MSSG personnel need a better appreciation of the practical complexity of the various funding mechanism, but the lead remains with the PRT. There is a need to improve aspects of the PRT's Conflict Pool financing procedures.

Lesson: At the tactical level (battlegroup and below) MSSG personnel should continue to be trained for the delivery of expert advice on sourcing finance and the subsequent use of money.

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30   HCS interview Director PRT 2010.

CAMPAIGN MINDSET

37. In is widely accepted that early on the UK lacked a campaigning focus and that successive deployments tended to think in 6 month chunks with each commander putting their spin on the plan.[31] Stabilisation activity in particular cannot operate within such limited time horizons which by its very nature takes time to set up. Indeed the World Bank's highly regarded 2011 World Development Report[32] recommends a 15-20 year expectation of the time required to permanently break a cycle of violence. Even at the lowest tactical level, platoon and below, it is important to think in terms of an ongoing campaign and to ensure that momentum is maintained throughout the campaign. Experience in Afghanistan has shown that even with continuity posts it took a new force time to bed in and that there would be a lull in stabilisation activity during and immediately after a relief in place. It is important to encourage people to think beyond their immediate tour and it is a good practice to set up early wins for successors. From a MSSG perspective being able to deliver early in a tour helped to establish the MSSTs credibility within the battlegroup and in turn the battlegroup with local officials and the wider population.

RECORDS

38. Local Afghans did not operate on 6 month cycles, they had seen many come and go and learnt how to survive and how to exploit situations to their advantage. They recognised that foreign military and civilian personnel tended to be more gullible early in a tour, lacked knowledge and were perceived to be in a weaker position to that of their immediate predecessors. Locals often sought to capitalise on this window. This was not simply an issue of being taken for a ride, inequitable allocation of resources or their capture by one element of society could inflame tensions and provide valuable propaganda for our adversaries. This weakness could be mitigated by establishing a core of longer tour MSSG continuity posts, and by educating commanders to seek and trust advice from stabilisation specialists. Stabilisation staff must also be encouraged to more formally maintain records and share information across tours and boundaries that clearly articulate the assumptions and logic behind longer term activities. Too often units inherited stabilisation activity that they failed to understand the raison d'être. When proposing stabilisation projects or activities planners must be encouraged to state why they think it will cause the desired change, be clear about the process of change and the changes in behaviour they believe will indicate success. Without this there is a temptation for new commanders to simply repeat what they have done elsewhere or to follow pet projects based on assumed dynamics and not see projects through to their long term conclusion.

TARGET ACTIONS TO ADDRESS DRIVERS OF INSTABILITY

39. As already highlighted there was a widely held view that at the outset of the Helmand expansion the stabilisation plan was simply a template of what was perceived to have worked elsewhere. An Operation TELIC or a Mazar-i-Shariff PRT solution was the only exposure to stabilisation thinking for many commanders and so this is what was immediately imposed on Helmand. Commanders need to be encouraged to spend the time to identify what it is that is driving instability at a very local level and hence focus their efforts on addressing these. Commanders tended to try to impose their understanding rather than trying to understand where the locals were coming from. When asked locals often had very good reasons for rejecting what appeared blindingly obvious to military commanders.

40. It is important to think through the wider implications of activity and look beyond the immediate timescale and beyond immediate area of operations. Commanders must consider the impact on neighbouring, downstream or upstream communities. Once a better understanding of the local Human Terrain has been established it is far better for commanders to then focus projects that try to connect rather than divide communities, look for what unites them and try to build on that. As the campaign progressed commanders at all levels became adept at calling, facilitating and exploiting local Shuras to better coordinate stabilisation activity. New and effective doctrine for the conduct of local engagement was developed during the campaign.[33]

Lesson: Think beyond the immediate tour; give your successors some early wins. MSSTs should ensure that there is a continuing line of activity set up that enables the incoming battlegroup and MSST to continue delivering effect. Stabilisation doctrine and SAG SOPs should be amended to reflect this.

Lesson: Comd SAG must ensure that training protocols for stabilisation SMEs, in particular MSSG personnel, focus on improving the articulation of the logic of stabilisation plans to better inform their successors.

Observation: Commanders and stabilisation staff need to be trained and encouraged to utilise local knowledge to identify causes of instability. It is better to initially concentrate on projects, however limited, that focus on common issues that might unite communities rather than those aimed at addressing the major, often one sided, issues of division.

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31 Various HCS study interviews.
32 World Bank World development report 2011: Conflict, Security and Development: Chapter 3. http://www.uis.unesco.org/Library/Documents/world-development-report-education-2011-en.pdf
33 JDN 4/13 Cultural and Human Terrain, September 2013.

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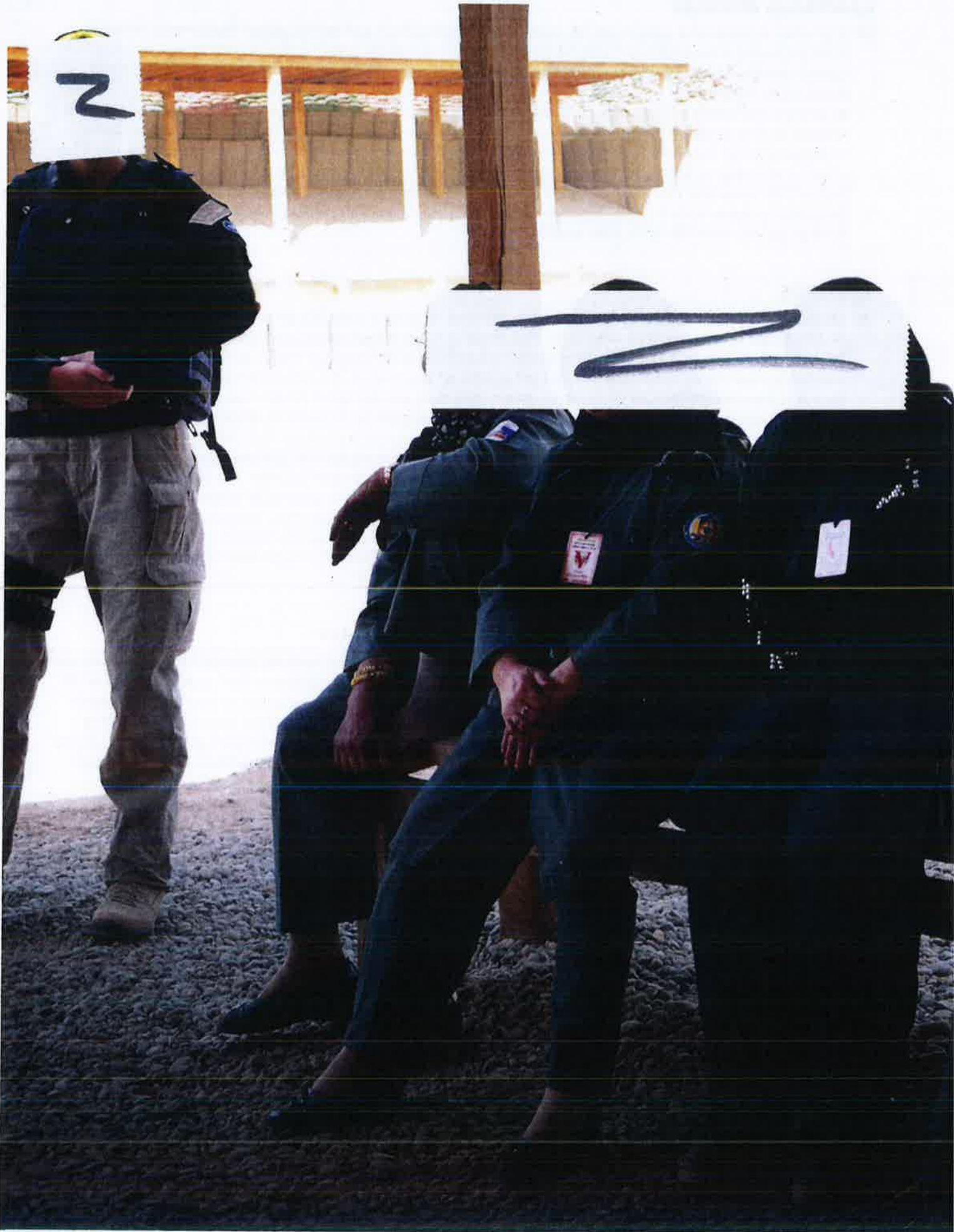
CHAPTER 5-5
OPERATIONAL LAW, DETENTION AND MILITARY POLICING

OPERATIONAL LAW (OPLAW)

BACKGROUND - THE LEGAL OVERLAY FOR OPERATION HERRICK

1. Throughout Operation HERRICK the legal support framework developed to meet the evolving demands for legal advice, surety and representation. This evolution was, in part, driven by high level public interest and scrutiny of the moral conduct of operations.

2. Military legal representation in theatre began in 2003 with representation provided by two Army legal officers (1 x Lieutenant Colonel and 1 x Major) based in Kabul. This level of support was appropriate for the size of the Force and nature of the mission and was limited to a single six month deployment. There was then no Service legal representation in theatre until 2006.

3. In 2006 the Headquarters ARRC[1] deployed to theatre to form Headquarters ISAF and their organic legal assets deployed with them. Thereafter, UK legal officers deployed on a tri-service rotational basis as part of the Headquarters ISAF[2] legal office. This was always headed by a US Army Judge Advocate General's (JAG) Corps Colonel. Concurrently, Headquarters Task Force Helmand (HQ TFH) was provided with a single SO2[3] Legal. By Operation HERRICK 6 in 2007 an additional SO3 legal post was created due to the heavy workload. Established in the same year was an SO1/SO2 legal post in Headquarters Regional Command (South) on rotation with Canada, and two legal posts (SO2 and SO3) at Headquarters Joint Force Support (Afghanistan) (JFSp (A)). At this point in the campaign the responsibility for Captured Persons (CPERS) and detention review was transferred to JFSp (A). In addition the JFSp (A) legal office took over responsibility for all discipline matters, freeing up the TFH legal team to concentrate on legal support to the targeting and intelligence communities within the Task Force.

4. From 2009 to 2013 a number of additional UK legal posts were established, including posts in Headquarters ISAF Joint Command (IJC), Headquarters Regional Command (South West) (RC(SW)) and an SO1 embedded into the USMC legal offices. 2010 saw the establishment of the Detention Oversight Team (DOT) with one legal officer (SO1) as commander of the team.

5. In 2013 the Afghan Review Board (ARB) legal post (SO1) was established. This was a response to the alleged non-compliance of UK-gathered evidence for supporting further investigation or prosecution of UK-captured detainees in Afghan courts, and the threatened release of these detainees in the absence of remedial work being done to improve the evidence supporting these prosecutions. The ARB proposals were, in fact, contradictory to Afghan law and eventually not pursued by the Service Police. This served to reinforce that an understanding of Host Nation (HN) law is essential when obtaining evidence for HN investigations and prosecution.

6. Throughout the campaign reach-back support was provided by the legal office in Permanent Joint Headquarters (PJHQ) in the first instance and then the Operational Law (OPLAW) Branch at the Land Warfare Centre which would provide officers to augment the in-theatre legal teams for the Relief in Place periods (in order to assist with RSOI[4] briefings) and to provide Rest and Recuperation (R&R) cover when required.

7. The types of legal advice provided varied according to the level of command at which the advice was delivered. At the tactical level (e.g. TFH) advice would range from the application of Rules of Engagement (ROE), Shooting Incident Reviews, advice on the Targeting Directive in the use of offensive and defensive fires (e.g. the rules pertaining to, and the employment of, indirect and direct fire weapons) advice on the legal constraints on covert and overt intelligence gathering, judgemental training, advice on the use of force against a backdrop of regular changes in "command approach" from commanders, and the legal constraints in the planning and execution of all military operations.

8. At JFSp(A), advice was far more focussed on detention of CPERS and the discipline of the force, whereas RC(SW) bridged the gap between tactical and operational level legal advice within coalition operations, and coupled with IJC, mainly centred on targeting and coalition interoperability issues. The implications for UK activity were that UK actions were within the relevant legal constraints at all times but these issues required careful attention and occasionally required negotiation to achieve commanders aims within national legal interpretations and policy. As the operation progressed, US and UK targeting operations became ever closer, culminating in the creation of the Coalition Targeting

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[1] ARRC: Allied Command Europe Rapid Reaction Corps
[2] ISAF: International Security Assistance Force
[3] SO3: Captain (or equivalent) staff appointment; SO2 Major (or equivalent) staff appointment; SO1: Lieutenant Colonel (or equivalent) staff appointment
[4] RSOI: Reception Staging and Onward Integration

Cell (the CTC) in late 2013 as the Regional Targeting Cell (at RC(SW)) merged with the ▓▓▓▓▓▓▓▓▓ at TFH.

9. It is noteworthy that at one stage, there was a delay in transferring CPERS to the ANSF due to ongoing litigation on the High Court which is discussed in further detail below.

10.

11. At the high-water mark of legal activity during Operations HERRICK 17 and 18 (2012-2013) the legal framework was per Figure 5-5-1 below.
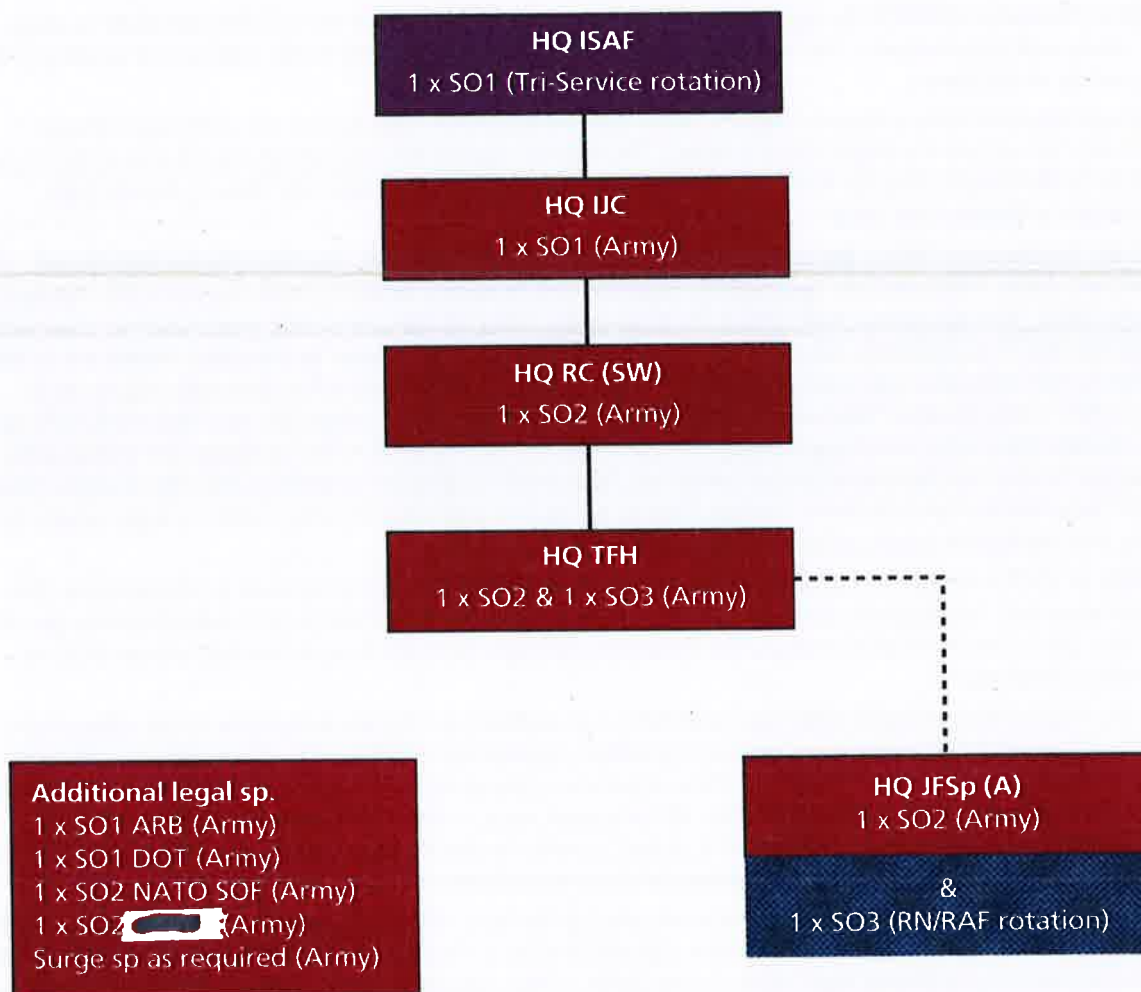

Figure 5-5-1. The Operation HERRICK 17 and 18 Legal Framework

THE OPLAW LESSONS

LEGAL SUPPORT TO THE EARLY STAGES OF AN OPERATION

12. During the initial deployment the volume of work for the legal officer at Task Force (TF) level was considerably greater compared to what it would be once the operation had become more established. This was due mainly to the need to establish the legal framework. On Operation HERRICK 4 the tactical Captured Persons (CPERS) policy had to be drafted by the SO2 Legal in TFH, which at that time was the only legal post at this level. This work had to be completed at the same time as the creation of other key theatre policy documents whilst supporting high-intensity combat operations. This meant it was not always possible to provide the necessary level of legal support to the TF. Furthermore, as there has been no legal framework on which training could be based, the pre-deployment training in legal matters was not as thorough as was needed. This created additional demands on in-theatre legal support.

13. Operation HERRICK showed that the manning of the Legal Branch for a TF/Brigade size formation should not be less than 1 x Major and 1 x Captain. This enabled the provision of appropriate legal support from 2007 to 2013, whereas prior to this, when the manning was at 1 x Captain, the level of support was strained and sometimes insufficient. A JFSp HQ should have the same strength of legal manning.

14. During the early stages of an operation within a multinational force such as ISAF there is benefit to be gained from having legal officers from each of the major troop contributing nations. This allows an early understanding of differing national positions and key command and staff officers from those nations can draw on national legal advice from the multinational legal office. For example, Headquarters Regional Command (South West) (HQ RC (SW)) had a predominantly USMC JAG office but with one UK Army Legal Service (ALS) SO2 to add UK understanding to the legal issues that arose. That officer was also able to advise the Deputy Commander, a UK Brigadier, on national red card issues and the UK approach to targeting. A similar approach was adopted at Headquarters ISAF Joint Command (HQ IJC), where a UK ALS Lieutenant Colonel was charged with heading the OPLAW section of the legal office, with the key responsibility of advising on targeting, whilst at Headquarters ISAF there was a UK legal SO1 (a tri-service rotational post) working in a predominantly US JAG Corps office.

Lesson: Legal Branches in deployed Headquarters must be appropriately manned to support initial operations and establish the in-theatre legal framework therefore ADOC should ensure that the manning of the Legal Branch in any UK Formation Headquarters reflects the increased requirement for legal support in the initial stages of an operation, with greater numbers of legal officers deploying than one would expect in an established operational theatre.

Operation: HERRICK showed that the manning of the Legal Branch for a TF/Brigade size formation should not be less than 1 x Major and 1 x Captain. This enabled the provision of appropriate legal support from 2007 to 2013, whereas prior to this, when the manning was at 1 x SO2, the level of support was strained and sometimes insufficient. The JFSp HQ should have the same strength of legal manning.

Lesson: Multi-national Headquarters require multi-national legal representation. ADOC should ensure that the Legal Branch of a multinational force Formation Headquarters that has command over units from different troop contributing nations has legal officers from each of the major troop contributing nations.

MINIMISING COLLATERAL DAMAGE

15. The minimalisation of collateral damage has proven to be of the utmost importance to the achievement of operational goals. Successive COMISAF Targeting Directives have reiterated the importance of "zero collateral damage" to mission accomplishment. It is likely that this will be an enduring requirement on future counter-insurgency operations, particularly in a multi-national/coalition force.

Lesson: Deployed commanders must Understand the impact of collateral damage and legal proportionality thresholds. There should therefore be an increased focus in future collective and pre-deployment training on reducing the risk of collateral damage in the targeting process and throughout military action. This is particularly pertinent for training for counter-insurgency operations.

THE DISCIPLINE CHAIN OF COMMAND FOR CIVILIAN PERSONNEL

16. The discipline chains of command for the civilian component of the force were confused and had not been properly articulated in accordance with the requirements of the Armed Forces Act 2006 (AFA 06). This led to delays in the system and an inability to adequately discipline civilians when compared to their military colleagues in theatre.

17. AFA 06 allows for civilians to be placed under the jurisdiction of the Act in order to enable discipline to be maintained when they are operating in a military environment overseas. However, for this to operate there must be a formal designation of those civilians to whom this will apply. Unfortunately, this was not forthcoming and therefore did not enable discipline over civilian contractors to be maintained. This in turn led to difficult working relationships between the chain of command and certain contractors.

Lesson: Guidance on the discipline chain of command for civilian personnel should be in place from the outset of an operation. PJHQ should create and disseminate clear guidance covering the status of civilian contractors for the purposes of AFA 06 and/or the details of any other code of conduct covering their behaviour in theatre.

24. These UHA were initially manned by military personnel from the unit at the Forward Operating Base (FOB) however Provost Marshal (Army)[8] (PM (A)) later advised that the 'Detention Sergeant' should be a SNCO from the RMP in order to provide additional surety.

25. The first United Kingdom THF (UK THF) was opened in Camp BASTION in June 2006, and was designed to detain detainees for up to 96 hours[9]. An improved UK THF was built in 2008. This was also located in Camp BASTION, again only designed to detain detainees for up to the 96 hour limit. The UK THF was manned by suitably qualified Military Provost Staff (MPS) and generalists from the Royal Navy and RAF[10] employed as Detainee Handlers. RMP personnel provided support as required, finally assuming the role of Detainee Handlers in 2014 upon the advice of PM(A).

UK THF 2006-2008   **UK THF 2008-2014**

Figure 5-5-3. UK Temporary Holding Facilities

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27.

28.

Fig 5-5-4. Intelligence Exploitation Facilities VARSITY and TORCHLIGHT

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8   PM(A) is the Defence Subject Matter Expert (SME) for operational detention and is CJO's advisor

9   The ISAF policy for detention authorised detention for up to a maximum of 96 hours, upon which detainees needed to be released or transferred to the Afghan Authorities, normally the National Directorate of Security.

10   Royal Navy and RAF Detainee Handlers were employed in the support role between January 2010 and April 2014. They all conducted a five-day detainee handling course prior to deployment which was delivered by the MPS.

DETENTION OPERATIONS

THE DEVELOPMENT OF DETENTION OPERATIONS AND DETAINEE EXPLOITATION

18. During the course of military operations members of the UK Armed Forces must be prepared to capture, detain or hold individuals for a wide variety of reasons. The treatment of these individuals is of critical importance, not only from a legal and policy perspective but also in terms of the legitimacy of the operation[5].

19. Throughout Operation HERRICK UK Forces were required to conduct detention operations as part of the process of transferring CPERS to the Afghan criminal jurisdiction process for prosecution. This was due to a number of factors, from the mandate to support the GIRoA[6], to the physical and legal problems with the long-term detention of CPERS. It is highly likely that such an arrangement will be utilised in future operations, with CPERS once again being transferred to the Host Nation for criminal prosecution under that nation's criminal code. If so, there will be a requirement to support that transfer with evidence on which a prosecution can be based. This requirement must be clearly understood by all Force Elements engaged in the discipline chain, from the point of capture through to the actual transfer.

20. The transfer of CPERS to the Afghan authorities was controlled by a Memorandum of Understanding between the UK and the GIRoA, with tactical level guidance being provided by the PJHQ SOI J3-9. This set out the expectations on both parties for the transfer of CPERS and was designed to ensure that UK legal obligations were met. As future detention operations may again result in the transfer of CPERS to non-UK criminal jurisdiction for criminal prosecution, similar agreements that satisfy any ECHR obligations for the UK must be in place prior to the initial deployment of the Force (or as soon as possible thereafter).

21. Detention Operations in support of Operation HERRICK continuously evolved throughout the campaign but generally followed a process whereby an individual would be detained by a unit and then transferred to the UK Temporary Holding Facility (THF) prior to onward movement to the appropriate Afghan judicial authorities, usually the National Directorate of Security (NDS).

22. The monitoring of former UK detainees transferred to the Afghan authorities was conducted by Royal Military Police (RMP) officers prior to the establishing of the UK Detention Oversight Team[7] in 2010. The process was overseen by the in-theatre Detention Authority which was initially with Commander TFH before transferring to Commander JFSp (A) in April 2010.

23. Following capture, the capturing unit were expected to transfer detainees back to the THF as soon as practicable but no later than 24 hours from the 'point of detention' (POD). Occasionally detainees may have first been detained in a Unit Holding Area (UHA), prior to onward transfer to the UK THF.

UHA SHAWQAT

UHA OUELETTE

Figure 5-5-2. Example Unit Holding Areas

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5   JDP 1-10 Captured Persons
6   GIRoA: Government of the Islamic Republic of Afghanistan
7   The UK Detention Oversight Team was established in May 2010 and was responsible for monitoring former UK detainees once they had been transferred to the Afghan authorities. Detainees were predominately transferred to the NDS at Lashkar Gah, but occasionally included the NDS in Kabul and Kandahar. Detainees were also transferred to the Counter Narcotics Police Afghanistan (CNPA) and juvenile detainees were transferred to the Afghan juvenile facility in Lashkar Gah.

29. Throughout Operation HERRICK the UK continued to face legal challenges to its process of CPERS handling before the UK Courts. In particular the cases of Myra Evans vs. the MoD and Serdar Mohammed vs. the MoD have sought to challenge the lawfulness of the UK policy of transferring CPERS to Afghan authorities and the legal basis for the long term detention of CPERS before such transfer. The UK's responsibility to ensure that detainees were only transferred to Afghan facilities where the UK were confident that detainees were not at risk of serious cruel, inhumane or degrading treatment. As a result the UK occasionally stopped detainee transfers with the lengthiest suspension being enforced between April 2012 and June 2013 due to concerns over the Afghan detention facilities in Lashkar Gah.

30. From July 2013 the UK only transferred detainees to the Afghan National Detention Facility – Parwan (ANDF-P) at Bagram.

Fig 5-5-5. The Afghan National Detention Facility – Parwan

Lesson: Operation HERRICK demonstrated the enormous scrutiny that CPERS operations face. This will likely continue post-HERRICK into contingency therefore Military Police engagement (RMP and MPS) must be in-place from the start of detention operations to provide appropriate surety.

Lesson: PJHQ should ensure that the relevant operational CPERS policy reflects the requirement for all CPERS transfers to be supported by the evidence necessary for a criminal prosecution or further HN investigation. PJHQ should ensure that the evidential requirements for supporting criminal prosecutions in the theatre of operations are fully understood and that these requirements have been passed onto CTG and feature in the OPORD.

Lesson: The transfer of detainees to host nation authorities must be supported by the relevant agreements. FCO/ MOD should ensure that an appropriate legal arrangement has been made enabling the transfer of CPERS to another nation for criminal prosecution.

Lesson: PJHQ Legal Office should regularly monitor caselaw in order to determine (in conjunction with CLS) whether the UK will need to amend any theatre CPERS policy in order to be legally compliant with national legal obligations.

CPERS DOCTRINE

31. Lessons identified from detention operations during Operation TELIC in Iraq (and subsequent legal challenges) highlighted the need for urgent Doctrine improvement. This was addressed through the lessons process and resulted in the production of increasingly relevant doctrine publications:

   a. **Joint Warfare Publication JWP 1-10 Prisoners of War Handling.** JWP 1-10 was issued in March 2001 concentrating on a 'prisoners of war' status within a conventional, peer-on-peer armed conflict context. However it was shortly overtaken by the different requirements of Operation HERRICK.

   b. **Joint Doctrine Note JDN 2/05 Prisoners of War, Internees and Detainees.** This JDN was issued in July 2005 having applied the lessons identified as a result of the Operation TELIC campaign in Iraq. This, in turn, required JWP1.10 to be reviewed to become JDP1.10.

c. **Joint Doctrine Publication JDP 1-10 Captured Persons.** JDP 1-10 was issued in May 2006 and was broken down into three publications, namely, JDP 1.10.1 (Prisoners of War), 1.10.2 (Internees) and 1.10.3 (Detainees). The second edition of JDP 1-10 was issued in October 2011 and reflected the recommendations made at the Baha Mousa Inquiry[11] (BMI). A third edition is due to be released in 2014, incorporating further observations and lessons identified from Operation HERRICK.

32. UK Forces were deployed in Afghanistan under a series of mandates from the United Nations Security Council[12] and at the invitation of the Government of the Islamic Republic of Afghanistan (GIRoA)[13], to help create a stable and secure environment that is sustainable by Afghan National Security Forces (ANSF), under the control of GIRoA.

33. This permitted UK military personnel to legally stop, search and detain individuals in Afghanistan and UK doctrine provided 'a handrail' of principles. Therefore, UK military personnel required clear policy at the tactical and operational level to ensure that such operations were conducted within a legal and policy-compliant framework. This was provided by two principal documents:

a. **ISAF Standing Operating Procedures 362.** Detention operations were supported by ISAF SOP 362, which dealt with the detention of non-ISAF personnel.

b. **Standing Operational Instruction J3-9 (SOI J3-9 originally J9-2).** This SOI provided UK forces with guidance on stop, search, question and detention procedures and was regularly reviewed as detention operations received an increasing level of scrutiny. This was a key document and commanders had to ensure they and their subordinates were fully conversant with its direction, guidance and procedures.

Lesson: It is imperative that CPERS doctrine remains current. Outwith operations, current CPERS doctrine is required for the conduct of CPERS training and all commanders should be familiar with such doctrine prior to any future operation likely to include detention activity.

Lesson: It is essential that future UK contingency operations are supported by a comprehensive CPERS SOI. Noting that this can only be finalised once the legal framework has been determined. Such an SOI will provide the basis for all relevant pre-deployment training requirements.

DETENTION GOVERNANCE AND ASSURANCE

34. Detention Governance and Assurance during Operation HERRICK followed the following structure:

a. The Chief of the Defence Staff appointed Commander Joint Operations (CJO) responsible for ensuring compliance with UK policy on detention within the Joint Operational Area[14].

b. PM(A) acted as the Defence subject matter expert for operational detention within the operating area and was responsible for the inspection and monitoring of all UK detention facilities within Afghanistan as well as advising CJO on detention matters. His twice-yearly inspections provided second-party assurance to UK detention activities, while focusing on custodial issues. His custodial inspections provided additional assurance to the conduct of UK detention activity.

c. Within Afghanistan, responsibility for compliance was delegated to Comd JFSp(A)[15] who was provided with SME advice from the Force Provost Marshal (FPM)[16], Commanding Officer IEF, the JFSp(A) Legal Advisor and Policy Advisor.

35. First-party assurance was conducted by the chain of command, with the FPM conducting bi-monthly inspections. Third-party assurance was carried out by external independent organisations; for UK detention operations this has been conducted by the International Committee of the Red Cross (ICRC).

Lesson: The correct governance and assurance for all CPERS activity must be in place and clearly understood from the outset of operations.

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11   The BMI report was published in September 2011. The inquiry examined the events that lead to the death of an Iraqi citizen, Baha Mousa on 15 September 2003 during Operation TELIC.
12   UNSCR 1806 (2007), UNSCR 1833 (2008), UNSCR 1890 (2009), UNSCR 1917 (2010), UNSCR 1943 (2010) and UNSCR 2011 (2011).
13   Letter of invitation (Government of Afghanistan to UN dated 01 Sep 05 and The Memorandum of Understanding between the UK and the Government of GIRoA concerning UK forces deployed in Afghanistan, dated 1 October 2005.
14   CDS Directive (Cat 1) on the handling of Captured Persons on Operations dated 10 February 2011.
15   Appointed as the Detention Authority in April 2010.
16   Provost Marshal (Army) senior representative in theatre.

CPERS TRAINING

36. Commanders should ensure that all personnel under their command receive the operation-specific pre-deployment training as mandated. For Operation HERRICK this comprised of:

   a. **'Redcap' Safeguard**[17]. This was delivered by the deploying RMP sub-unit to the deploying Battlegroup as required.

   b. **Operational Training and Advisory Group (OPTAG) Detention Training.** An MPS SNCO delivers a mission specific operational detention presentation/lesson.

   c. **Battlegroup Detention Officers[18] Training.** HQ PM(A) deliver a Battlegroup Detention Officers Officer's course that trains Officers to be employed as either Battlegroup Detention Officers or Unit Holding Officers.

   d. **Detention Sergeant[19] Training.** This training was delivered through attendance on the All Arms Unit Custody Staff course delivered at Military Corrective Training Centre, Colchester.

Lesson: CPERS training must be regarded as core military training and CTG should ensure that pre-deployment training includes instruction on evidence collection and preservation in accordance with the requirements identified by PJHQ.

Lesson: The Military Corrective Training Centre operational archive should continue to hold tactical and operational information relating to CPERS activity.

17   Redcap Safeguard is endorsed by HQ PM(A). A similar package is available for contingency CPERS training.

18   The Battlegroup Detention Officers course is delivered twice a year (September and February). The course is not Operation HERRICK specific and will continue into contingency. Full details can be obtained from HQ PM(A).

19   Detention Sergeant – At the time of writing (June 2014) a CPERS SNCO course will be trialed in June 2014, with role out later this year. Full details can be obtained from HQ PM(A).

TACTICAL MILITARY POLICING

BACKGROUND – THE THEATRE PROVOST GROUP

37. The Theatre Provost Group (TPG) provided Provost Support to the deployed force, including Close Support to TFH and General Support in Camp Bastion and other Main Operating Bases (MOBs) including specific investigations in support of incidents. Its role was to provide surety (taking detainees from forward units into the established Detainee Holding process) as well as providing the whole spectrum of Military Police (MP) tasks ranging from investigations of alleged criminal acts to obtaining evidence for coroners' courts concerning the deaths of British soldiers in combat.

38. Commanded by the Force Provost Marshall (FPM), by Operation HERRICK 8 the TPG consisted of:

   a. **The deployed Provost Company which provided general policing support to the force, detaching RMP Sections to Battlegroups as required.** The Sections also catalogued, photographed and conveyed forensic evidence from Improvised Explosive Devices (IEDs) to the Weapons Intelligence Section (WIS) for forensic examination and subsequent exploitation as well as running in-theatre Rules of Engagement continuity training.

   b. **The Special Investigations Branch (SIB) which investigated all serious crime, including UK fatalities.**

   c. **The Military Provost Staff (MPS) who ran the Temporary Holding Facilities (THF) that contained various detainees and were located adjacent to Task Force (TF) VARSITY at Kandahar airfield and TF TORCHLIGHT at Camp Bastion.** Both THFs were subject to periodic inspection from both Provost Marshall (Army) (PM(A)) and the FPM as well as regular visits by the International Committee of the Red Cross.

39. The Force Provost Marshal worked to Commander JFSp(A) and was initially the Officer Commanding of the deployed provost Company. However, it was found that having an OF3 (Major) Provost Marshal proved unsuitable due to the span of responsibilities. By Operation HERRICK 10 PM(A) judged it necessary to elevate the FPM post to OF4 (Lieutenant Colonel) since more experience was needed in theatre to deal with the key areas of risk, detention and Shooting Incident Reviews.

THE TACTICAL MILITARY POLICING LESSONS

ROYAL MILITARY POLICE DOCTRINE

40. Experience from Operation HERRICK has indicated that RMP tactical doctrine is in urgent need of revision. This doctrine is required to address four main issues; Command and Control (C2), Brigading of MP Assets, Employment of Close Protection (CP) personnel and clarity of the role of specific MP Appointments.

    a. **C2.** C2 of all MP assets. Lack of clarity and coherence resulted in competing priorities and disjointed effort during Operation HERRICK. This was internal to the TPG as well as between Task Force Helmand (TFH) and JFSp(A). Clear C2 also allows for the necessary functional separation where required, i.e. Detention.

    b. **Brigading of MP assets.** Early brigading of all MP assets will bring advantages in terms of Pre-Deployment Training, reservist selection and training, training of sufficient Individual Reinforcements (at the right rank), identification of individuals for specialist roles (including embeds, Intelligence Exploitation Force personnel, Battlegroup Liaison Officers and possibly Individual Augmentees (IAs)). It would also provide enhanced G1 support and tracking for all assets and the correct allocation of attached G1/4 staffs. It was also identified that MP assets were not always managed through the normalisation and rehabilitation process and this could also be better captured through brigading.

    c. **Close Protection.** Additionally there were a number of specific lessons identified as a result of the lack of clear orders for deployed CP assets including:

        (1) CP Unit Individual Reinforcement policy and nomination.

        (2) Ring fencing of CP assets for specific tours.

        (3) Mitigating against misemployment of CP assets in theatre (particularly officer Team Leaders).

        (4) Visiting/inspection and welfare policy.

    d. **Orders for specific appointments.** The following appointments were identified as requiring specific orders, particularly with regard to the separation of roles:

        (1) Force Provost Marshal.

        (2) Officer Commanding appointments.

        (3) Brigade Provost Officer/Provost Advisors.

        (4) Battlegroup Liaison Officers.

41. In addition, whilst it is imperative that MP capability is included in wider Force Generation (FGEN) orders and Operation Orders (FGenOs and OpOs), a specific MP FGenO/OpO could address some of these issues.

Lesson: RMP require updated doctrine and an overarching CONEMP/OpO/FGenO. Experience demonstrated the lack of clear direction/Orders from PM(A) with regards to special to arm issues. This impacts on resourcing, training and focus of effort. The lack of updated MP doctrine and Concept of Employment (CONEMP) during Operation HERRICK exacerbated this issue.

DOCTRINAL PLACING OF RMP

> *'Out of a Theatre Provost Group of 106, over two thirds were deployed forward; when you are embedded daily in a fighting multiple in contact you are not CSS troops.'*
>
>   *TF Helmand Operation HERRICK 9*

42. The roles and responsibilities of the RMP have evolved significantly throughout the Iraq and Afghanistan campaigns and the doctrinal placing of the RMP is currently unclear. For example, within the Arms and Services, the RMP are part of the Adjutant General's Corps; however MP feature in Command Support in the Staff Officers Handbook (Land) (SOHB(L)) and Army Doctrine Publication Operations (ADP Ops); and MP feature in Combat Service Support (CSS) in Military Knowledge publications and 'Sustainment' within the British Army Electronic Battle Box (BAEBB).

43. The resulting role classification is confusing so, by default MP are routinely still considered 'CSS' for all G4 and Training requirements. This has forced MP elements to take risk against 'training how we fight'.

Lesson: Clarity is required on the doctrinal placing of RMP and set into MP Doctrine for contingency and wider Army Doctrine publications. Amendments to RMP role classification would also enable Phase 2 training to be amended to ensure individuals are sufficiently prepared to meet their operational roles.

SHOOTING INCIDENT REVIEW PROCESSES AND POLICY

44. The introduction of the Armed Forces Act 2006 impacted on the Shooting Incident Review (SIR) process. Service Police (SP) are required to initiate an investigation where there are reasonable grounds to believe a proscribed or Schedule 2[20] offence has been committed, irrespective of the decision of the SIR deciding officer. The current format of the SIR process does not reflect this.

45. If the FPM (or SP advisor) determines that the shooting incident warrants an investigation the SIR process cannot impede this investigation. This causes perception and procedural issues with the deciding officer and chain of command.

Lesson: Shooting Incident Review processes require revision. The requirement for an SIR process for a new theatre of operations must be considered early in the planning stages and it is imperative that the FPM is engaged in this. Any SIR process assurance must follow the chain of FPM – Legal Advisor - Commander in order to ensure any requirement to investigate is identified at the earliest opportunity in order to preserve and secure evidence and avoid adverse interference in any subsequent judicial processes.

Lesson: ▄▄

Lesson: MP assets likely to be required to advise on SIRs must undergo specific training prior to deployment and this must be included in MP Doctrine and Orders.

LEGAL AND JURISDICTION FRAMEWORKS

46. Military Police operations in Afghanistan identified weaknesses in MP support to the Service Justice System (SJS) which carried reputational risk for the Army and resulted in delays to the jurisdiction process. For example, the lack of a deployable Service Custody facility was noted even though this could be easily fixed with a Tactical Doctrine note/ Standard Operating Procedure and the provision of some basic equipment. In addition, there was a perception that the lack of clarity on jurisdiction of deployed contractors, Troop Contributing Nations personnel and locally employed civilians (where there is no credible host nation police capability) carried a risk to Defence.

47. The legal framework and jurisdiction of all deploying elements needs to be clarified at the outset of the operation with clear reachback to other elements of the SJS and additional capacity to provide legal advice on operations needs to be built into Army Legal Service planning yardsticks including linkages into the JAG for custody issues.

Lesson: A clear legal and jurisdiction framework is required from the outset of operations. The MOD needs to address operational Jurisdictional issues with HQ PM(A) taking forward any decisions made with other SJS actors in Theatre in order to sustain the SJS in Theatre.

MILITARY POLICE TRAINING

48. The roles and responsibilities of the RMP are distinct and unique from the remainder of the Army and are still widely misunderstood. This has been made worse as the role of the RMP has developed significantly during the Iraq and Afghanistan Campaigns and doctrine and training requirements have not kept pace with these developments. The key Military Police training Issues have been identified as:

   a. Training shortfalls to better deliver the MP operational role.

   b. Training of the wider Army to better understand the MP operational role.

   c. Validation of MP training.

49. The RMP are an agile asset that can be deployed in a variety of roles in theatre which are not always replicated in the firm base. Being a scarce resource with post gapping and a variety of specialist roles, it is extremely difficult to develop a model career or training pipeline for officers. As such, there are training gaps in specific operational roles such as the Brigade Provost Officer which need to be formalised and addressed. Training must also re-enforce PM(A)'s Directive which places emphasis on 'soldier first' and highlights the imperative to develop and maintain field skill sets.

50. Observations from Afghanistan implied that there was a lack of coherency across the Operation HERRICK deployments in terms of MP training, training validation and across capability (such as Close Protection and the Special Investigation Branch). One outcome was that RMP assets did not always conduct Relief in Place at the same time enabling them to train together. In some cases training was not formally validated before deployment and there was no clear policy direction on the standards to be met. When validation took place it was subjective as there are no set special-to-arm training (STA) standards.

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20   A Schedule 2 offence refers to a 'serious offence' under the Armed Forces Act 2006 (in comparison to Schedule 1 offences which are criminal conduct offences that may be dealt with at a summary hearing).

51. Therefore Headquarters PM(A) need to identify the validating authority for STA training and support exercises and Pre-Deployment Training (PDT) as required. This is to include all MP elements, including IAs, and roles.

52. Observed best practice shows the requirement for the separation of delivery from validation roles and a formal endorsement of set STA training standards.

Lessons: Headquarters PM(A) must review the Training Objectives (TOs) of Phase 2 and 3 training, although this will require Tri-Service endorsement, to ensure RMP personnel are adequately trained and prepared for the roles and responsibilities expected of them. 'Soldier First' must be at the heart of this training and the Estimate and Orders processes must be incorporated into Firm Base activity.

Lesson: Training delivery and training validation must be separate. Headquarters PM(A) need to identify the validating authority for STA training and support exercises and PDT as required. This is to include all MP elements and roles and may also need to include IAs.

5-5_14

CHAPTER 5-6
PERSONNEL
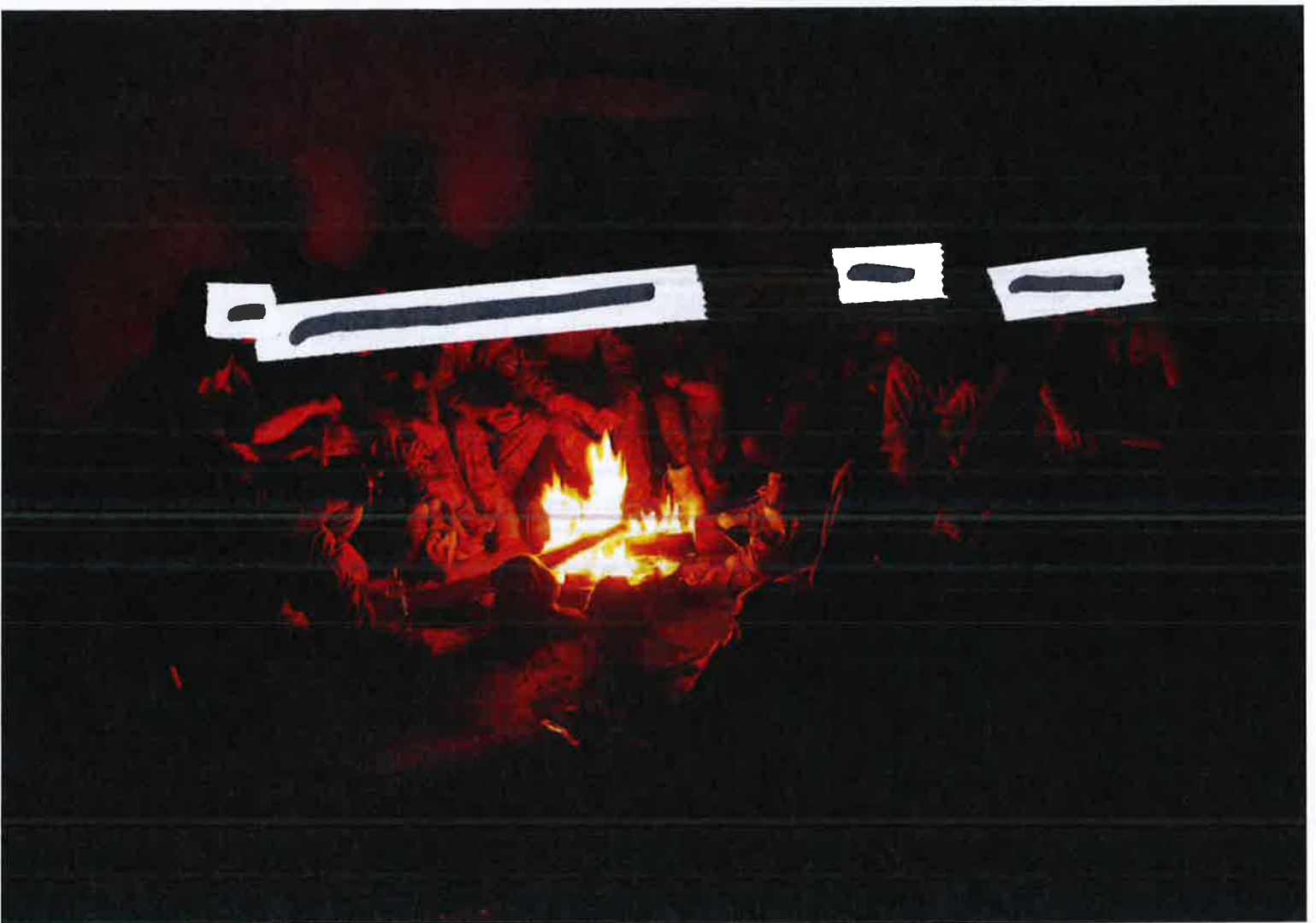
Figure 5-6-1. Soldiers in a platoon check point, Operation HERRICK 13.

CONTEXT

1. Operation HERRICK provided the impetus for significant changes to Army personnel policies. As a result, the provision and support for serving soldiers, the Wounded Injured and Sick (WIS) and Army families reached unprecedented levels. However, it should be recognised that this provision was optimised for a specific campaign and as such, aspects of this provision may be either inappropriate or unaffordable in the future. This presents a future challenge for managing expectations of soldiers, families, HMG and wider society. The evolution described in this chapter took place against a backdrop of an Army restructured onto a campaign footing under Operation ENTIRETY, British Forces (as then) ongoing experience on Operation TELIC, strong public support for the Armed Forces, a manning surplus and financial opportunities provided through access to NACMO[1] funding. The key advancements for Operation HERRICK[2] have been:

   a. The Army's ability to match manpower supply to operational demand has developed into a number of enduring mechanisms that can reconcile supply with operational demand out to 24 months. Integral to this is an increased ability to accurately and effectively understand deployability levels.

   b. The provision of support to the Firm Base has developed including a scalable Rear Operations Group (ROG) concept that supports more effectively the operational deployment and families' welfare.

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1   Net Additional Costs of Military Operations.

2   Many of the pertinent personnel lessons from Operation TELIC have continued into Operation HERRICK. Progress has been made in addressing these issues. Manning the operation, management of Reserves, deployed and Firm Base welfare and Military Secretary (MS) issues feature heavily in both operational accounts.

c. Deployed welfare support, managed by PJHQ J1, has ensured that personnel are now better connected, entertained and sustained in theatre. Furthermore, policy and procedural enhancements have been introduced to minimise stress from operational service.

d. The management of WIS soldiers has improved greatly. Stronger links with the charitable sector have meant that those injured on Operation HERRICK receive comprehensive recovery and rehabilitation support.

e. The British Army's career management system has been overhauled to place support to operations at the core of overarching man management. The Army Personnel Centre (APC) was 'operationalised' with the creation of a bespoke MS Operational Commitments Cell. In general, filling operational posts has been given primacy over routine appointments.

PREPARE

2. Deployability. After a number of years of 'trial and error', an effective process of measuring and reporting the deployability status of units has been developed. Initiatives were introduced to improve deployability as the Army's understanding of these statistics improved. The initiatives ranged from injury prevention (hearing protection), improved access to medical and rehabilitation treatment through to better management of the long term wounded, injured and sick and an improved process leading to medical discharge. There has also been a change in culture regarding medically non-deployable personnel and much of the reluctance to process these individuals to a medical discharge has been overcome.

a. **Measuring Operational Readiness.** Throughout Operation HERRICK, there was a requirement to accurately measure operational readiness of units and sub-units. This requirement will continue beyond Operation HERRICK. G1/J1 operational readiness is a combination of medical, disciplinary and welfare factors. The mechanism used to record these checks was, and remains, Land Forces Standing Order (LFSO) 3210.

b. **Health Committees.** Brigades, units and independent sub-units were mandated to hold health committee meetings. For units these were monthly events; quarterly for brigades. During the first few years (2006-2010) of Operation HERRICK, these were sometimes paid lip-service to. It took several years of command-led direction and education, plus experience, for many units to give these committees the attention they deserve. They are central to the delivery of improved deployability.

c. **Operational Deployment Record.** As Operation HERRICK matured and the process for training individuals for the operation became more defined he requirement to record this process became more complex than the MATTs-based records that JPA is configured to record. Simultaneously political and public interest increased as coroners questioned the level and detail of threat-specific training given to individuals prior to deployment. As a consequence, a stand-alone Operational Deployment Record (ODR) was procured through the UOR process. This tracked the completion of all mandated PDT and RSOI in a single database for the deploying force. ODR is a bespoke system that was developed to meet a particular theatre-specific need. It is dependant on fixed processes, such as PRT and RSOI, which will not necessarily be repeated in a contingency deployment.

Lesson: Looking beyond Afghanistan, there will be a requirement to broaden the scope of the deployability report to reflect operational readiness, including documentation, individual and collective training and churn, with different criteria set at each level of readiness. This must ultimately be derived from JPA. D Pers Ops is engaged with D Pers Admin to produce a Vanguard Readiness Mechanism.

Lesson: Unit and formation health committees must remain central to the delivery of improved deployability as the Army returns to contingency.

Lesson: JPA must be resourced and updated to be the single personnel data repository. Parallel systems such as ODR must have their capability subsumed into an updated JPA. D Pers Admin should lead on this.

3. **Managing Manpower Supply and Demand.** At the start of the campaign, the ownership of operational manning was distributed to Arms and Services Directorates (A&SDs), who informed the Force Generation (FGen) process conducted by the Chain of Command under Army Directorate for Operations and Contingencies (ADOC) authority. Since the demise of the A&SDs, and the increasing complexity of providing manpower to Operation HERRICK, the creation of E1 Manning Bricks (E1MB), the Quarterly Manpower Operations Process (QMOP), the creation of the Army Manning Priorities Committee (AMPC) and the development of the Pinch Point Working Group (PPWG) has enabled the Army headquarters to match manpower supply with demand so that the right trade, in the right rank, with the right training is deployed to the right place at the right time.

a. **Pinch Point Trades.** The PPWG was developed due to the high demand for certain trades. One of the primary outputs was targeting incentives at certain trade groups who could not maintain harmony levels due to excessive demand against structures. Armed Forces Pay Review Board and Directorate Manning (Army) have the freedoms to introduce financial measures to create these financial retention measures. One example was a £50,000 retention bonus for Advanced EOD operators.

b. **Gapping.** The AMPC was established in order to manage and reduce demand for manpower, whilst determining the priorities for its supply. ACGS endorses the Army Manning Priorities (AMPs) which inform the Army Personnel Centre (APC) boarding process and allow the Army to place manpower where it is needed most.

c. **QMOP.** The QMOP measures, by cap badge, manpower supply levels against known operational commitments and standing tasks out to 24 months. This looks further out than the FGen cycle and allows a longer lead time for manpower planning staff to implement mitigation measures. These may include: increasing training opportunities, amending structures, employing different trade groups to deliver a capability or financial retention measures to sustain manning levels. Early anticipation of unit ORBATs[3] (up to 24 months out) is vital to ensure all manpower including specialist skill sets are in place for the start of Mission Specific Training.

Observation: PPWG, QMOP and the AMPC are fit for purpose and must endure as the tools of choice for managing manpower supply to meet operational and contingency demands.

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3   ORBAT = Order of Battle, the structure of the unit when it deploys on operations.

DEPLOY

4. **Rear Operations Group.** Since the beginning of Operation HERRICK significant improvements have been made to the policy and structure governing ROGs, to the point where ROG scale and capability meets the demand of both deployed and Firm Base requirements. Importantly, the value of G1 and administrative preparation has been given increased emphasis within the brigade or unit commander's planning process, recognising the significance of the role played by the ROG. Initially, Unit Rear Parties, as they were previously known, were thinly manned from those unable to deploy, either due to being about to leave the army, outstanding welfare or disciplinary issues, or medically non-deployable. This manning did not allow the officer commanding the rear party to provide the level of support that either the deployed force, or the families of those deployed, required or merited.

5. **A combination of factors improved the situation.** As units approached their second Operation HERRICK tour, there was a realisation from COs, adjutants and RCMOs that they had to leave the ROG some of their most capable officers and NCOs, if they wanted to be well supported when deployed. Brigade, division and Army headquarters provided greater support and clearer, firmer direction on what was required. NACMO funding provided each unit with a Full Time Reserve Service (FTRS) Captain on a 12 month contract as ROG second in command, an Exercise Rehabilitation Instructor (ERI), also on a 12 month contract, to work with the injured soldiers, and additional white fleet vehicle and drivers for welfare tasks, such as shuttling family members to and from Queen Elizabeth hospital to visit their wounded soldiers.

6. **Families Welfare.** The provision of welfare support to families evolved during the campaign, but was funded by NACMO. The Sneddon Welfare Review will consider the wider aspects of welfare provision to families and inculcating a culture of self reliance and resilience amongst service families.

    a. **Families Welfare Grant (FWG).** FWG doubled during Operation HERRICK, rising from £2.20 to £4.40, which enabled a more extensive welfare package to be created for families. Beyond Operation HERRICK, the grant should be increased in line with inflation to ensure that spending power is not diminished.

    b. **Social Media.** Advocating and promoting the use of social media[4] as a method of communication between ROG welfare staff and families has been an important step in enhancing the connectivity with families of deployed personnel. Although this means of communication involves risk to security and reputation, the speed, convenience and familiar user interface is invaluable to its users. Army Media and Comms continue to monitor social media and information flows and advise on new and improved ways of passing welfare information.

    c. **Transport.** The policy for transport entitlement[5] distinguishes between families of deployed soldiers and others. In general, public money can only be used to support those families in the first category, and whilst this is unlikely to change, unit welfare staffs are now better informed on the differing entitlements and sourcing of non-public funds to meet the requirement.

> **Lesson:** A suitably structured ROG should be included in all future Operational Establishment Tables.
>
> **Lesson:** The Army Headquarters ROG Directive should remain the capstone document for future operational deployments as it provides clear guidance across all staff functions. It remains the responsibility of commanders to conduct a bespoke ROG estimate. The fundamental principles of the ROG Directive have been taken forward as part of Vanguard (defining the Army Readiness levels).
>
> **Observation:** Future deployments are not guaranteed to attract the NACMO funding required for all aspects of the Operation HERRICK ROG; expectations should be managed accordingly.
>
> **Observation:** Beyond Operation HERRICK, the Families Welfare Grant should be increased in line with inflation to ensure that spending power is not diminished.
>
> **Lesson:** A study should be conducted as to whether any of the ROG resources should be provided from core or other sources of funding. The allocation of ERIs (funded by NACMO) to units proved extremely popular with commanding officers and will not prevail unless justified from core funds. Similarly additional transport resources for welfare could be resourced using non-public (charitable) funds.

7. **Repatriations.** The processes and infrastructure supporting the repatriation of personnel from Operation HERRICK have developed significantly. Set against the backdrop of an increasingly active general public who wished to show their support for the deceased, repatriations became a focus for national media.

    a. **Principles.** The ceremony surrounding repatriations (Operation PABBAY) is specific to Operation HERRICK and Operation TELIC; as such, it may not be appropriate for future operational deployments.

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4   DIB 33/09 & ABN 86/13.
5   JSP 800 Defence Movements and Transport Regulations.

b. **Planning and delivery.** The scrutiny placed upon the planning and execution of repatriations by the Chain of Command required the Operations section of Personnel Operations Branch (Pers Ops) in Army headquarters to focus solely on repatriations. An OF3 (Major) commanded the ceremony and an OF2 (Captain) organised the administration and coordinated all operational staff work and Visiting Officer liaison. An E1 civil servant drafted the Letters of Condolence for CGS and supported all other facets of organising the repatriation.

c. **Attendance.** Parity was sought across all repatriation ceremonies relating to conduct and attendance of both military and civilian personnel at Brize Norton. The capacity of the repatriation centre required CDP to impose a cap of seven for each family attending the ceremony and only four representatives from the Regiment or Corps. No Royal or Ministerial presence was encouraged and CGS was represented by a General Officer of 2 Star rank.

Observation: JSP 751 Joint Casualty and Compassionate Policy and Procedures has been redrafted to be more generic and less Operation HERRICK focussed. It remains fit for purpose.

Lesson: Chief of Defence Personnel (CDP) should determine a set of principles to establish the appropriate level of repatriation, cognisant of the fact that many serving soldiers and their families associate the current conduct of Operation PABBAY as an appropriate standard that should endure for future operations.

Lesson: Should a similar level of casualties occur in future, the Ops section of Pers Ops branch in Army HQ will be required to lead on the planning and delivery of repatriations. Manning levels within the branch must be sufficiently robust to allow for this.

Lesson: Further work is required to provide guidance on planning for a Mass Fatality Repatriation (MASFAT). CDP is leading on a CDS Directive for managing a mass fatality incident (known as Operation SETTAINE). Pers Ops, with support from ADOC, will conduct the subsequent work to develop the Army headquarters response to a major incident of this nature.

8. **Deployed Welfare.** JSP 770 Tri-Service Operational and Non-Operational Welfare Policy formalised and refined through Operation TELIC and Operation HERRICK, provided a 'high water mark' for deployed welfare. JSP 770 was updated in June 2014[6] and reflects that future Tri-Service policy has become effects based, utilising more digitised and internet borne means of delivery. Fundamental to the delivery will be commanders conducting their own welfare estimate to determine appropriate and cost effective provision. Key developments were as follows:

a. **Communication.** Astrium[7] delivered new technologies as part of their own internal commercial development strategy. An increase in satellite bandwidth and processor speeds has meant that satellite phones and desk top computers with slow connection speeds have been enhanced by broadband connectivity enabling voice/data communication. E-Bluey machines can now deliver high quality colour messages to deployed personnel.

b. **WiFi Provision.** Paradigm Services provided portable internet links that could be moved from forward operating base to patrol base and 'Fast Cabins' that produce a WiFi bubble. These have been instrumental in the advancement of WiFi within forward locations. Commercial investment in high tech mobile solutions, primarily telecommunications, have allowed the military to benefit from single point fixed internet access to WiFi hotspots in communal and accommodation areas. Having broadband WiFi available in accommodation allows personnel to download films, newspapers, games and music onto portable devices rendering the old style internet cabins redundant, thus reducing fixed costs. Self imposed content blocking regulation halved download speeds; however the content blocking restrictions were later lifted with no discernable negative impact. PJHQ are now considering commercial solutions for the provision of WiFi in line with the updated JSP 770 which are likely to be significantly less expensive than the current MoD contract with Paradigm Astrium.

c. **Retail solutions.** Expeditionary Force Institute (EFI) has developed a light, agile, retail solution Rapid Deployed Shop (RDS) that can be delivered into austere locations. PJHQ are currently investigating local retail solutions similar to US or NATO PX models and the use of Host Nation / Local National facilities.

Lesson: Pers Ops in Army HQ should inform and support the Chain of Command to conduct welfare estimates before deployments in accordance with JSP 770.

Observation: The revised deployed welfare policy will allow commanders to make better use of local contractors and should provide improved access to the internet.

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6   Version 9 of JSP 770: Tri-Service Operational and Non-Operational Welfare Policy was released in June 2014, Part 1 covers Non-Operational Welfare, Part 2 covers Deployment Welfare Support, included: Deployment Welfare Package, Trauma Risk Management (TRiM) Policy and Post Operational Decompression (DcN).

7   Astrium is a commercial company that is a subsidiary of European Aeronautic Defence and Space Company. They were awarded the contract to provide satellite communications services to the MOD. This programme was known as Paradigm Services.

Figure 5-6-2. Unpleasant Living Allowance (ULA) was paid to soldiers who were required to live in particularly austere conditions.

9. **Pay and Allowances.** Operation HERRICK saw the introduction or revision of a number of bespoke operational allowances. A far from exhaustive list includes: Operation Allowance (£29.02 per day, tax free), Unpleasant Work Allowance (circa £3 per day at basic rate), Unpleasant Living Allowance (circa £3 per day), Campaign Continuity Allowance (£60 per day, taxed) and the HERRICK Drawdown Allowance (£50 per day, taxed). The imperative to improve the financial package was in part fuelled by the media commenting on the tax free status of US and Australian servicemen in Afghanistan. In some quarters, this flurry of allowances gave rise to a concern that the justification for the X Factor would be weakened.

   a. **Future allowances.** Operational allowances generally require Tri-Service agreement. CDP staff have initiated a study of operational risk as part of the New Employment Model (NEM) Stage 2. This will consider what financial support should be provided for personnel on operations in the NEM and contingency era. Within Army headquarters, Project 21 of Army 2020 is taking forward the development of Reserve Terms and Conditions of Service. PS10(A) is involved with both work strands.

   b. **X Factor.** The creation of operational specific allowances is potentially sub-optimal in overall terms of remuneration if the X Factor is affected. Personnel could be better served by having the rigours of operational service reflected in a significant X factor (which is through-career and pensionable), rather than receiving piecemeal compensation.

Observation: A holistic view must continue to be taken when considering the provision of additional financial support to those on operations to ensure it is coherent with wider operational welfare provision. PJHQ's Operational Review Board will continue to 'lead' on this issue through the analysis of 'risk and rigour' statements. Similarly, care should be taken to ensure that the financial reward package does not become unbalanced; with an over-emphasis on (transitory) operational allowances at the expense of providing appropriate allowances to support personnel in base locations and those undergoing training.

10. **Education.** Operation HERRICK provided an opportunity for many deployed personnel to undertake professional career development courses and qualifications in the Joint Theatre Education Centre (JTEC) facilities. For many soldiers the demands of Hybrid Foundation Training and Mission Specific Training prevented attendance on mandatory career courses and when operational tempo allowed it, commanders were able to release personnel to conduct this activity. Furthermore, AGC(ETS) officers were able to reach personnel in patrol bases to deliver education and training; a morale enhancing activity. In addition to career development, the AGC(ETS) delivered: English language and cultural awareness training to Afghan National Security Forces (ANSF) and Locally Employed Contractors (LECs); cross-cultural capability training to UK personnel including language, cultural awareness and interpreter training; female focus officers (Pashtu and Dari speakers with additional cultural capability training); instructor/mentor development (both for the UK and ANSF personnel); training development activity including course design for ANSF training and education.

Observation: At all scales of deployment Force Protection plans should consider delivery of English language and UK cultural training to Host Nation Security Forces and LECs.

Lesson: When force generating, due consideration must be given early enough to providing appropriate language and cultural training to deploying UK force elements. This applies to any deployment where UK troops will be operating with or alongside partner / host nations.

Lesson: The JTEC model is appropriate for future enduring operations. The appropriate scaling can ensure personnel are not missing career courses. Where the duration or scale of deployment does not justify a JTEC, Learning Development Officers can be deployed to provide support. Concentration of ETS assets within the JTEC provided the most effective delivery model but with the ability to surge forward to forward operating bases and patrol bases.

Lesson: Director Education Capability should confirm the Defence Engagement mentoring role and its links to the Army Instructor Capability work strand.

11. **Rest & Recuperation (R&R).** The decision to provide R&R to home locations for Operation HERRICK was made once and never seriously reconsidered owing to the mounting political and media interest surrounding troops' welfare. The reduction of combat power during the R&R window (the bulk of a 6 month tour) undoubtedly reduced commanders' ability to have operational effect. It also arguably increased the tactical risk to undermanned and under-resourced forces during this window. It made Task Force Helmand (TFH) and subordinate units predictable in when they chose to mount deliberate operations (just before and just after the R&R window)[8]. It should be noted that the structure of an Operation HERRICK infantry company was deliberately increased by 20 posts to include an 'attrition reserve' of 10 men and 'R&R cover' of 10 men, leading to a 120 man total manning strength. While sub-units therefore had less manning during R&R they did not drop below the sub-unit manning level as originally envisaged. However, when presented with 120 man companies at the start of the deployment, commanders expanded the demands on these sub-units so that their tasks required the permanent deployment of all 120, which was never the original plan. The impact of R&R was also keenly felt on the strategic airbridge.

12. JSP 760 Tri-Service Regulations for Leave and Other Types of Absence clearly places the decision to grant R&R with the operational commander; however the potential withdrawal of R&R was seen as politically untenable in the face of major combat operations and mounting casualty rates. JSP 760 also states that R&R does not necessarily have to involve return to the UK; it might simply be giving the service person some 'down time' in a place of safety.

13. The benefits to the individual and family of the model of R&R used on Operation HERRICK are unclear. Anecdotal evidence supports both sides of the argument, with many spouses stating that the service person returning for 11 days mid-tour is as disruptive as it is welcome. No study has yet shown clear benefits in terms of mental heath or longer term professional effectiveness. However, most service personnel welcomed R&R when it arrived.

14. **Other Coalition nations had innovative R&R mechanisms.** Of note, the Danish had an 'R&R Platoon': an additional platoon of infantry soldiers who rotated into and out of companies to relieve complete platoons at a time. This could work well for combat arms, less so for specialists. It would also be complicated by the need for correctly qualified drivers of protected mobility vehicles. Also required for this model is the ministerial agreement that these 'R&R soldiers' are above the declared manpower cap.

Lesson: R&R was a politically loaded issue during Operation HERRICK that operational commanders did not feel able to challenge. The end of this campaign provides an opportunity to break the mindset of guaranteed R&R travel to home location. A separate study should be commissioned on this subject. It is, of course, entwined with tour lengths.

Observation: The policy for R&R (JSP 760) is current, up to date and fit for purpose. However the Army must acknowledge that a decision on R&R for more high profile campaigns is likely to be decided in the political arena

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8   Widely commented on in Post Operation Interviews with Commanding Officers of Infantry Battlegroups on every Operation HERRICK tour.

RECOVER

15. Trauma Risk Management (TRiM). TRiM was formally adopted by the Army in 2007. It was developed through the Academic Centre for Defence Mental Health having previously proved effective with the Royal Marines. The initial focus of the Army TRiM Training Team (TTT(A)) was to train sufficient numbers of TRiM practitioners and coordinators within units and formations deploying on Operations TELIC and HERRICK. TRiM appears to have been an effective system of peer delivered support to those exposed to operational stress and strain. It is the nature of post operational stress and mental health that it may as yet be too early to assess whether TRiM has mitigated the risk effectively. It is also extremely hard to present objective evidence to support this, but subjectively it has been well received by the vast majority of tactical commanders[9].

16. There has been some concern raised that while the TRiM process is fit for purpose for generalists, there are some specialist Career Employment Groups (CEGs) that may need an 'additional level of TRiM'.[10] EOD operators, High Risk Search Teams, Medics, Attack Helicopter aircrew, Royal Military Police (Special Investigation Branch), Chaplains and COs are some, but not the only, examples. These CEGs are at greater risk as they can be exposed to prolonged periods of high stress or have to participate in more traumatic incidents. They are also in pinch point trades in high operational demand, so are likely to rotate into and out of theatre quickly. For the C-IED community, their operators are also employed on UK homeland security tasks when not on operations, so there is little respite.
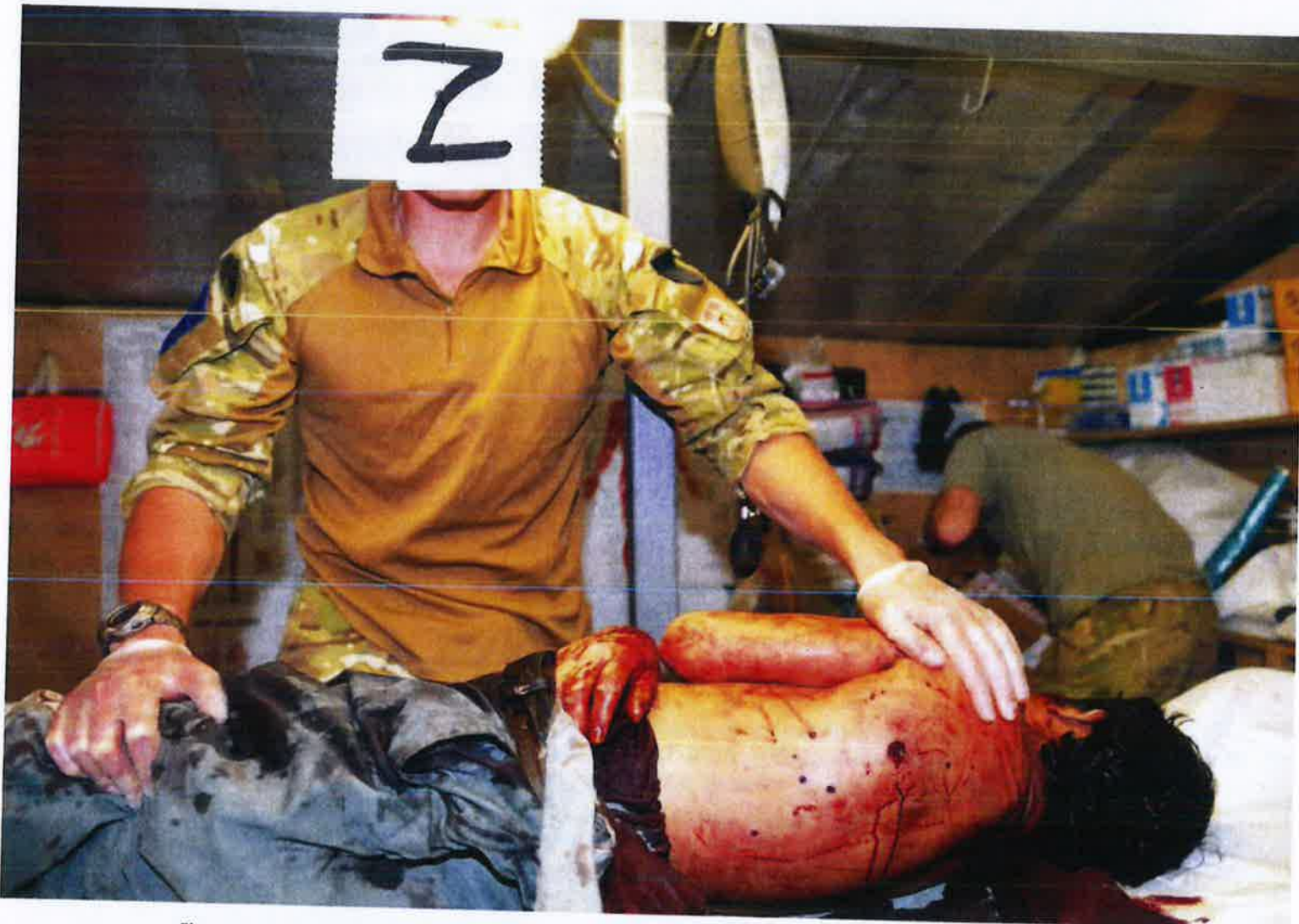
Figure 5-6-3. Some Career Employment Groups are more exposed to battlefield stress and trauma.

17. As the campaign draws down, the future of TRiM within the Service is being examined by Army Medical Directorate (AMD), although it is recognised that its use in response to a traumatic incident has the same utility in the non-operational environment as it does following operational service. The move to contingency demands renewed scrutiny of the enduring requirement. The development and use of TRiM in a non-operational environment provides not only an enduring peer delivered support system but a means of maintaining preparedness for future operations.

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9   Post Operation Interviews.
10 Shortly after Operation HERRICK 11 this issue was raised, but failed to gain sufficient traction for a separate study as there was no empirical evidence at the time to suggest that specific CEGs were at any greater risk. However, the concern remains within the C-IED community in particular. See Chapter 3-5 of this report for more detail.

Lesson: The governance of TRiM needs to be realigned to meet the needs of the Army on contingency and capitalise on pan Defence expertise.

Observation: To maintain a widespread and consistent level of TRiM coordinator and practitioner capability, current levels of and the mode of training needs to be reviewed. The ongoing AMD review will include an analysis of revalidation, 'Train the Trainer' capability and the needs of different groupings within the Reaction and Adaptable Forces as well as those in high risk Career Employment Groups. The guiding principle of peer delivery will remain the key consideration in selection of personnel for training.

Observation: Maintaining, securing and protecting accurate records of TRiM interventions is a fundamental requirement and must be done in accordance with policy directives; this encapsulates the timeliness and accuracy of completion of the log books, recording of risk assessments on Joint Personnel Administration (JPA) and return of logbooks to the TTT(A) for archiving.

18. **Service Charities.** The number and role of Service related charities has widened throughout the campaign (more than 1000 new charities have been established as a direct consequence of military operations in Iraq and Afghanistan). Public perception that existing government support to deployed service personnel and families was inadequate gave rise to many of these charities, most notably Help for Heroes (H4H), resulting in widespread interest and large financial donations. This provided the charity sector with considerable influence and it was a challenge to align the charitable sector with the Army's best interests. There was also a perception that the charities and the Army were often at odds – we did not present a very 'joined up approach' to the public.

    a. Consolidation. The validity and viability of many of the smaller Service charities will come under pressure as the public profile of servicemen and women on operations decreases. A period of consolidation of charities may follow in order to reduce the impact of administrative running costs.

    b. Regulatory and Propriety Regulations. The MOD regulatory and propriety regulations that govern the military support to Service charities do not encourage units or individuals to support the Service charities and should be revised.

19. **Army Recovery Capability (ARC).** From 2008 it became clear that the small Sickness Absence Management (SAM) team was struggling to cope with the numbers of sick absent personnel. There was significant political interest and external pressure to find a solution, especially with an increasing number of casualties resulting from the enduring operation. Units were unable to deliver an appropriate level of support and so the ARC was formally launched in February 2010. The capability was delivered in full partnership with the key service charities (notably The Royal British Legion and H4H). Eleven Personnel Recovery Units (PRU) were formed and funded by the core budget. In addition, six Personnel Recovery Centres (PRC) have since been built and funded by the charitable sector alone. The approach to SAM was restructured and terminology was changed to Wounded Injured and Sick (WIS) to better reflect the operational injuries over the old 'sick at home' stereotype. These combined capabilities deliver an effective recovery pathway constructed with bespoke courses and activities to compliment the rehabilitation pathway.

a. **Charitable Sector Liaison.** Operation HERRICK has helped the Army develop its relationship with the charitable sector in delivering significant financial assistance as part of a more complete response to management of WIS personnel.

b. **Review.** Whilst the complexity of injuries has decreased in line with a reduction in combat operations the demand for places within the PRUs and PRCs has remained the same. ARC is engaged in a business process review that will outline the enduring requirement.

Observation: The Army's relationship with the charitable sector has developed significantly during the period of Operation HERRICK. This relationship will need to be enhanced and sustained if the increasing costs of benevolence are to be met within a context of diminishing support from society.

20. **Career Management.** At the outset of Operations TELIC and HERRICK, the APC had no mechanism for supplying individuals for short duration operational tours. To that end, in 2005 the APC established an Augmentation Cell to provide a focus for the Boarding of such assignments; providing a direct link between the APC, PJHQ, and MOD Operations Directorate. As operational demand grew so did the Augmentation Cell, being formally established as the enduring Military Secretariat Operational Commitments Cell (MS Op Cts Cell). This allowed APC to give prominence on Boards to short duration operational assignments over routine assignments. It has also better ensured a stabilised training audience, minimised short-notice trawls, and improved efforts to integrate requisite support to operations with individuals' career recognition and progression. Of note, MS Op Cts has based an OF4 (Lt Colonel) 'forward' in the ADOC in order to improve the ability to react to, predict and pre-empt operational manpower developments.

Lesson: There is a continuing requirement for the APC to maintain robust and effective situational awareness of planned and current operations through the MS Op Cts Fwd in Army HQ and at APC.

Lesson: Whilst Director Manning (Army) continues to rationalise the current OCE into the Resilience Margin, the scope for short notice, short-duration operational posts will remain and therefore there is a concomitant requirement for APC Boards to continue to give prominence to operational, short duration assignments for selected individual augmentees.
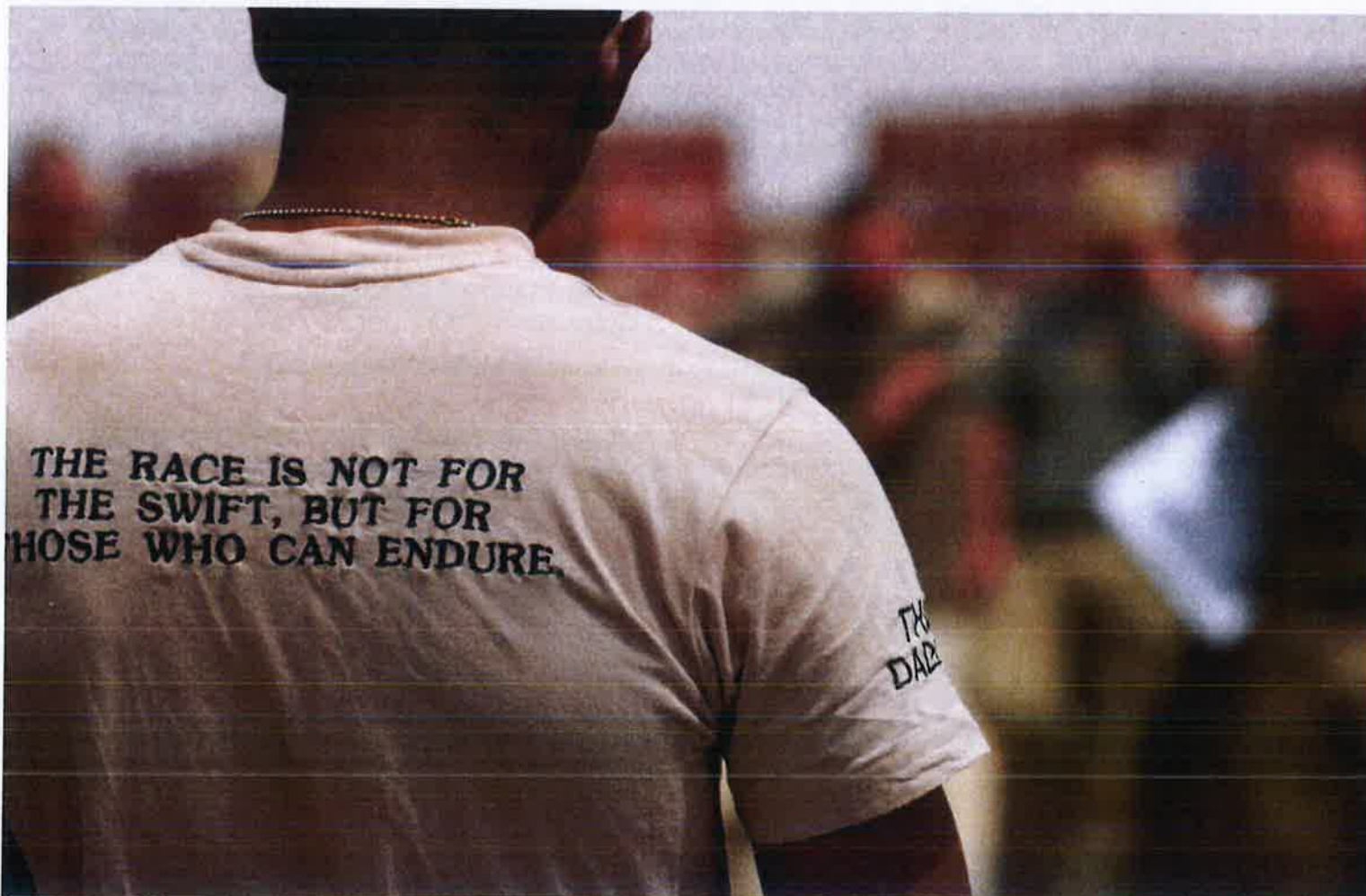
CHAPTER 5-7
ORGANISATION AND FORCE GENERATION

'The force generation process worked extremely well, but we would have benefitted from earlier arrival and integration of our Individual Augmentees. They appeared very late.'

Commander TFH, Operation HERRICK 10[1]

INTRODUCTION

1. The Organisation Defence Line of Development (DLOD) underwent significant change to keep pace with the demands of Operation HERRICK. Some change was a response to specific need, whilst others fundamentally changed the way business was conducted, such as Stabilising the Training Audience. Overall the lessons learned from the operation were positive and the resulting change can be considered good practice going forward; the Army is now better placed to structure the force on future operations.

2. The most significant change in the Organisation DLOD was Operation ENTIRETY and, although the subject of a separate chapter[2], it is important to set the context. As early as 2006 the Army had already started to restructure in order to deliver two rules of 5, one each for Iraq and Afghanistan. This had seen the re-rolling of units, forming of new units and suppression of other parts of the structure that were not directly linked to the operation. What Operation ENTIRETY did was to formalise this process and unlock the issues people were having trying to enact change, giving them the required resource backing. Structural change, which is rightly a process of checks and balances, was sped up as staff knew it was on the main effort and the compensating reductions could and would be found from the parts of the Army that were being suppressed.

3. In the Organisation DLOD, the high water mark of this change was Stabilising the Training Audience in 2010[3]. This sought to ensure that personnel were trained individually and collectively to a pitch immediately prior to deployment. This meant ensuring that units were manned to 100% by the start of Mission Specific Training so that the low level cohesion required in Afghanistan was achieved. For this to happen, it required the force generation and force preparation process to be conducted early enough that units could be assigned their specific roles before Mission Specific Training. This in turn meant that the training could be more targeted, the training support refined and ultimately the burden on the individual reduced. By the end of the operation, units were posted people for the duration of the training and operational cycle and were able to plan their activity with a degree of certainty. There were areas where this could not be achieved, usually where specialists were in short supply or where levels of specialist training meant integration occurred late in the process. Some of the lessons included below relate to this issue.

4. Under Operation ENTIRETY, the changes made were all designed to be reversible within five years. However, the Army 2020 study recognised those changes that were not theatre specific and could endure beyond Operation HERRICK. The net result was an Army better structured for future operations. There is still work to do and the lessons covered below seek to address areas that were 'just about' made to work on Operation HERRICK but need an enduring solution if they are not to be raised again on the next operation.

PLANNING AND INTEGRATION OF SURGE FORCES

5. Shortly after the outset of Operation TELIC, one of the two Resident Infantry Battalions (RIB) in Cyprus was designated the TELIC Reserve Battalion (TRB). From Operation HERRICK 4 (2006) onwards, this role was renamed Theatre Reserve Battalion (also TRB), a reserve for both the Iraq and Afghanistan theatres. This provided an acclimatised light infantry battalion, geographically pre-positioned and on appropriate notice to move. TRB deployments occurred regularly throughout the TELIC and HERRICK campaigns, sometimes a deployment of sub-unit strength, often battalion strength. There was, at times, a lack of understanding of the role of the TRB. Some mistook it as a High Readiness force at Commander Joint Operations' disposal, others as a Battlefield Casualty Replacement (BCR) pool, able to backfill deployed forces. The TRB was designed for planned and authorised surges, of a finite and agreed time, for specific operations. It was a light infantry battalion, without the all arms attachments to make it a potent BG. It was also not routinely equipped with the suite of Urgent Operational Requirements (UORs) that the deployed force had. This was due to a number of factors, primarily the paucity of UOR equipment, and the limitations of barracks, training estates and supporting units in Cyprus. It was also expected that the deployed HQ would fly the surge forces into theatre, marry them up with Protected Mobility vehicles as required, and integrate the surge forces into the Order of Battle (ORBAT), battlegrouping them on arrival in theatre.

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1   Post Operation Interview.
2   See Page XXIX of this report for a detailed description of Operation ENTIRETY.
3   Stabilising the Training Audience FRAGO 1/10, HQLF/FDT/3/6/4, 16 December 2010.

6. The TRB was generated as a reserve that was capable of being integrated and fully employed in theatre, but its use was constrained politically. It is important to recognise that the TRB was designed for surge, not optimised for high readiness; a capability that is delivered by contingency forces. The integration of the TRB improved over time with the establishment of a TRB Liaison Officer in the deployed headquarters enhancing planning and warning time for possible deployments.

> **Observation:** The use of the TRB showed that surge forces can have significant effect on an operation. However, if they are not properly planned for and equipped, they risk arrival in theatre unable to deliver effect to their full potential.

7. Looking forward to future operations, within VANGUARD, the Concept of Employment for a reserve battalion must clearly set out the parameters for its use. It must be apparent that the battalion is only equipped for a generic operation and so will require an uplift as and when it is deployed. For an enduring stabilisation operation, a generic reserve battalion can be structured, trained and equipped for the specific operation, becoming a theatre reserve. VANGUARD will direct the Regional Standby Battalion 1 (RSB1) as the reserve battalion. This will remain as a unit and not a battlegroup for two reasons: the limitations of space and supporting units in Cyprus, and the existence of high readiness battlegroups in contingency forces (Air Assault Task Force and Lead Armoured Battle Group).

A2020 STRUCTURES TO ENABLE OPERATION HERRICK BEST PRACTICE

8. The tension between the Army Establishment Table 8005 structures for training and steady state versus what was required for operations was a source of frustration on Operation HERRICK. The fluctuation between the two structures led to gapping across the Army and a loss of corporate knowledge through the lack of sustained training with the right people.

9. Experience during Operation HERRICK highlighted the importance of maintaining a high tempo of effect, not necessarily operations, against the enemy. Tempo is far more than the number of operations or patrols; it should be viewed and measured according to the level of sustained effect being applied to the insurgent. But, whilst sustaining tempo, there is a requirement to remain agile and retain the ability to exploit opportunities as they arise. The power of combinations across a force, augmented by key enablers, was most usefully applied to sustaining tempo. In order to allow this to be repeated in future operations, Reaction Force unit HQs need to adopt a 'plug and socket' approach, with key SMEs embedded in the staff to ensure that effects are correctly planned and synchronised to the best result.

10. A common view is that A2020 has 're-set the curser' on this post Operation HERRICK, and that a battlegroup or company on roule 1 of a contingent operation will not be expected to do the same level of Plan, Refine, Execute as on Operation HERRICK. Many individuals with infantry battlegroup experience feel that A2020 had cut its cloth a bit too neatly, and that one or two extra core battlegroup headquarters staff would have been helpful.[4] This aspiration relies on the generation of additional infantry officer liability, something there is not the resource, capacity or appetite to achieve.

11. Although the aspiration will always be to have as much capability as possible, a peace time structure cannot bear the requirements of an operational structure. In designing force structures the Army need to be clear on which capabilities are seen as essential for all operations and those which are only used for a certain type of operation. A 'plug and socket' approach achieves the middle ground of the option of augmentation open beyond roule 1 whilst not adding additional liability pressure outside the operation.

> **Observation:** The force generation process developed over the course of Operation HERRICK, supported by initiatives such as putting the Army on a campaign footing and Stabilising the Training Audience. The A2020 design for units should provide the sockets for capabilities to enhance an HQ as required for a specific operation.

FORCE GENERATION OF POLICE MENTORING CAPABILITY

12. On Operation HERRICK, police mentoring was relatively slow to start, in part due to the lack of a trained mentoring capability. This developed throughout the operation, but based largely on a British policing model. In the future, police mentoring capability for counter insurgency and stabilisation operations must better take account of the requirements and capabilities of the local police force. While it will remain an aspiration to draw on the expertise of other government departments, the reality of operations, especially in early deployments, is that the military will have to resource capability largely on its own.

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4   Post Operation Interviews and discussion during Military Judgement Panels.

> **Lesson:** A conceptual police mentoring capability and subject matter policing expertise is required to allow forces to better plan, force generate and deliver police mentoring early in a stabilisation operation. Intelligent use of Reserves would enhance this.

13. Provost Marshal (Army) (PM(A)) has been assigned as the capability lead for police mentoring, noting that the force elements would most likely come from another Capability Directorate's area. The expertise provided by PM(A) will allow a force to better plan, force generate and deliver police mentors. PM(A) will now develop the required doctrine for the capability.

FEMALE ENGAGEMENT CAPABILITY

14. Females soldiers engaging with local women has the potential to be an important information activity tool. However, the lack of women, both soldiers and interpreters, in the deployed force led to a paucity of female engagement capabilities, potentially missing out on engagement with 50% of the local national population. Few specific female engagement teams were actually generated. Far more common were sub-unit commanders deploying those women they had in the patrol bases on the ground as female searchers and 'engagers'. This was most successful with those who would be on patrol anyway, such as medics, RMP and dog-handlers. If chefs and HR Administrators were used they required further training and of course meant that they were not doing their "day job" in the Patrol Base.

15. Whilst the paucity of female engagement teams was seen as a lack of capability by some, it should be viewed in the context of the specific operation, through a prism of cultural understanding, as female engagement is not always appropriate. In some cases where the cultural norm is for women not to engage with strangers on official business, the forcing of engagement with them can show a lack of cultural respect and be counterproductive. A combination of the above made the use of female engagement on Operation HERRICK minimal and did not give a true understanding of its utility. More research is required to determine whether female soldiers should be force generated in engagement-specific roles at the cost of other capabilities.

> **Observation:** When planning operations an early assessment is required to determine the utility of gender specific activity. This will then allow a decision to be made based on balance of investment. Are women best employed in their primary role or should they be used in engagement roles?
>
> **Lesson:** Capability development in the area of gender specific activity should be incorporated as part of the wider look at Information Activity and Stabilisation Support (IA&SS) being conducted by Capability Directorate Combat Support (CD CS) to gain better understanding of their utility. Guidance is then required on the use of female engagement.

DEFINING AND PROFESSIONALISING SPECIALIST CAREER FIELDS

16. To use but one example of a field of activity, over the Operations TELIC and HERRICK periods, the nomenclature on Information Operations has changed numerous times (Influence Operations, PsyOps, Information Operations, Special Influence Methods, Information Activity and Outreach (IA&O)). This constant changing of terminology has been in part to better dovetail with our coalition partners, but also reflects the lack of clarity and direction in these fields.

17. Information Activity and Stabilisation Support (IA&SS), the now accepted name, is a vital tool in achieving Influence over a target audience – be that enemy forces, local nationals or indigenous partners. Post Operation debriefs from ground holding units highlighted the lack of resources and expertise within the 'Influence Cells' at unit and sub-unit level. Failure to deliver local expectations was damaging to the operation. This concern was repeated at formation level where it was felt that the gathering of cultural, human terrain and key leader engagement information now exceeds the ability of the standard brigade, unit and sub unit 'Influence Cell' to manage.

18. The British Army report Operations in Iraq, produced in November 2010, spoke of Information Operations (as it was then known) as '21st Century Combat Support' – suggesting these capabilities were now as relevant as Artillery and Engineer support have been traditionally, and must be as professionally run.[5] The envelope of '21st Century Combat Support' could be expanded to include ISTAR[6], Cultural Specialists and Linguists, Civil-Military Cooperation, Media Operations, Psychological Operations and several other areas.

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5   'Operations In Iraq Jan 05 – May 09, An Analysis from the Land Perspective', Para 712, November 2010.
6   Intelligence, Surveillance, Target Acquisition and Reconnaissance.

Figure 5-7-1. Cultural Specialists facilitate Key Leader Engagement, Operation HERRICK 13.

Observation: The understanding and use of '21st Century Combat Support' on operations improved over the course of Operation HERRICK. The Army needs to ensure that this knowledge and associated skills are not lost as it moves forward. However, there are only so many specialists the Army can have a career stream for. A decision needs to be made on whether this is core, chain of command, business and therefore generalist, or for a specialist.

Lesson: Activity that requires a specialist such as Psychological Operations must be made into a more attractive choice. If it is to attract the brightest and best to these crucial capabilities, the Army needs to ensure that it is seen as a career enhancing (or at worst, neutral) role.

Lesson: For the generalist, where skills like IA&SS and ISTAR are now taught as part of individual and collective training, this needs to endure into the future. They should be considered core planning skills on courses such as the Captain's Warfare Course and Intermediate Command and Staff Course (Land).

MOBILISATION AND INTEGRATION OF ARMY RESERVES

19. Under the Reserve Forces Act 1996, Army Reserves are mobilised for a 12 month period. This must include their annual leave entitlement and Post Operational Leave (POL) they accrue during their tour. The mobilisation process may also begin with a period of time spent at the Reinforcements Training and Mobilisation Centre (RTMC) in Chilwell, undergoing medicals, basic training, kit issue and administration. For a standard 6 ½ month Operation HERRICK deployment, a unit or sub-unit typically conducts Pre-Deployment Training (PDT) over the 3-6 months before hand, broken down as Hybrid Foundation Training (HFT) and then Mission Specific Training (MST). On recovery from the operational theatre, the unit or sub-unit typically goes through 48 hours Decompression, a 3-5 day Normalisation package in Barracks, takes POL of up to 4 weeks, then conducts further Normalisation, including a number of Homecoming and Medals Parades.

20. Throughout Operation HERRICK it has proven impossible to include the mobilised Reserves in all of these activities which ultimately exceed the 12 month mobilised period. Units have had to make the choice of receiving their Reserves 'early' and integrating them into all PDT, or receiving them 'late' and allowing them to Normalise fully with the unit. The first solution sees the Reserve undergo a more comprehensive training package, which he or she needs as they are likely to start from a lower skill level than their Regular counterpart. This means that from Day 1 of the deployment the Reserve is fully effective, but it means that he or she needs to recover from theatre early, thus Decompressing without their colleagues, receiving a truncated Normalisation Process and missing the Homecoming and Medals Parades. This has been linked to Post Operational Stress related issues in Reserve individuals, and does not do justice to the 'One Army' aspiration. The second solution is one favoured by the Royal Marines, who tend to receive their Reserves later, taking risk in PDT. They feel that they can buy out some of this risk through the Reception Staging and Onwards Integration (RSOI) package, and that the benefits of the Reserve Decompressing and Normalising with their unit outweigh this. By 2010 it was generally felt by Army units and formations that a 4:6:2 split was a good rule of thumb. This gave four months pre-tour, six months deployed and two months post-tour. Leave entitlement was taken out of the four and two.

> **Observation:** A hard and fast rule in mobilisation may not be best for all types of Reserve and will need to be considered in the context of why they were mobilised. Therefore a rule of thumb for the breakdown of the 12 months should be used as opposed to a set model.
>
> **Lesson:** A generic Army Mobilisation Instruction, centralising the relatively inaccessible source documents, should be developed to provide clear and unambiguous guidance to the Chain of Command on the Force Generation process of a Reservist.
>
> **Lesson:** A review of the Terms and Conditions of Service relating to the Regular Reserve should be conducted by D Pers Cap in order to ensure they can meet the future requirements of the Army. As necessary, Director Manning (Army) should refine the Compendium of Reserve Regulations 1997.
>
> **Lesson:** The Army must maintain the ability to accept large numbers of Reservists into service at short notice in order to meet operational contingencies. As such, the output currently delivered by the RTMC should endure.

21. The Reserve Forces Act 1996 will be amended under the Defence Reform Bill and will eventually be replaced by a new Armed Forces Act 2016. It is intended that both pieces of legislation will be structured to increase the availability and delivery of the military capability required for a full integrated force under Army 2020.

ACCESS TO SPECIALIST CAPABILITIES IN TRAINING

22. Capabilities that are not held within a unit were battlegrouped for Operation HERRICK. However, some of these were unable to conduct collective training with the unit during HFT or MST, meaning integration occurred either at the end of MST or once the unit had deployed. This led to a lack of understanding of capabilities and a less-than-fully integrated all arms force deploying to theatre.

> *'It is important to Battlegroup as early as possible, yet taking account of the demands of individual specialist training that are also present. If you have established working relationships early it makes it much easier to operate in theatre, and it also helps to foster flexible task-organising, which was something that was to characterise our tour.'*
>
> *TFH, Operation HERRICK 6[7]*

23. If, due to its own MST commitments the capability is not integrated until late in the process, it is likely to not be used to its full capacity and effect through a lack of understanding. Full operating capability is only likely to occur after a period deployed on operations. This raised two distinct issues.

   a. **In some cases, exposure to the capability during collective training is key.** It helps commanders and soldiers understand what that capability can offer on operations and makes for a better exercise. It is not essential that the same people are those who will deploy with the unit. Often these capabilities are managed centrally by the higher headquarters in any case, so may well be moved from one patrol base to another, without being truly 'owned' by the local commander. An example of this from Operation HERRICK was the Counter-Improvised Explosive Device (C-IED) team.

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7   Post Operation Interview.

b. **In other cases, not only is exposure to the capability during training key, but the opportunity to build relationships is too.** Some specialists are integrated into units and rely on relationships to establish trust and common understanding. An example of this from Operation HERRICK was the Cultural Specialist (Human Terrain), whose relationship with the formation or unit commander was key.

24. It is therefore important to identify if it is more important that the capability is present in training than the specific individuals who will be paired in theatre. If so, standardising the procedures for specialists will allow the 'plug and socket' approach to better understand capability and therefore lead to reduced requirement to integrate early. Conversely, there are some specialists who are integrated into units and rely on relationships to establish trust and fully appreciate their capability. This needs to be built up through the training cycle so that they are fully capable on deployment to theatre. VANGUARD will authorise units to pair and therefore better support each other with specialists, which in turn will see them generated and integrated earlier in the process.

Observation: A standardised 'plug and socket' approach will aid the attachment of all arms capability to units during collective training.

Lesson: There are some specialists that rely on established personal relationships to be fully effective. The Force Generation process must identify this and be agile enough to facilitate it. It is likely to be in small numbers, but in potentially pinch point trades.

PROVISION OF BCRS

25. From Operation HERRICK 13 onwards the provision of BCRs was optimised. The Brigade managed BCRs centrally and pulsed them into Bastion for top-up training and some elements of RSOI. This allowed the time from loss of an individual to receiving a replacement to be reduced to 8 days. There will always be situations where this timeline is extended due to the low number of specialist BCRs that can be held at readiness. An additional initiative that proved effective was the nomination of a formed infantry company from out-with the deploying brigade as BCRs. This company went through MST as the last sub-unit to be trained, and then held themselves at readiness. This is a lesson of good practice that should be the aspiration on any future enduring stabilisation operation.

Observation: From Operation HERRICK 13 onwards the BCR mechanism was optimised for an enduring stabilisation operation. Lessons from this should be recorded as Good Practice.

CHAPTER 5-8
DOCTRINE

'Overarching all of this was the need to put our approach to COIN at the forefront of our thinking. Because of the lack of coherent and up-to-date British doctrine, we issued the recently released US COIN manual to all commanders, and drew upon it at various stages of our training.'

Commander TFH, Operation HERRICK 7[1]

DOCTRINAL CONTEXT

1. **US, Joint and Army doctrine.** The HERRICK era saw the production of numerous doctrine publications relevant to the Land tactical level. See Figure 5-8-1.
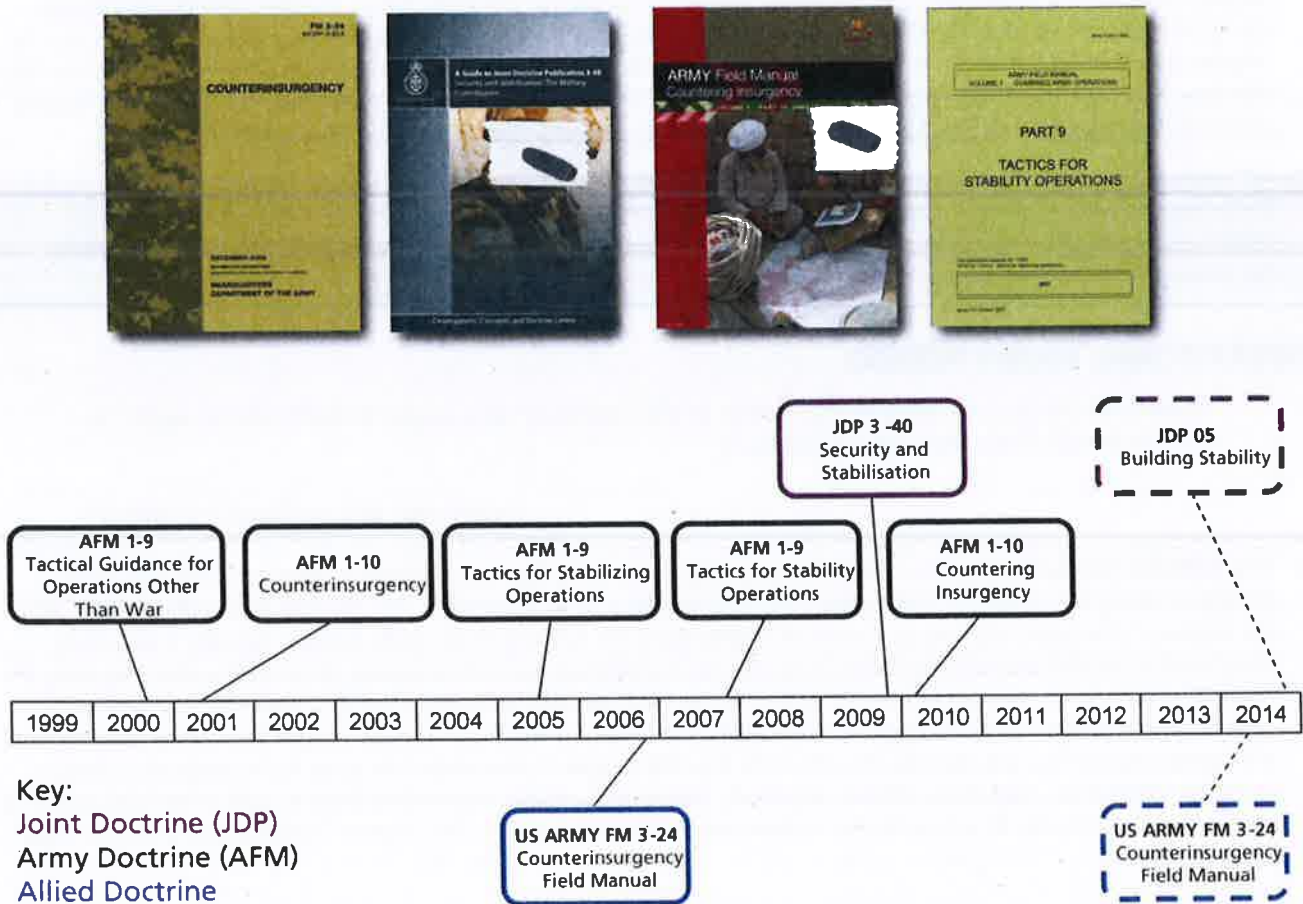
Figure 5-8-1. Operation HERRICK doctrine timeline.

a. **US Doctrine.** The US Army Field Manual 3-24 (FM 3-24) was published in late 2006 and was extremely important as it influenced emerging UK doctrine; it is acknowledged in the foreword to Joint Doctrine Publication 3-40 Security and Stabilisation: the Military Contribution (JDP 3-40). It was one of the catalysts in the re-drafting of Army Field Manual Part 1 Volume 10 Countering Insurgency (AFM 1-10). What is not always acknowledged is that much of the material in the US FM 3-24 was drawn (some sections word for word) from the 2001 edition of the UK AFM 1-10.

b. **Joint Doctrine.** JDP 3-40 was published in November 2009, acknowledging that prior to its publication there was a 'gap in our professional knowledge'[2] in this field. It is due to be revised and re-titled JDP 05 Shaping a Stable World: the Military Contribution, for publication in late 2014.

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1   Post Operation Interview.
2   JDP 3-40, Foreword, page v, DCDC.

c. **Army Field Manuals (AFMs).** Stabilisation was the focus for much of the earlier doctrine and AFM 1-9 saw three iterations with its title evolving from Operations Other than War in 2000 to Tactics for Stability Operations in 2007. AFM 1-10 was published in 2001 but lacked credibility (largely due to a dated format as the content was reasonably good). It was re-written during 2009 and put into a new format. This included photographs and case studies. It was printed on glossy paper and used colours to make it more accessible and easy to read. Most of the critical information was contained in the first chapter as it was assumed that was all some people would read. It was written with input from academics and allies and was the topic of a conference at RUSI.

2. **Lower level tactical doctrine.** Below the level of the AFM there was a large amount of supporting doctrine. This was produced to support the creation or fielding of a new capability or equipment; to clarify or promulgate new tactics, techniques and procedures or to explain new, or misunderstood old, concepts. These were produced by Director Land Warfare, Arms and Services Directors and, later, Capability Directors in the form of Doctrine Notes and Information Notes. There were also a number of publications produced by the Lessons Exploitation Centre (LXC) and Land Intelligence Fusion Centre (Afghanistan) (LIFC(A)). See Chapter 5-9 for more detail on the lessons process.

3. **The Afghan COIN Centre and the advocacy of doctrine.** As an Operation Entirety Measure, the Land Stabilisation and Counterinsurgency Centre (LSCC)[3] was created in May 2009 in order to launch and then advocate and educate the new counterinsurgency doctrine. It was headed up by the principle author of AFM 1-10, ▬▬▬▬▬▬ [4] The Afghan COIN Centre developed extensive international and academic networks which assisted with the production of doctrine and the delivery of study periods (see below). Staff in the centre had typically just returned from a tour in Afghanistan and most went on to command units in theatre. These staff spent considerable effort advocating the new doctrine, and providing conceptual support to formations and units. They had close links into the operational theatre and were well placed to fill any nascent gaps in doctrine or demand from theatre, or those training to deploy.

Observation: A doctrine centre focused on producing doctrine for the current operation is best staffed by those recently returned from that theatre, and likely to return there. Close links into the operational theatre were vital to the success of the Afghan COIN Centre.

OPERATIONAL STUDY PERIOD

'There is no shortcut for studying the context of the operation, both across its width and its depth, in order to sharpen one's instinct and judgement'

Commander TFH, Operation HERRICK 8[5]

4. **The HERRICK Study Period.** Those brigades deployed on the early Operation HERRICK tours ran their own study periods covering the context of Afghanistan and the brigade area of operations. The content and quality varied. When the Afghan COIN Centre was set up it took on responsibility for running these study periods, typically 5 days long. Programmes included teaching and advocating the newly published counterinsurgency doctrine, thereby preparing the brigade to conduct its own conceptual cascade training. Also included were the context of the operation (regional, cultural, political) and a detailed study of some aspects of Helmand Province. Throughout pre-deployment training and the operation itself this was typically the only time that the Brigade Commander had all of his commanding officers, second in commands, operations officers, adjutants, regimental sergeant majors and brigade staff in the same room. It was an ideal opportunity to articulate the context and commander's intent. The Afghan COIN Centre ran 22 of these study periods.

Observation: Having a single organisation (in this case the Afghan COIN Centre) to run the conceptual training worked very well. It took some pressure off a busy brigade HQ and presented an opportunity to teach and advocate the doctrine. The Afghan COIN Centre's extensive network of experts, academics and allies was an excellent source of speakers. This is an example of good practice.

5. **Supporting material.** Study weeks were supported by a considerable number of posters, books and military publications as well as the production of a bespoke mission study pack, all distributed to the training audience. These publications were issued on the understanding that they would be read, passed between individuals and re-read; the COIN Centre was not going to ask for them back at the end of the operation. This was to discourage units from storing rather than issuing books and publications. 22,000 copies of the Army Field Manual Volume 1 Part 10, Countering Insurgency have been distributed to the Army in hard copy since its publication in 2010, the rational being that no one should have the excuse that they did not have a copy, or at least access to a copy. The budget for the provision of books and publications in 2012 was £60,000 of NACMO money.

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3   This name was soon changed to The Afghan Counterinsurgency Centre (known as the Afghan COIN Centre), but reverted to LSCC in 2011.
4   Prior to assuming this ro ▬▬▬ had assisted the US Training and Doctrine Command (TRADOC) with their revision of FM 3-24 and completed a PhD in 'The Validity of British Army Counterinsurgency Doctrine after The War in Iraq 2003-2009'.
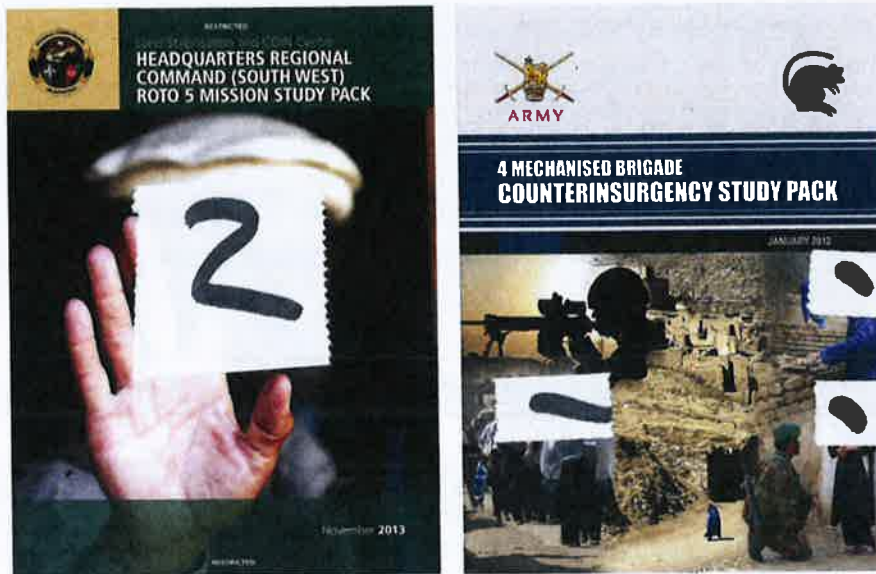5   Post Operation Interview.

Figure 5-8-2. Examples of key mission study packs.

Observation: It is important to teach the appropriate doctrine to those undertaking pre-deployment training. This should be done at the start of pre-deployment training and works well when combined with a wider, contextual education package.

Observation: Provision of supporting material, particularly books (rather than military publications) encouraged the ongoing education of the training audience and made them feel that they had been invested in and taken seriously. Units were encouraged to run reading clubs. Unit or brigade essay competitions were highly effective, if not universally popular, in ensuring that junior officers read doctrine.

Lesson: DLW should maintain the resources (know-how, contacts, staff and budget) to run operational study periods by running region-focused and operations-focussed (for example stabilisation operations) study periods in support of the Adaptable Force. This should include the provision of supporting books and military publications.

OPERATIONALLY-SPECIFIC DOCTRINE

There will always be the need … to "operationalise" doctrine against the challenges of the specific theatre and the stage of the operation'

Commander TFH, Operation HERRICK 14[6]

6. **The AFM on countering insurgency tells the commander how to think but it is light on instruction on what to actually do.** Whilst this is appropriate for an AFM that is relevant to all theatres, those undergoing training and in Afghanistan were hungry for lower level doctrine that would bridge the gap between the Army Field Manual and the tactical realties on the ground. Close links with the Operational Training Advisory Group (OPTAG), the training audience and those in the operational theatre were instrumental in maintaining the doctrine authors' understanding of the demand and the issues. Specific publications one level below the AFM were developed, that gave more practical instruction on theatre-specific issues, and tied in the British doctrinal concepts with the ISAF phases of stability and transition.

7. **Throughout the campaign TFH SOPs[7] developed to a point where they were highly refined.** These provided some of the theatre-specific guidance to the 1* HQ and subordinate units that was absent from AFM 1-10. What was important was the liaison between the custodians of TFH SOPs in Afghanistan and the writers of tactical doctrine in the Afghan COIN Centre, as each fuelled the other. Successive UK brigades also found they had to ensure that TFH SOPs were compliant with ISAF directives, policies and SOPs, and PJHQ-owned UK directives and polices. As the HERRICK campaign draws to a close it is vital that TFH SOPs are archived and exploited by DLW and Capability Directorates to feed future tactical doctrine and TTPs.[8]

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6   Post Operation Interview.
7   TFH SOPs on AKX(S).
8   Tactics, Techniques and Procedures.

Lesson: DLW should maintain the ability to deploy a liaison officer to theatre and to maintain close links with OPTAG. Conduct 'doctrine gap analysis' to anticipate the demand.

Observation: Doctrine that was specific to the operation, bridging the gap between and Army Field Manual and the tactical realities on the ground was very valuable. This required several publications. Counterinsurgency in Afghanistan – The Essentials, Doctrine Note 13/03: UK Security Force Assistance in Afghanistan, HERRICK Tactical Aide Memoire and Operational Insights – Company Level Tactics in Afghanistan are good examples.

Lesson: DLW must ensure that TFH SOPs are archived and exploited in the production of future UK land tactical doctrine.

CAPTURE TRANSITION, AND CURRENT MENTORING AND ADVISING BEST PRACTICE IN DOCTRINE

8. At the time of writing, the Army is at or arguably just past a 'high-watermark' in understanding various aspects of a counterinsurgency operation. These include transition, advising and mentoring. There are individuals in the Army today with considerable operational expertise in these areas but this pool of experience will reduce over time.

Lesson: DLW should capture and publish recent operational experience relating to transition, advising and mentoring.

EFFECTIVE DOCTRINE WRITING

9. During Operation HERRICK a considerable amount of doctrine has been published and the quality has generally developed to become increasingly readable and accessible.

Observation: Doctrine should be accessible to the desired audience; it should be readable and illustrated with diagrams, photographs and vignettes or case studies. Doctrine authors should understand the writing process and be encouraged to bring doctrine to life as much as possible. They should understand that their readers will be busy and will often only read the first chapter. They should achieve buy-in from stakeholders, allies and, where appropriate, academia prior to publication. Publication should be followed by education and advocacy of that doctrine.

Lesson: DLW should produce an Army Tactical Doctrine Writing Handbook laying out a formal procedure and giving guidance on writing style and supporting material.

ROUTINE DOCTRINE REFRESH

10. AFM 1-10 was published in 2001, but not then revised until 2009 for publication in 2010, despite the UK being engaged in two counterinsurgency campaigns. Although the 2001 version of AFM 1-10 was fit for purpose (and much used by the US in the writing of their counterinsurgency doctrine), the age of the doctrine undermined its credibility and led to few officers reading or using it, until it was successfully re-launched in 2010. A lack of current UK counterinsurgency doctrine led many commanders to find alternatives from allies and elsewhere, leading to an incoherent approach to the campaign. British commanders were regularly using US doctrine.

Lesson: DLW should ensure that Land Tactical Doctrine is formally assessed at least every 2 years and certainly in the early stages of an operation, and is refreshed or re-written as required.

INTEROPERABILITY

11. Many military HQs in Afghanistan were multinational. Use of NATO, instead of national doctrine reduces confusion and avoids potentially dangerous misunderstanding. Investing UK resources in the writing of NATO doctrine with the aim of achieving compliance with UK doctrine, or the adjustment of UK doctrine to be compliant with NATO doctrine would alleviate this.

Lesson: DCDC and DLW should invest people and time into the writing of NATO doctrine to make it acceptable for use by the UK. Where possible and appropriate they should adopt NATO doctrine as UK doctrine. This is in progress and in accordance with Chief of the Defence Staff direction.[9]

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9   CDS and PUS loose minute "Putting NATO at the heart of UK Defence" dated 13 July 12.

EXAMPLE HERRICK STUDY WEEK PROGRAMMES

JOINT FORCE SUPPORT (AFGHANISTAN)

Start	Finish	Title	Speaker
Day 1			
10:00	10:05	Admin Brief	
10:05	10:20	Comd's Opening Remarks	
10:20	11:05	Geographical Overview	LIFC(A)
11:05	12:25	Afghanistan; 1840 to the rise of the Taliban	▬▬▬▬
13:10	14:40	Rise and fall and rise of the Taliban	▬▬▬
14:40	15:30	Regional Context - India/Pakistan/Iran	DIFC(A)
15:50	16:40	Regional Context - Central Asia, Russia	Col (retd) Chris Langton
Day 2			
9:00	10:00	Security Force Assistance	Land Stabilisation and COIN Centre
10:00	11:00	Op HERRICK Transition planning	PJHQ J3/J5
11:20	12:50	Support to COIN	Current JFSp(A)
13:35	14:35	Academic Perspective	Prof Anthony King, Exeter University
14:50	15:50	The UK Campaign	LIFC(A)
Day 3			
9:00	10:00	Threat Brief	LIFC(A)
10:00	10:15	Comd's Opening Remarks	(Many new attendees)
10:15	11:15	Strategic Messaging	Defence Media and Comms 1-star
11:15	11:35	Tea/Coffee	
11:35	12:55	Media Perspective	▬▬▬▬
12:55	13:40	Lunch	
13:40	14:25	ANSF Structures	Current JFSp(A)
14:25	15:10	Sp to ANSF	Current JFSp(A)
15:10	15:30	Tea/Coffee	
15:30	17:30	Redeployment Planning	PJHQ J4
Day 4			
9:00	10:00	JFSp(A) sp to PRT and Governance	Current JFSp(A)
10:00	11:00	Contractorisation	KBR
11:00	11:30	Contractorisation	Supreme
11:30	12:30	Contractorisation and Security	Supreme
12:30	13:30	Coalition Perspective	Lt Col, US Army
13:30	14:30	Closing Remarks	ACDS(Log Ops)

Task Force Helmand

Start	Finish	Title	Speaker
COIN Study Day (held two weeks before the main study period)			
0900	1500	Counterinsurgency Doctrine and Practice	Afghan COIN Centre
Day 1			
0915	0930	Opening Address	Bde Comd
0930	1100	The Rise, fall and rise of the Taliban	David Loyn, BBC
1130	1230	Afghanistan: Legacies for Today	▬▬▬
1130	1430	India and Pakistan/Baluchistan	▬▬▬
1430	1530	Central Asia and Russia	▬▬▬
1600	1630	Helmand in Context	LIFC(A)
1630	1730	How we got here: Evolution of UK military Approach to Operations and the Insurgents' Response	LIFC(A)
Day 2			
0830	0910	Helmand in Context. Agriculture, Economics and Narcotics	LIFC(A)
0910	0940	The four state model. Human Terrain and Modern Motivations	LIFC(A)
0940	1020	The four state model. Governance and Justice in Helmand	LIFC(A)
1050	1150	Corruption	Transparency International
1150	1250	The Narco State	FCO Afghan Drugs and Justice Unit
1350	1450	The Nature and State of the Insurgence	LIFC(A)
1450	1600	Insurgent TTPs	LIFC(A)
Day 3			
0830	0930	Culture – Practical application, guidance, social structures	CO DCSU and CULAD
0930	1030	Religion	LSCC
1100	1400	Influence in Helmand	Start Comms Lab
1400	1500	Strategic Messaging – The Narrative	Defence Media and Comms 1-star
1530	1700	Media Focus	▬▬▬
1700	1730	Plenary	
Day 4			
0830	0930	UK Government View	FCO Hd Afghan Gp
0930	1030	Afghan Perspective	▬▬▬
1100	1200	The Vision for Afghanistan	DCOM ISAF
1300	1400	The UK Military Contribution to ISAF	CJO
1400	1500	RC(SW) Plan and USMC Perspective	USMC C3 FOPS RC(SW)
1530	1700	Danish and Estonian Perspectives	Danish and Estonian Contingent Commanders
Day 5			
0800	0900	UK Commander's Perspective	Maj Gen Carter former Comd RC(S)
0900	0945	▬▬▬	▬▬▬
1020	1120	US Commander's Perspective	US Army Bn Comd US 82nd Airborne
1120	1220	Afghan Commander's Perspective	Col, ANA
1220		Closing Remarks	Bde Comd

CHAPTER 5-9

LEARNING IN THE LAND ENVIRONMENT

'Higher-level learning' entails modifying the organization's knowledge management (ie collection, analysis and dissemination) and, more importantly, sense-making constructs in significant ways. It occurs when responses to detected errors lead to processes of learning where the participant questions fundamental aspects of the organization, such as the entrenched beliefs and attitudes that personnel have regarding what the Army's core functions and identity should be.

Conversely, 'lower-level learning', which equates to adaptation, entails the alteration of behaviour in order to deal with operational challenges without needing to reassess the whole programme and the logic on which it relies for its continued existence. Adaptation limits itself to rectifying errors within the current system of norms, beliefs, attitudes and assumptions.

Adaptation is a necessary, but not sufficient condition for organizational learning to ensue. Although adaptation may boost current performance, it frequently diminishes incentives for seeking new institution-wide approaches or paradigms. That is, adaptation has its own traps.[1]

Journal of Strategic Studies; "Coping with Knowledge: Organizational Learning in the British Army?"; Sergio Catignani; a Strategy and Security Institute, University of Exeter, UK; published online, 8 May 2013.

BACKGROUND

1. **Prior to Operation ENTIRETY.** Before Operation ENTIRETY, the majority of the Army's lessons staff was concentrated in the handful of staff officers of the Mission Support Group within the Land Warfare Development Group. It conducted analysis on selected exercises, experiments and operation reports, backed up, where possible, by targeted interviews. The output was used in mainly doctrine development. It was neither directed nor staffed to deploy to hunt for lessons. Below the Army level, few organisations had dedicated lessons staff and, despite the best of intentions, most learning processes were not rigorous and none were universal. Although learning did take place and lessons processes existed, learning was subject to the vagaries of individual views and other organisational priorities. Even when effective learning did exist, the Army had difficulty in demonstrating that clearly. This was not solely an Army problem; it was reflected across Defence.

2. **Operation ENTIRETY organisational enhancements.** Several organisational enhancements were made in order to address capability or capacity gaps, including those involved in the provision of situational awareness, knowledge management and learning. These enhancements included:

   a. **LXC and wider lessons posts.** The lessons process within the Army was enhanced significantly and appropriately resourced in late 2009 under Operation ENTIRETY.[2] For example, the Lessons Exploitation Centre (LXC) expanded from two or three staff to nearly 20. The major Capability Directorates (CDs) now have dedicated lessons posts; the "virtual" CDs[3] either have dedicated or double-hatted, but nonetheless active, lessons posts. Each Army level Defence Line of Development (DLoD) has designated a lead member of staff for lessons.

   Observation: The working relationships forged between the LXC, DLoD lessons leads and the CDs were and are cooperative, active and effective.

   b. **Information Management Staff (IMS).** The IMS specialist staff of five was established under Operation ENTIRETY in order to design, develop, operate and maintain a web-based knowledge management and sharing tool – the Army Knowledge eXchange (AKX). The AKX is covered later in this chapter and so is not considered further, here.

   c. **Land Intelligence Fusion Centre (Afghanistan) (LIFC(A)).** LIFC(A) was formed in early 2010 to address the critical intelligence capability gaps across Afghanistan. LIFC(A) delivered a tactically focussed, single point of understanding to support Operation HERRICK land forces and wider Defence. It provided 'immersion' facilities for deploying intelligence personnel; a 'hub' to maintain the intelligence narrative; provided additional analytical resources to support 'reachback'; and enabled wider engagement to other militaries, international agencies, other government departments and academia.

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1   Journal of Strategic Studies; "Coping with Knowledge: Organizational Learning in the British Army?"; Sergio Catignani; a Strategy and Security Institute, University of Exeter, UK; published online, 8 May 2013.
2   See HERRICK Campaign Study, Operation ENTIRETY Chapter.
3   D SPS, PM(A), AMD, JHC, D Trg (A).

   d. **Defence Cultural Specialist Unit (DCSU).** The DCSU was formed in 2010 to improve our understanding of the 'human terrain'. The DCSU has a dedicated team of human terrain analysts and became the single authority for the fielding of all military cultural specialists and linguists. To date over 50 language trained cultural specialists (from all three Services, Reservists and all ranks) have deployed on Operation HERRICK as Cultural Specialists (Human Terrain) (CS(HT))[4] to ensure the effects of military operations on the local population were considered and better understood.

3. **Level of focus.** The key investments in people and process under Operation ENTIRETY were made at the Land Environment tactical level. There are good grounds for criticising a lack of similar investment in learning at the operational and strategic levels, something only now being addressed through VCDS' Defence Organisational Learning Strategy (DOLS). Yet DOLS promises little in terms of staff, indeed the Joint Forces Command Joint Warfare (JFC JW) Analysis branch has been whittled down from its strength when it was PJHQ's J7 lessons section.

4. **Components necessary for success.** The four components necessary for effective and demonstrable institutional learning are outlined below:

   a. **Leadership at a Senior Level.** Without leadership from OF5 level and above, the financial and organisational challenges that need to be overcome to embody identified lessons will prove insurmountable. Identifying lessons may be a bottom-up process, but driving the changes necessary requires a top-down approach. Ownership of lessons has proved a successful way of allocating them to senior 'champions'; this should continue.

   b. **A Receptive Organisation.** Lacking wide acceptance of the need to learn, an organisation will fail to do so, collectively. Due to the benefits gained through the current lessons process, the Army is largely convinced of the need to learn. However, the Army has a very short generational turn-over, assessed at between five and eight years. Any significant gap in the output of the lessons process will reduce the Army's reflexive acceptance.

   c. **A Robust Mechanism for Learning.** The Land Environment Lessons Process (LELP) is the mechanism by which the Army identifies lessons, identifies the changes that need to be implemented and tracks their progress. The Defence Lessons Identified Management System (DLIMS) is now used across the Army as the single tool to underpin the LELP. The process of capture, analysis and resolution must include a proactive system of output – informing suitably chosen target audiences of what has been learned and what that target audience has to do to perpetuate that learning.

   d. **A Kernel of Protagonists.** The majority of protagonists should and will be mainstream staff officers in units, HQs and training centres who take an active and routine part in learning. The role of leadership in energising learning and ensuring that it occurs (sub-paragraph a above) is emphasised. On Operation HERRICK, the kernel included forward-deployed, embedded lessons staff officers (the "Deployed Network"). This proved to be a very effective way of "priming the lessons pump". It has been observed frequently, however, that without a reasonable number and spread of personnel whose main role, rather than secondary or worse, is the capture and analysis of lessons, then the business of learning often stalls; priorities deemed more important all too often overtake those who have, at best, a second-hat for lessons.

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4   Previously known as Cultural Advisors (CULADs).

5. **A theory of learning through experience.** Learning through experience involves three main steps:

   a. Observation leading to Capture of the essence of an issue.

   b. Analysis of the apparent issue to see if it really does merit effort to fix and, if so, what that fix might look like; subsequently, Analysis again to assure that the fix has been made.

   c. Resolution, to design and implement a detailed fix.
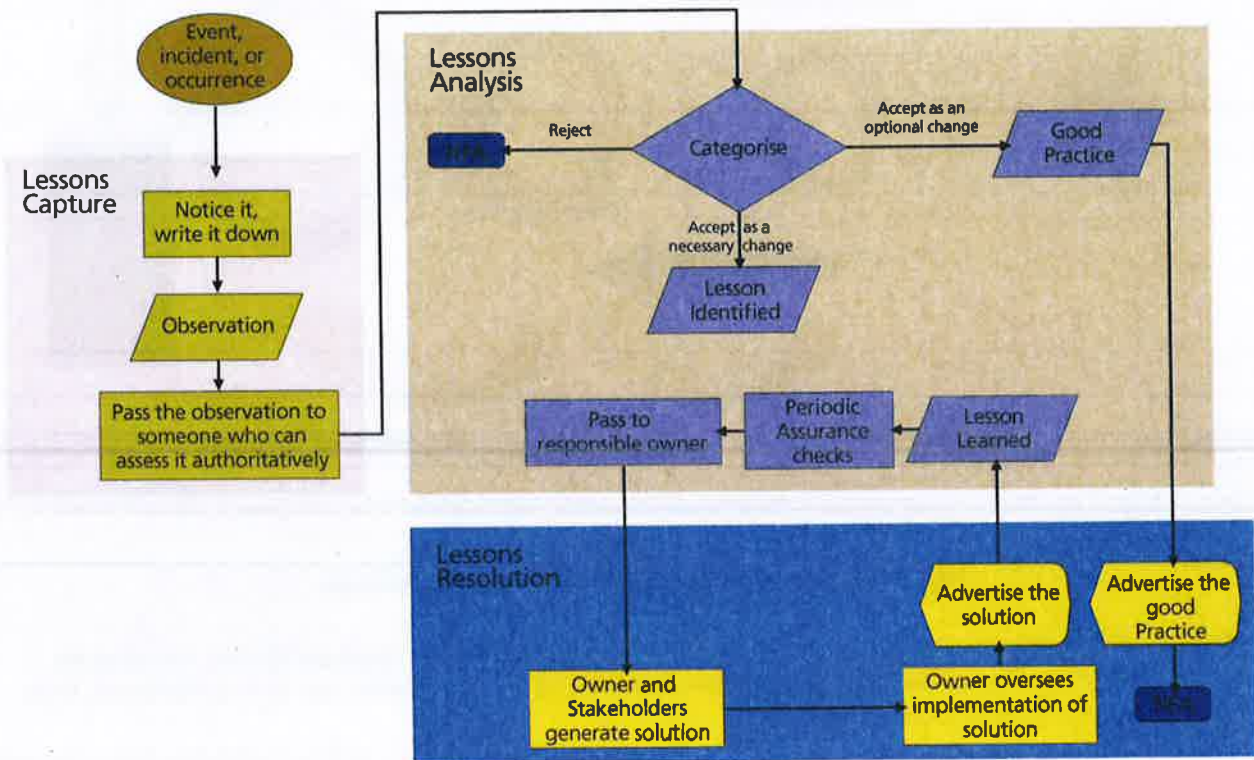
Graphically, this can be portrayed as a relatively simple flow-chart; Figure 5-9-1 below.

Figure 5-9-1. The steps of learning.

DEVELOPMENTS IN THE ARMY'S LEARNING PROCESSES DURING OPERATION HERRICK

6. **Operational learning.** Developed during Operation HERRICK, learning from experience on operations was formalised into what are best described as three "loops". These are:

   a. **The Short Loop.** Focussed on saving life and limb. Mostly run by the Deployed Network and HQs and units in theatre. The loop time was measured in hours and days.

   b. **The Interim Loop.** Focussed on taking hard-earned experience from the Short Loop and investing that into the training of those scheduled to take-over next in theatre. Mostly run by the LXC, HQ Collective Training Group (CTG) Operations branch[5] and the Operational Training Advisory Group (OPTAG). The loop time was measured in days and weeks.

   c. **The Long Loop.** Focussed on institutional change. Characterised by the formal LELP. The loop time was measured in anything from weeks, through months, to years, depending upon the changes necessary to learn the lessons fully.

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5   Newly renamed; it was CeTAC, the Collective Training Advisory Cell.

Graphically, the operational learning mechanism and its loops are illustrated at Figure 5-9-2 below:
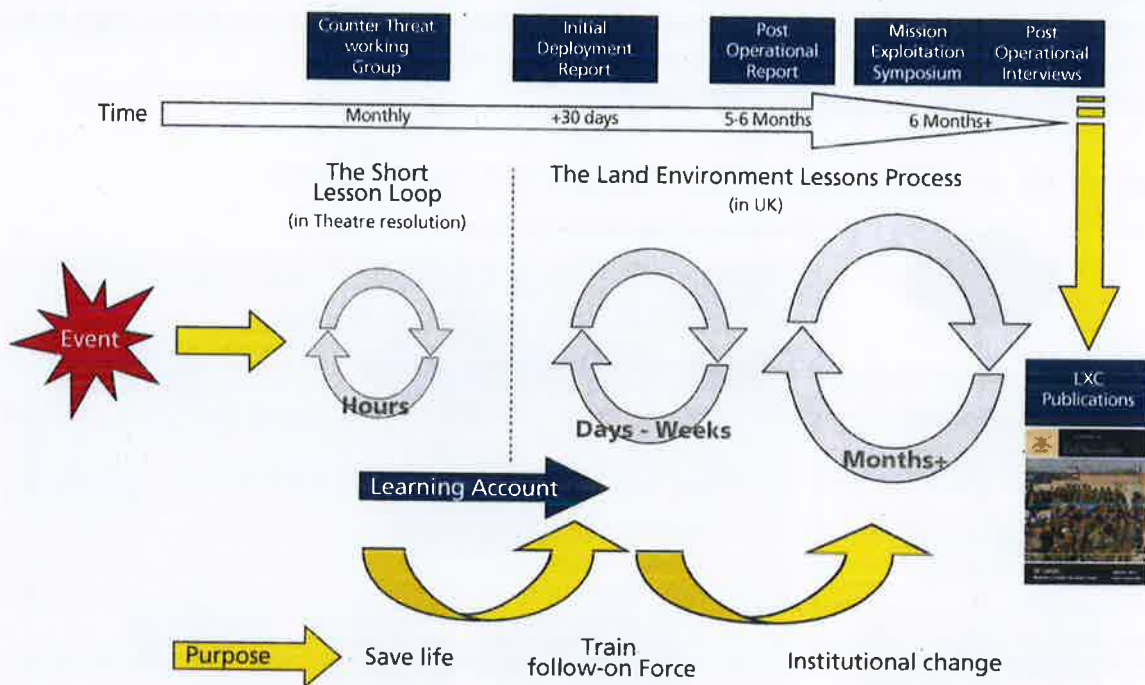
Figure 5-9-2. The operational Land Environment lesson loops.

7. **A Deployed Network.** The Deployed Network (DN) was a virtual organisation, deployed forward, focussing on lessons and learning. This ensured that relevant learning developed on the operation was both spread across those engaged and back to those preparing to deploy.

    a. At its height, the core of the DN comprised an Individual Augmentee (IA) SO1 Mission Exploitation (MX) allocated to HQ RC(SW), an LXC SO2 deployed forward as the SO2 Counter Threat / Lessons (SO2 CT / Lsns) within HQ TFH and an IA SO3 Lessons working with the SO2 CT Lsns. These were the only members of the DN whose main role was focussed on lessons and learning.

    b. The remainder of the DN was made up from "fellow travellers".[6] The breadth of coverage of the DN allowed fairly extensive capture across theatre, albeit with notable gaps, especially at the Kabul end. The ability of the DN to hunt across theatre was enhanced by the ability of the SO1 MX[7] to travel freely within TFH and JFSp(A), between RCs and up to HQs IJC and ISAF.

    c. The DN ran the Short Lessons Loop. Via weekly meetings by video teleconference (VTC) and daily by 'phone and email the communications, the DN also fed straight into the Interim Loop by passing pertinent learning information to the LXC and CTG as embodied by HQ CTG Ops Branch and OPTAG.

    d. The DN maintained healthy working relationships with HQ RC(SW)'s[8], HQ IJC's and HQ ISAF's lessons staffs. Frequent and repeated comment from other nations' lessons staff, in theatre and out, emphasised that the UK lessons system did well in feeding learning into and across theatre: this was not, it should be noted, well matched by ISAF's output to the nations.

    e. HQ TFH instituted a Counter Threat Working Group (CTWG), initially focussed on the Counter IED battle. The CTWG soon expanded its remit to consider other enemy focussed threats – for example single round small arms fire and indirect fire. Latterly, it covered a wide range of threats, including disease and non-battle injury. Meeting monthly, under the chairmanship of the Deputy Commander TFH, it drew together the Brigade RSM, the major unit RSMs, major unit seconds in command and, as needed, subject matter experts. A rolling issues log was kept on the deployed Mission Secret system, allowing tracking of opened and resolved issues – a form of "to do list" and an institutional memory. The CTWG concept has now been picked up by HQ RC(SW), albeit that the USMC finds itself constrained by what might be termed "a blame culture". Despite USMC commanders' best efforts, this makes open discussion of mistakes and omissions that present useful material for generating learning, and certainly wide dissemination of results, a difficult proposition.

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6   The CO of the BASTION Training Centre, the SO1 J7 HQ JFSp(A), the UK NCC's SO2 J7, the UK provided SO1 of COMISAF's Advisory and Assistance Team Southwest (CAAT(SW)) and the Equipment Capability post holders within HQ Joint Force Support (Afghanistan) (JFSp(A)).

7   The SO1 MX post was disestablished in early 2013, leaving the DN much less able to capture learning information from source.

8   The US Marine Corps Lessons Learned Centre (USMCLL Centre) also sent a one-post Deployed Network to Afghanistan. So the UK's DN in HQ TFH interfaced with the USMC's DN in HQ RC(SW).

8. **The LXC Working Group.** For its part, the LXC initiated LXC Working Groups (LXC WG)[9], pulling together stakeholders within the Land Warfare Centre (LWC), the Frontline Commands (FLCs)[10] and, importantly, foreign liaison officers. The LXC WG served to cross-pollinate learning information rapidly to and from each of the three FLCs' pre-deployment training organisations, to and from CTG / OPTAG and to and from many of the key nations involved in ISAF.[11]

> **Observation:** The strength of the link between lessons staff, both in theatre and in the firm base, has been central to institutional learning in the medium term – the investment in the follow-on force has thus been very strong, but it took the establishment of dedicated lessons staff to ensure it.

9. **Capture.** The capture of learning information in the short and medium terms has largely been described above, centred on the DN, the LXC and CTG – and the other FLCs together with the foreign Liaison Officer (LO) network. Using Short and Interim Loop outputs plus the outputs described below, Long Loop learning was primed with the information it needed in order to generate institutional change:

    a. **The Initial Deployment and Post Training Report (IDAPTR).** The IDAPTR[12] was written by units and summarised by the deployed formation at the 30 day point of each tour. It aimed to reflect on the Force Generation and Force Preparation in light of the first month's experience. It was a "quick and dirty" report, destined to assist the follow-on force and follow-on but-one force. It was directed to be with the LXC by D+42 in order to be useful for those audiences.

    b. **The Post Operation Report (POR).** Written by deployed units and summarised by the deployed formation, the POR was written towards the end of the tour and due back to LXC two weeks prior to Transfer of Authority (ToA). It included a lessons annex[13] as well as a reflective summary of the formation's tour and key learning points. It was important that the POR did not rehearse points already covered by the IDAPTR.

> **Observation:** Not all UK force elements produced PORs. There was, and still are, no PORs recorded by HQ JFSp(A) prior to number 17. This gap arose due to the blurring of lines of reporting of that Joint HQ in learning terms. There are few PORs on record from other Force Elements other than the Expeditionary Air Wings.
>
> **Lesson:** There should be a coherent and enforced plan for the production of PORs by all deployed force elements (FEs). This plan should be promulgated by PJHQ and include:
>
> - List of FEs to produce PORs.
>
> - List of focal points in theatre for minor FEs to submit their PORs to.
>
> - List of single Service or Joint HQs in the Frim Base to which specific PORs should be submitted.
>
> - Timescale for completion and submitting of PORs.

    c. **Post Operation Interviews (POI).** The LXC includes an SO1 Post Operation Interviewer who conducts targeted interviews, mostly with formation and unit commanders and key staff; but also with selected personnel – eg cultural specialists and interpreters – whose views and experiences contribute usefully to wider knowledge and learning. POIs were captured between the end of tour and the four month point. Originally classified RESTRICTED-STAFF – and thus not publishable widely – POIs were later classified at just OFFICIAL-SENSITIVE level and published on the Army Knowledge Exchange (AKX) for widespread consumption.[14] A "hangover" from the RESTRICTED-STAFF days, a synopsis was produced at approximately the end of tour plus six month point.

> **Observation:** An enduring regret is that there was no higher-level, coordinated programme to target and capture POIs from all key UK personnel – for example DCOMISAF.[15] HQ Air did, however, make very effective efforts to interview its Expeditionary Air Wing commanders.

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9   Weekly, then fortnightly and finally two-monthly.

10   OPTAG; the RAF's Force Protection Centre's LCC – Lessons and Concepts Cell; and the RN Maritime Warfare School, Operational Training section.

11   Especially the US, Australian, German, Danish, Canadian and French Armies. There is no USMC LO in CGS's foreign liaison officer team; the key UK lessons links to the USMC are maintained by the DN to HQ RC(SW) and by the LXC to the USMC Lessons Learned Centre at Quantico.

12   The IDAPTR has now been renamed the Initial Deployment Report (IDR).

13   Between Operation HERRICK 1 and HERRICK 19, there were 7267 items recorded on the POR lessons annexes of the lead unit or formation, an average of 382 per roulement. Some of these were repeats of previous observations in the process of being resolved, some were finally assessed as issues better solved in theatre or what amounted to hand-over points for sharing with the next unit, some were sentenced as lessons, others as good practices, some were disagreed to be lessons; and some of each category were Land level while others were better allocated to lower levels to deal with.

14   The LXC is in the process of contacting previous contributors, seeking their assent to reclassification of their POIs to remove the STAFF Caveat, by redaction if necessary. Very many have already agreed and their un-caveated POIs are now on the AKX.

15   Or key staff from HQ JFSp(A). Or from the contingents of other nations intimately involved with UK-led ops in Helmand: ie Denmark and Estonia.

Lesson: There should be a comprehensive, coordinated programme of targeted POIs covering all key UK personnel deployed on an operation, promulgated by PJHQ, including:

- List of posts to be interviewed.
- Allocation across JFC and single Services for the conduct of those interviews.
- Timescale for completion of POIs.

d. **Learning Accounts (LAs).** Previously called Operation Learning Accounts and After Action Reviews (OLAAARs), LAs were written by units experiencing incidents from which learning could be generated. LAs were formally only required for incidents in which casualties graded Seriously Ill (SI) or higher were suffered. However, incidents in which there had been significant near-misses and equipment losses and damage were increasingly the subject of LAs. DN staff helped the units to write LAs. The UK National Component Command (NCC) had overview of all LAs, a function carried out on his behalf by staff within HQ JFSp(A). LAs were designed to inform the single Services' inquiry branches of what occurred and what had been learned in order that a decision could safely be reached on the need, or otherwise, to convene a Service Inquiry or Non-Statutory Inquiry. But LAs were used widely by lessons staff to feed both the Interim and Long Loops; and by Coroners as a source of relatively objective information. LAs thus served many masters.

Observation: Setting and enforcing standards of Land Environment post incident reporting has resulted in a much reduced requirement for Service Inquiries.

e. **Other formal sources.** Individual Capability Directorates developed their own methods of collecting useful information and exploiting it. An example would be CD Combat and the "OOST" programme. Observations from Operations for Science and Technology (OOST) were based on group post operation interviews[16], to gain first hand accounts of the use of equipment and techniques, tactics and procedures. OOST reports were subjected to Military Judgement Panels (MJPs) within CD Combat and the agreed output was then used by Dstl to inform procurement and design changes as appropriate.

Good practice: The tasking, production and use of OOST reports represent a good example of learning; from operation to POI to CD to Science & Technology to procurement.

10. **Capture events.** A number of events, beyond the tour diary, the CTWG and incidents, were used to generate learning information that was then captured. These were primarily the Army level Mission Exploitation Symposium (MXS) and specific conferences, MJPs and lower level MXS conducted by Capability Directorates, for example. The MXS concept was developed around the end of Operation HERRICK 11 to corral all of the many requests to access units and formations returning from ops for information into a single, predictable and controllable event. Reports from central presentations, syndicate discussions and deep dives were captured to feed into the LELP.

Observation: While the MXSs run since 2010 have proven popular and effective in generating learning opportunities, it is notable that they have not been replicated above the tactical level. One notable gap has been exploitation of the Combined, Joint, Inter-agency, Inter-governmental and Multinational (CJIIM) community.

Recommendation: In the future, formal exploitation of a mission should extend above the tactical level. This might include using capture events, such as MXSs, to generate learning and sharing of knowledge. Such MXSs would require sponsorship by appropriate 2-star organisations.

11. **Analysis.** Analysis of incoming information was initially achieved, at Land level, by the LXC; below Land level, the Capability Directorates take the lead. Once an MJP decided upon issues that needed solution (now termed lessons or lessons identified), these were listed, often re-scripted in order to clarify them and then presented to Army DLoDs to agree ownership. Although "horse-trading" is common, this is no bad thing as the DLoDs are subject matter experts (SMEs), better placed to appreciate the nub of an issue. While the LXC acted as "the Army's conscience" in so far as the LXC presses issues that appear to its staff to need resolution, the DLoDs, as SMEs add much to the debate. Once issues were agreed, they were uploaded on to the DLIMS and formally allocated to relevant DLoDs for resolution.

12. **Resolution.** Lessons staffs cannot and do not learn on behalf of the Army. Only those with the authority to effect and resource change can do that. These are the DLoD leads. As touched upon at paragraph 11, the DLoD leads took ownership of relevant lessons, researched them to find root causes, designed solutions and then oversaw implementation. Other stakeholders, often Capability Directorates, held an active interest; the LELP allows involvement of such stakeholders. Once a DLoD lead believed that a lesson had been resolved, the DLoD staff reported back to the

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16   OOST interviews are contracted by Dstl and undertaken by QinetiQ. They focus on lower ranks, typically Pte to Major. The initial OOST focus was on combat units, but the programme later expanded to include CS and CSS units.

LXC, as the holder of the Land lead for lessons. Formal boarding mechanisms were used to review progress and, when applicable, agreed that a lesson could be "closed", either as learned, or because in-depth research had resulted in the DLoD refusing to agree that the lesson was valid, or had shown that a solution was not viable.

13. **Governance and Assurance.** The LELP includes a series of mechanisms to govern and assure the lessons process. These provided, at increasingly senior level, the ability for Army staff to ensure that the lessons process remained on track, that lessons were being dealt with appropriately and that all aspects of the process were joined up.

14. **Output.** Maybe the most important element of organisational learning is the output of knowledge. The breadth and depth of learning output has significantly increased across the period of Operation TELIC, but especially during Operation HERRICK. Outputs have been alluded to in the paragraphs above and are detailed below. Output methods formed a mix of "push" – publications that were sent directly to parties known or thought to have a role in using such information; and "pull" – publications placed so that those who may have had an interest could easily find and access them.

    a. **DLIMS.** As the single, pan-Defence IT tool for managing lessons, good practice and observations, DLIMS is also a repository of lessons. It is accessible by anyone in Defence with an RLI account. It holds a vast store of useful information that is critical to continuity of learning. This includes a significant number of Operation HERRICK lessons and good practice.[17]

> **Observation:** DLIMS is somewhat a specialist tool with, as yet, a search functionality that takes training and experience to use to full advantage.

    b. **AKX.** Commander FD&T, under Operation ENTIRETY, established an Army web-based interrogation system, the Army Knowledge eXchange (AKX), similar to the US Army Knowledge On-line (AKO). It is a user-friendly IT application that looks and feels similar to other knowledge management sites on the internet.[18] It hosts a comprehensive library of documents, presentations and other media which are uploaded directly to the Knowledge Base by subject matter experts. These can be easily and effectively searched, unlike other Defence platforms of the era. It also hosts a discussion area, the AKX Forum to enable collaborative working and to encourage feedback. It is very much an example of the future of knowledge management and sharing; it is a Defence-leader. Operation HERRICK focussed AKX content was collated into the Afghan Hub to provide an easily accessible, 'one-stop shop' for operational knowledge. All LXC lesson products are hosted or copied there, along with numerous reports and publications from other, like-minded sources: operational publications, newsletters, post operational interviews, science and technology reports, NATO and ABCA nations' lessons reports and so on. AKX usage topped 2000 daily site requests, with 31000 requests in the 30 day period to 23 November 2010.
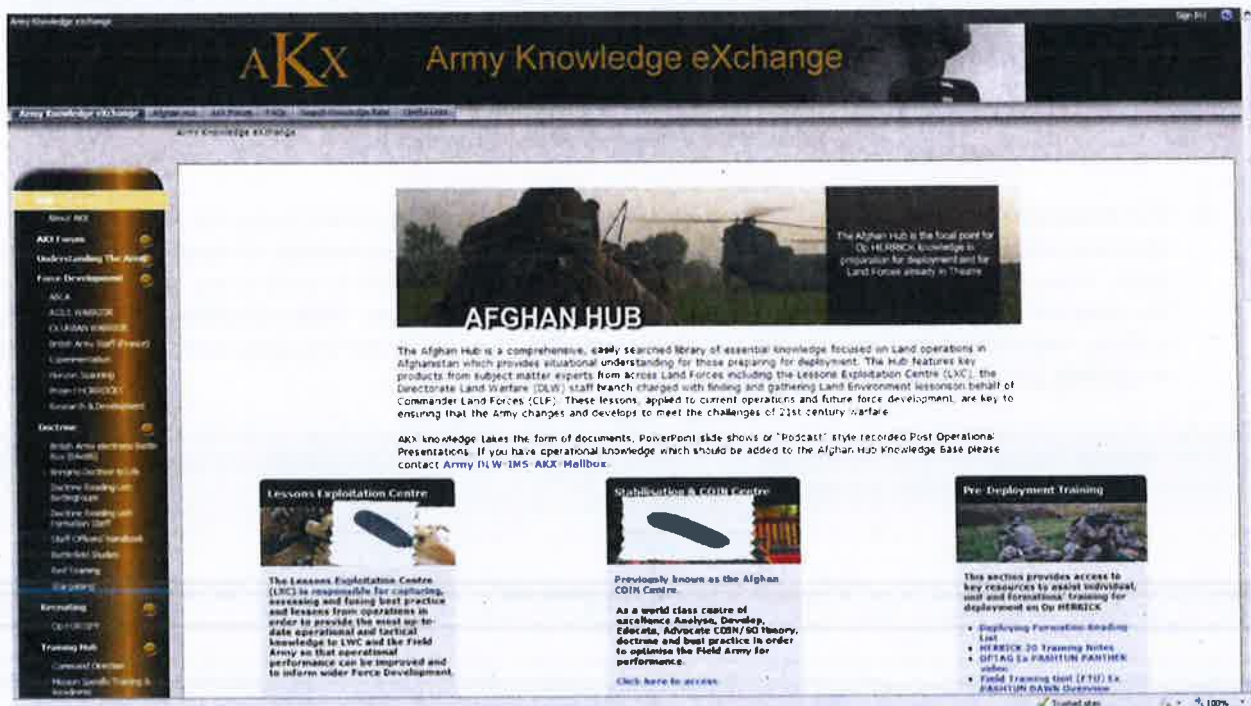
Figure 5-9-3. The front page of the AKX's Operation HERRICK site.

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17   There are 2272 Operation HERRICK lessons and observations in the Land domain of DLIMS at the time of writing. There are many more in other domains, such as those of Capability Directorates.

18   Each of the three AKX Protective Marking tiers sits on separate servers, outside the remit of Defence Information Infrastructure (Future) (DII(F)) with control in Army hands and can be accessed by DII and by all legacy systems such as Training And Financial Management Information System (TAFMIS), Ash Forest (the IT providers for Collective Training Environments) and the Defence Science and Technology Laboratory. This has afforded the AKX the full flexibility to respond quickly to the needs of its users and other stakeholders. This agility has been fundamental to AKX's success.

c. **One-Page Lessons.** The DN produced "One-Page-Lessons" (OPLs). These were usually in the form of a single side of A4 in 3-column format. They aimed to highlight a single issue, show relevant imagery to illustrate, provide a simple description of a problem and simple steps to overcome that problem. They sometimes covered an entirely new subject or aspect, or were simply a "remind and revise" product. They were classified no higher than OFFICIAL-SENSITIVE, were emailed across theatre very rapidly following an incident and were designed to be rapidly printed, displayed and briefed to those engaged in the operation at that moment. They were also transmitted rapidly back to the firm base for investment into the follow-on force. The LXC often extracted from OPLs and used the information to amend and update operational publications and to form the basis for an article in a newsletter. An example of an OPL is at Figure 5-9-4 below:

RESTRICTED

| 25 OCT 13 | LESSONS UPDATE – Pillow Charge IEDs | H19_LU_002 |
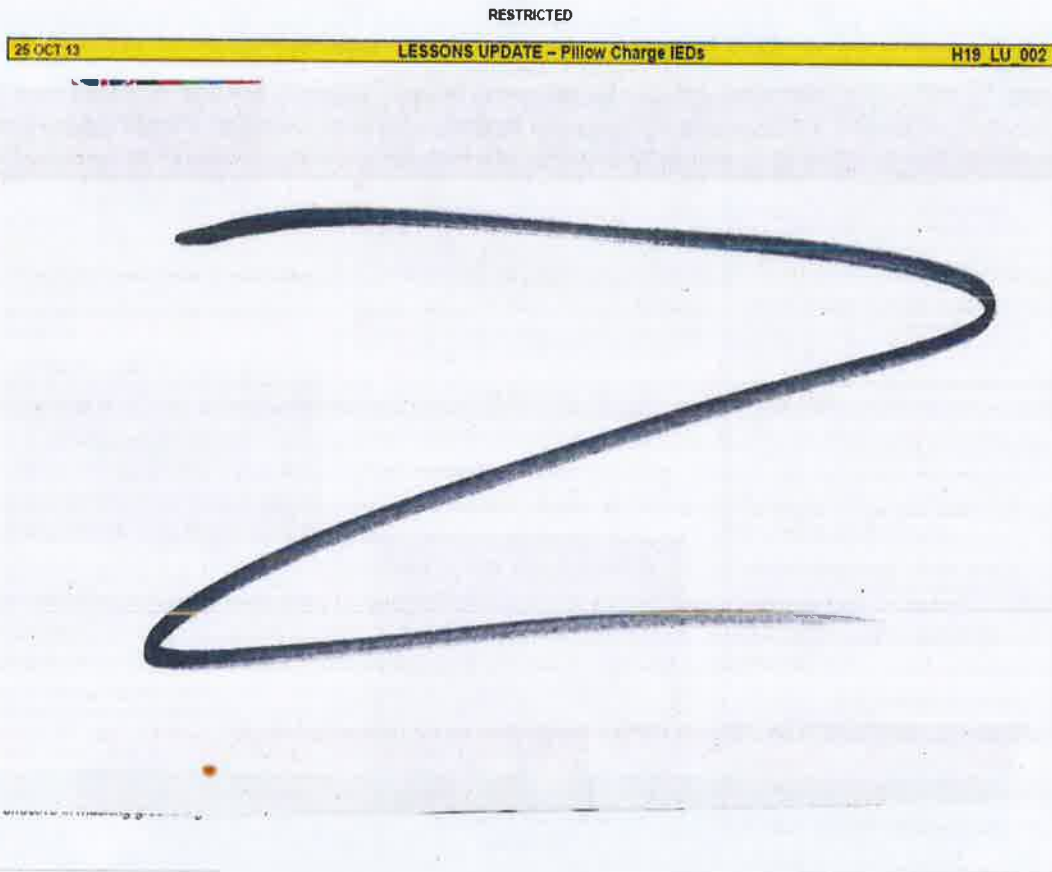
Figure 5-9-4. Example of a One-Page-Lesson.

d. **LXC Newsletters.** The LXC routinely produced "LXC Newsletters". These aimed to provide a slightly more enduring product than an OPL. They typically held the form of an A5 glossy booklet, of between two and 12 pages. Some newsletters covered a single subject; for example, and covered in detail in the Good Practice Chapter, the range of ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓ publications. Other newsletters covered several subjects, often including "Lessons from Learning Accounts" – a series of one line statements of advice, guidance and pitfalls arising from recent incidents.

Observation: Newsletters may be regarded as "Interim Tactical Doctrine", as many articles later go on to form the basis of refreshed or expanded doctrine.

Figure 5-9-5. Examples of LXC Newsletters: a single subject issue – Operation CARDEL, measures to counter the insider threat, June 2013; and a multi-subject issue, October 2013.

e. **Operational Publications.** It became established practice for the LXC to compile a handful of operational publications (op pubs) at each Operation HERRICK roulement. This was not a new invention – the Northern Ireland aides memoire produced for Operation BANNER and issued to follow-on forces at the start of their pre-deployment training presaged modern op pubs by several decades. What was new was the range and frequency of such publications. The LXC produced Operation HERRICK op pubs every six months, until the Operation HERRICK 20 editions in autumn 2013:

(1) **The Operation HERRICK Tactical Aide Memoire (TAM) insert.** The TAM insert was designed for commanders from LCpl and above. It contained information to assist planning, background activity training and to use in response to an incident. As much of the information as possible, that could reasonably be regarded as common to all likely operations, was absorbed into the reissued All Arms TAM in 2013. The aim there was to both front-load such information into future operations and to reduce the potential size of op pubs in the future.

(2) **The Operation HERRICK Individual Aide Memoire (IAM).** In much the same design as the Operation HERRICK TAM, but as a stand-alone document issued to individuals deploying, the IAM was designed to provide life-saving and revision information to every single person deploying on the operation. Again, as much IAM information as possible and relevant was extracted and added to the new All Arms TAM in 2013. This does, however, leave a gap for contingency at the level of the individual who is not a commander; there is no low-level doctrine pocket book for individuals, other than for Operation HERRICK.

(3) **Reports and Returns Slate Cards (R2 Cards).** R2 Cards were hard plastic, A6 sized cards with pre-formatted reports printed on them. They were designed to be carried into the field. R2 Cards contained essential reporting formats for use during an incident – medical evacuation requests, emergency close combat attack requests, calls for explosive ordnance disposal specialists and so forth.

(4) **The Operational Guide (Op Guide).** The Op Guide was a Land Intelligence Fusion Centre (Afghanistan) (LIFC(A)) product. It aimed to provide basic information to commanders on the country, the people, the enemy and friendly forces in Afghanistan. It was in the form of an A5 booklet – akin in design and size to the booklet "British Defence Doctrine".
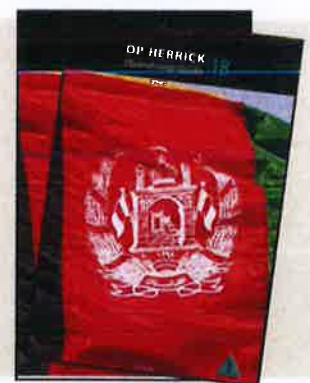
(5) **Operational Insights (Op Insights).** Op Insights was compiled by the LXC, based extensively on short essays and vignettes provided by the last in-place force. It was in the same format as the Op Guide. It aimed to provide commanders with direct reporting, advice and impressions from their forebears in theatre, covering aspects of operations, the threat and environment. It was, in simple terms, a "what it's like out here" book.

Observation: The bespoke operational publications have been generated for two reasons:

1. Because specific theatres had characteristics that could not be described by generic, broadly applicable publications.

2. Because the generic publications had been too slimmed-down; so the bespoke products added back what should have been there before.

Lesson: Ongoing reviews of doctrine, for example the All Arms TAM, should include as much widely applicable information as possible, including that drawn from operational publications, so that more information will be available on the next first deployment and less content will be required in follow-on, specific, operational publications.

Learning vignettes

Vignette: The following two vignettes about learning are provided to give a flavour of how it can work well. The details are summarised; it is important to understand that these examples of learning were not solely down to LXC staff –as always, it is those with authority to make changes and the matching resources who do the learning; and there are many stakeholders in any learning.

Closed architecture vehicles rolling into water. A number of incidents occurred during both Operations TELIC and HERRICK where vehicles rolled off bridges or canal and river banks and fell into water. Where the make-up of the vehicle was primarily to resist explosive or other kinetic attack, the lack of easy egress and other factors conspired to create casualties, including several deaths. The issue came to a head in 2010 with two separate incidents. In each one, a Ridgeback protected mobility vehicle rolled into a canal. In total, five personnel died. The incidents galvanised national media attention. Comprehensive post incident reporting led to several recommendations, one of which was that specific training in roll-over and water-egress survival would help to reduce casualties. This resulted in the procurement of a device known as a Roll-Over Drills Egress Trainer (RODET) – see Figure 5-9-6 below. It has been credited, by some of those involved in subsequent roll-overs into water, with saving lives through preparing crews for the worst by providing practical training.
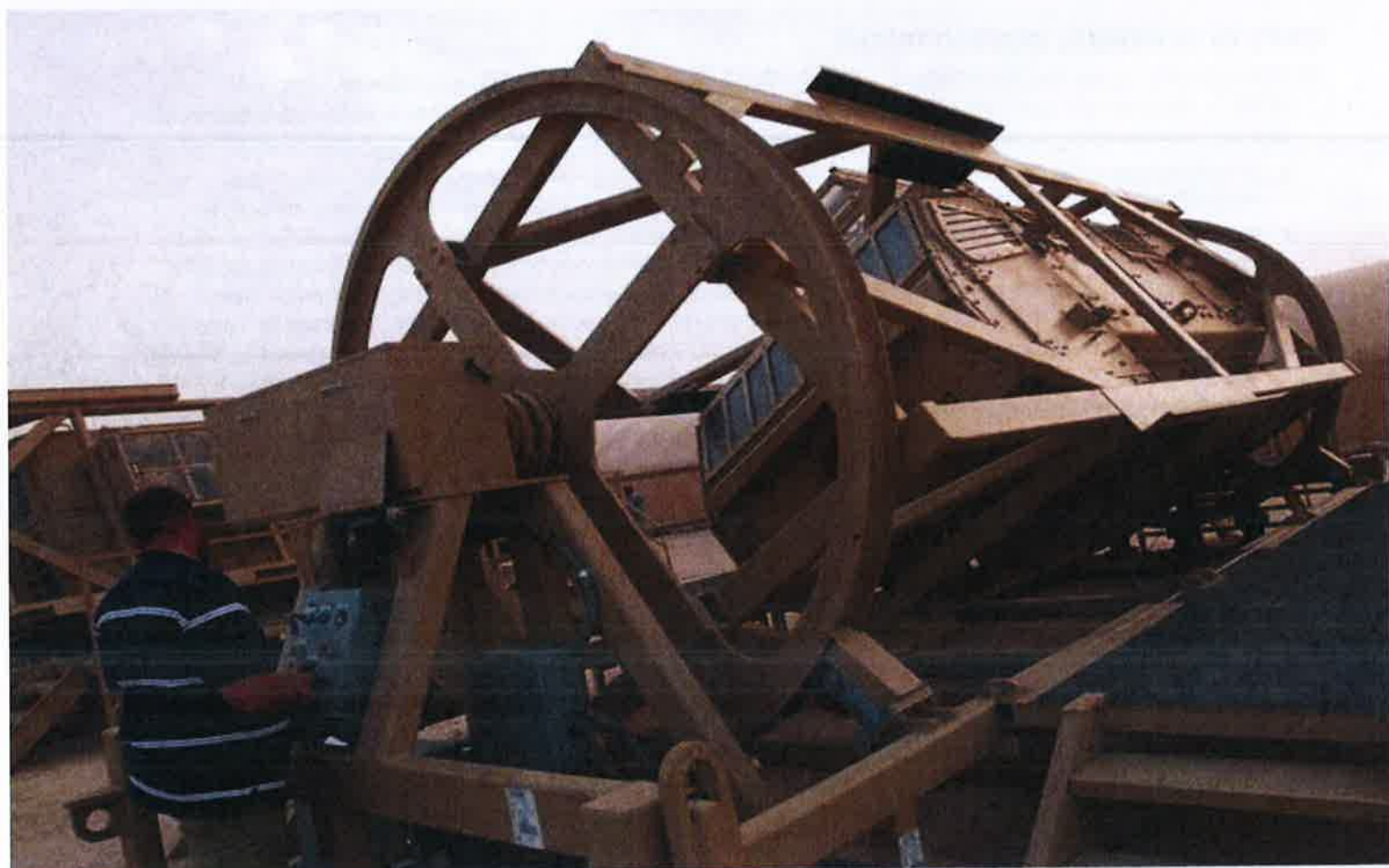
Figure 5-9-6. The Roll-Over Drills Egress Trainer (RODET).

Vignette: Countering the insider threat.

Early development. In late 2012, the commander of the next brigade to deploy requested that counter insider-threat (C-I/T) tactics, techniques and procedures (TTPs) be expressed in pictures and writing to allow pre-training of deploying troops. Until then, those deploying had taken over the C-I/T TTPs of the in-place force as developed locally; an approach which had been seen as sufficient until then. But recently, the I/T had increased; and an escalating number of mandatory C-I/T measures were ordered by COMISAF and Commander TFH, so it was now time to write down and institutionalise the C-I/T TTPs. A stakeholders' meeting was called, led by CTG and LXC. Concurrently, TFH sent back all in-theatre information available.[19] One result of this meeting was, within around one week, a draft of UK C-I/T TTPs. Rapid agreement was reached that these were fit for purpose and the TTPs (now known as Operation CARDEL) were placed concurrently on AKX and sent for printing into operational publications.

ISAF development. No sooner had ▬▬▬▬ been produced and distributed (and widely taken up across ISAF – all UK lessons products are shared with ISAF immediately on production) than COMISAF called for a comprehensive Security Force Assistance and C-I/T study period at NATO HQ Brunssum. LXC and OPTAG formed the heart of the "COMISAF guidance on combating insider attacks" writing team. The resultant document was adopted across ISAF (see the front cover, reproduced at Figure 5-9-5).

Summary. The example serves to illustrate how fast the lessons loop can be. From identification of a problem in early Nov 12, formal doctrine was available electronically and in training video format in around 4.5 weeks; and in multiple hard copy formats within 3 months. Bespoke training was rolled out within 2 months of problem identification. All of this relied on the ability of the in-place force to communicate and share information with the firm base, vastly eased by the Deployed Network. It distilled lessons, in-place procedures and in-house training into comprehensible products within hours of these coming to light, made reliably good judgements as to what was necessary back in the firm base and what was not, sent products back, handled requests for information (RFI) and explained the often different perceptions of the firm base to the in-place force. Without this rapid loop of lessons, RFIs, supporting information and contextual briefing, the tactical doctrine and training products would have taken much longer to emerge and would have had to go through multiple iterations in order to attain the standard that they did, in fact, attain from the outset.

GAPS IN LEARNING DEVELOPMENT

15. Although great strides have been made in institutionalising learning over the course of Operations TELIC and HERRICK, there are still significant weaknesses that it would behove the Army and Defence to address as a matter of urgency, if we are to be properly regarded as a learning organisation.

   a. **A holistic approach.** The advances in learning that each of the FLCs would rightly argue they have made have not been well reflected at the Joint level. For whatever reason, it appears that the passage of lessons for resolution to the Joint level and to the Centre is too difficult to accomplish routinely. Single Service lessons staff show increasing frustration that issues apparent to them as solvable only at the Joint level are routinely rebuffed. VCDS' DOLS initiative is to be welcomed, as it acknowledges extant weakness in learning at Defence's higher levels. Illustrative of this institutional weakness is the reluctance at any level above the FLCs to develop a pan-theatre list of commanders and key staff for interview and subsequent management of such interviews by relevant and available lessons staffs from all sources, in order to generate relevant POIs. It is remarkable that there is only fragmentary record of commanders above those of TFH who have been interviewed to harvest their experience for institutional benefit. This institutional weakness is not confined to areas beyond the single Services. Lessons that are properly seen as operational and strategic level ones rarely find willing traction in the Army.

   Observation: Without thoroughly analysing each issue, and acknowledging that operational and strategic issues are often "wicked problems", it does seem that challenges to conventional wisdom are not routinely welcome. Without genuine debate and willingness to accept imperfection at these levels, the good learning practice developed at the tactical level seems fated to stay there.

   b. **A theatre-wide view.** The Operation HERRICK DN was, despite the ability of its SO1 MX to travel widely, heavily focussed upon TFH. Some attention was paid to JFSp(A); less to Kabul based units, for example. No member of the DN was dedicated to a BRITFOR role, a significant gap that resulted in failure to ensure that information was both extracted from every part of the Force and passed across the entire Force. Latterly, the LXC discovered that many of its TFH derived lessons outputs failed routinely to get to Kabul based units. While not every piece of learning from TFH would be applicable everywhere else, provision of such information, in order that those responsible for Force Elements beyond TFH could make a judgement, failed. Manpower caps make the justification of every single

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19 For example, Guardian Angel training objectives, C-I/T OPLs, unit Standard Operating Procedures, Task Force and unit orders.

post necessary – and hard: but we would do well to have theatre-wide representation, and thus span of learning, from the outset in future operations.

Lesson: A Joint lessons capture plan should be regarded as essential. It should be expressed in CJO's operation directive and include:

- General breakdown of subject areas under which captured information is sought; these should span the strategic, operational and tactical levels.
- Confirmation of Force Elements targeted for capture.
- Key personnel to be targeted for POIs – including personnel from other Troop Contributing Nations, where appropriate.
- Allocation of capture tasks across JFC, DCDC and all three FLCs; in and out of theatre.
- Include sub-FLC level capture tasks, exemplified by CD Combat's OOST programme for Operation HERRICK.
- Set minimum reporting requirements in terms of formats, distribution and time.
- In order to generate confidence across the chain of command, outline the style and frequency of learning output intended that will spread lessons and good practice following capture and analysis.
- Set single Service and Joint responsibilities for sponsoring Mission Exploitation Symposia.

c. **Information Management and Exploitation (IM/IX).** Repeatedly throughout the study, it has been a struggle to find relevant documents – for example, only three of eight Operation ENTIRETY FragOs can be found. Institutionally, our IM/IX is not good. It is too easy to say that this is simply a command responsibility and that the Operation Record should capture everything. The Operation Record is, in reality, a vast digital and hard copy heap, with minimal staff in Defence to categorise it, store it, access it and make it available. Without even a published library structure of this information accessible across Defence, one has no idea what might be in there to then ask for retrieval. The Operation Record only applies to the deployed end of the operation. Staff are extremely unlikely to take any action to store information correctly if it takes minutes per document – they do not see it as a priority and do not afford it time. This situation cries out for a Defence solution and a high degree of automation. IM/IX must be easy for individuals to do or it will not be done.

Lesson: IM/IX across Defence is well below the standard needed to support learning and defend decision-making against later claims. A pan-Defence, enforced solution to IM/IX is needed, including standards, formats and structures. The solution must automate IM as much as possible, removing the time and detail burden from commanders and staff.

d. **Remembering "how to".** We have failed, consistently, to "capture the high-water-mark" of each of the things we did well; eg targeting and mentoring, partnering and advising. It may be argued that SOIs and SOPs incrementally developed in-theatre, together with immersion and handovers, are enough to capture the state of each art – and this is true to the degree that the high-water-mark is generally maintained and even raised from roulement to roulement. But this does nothing for continuity from campaign to campaign, for institutional learning and for sustained development across the DLoDs. Such subjects may have been captured at lower levels, but there is no surety of that and no Army-wide visibility of it, unless it ~~has already~~ been written into doctrine.

4 RIFLES OPERATIONAL VIGNETTES

There were, however, good examples of attempts to set standards for capturing "how to" – for example 4 RIFLES produced a vignettes publication after their Operation HERRICK 10 and 11 tour.[20] We must institutionalise such capture, do it as we go along and do so very deliberately.

Lesson: The capture of "how to" should be a specified part of the joint lessons capture plan.

e. **Recording study methodology.** The HCS team could find no record of how previous campaign studies were conducted, nor find a "how to conduct a study" guide. Given the number of times that such studies have been done, this appears to be a glaring omission.

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20   "4 RIFLES Operational Vignettes, HERRICK 10 and 11", uncoded publication, RESTRICTED. Provides thirty vignettes that illustrate the character of operations during the 4 RIFLES' tour. Text, diagrams and colour photographs.

Lesson: Study terms of reference (ToRs) for the Land Environment tactical level Operation HERRICK Campaign Study (HCS) should be recorded as part of the HCS report. Additionally, the HCS team should write what amounts to a Standard Operating Instruction (SOI) covering the "how to" and include it with the ToRs.

f. **Learn or blame?** Defence has maintained an admirably open approach to learning from operational mistakes, at least at the tactical level. But a trend of increasing delay in production of Learning Accounts (LAs) has been observed. As noted at paragraph 9.d, LAs are designed to inform the formal decision to convene an inquiry, either Service or Non-Statutory; that decision is taken on the basis of whether certain conditions have been met, including whether any lessons that emerge from an incident have been properly identified and carried forward for action. It is assessed that the reason for the increasing delay in LA production is concern by authors that LAs are widely consulted and quoted in Coroner's inquests and used by others as a narrative of the incident. This dual purpose – initially for identification of lessons; now for narrative purposes – has led to a reduction in utility and clarity of the product. Although no written account can be excluded from a Coroner's Court or similar these days, we do stand in danger of seeing LAs becoming anodyne and uninformative.

Observation: The reporting trend shows increasing reluctance candidly to state the reasons for an incident. If authors believe that they or other individuals named in the LA stand to be blamed on the strength of the LA, we will see a key source of learning wither.

Recommendation: There must be robust, institutional defence of the decisions and actions of commanders and soldiers in the field.

Recommendation: Maintain clear understanding that the key reason for LA production is to allow single Service authorities to decide whether a Service or Non-Statutory Inquiry is needed, based upon an assessment of whether all relevant learning requirements have been made.

Recommendation: Enforce a short timescale for LA production and submission; preserve formatting, punctuation and spelling errors – all of this will result in a product that is, and looks, "dirty and early" rather than "late and polished".

g. **Learning continuity in theatre.** Some lessons, especially those arising from incidents, are best fixed in theatre; and this has been the practice. OPLs and other reports serve to ensure that some of this learning is transmitted back to feed the Interim and Long Lessons loops. But other fixes, especially to simple SOPs and policies, are in danger of being lost from roulement to roulement. While lessons staff endeavour to record everything they can and pass it back to the firm base, there is just too much going on at any one time to hope to truly achieve learning continuity in theatre without a dedicated tool to support lessons staff. The server capacity available to HQ TFH was only sufficient to hold the records of the current and the preceding roulement. So the best information currency held was around 12 months. Records of CTWGs and the Rolling Issues Log referred to above (a localised invention) were stored on the same HQ server that was extensively wiped every six months. There is no deployable DLIMS to support lessons staff in theatre so that localised learning can "stay learned"; incidents repeated in whole or in part from roulement to roulement have shown this. An example: There was repeated failure of lessons on managing the Surveillance and Target Acquisition Plan (STAP) f ▬▬▬▬▬▬▬▬ to be passed between roulements. This led the LXC to develop two seasonal lessons pages on AKX for winter and summer tours and to push the information forward to new formation HQs as soon as they arrived. CTG also took the seasonal STAP lessons that the new formation would face and emphasised these in training. Nonetheless, it was difficult to replicate such STAP difficulties in training without ▬▬▬▬▬▬ so in-theatre imagery and examples held forward would have helped considerably.

Lesson: Defence needs a deployable lessons database, preferably one that directly links to the Firm Base system, currently DLIMS. The unit or formation deployed obviously needs sufficient server capacity to support such a deployable database.

THE FUTURE OF THE ARMY'S LEARNING SYSTEM

"One must distinguish between 'lower-level' and 'higher-level' learning in order gauge whether new knowledge -- in the form of new conceptual constructs, structures, processes and routines – has been institutionalized throughout the organization and, thus, whether it will endure beyond immediate operational challenge".[21]

21 Journal of Strategic Studies; "Coping with Knowledge: Organizational Learning in the British Army?"; Sergio Catignani; a Strategy and Security Institute, University of Exeter, UK; published online: 8 May 13. It may be instructive to compare the substance of lessons raised from Operation TELIC and Operation HERRICK, to see whether many of the same issues arose. It is suspected that the answer is "yes"; if so, that would indicate that the Army is much better at single-loop learning than double-loop learning.

16. **Use of new methodologies beyond Operation HERRICK.** The advances in learning made from Operations TELIC and HERRICK have already been fielded beyond these two operations. Examples include:

   a. **UK Operations and Resilience.** An MXS was held following the 2012 Olympics, extracting learning from Operations OLYMPICS, ESCALIN (potential fuel tanker drivers' strike), QUICKTHORN (potential prison officers' strike) and GIRAFFE (flooding, North England, 2010). A member of the LXC staff was deployed to HQ SJC(UK), akin to the deployment of the DN to Operation HERRICK, during Operation PITCHPOLE (flooding, SW England, 2014). Numerous Operation PITCHPOLE POIs have been completed with formation commanders and key SJC(UK) staff.

   b. **Other operations.** The LXC has used some or all of the learning methods used for Operation HERRICK for: Operation SERVAL (French – Mali, early 2013); Operation NEWCOMBE (UK contribution to EU Training Mission, Mali, 2013 onwards); Operation ELGIN (periodic UK rehearsal of reinforcement to the EU mission in Bosnia Herzegovina); Operation VOCATE (the UK mission to train elements of the Libyan General Purpose Force in Bassingbourn, 2014 onwards); Operation HELVETIC (security operations in Northern Ireland, 2008 onwards); and Operation SPONSOR (security of the 2013 G8 summit in Fermanagh).

   c. **Foundation training.** A start has been made in exploiting foundation training in a similar manner to that used in Operation HERRICK. Four Training Exploitation Symposia (TXS) have so far been held, addressing learning from the training of Very High Readiness and High Readiness contingency forces.

All of these initiatives point to the utility and popularity of the hard-learned and hard-won experience of, and process for, generating learning from our activities.

17. **Future challenges.** For the Army, it seems axiomatic that we must continue to use what we have learned about learning.

   a. **We should focus capture and analysis effort on major training events – probably at Collective Training level 3 (CT3) and above.** We are already very good at using such events to invest in the specific training audience – BATUS after action reviews (AARs) are highly professional and good examples of where we do well. But we then fail to take this learning and amalgamate it with results from AARs arising from major training events across all of the Collective Training Environments. Were we to do that, it is highly likely that Force Development themes would stand out, initiating LELP action.

   b. **Defence Engagement (DE) is emerging as an important task for the Army post-Operation HERRICK.** As yet, only tentative moves have been made to capture, analyse, resolve and learn across the Force – although interest in convening a DE MXS in late 2014 is rightly being shown by the formations concerned and Army International Branch.

   c. **Key to future learning is the continued development of the Army's Master Question List, designed and maintained by the Directorate of Force Development.** This has already been used by the LXC to generate question-sets to prompt lessons capture from some training events and operations. The move to a more targeted capture of learning seems both necessary and obvious. The concept is illustrated at Figure 5-9-7, below:
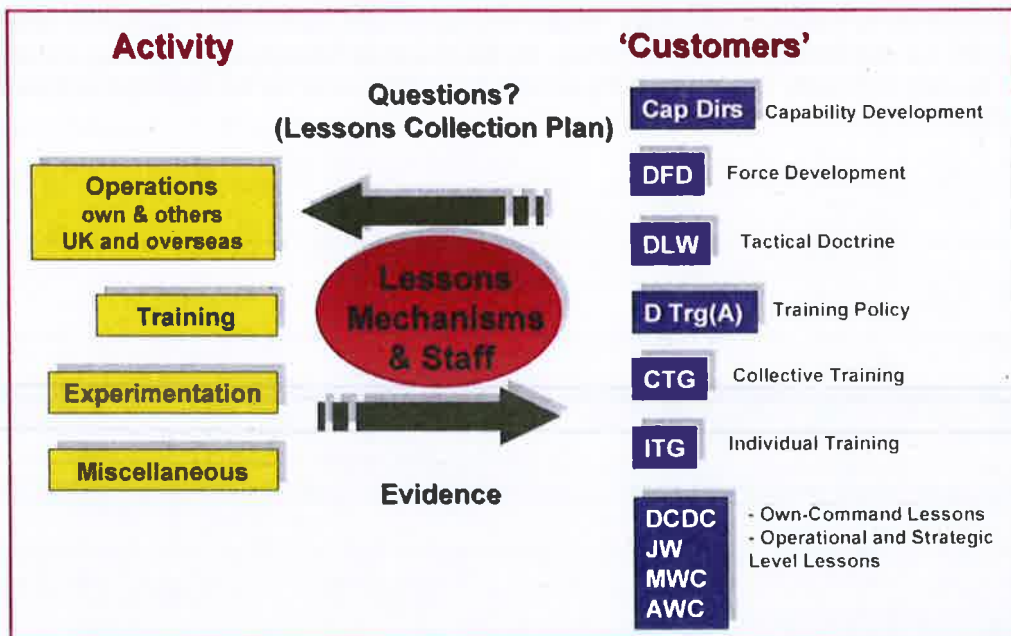
Figure 5-9-7. Targeting lessons capture.

RECOMMENDATIONS

18. In addition to observations and lessons that have been noted above, the following is recommended in order to perpetuate what has been identified as good learning practice:

Recommendation 1: A Deployed Network (DN) of lessons practitioners and "fellow travellers" should be considered for future operations. One post at least should be found from LXC resources. Another should be an IA with the ability to travel widely throughout theatre, especially outside whatever BRITFOR construct is deployed, in order to capture learning at source. Critically, the DN must be specifically designed to have a BRITFOR remit. This should be embedded in Land Force Generation doctrine and mounting orders.

Recommendation 2: The Counter Threat Working Group (CTWG) concept should be instituted early on in an operation. CTWGs should be formed at levels such as BRITFOR, formation and the main supporting HQ (eg a future HQ JFSp). The CTWG secretary should be one of the DN, ideally the LXC forward SO2.

Recommendation 3: The close links forged between the LXC, CTG and DLW's Warfare Branch should be maintained and strengthened – using collective training at CT3 and above plus Defence Engagement as the main focus of exploitation activity.

Recommendation 4: The direction for deploying and deployed forces to prime the Long Lessons Loop by providing formal input should be maintained.[22]

Recommendation 5: Learning Accounts (LAs) should be retained as the primary reporting format for Land Environment incidents that may require the convening of a Service Inquiry (SI) or Non Statutory Inquiry (NSI). The learning demonstrated, or not, within an LA must remain the primary driver for the Army's decision to convene an SI or NSI or not. As a secondary role, the LA must remain the primary method of capturing such learning for the Interim and Long Loops.

Recommendation 6: The learning outputs that have supported recent operations should be institutionalised – at least in outline terms – as those which are routinely expected (and funded).[23] Looking to the immediate future, initial products should be designed for Operation NEWCOMBE, the Operation VOCATE Land Training Unit, Operation ELGIN and for Defence Engagement generally.

CONCLUSION

19. Setting up the Army's current lessons architecture has enabled rapid and coherent learning as well as enhanced training across the force, prior to and during operations. The creation of the strong link between the learning of lessons and good practice and then passing these to the training engine has saved life and limb, equipment, time, money and reputation. Rigour is now apparent in learning and institutional change. The Army is able to demonstrate externally that learning occurs across an increasingly wide range of competencies; initially focussed heavily on operations, but now examining routine training, starting to support Defence Engagement and beginning to look at how routine business can be done better. Learning across the Land Environment is now a reality with RN, RM, and RAF closely tied in to LE learning. The contribution made by this re-energised lessons process to success on operations, saving lives and improving training is undoubted. These investments might seem to be a luxury post Operation HERRICK, but this is a vital capability that must endure. For learning to be instinctive, the learning and adapting process must be used continually. The Army's ability to learn and adapt cannot be freeze-dried and thawed out only in times of conflict.

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22   Such inputs are exemplified by: Initial Deployment Reports, Post Operation Reports, Post Operation Presentations, Mission Exploitation Symposia and Post Operation Interviews.

23   These include: a Tactical Aide Memoire insert for commanders, an Individual Aide Memoire for all personnel, One Page Lessons that convey new learning or are remind and revise products for the Short Lessons Loop, frequent Newsletters that convey new learning for the Interim Lessons Loop and Operational Guides and Insights that provide background understanding and a feeling for "what it's like out here".

CHAPTER 5-10
OPERATIONAL SAFETY

"Be hard nosed, look and listen. Challenge bad practices".

Mr Charles Haddon-Cave QC, Author of the Nimrod XV 230 Report

BACKGROUND

1. On operations there remains a requirement for commanders to adhere to Defence direction and UK statutes and regulations that apply to laws dealing with Health, Safety and the Environment.[1]

2. On operations, in addition to the need to manage risks in order to maintain morale, there is the need to do so in order to preserve the force. Whilst the numbers of soldiers killed in action is much harder to ameliorate, the application of safe working practices and a safe environment are key force protection measures that need to be implemented to maintain fighting power.

3. Commanders at all levels have a personal responsibility for ensuring that activities are undertaken in as safe a manner as is reasonably practicable, taking due regard to any risks to personnel or the environment. This responsibility cannot be delegated. The mechanisms for discharging this duty may be delegated and assistance and support obtained, but legal responsibility remains with the chain of command and respective commanders.[2]

4. Operation HERRICK saw a significant number of Non-Battle Injuries (classed as Disease and Non-Battle Injury (DNBI)). Figure 5-10-1 gives an idea of scale.

Year	KIA	WIA	DNBI
2009	91	331	258
2010	75	391	304
2011	32	189	344
2012	38	96	499
2013	7	35	82
2014	Nil	14	64

Figure 5-10-1 KIA, WIA and DNBI figures for 2009 to September 2014[3] – Operation HERRICK

UNDERSTANDING THE PROBLEM?

5. The accident reporting situation throughout Operation HERRICK was at best disjointed and at worst, non-existent in the early deployments.[4] Stove piped peacetime incident reporting process frustrated the Accident and Incident Notification Cell (AINC) attempts to understand and analyse operational incident lessons and make appropriate recommendations for change.

Vignette: The accident and incident reporting system set out in JSP 375 relied on each TLB having their own process in place. The Army relied on the MoD Form 510 through to the AINC. PJHQ, as a separate TLB, sat outside of the Army TLB reporting system which meant that as soon as an individual steps over the operational threshold the reporting system is broken from an Army TLB perspective. Furthermore, information on incidents was not routinely reported to the AINC. Accident statistics were not easily gathered from PJHQ and records were not passed to AINC, although serious injury/fatalities were picked up through the Joint Casualty and Compassionate Centre. This meant that the cause of injury/ fatality was often unknown and in particular, whether it was related to a safety failing or otherwise. At an Operational Safety Working Group (OSWG) meeting this point was raised and it was agreed that PJHQ would provide the MoD Form 510 to AINC. These came in paper format some considerable time after the incident occurred, but at least trends could start to be established.

DNBI continued to be a major issue as this kind of information was generally passed through the Role 3 Hospital in Camp Bastion. DNBI figures for reporting statistics had to be gathered through Defence Statistics who had links to the Medical database.

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1   Health and Safety at Work etc Act 1974 (HASWA 74), Environmental Protection Act 1990 (EPA 90), The Management of Health and Safety at Work Regulations 1999 (MHSWR 99), The Fire Precautions (Workplace) Regulations 1997, JSP 815 –Defence Environment and Safety Management.
2   A Commanders Guide to Safety and Environmental Risk Management, CESO(A), Edition 5, June 2010.
3   Figures from AINC database as at September 2014
4   The same could be said of Operation TELIC.

6. As a result of trend analysis several safety issues were raised (eg power management, manual handling) and it was clear that Health and Safety on operations was not given the same degree of attention as it was routinely 'in barracks'. This then led to a series of pre-deployment Health and Safety briefings conducted by PJHQ with input from CESO(A) and the SO1 Force Protection Cabal.[5] In 2011, as a consequence of this PJHQ Operational Safety and CESO(A) joined forces to produce a "Commander's Pocket Guide – Operational Safety". This straight forward pocket guide drew commanders' attention succinctly to hazardous areas on operations that had been identified from accident / incident reporting and trends.
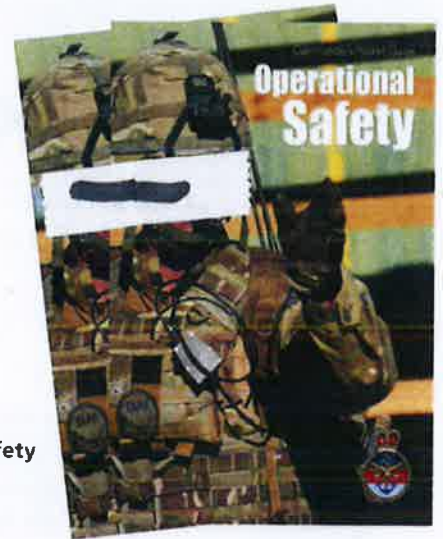
Figure 5-10-2 Commander's Pocket Guide – Operational Safety

WHAT WERE CAUSAL THEMES AND ARE THERE ANY CAMPAIGN EVOLUTIONARY TRENDS, INCLUDING ON MST

7. The lack of an available Operational Training Equipment Pool for training on UOR-procured equipment caused considerable challenges. Personnel were often required to operate equipment not fitted to operational standards, or indeed equipment in theatre different to that which they were trained on. Additional in-theatre training had to be provided during reception, staging and onward integration which was a condensed training package that was barely adequate for what was required. This overall situation improved, but remained a challenge as the political will was to have the equipment on operations quickly but in doing so preventing full integrated deployment of capability where it could protect personnel from harm, such as that from exploding IEDs.

8. There was a failure to follow standard practice and procedures for various work/normal 'in barracks' activities whilst not in contact with the enemy. These were highlighted in the Commander's Pocket Guide – Operational Safety, see Figure 5-10-2.

Figure 5-10-3, Commanders Pocket Guide, detailing 16 key Force Protection Measures

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5   CESO(A) - SO1 Safety Performance, 3 (UK) Div - SO1 FP, FTC - SO1 FP, PJHQ - SO1 Ops Safety.

Vignette: Fire Risk. In Feb 13 Two soldiers died as a result of a serious fire. A nightshift of IMMLC drivers were asleep in a tent (not recorded as a designated sleeping area) within Bastion Camp when a fire started. The Duty NCO, who was also asleep when the fire started, recalls being woken by the smell of burning wires and then seeing flames coming from under the desk on which the Burco Boiler, TV and radio battery charger were situated. He later stated that he did not recall the smoke alarm functioning. The Duty NCO immediately got up and ran to the exit and as he did the interior tent lining caught fire and a burning piece landed on his right hand. As he ran out of the tent he shouted to the remaining soldiers to get out. On exiting he shouted for help and then attempted to fight the fire however, by this stage it was too fierce for him to have any effect. Fire investigators concluded that the blaze started in the vicinity of the electrical appliances - including a 32in flat-screen TV, boiler and fridge, and a nearby air conditioning unit. The fire quickly spread, igniting combustible materials stored nearby. A number of key factors were involved in this fire; such as the failure of the smoke detector (expired batteries) and the overloading of an extension cable. There were also a number of failures in the management of the sleeping accommodation at that time. A large number of recommendations were raised and put into place to prevent any recurrence.

Vignette: Class 4 laser. Whilst acting as the runner for PB4 Guard a soldier came across a sight/laser on the table of the guardroom. Due to interest in the workings of the said laser the soldier picked it up to inspect it. In doing so he put the sight to his eye and pressed the activate button. The laser was not positioned correctly and subsequently shone directly into his right eye. Full details of medical attention/treatment received following this accident are not provided on the MOD Form 510, although the soldier did attend the Medical Officer at PB2 and has since been transferred to Bastion R3 Hospital, AEROMED to the UK is anticipated. Laser used - IZLID laser (NSN 5855-01-505-3095) - Class 4 laser (not eye safe).

WHAT WAS PUT IN PLACE TO RAISE OPERATIONAL SAFETY AWARENESS?

9. The introduction of a Civil Servant C2/SO2 Health and Safety post within Camp Bastion occurred late in the deployment which also served to drive down incidents. This post also introduced site safety visits to FOBs and provided a traffic light grading system for each area of deployment. This system was mapped and presented at the OSWG. Comments and issues raised as a result of this mapping were resolved or addressed via direction from PJHQ J7. Within this mapping, accident and DNBI figures were also presented giving visibility of possible causes and providing trends.

10. In 2013 Negligent Discharges of personal weapons had reached a point where counter-negligent discharge policy had to be put in place.[6] This included active measures such as; completion of a personal Weapon Handling Test every 6 months, check zeroing of personal weapons every 30 days and prescribed unloading bay discipline.[7] Heightened Force Protection measures had resulted in the vast majority of the deployed force regularly carrying loaded or made ready weapons. There had been a number of Non-Battle Injuries resulting from incidents involving weapons that could have been avoided if correct drills and/or safety precautions had been followed.

11. Throughout the HERRICK campaign incidents involving the burning of waste materials in burn pits were notified to the AINC on a regular basis. The ignition of the burn pit was where most accidents occurred with flash burns being the major cause. Personnel attempted to light burn pits using petrol or other highly flammable substances without an understanding of the characteristics of such chemicals. The task was usually passed to the lowest rank level who was also badly briefed and unsupervised. CESO(A) provided an initiative whereby instructions for burn pits were placed on the cartons of Operational Ration Packs. The introduction of specific training and briefings were also introduced via the Commander's Pocket Guide to Operational Safety. HQ TFH produced one page good practice guides – Burn Pit Best practice. This may have reduced incidents; however, burn pit accidents remained high on the 'key issues' list throughout Operation HERRICK.

Vignette: Burn Pit. Check Point south of Haji Halem - Afghanistan. A soldier was tasked to burn rubbish and covered the intended burn pit in petrol. As he approached the pit with a piece of lit cardboard, it ignited the vapours. The soldier suffered 1st degree burns to his right hand. The soldier was then taken to Bastion Hospital for further treatment.

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6   TFH SOP 1006, Counter-negligent Discharge Policy dated April 2013. 13 NDs have occurred in TFH in the first three months of Operation HERRICK 19, against a total of 17 for the whole of Operation HERRICK 18.

7   BRITFOR SOI – Force Weapon Handling dated February 2013.

RESTRICTED

H14/3CDOX/LU-101   **LESSONS UPDATE – 18 APR 11**

Headquarters
Task Force Helmand

BURNS PIT SAFETY

INTRODUCTION

1. There have been a number of recent incidents where significant injuries have been caused by poor drills at Burn Pits, or placing of prohibited items in Burn Bags causing explosions injuring those disposing of the waste.

2. The following Burn Pit Procedures are to be distributed to all FOB/PB commanders. All personnel involved in supervising and lighting burn pits are to be briefed accordingly and are to follow this direction, to reduce the likelihood of burns injuries being caused when lighting or supervising burn pits.

PROCEDURES

3. Burn pit operations are to be undertaken by a minimum of 2 persons at the designated burn pit area.

4. PPE, gloves and goggles are to be worn to protect exposed skin. Jacket sleeves are to be rolled down and long trousers are to be worn; at no time are shorts to be worn in the vicinity of the burn pit.

5. The burn pit is to be fully extinguished before re-lighting material.

6. Under no circumstances are petrol or kerosene to be used to light a burn pit. *Only diesel is to be used.* All fuel stocks are to be correctly labelled and checked prior to use.

7. The burn pit is to be ignited using a lit taper (long pole with a soaked rag), which is to be used at twice arms length, upwind.

Effects of full thickness burns to the torso.

8. No other accelerants, or other highly flammable materials, are to be used at any time. No such material is to be thrown or placed onto the fire once it is lit.

9. At least one water filled fire extinguisher is to be in close proximity (not more than 10m) to the burn pit during the lighting procedure.

10. Burning is to be supervised until the risk of the fire spreading is considered to have been removed and the burn pit area deemed safe.

11. The following items *must not* be placed in Burn bags (and all of them have been in the past):

- Ammunition.
- Fuel cans.
- Batteries.
- Aerosols.
- Non-flammable waste.

Burns First Aid

12. Further guidance can be obtained from the Medical chain and MATT 3 Pamphlet.

- Do not cover the whole body in cold water.
- If not an airway burn then consider pain relief.
- Lightly cover skin burns with Field Dressing(s).
- If phosphorous present – remove carefully.
- Cover phosphorous burns with a wet dressing and keep wet.

SUMMARY

13. All burn pit incidents, whether resulting in injury or considered a near miss, are to be reported to TFH SO3 J4 Ops for further investigation if required. This will ensure that the procedures are updated where necessary.

14. Any demands for PPE resulting from this direction are to be placed by BG QMs and prioritised according to necessity.

Any questions call SO2 Lessons on **Red 7258**.

RESTRICTED

Figure 5-10-4, TFH Burns Pit Safety Good Practice Guide 2011

12. The introduction of PJHQ/CESO(A) briefings to deploying troops as part of MST served to highlight significant risk areas and the importance of applying the safe system of training/work (SST/W). Particular direction was applied to construction tasks where adherence to the SST/W, even in hostile surroundings, was vital in ensuring the safety of the workforce. The implementation of an Operational Safety checklist succinctly set out key areas of safe practice requiring attention. This was later subsumed into the Commander's Pocket Guide - Operational Safety. Reporting improved following the introduction of this Pocket Guide. Changing the terminology from Health and Safety to Force Protection served to address the often misinformed attitude towards protecting oneself and ones colleagues.

ENDURING LESSONS

Lesson: The importance of Health and Safety compliance in all areas of operation must form part of the training culture in the same way that MST training is provided. It should not be considered as a separate issue, but part of the routine preparation for operations. Fundamentally the safe system of training/work must be understood by all levels of command and adhered to throughout.

Lesson: The reporting of accidents and incidents must be clarified and promulgated to all deploying troops. This should be a matter of policy and mobilisation/ deployment orders and not left to briefings within an already packed pre-deployment training process. It must also be stressed that the benefit of good accident and incident reporting can then be utilised for force protection.

Lesson: Accident reporting for Army personnel on operations should still be passed to the AINC as is the case for non-operational accident reporting. This could be achieved by a copy being sent to the AINC alongside any existing PJHQ requirement.

Lesson: Force Protection should stand as the term that encompasses all form of protecting people in the workplace and on operations.

CONTENTS

SUBJECT   **PAGE**
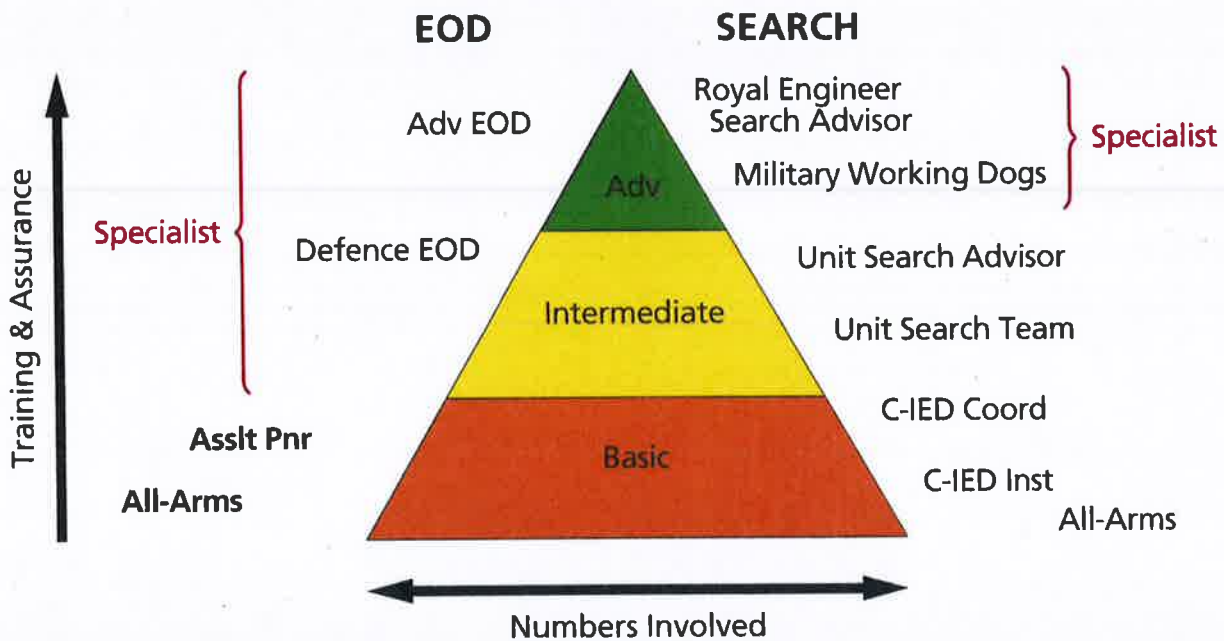
Six - Good Practice Guides

CHAPTER 6-1
GOOD PRACTICE -
COUNTER IMPROVISED EXPLOSIVE DEVICES

'Like it or not, the IED as a threat is here to stay. All force elements need to be capable of operating in an IED threat environment and we must ensure that dealing with the IED is not merely seen as the preserve of the specialist'

Land Forces 2009-10.

OBSTACLE DRILLS AND TRAINING

1. **Introduction.** The threat of attack from explosive devices (improvised or manufactured) is likely to exist wherever UK force elements are deployed. This maybe from direct action by opposition forces or as the result of legacy or recent UXO. C-IED tactics, techniques, procedures have developed substantially and comprehensively over the duration of the campaign.

2. **Background.** C-IED awareness and TTPs became a fundamental part of the basic skill sets required for operations in theatre. Counter Explosive Ordnance training has now been encapsulated into Mandatory Annual Training Test (MATT) 9. Specialist assets were developed with their own Command and Control Structures. The skill set differentiation is shown in the diagram below.

EOD   SEARCH

Training & Assurance

Adv EOD — Royal Engineer Search Advisor — Military Working Dogs — **Specialist**

Adv

Specialist — Defence EOD — Unit Search Advisor

Intermediate — Unit Search Team

C-IED Coord

Asslt Pnr — Basic — C-IED Inst

All-Arms — All-Arms

Numbers Involved

INFORMATION AVAILABLE

3. The following areas are accessible from the quick links below;

-
- Patrol Search Course Materiel - OP BARMA (area / route clearance) and Vulnerable Point 360 (VP 360) Drills. Low level technique, tactics and procedures.

- OPTAG Trg Delivery - Operational Training Group (OPTAG) C-IED and search lessons and presentations.
- AKX C-IED Site - General Information links. TAMS, IAMS and Tactical Doctrine / Briefing notes.
- MATT 09 - Annual individual training requirement (Less Media Clip).

SUMMARY

4. **The explosive threat will continue to exist in all areas that UK forces operate.** It is most visible when used as a method of direct attack but will still exist as a legacy threat from previous conflicts. MATT 09 is the Army's current doctrine and regarded as the basic minimum required for all UK force elements.

5. **Variations on C-IED TTPs are at the local commander's discretion in order to accommodate different operational situations.** Regular documented reviews of the IED / EO threat should be carried out as part of the local Force Protection risk assessment to validate any changes and must be a standard mission exploitation RFI.

CHAPTER 6-2
GOOD PRACTICE - FORCE PROTECTION

THE INSIDER THREAT – ███████████

INTRODUCTION

1. **The threat of an insider attack will always exist where UK force elements are mentoring and advising indigenous security forces.** This threat can be mitigated against by additional training of force elements during force preparation cycles. All information pertaining to ███████████ and COMISAF's guidance on combating insider attacks (developed from the ███████ _ work and designated as ISAF good practice) can be accessed on the Army Knowledge Exchange (AKX) at the following link Insider Threat. The UK retains the name ███████████ . for all measures to counter the insider threat, but the COMISAF handbook now forms the UK's written doctrine.

OVERVIEW

2. ███████████ . is the codename given to the UK TTPs designed to counter and prevent Insider Threat. COMISAF's handbook contains a broad spectrum of information covering the following areas;

- Conceptual framework.
- Cultural and historical Context.
- Vignettes.
- Training.
- TTPs.

BACKGROUND

3. **The first recorded attack against UK troops was in 2007 with a gradual increase in frequency over 2008, 2009 and 2010.** An exponential rise in attacks (100% increase) in 2011 was followed by another subsequent doubling in 2012.

Late on in 2011 the UK and ISAF perception of insider attacks changed from one of a growing tactical issue to one with potentially strategic consequences. Public opinion also demanded a response to the increasing number of UK casualties. This led to the UK development of ███████████ a collaborative piece of work between TFH, HQ JFSp(A),1 (Mech Bde) [HERRICK 18]], CTG/OPTAG and LXC. Recognising the requirement for coherence, COMISAF hosted a comprehensive SFA and insider threat study period at NATO HQ Brunssum in early 2013. UK military doctrine and training SMEs attended and their contribution formed the core of the "COMISAF Guidance on Combating Insider Attacks" publication. This has been adopted across ISAF in order to ensure coherence of TTPs and understanding across the multinational force

4. **2013 (HERRICK 18) saw a marked reduction in the number of insider attacks.** This has been attributed to three factors;
- Increasing effectiveness of ANSF and ISAF measures to deter and defeat the threat ██████).
- Increasing effectiveness of ANSF measures to detect the threat through vetting, man-management, leadership and training.
- Reducing ISAF / ANSF interface as ISAF force levels drop and Transition grows in pace.

INFORMATION AVAILABLE

5. **The following subject areas are available on the AKX and can be accessed from the quick links below;**

- FRAGOS - Any ISAF, IJC, RC(SW), TFH and TFH unit FragOs that cover aspects of insider threat.
- SOI / SOPS - Any ISAF, IJC, RC(SW), TFH and TFH unit SOPs and SOIs that cover aspects of insider threat.

- Advice - Any documents, one-pagers, aide-memoires, ISAF / Allied / Coalition TTPs or similar that give written or diagrammatic tips, pointers and so forth.
- Analysis - Dstl lead and other documents that provide background and understanding of the insider threat.
- TTPs - Endorsed UK TTPs for countering the Insider Threat.
- Endorsed UK Training Materials - Training materials endorsed for UK use.
- Non UK Endorsed Training Material - Training materials from multiple sources, but not formally endorsed for UK use. Readers may find these useful to draw on for wider situational awareness.

SUMMARY

6. **The insider threat will continue to exist in all areas that UK forces operate.** It is most visible when partnering indigenous security forces but still exists in areas traditionally regarded as 'reduced threat' i.e. JOBs and MOBs, due to the presence of contractors and locally employed civilians (LECs). ▓▓▓▓▓▓▓ is the Army's current doctrine and regarded as the 'good practice' for all UK force elements partnered with indigenous forces or employing host nation contractors or LECs.

7. **Variations on** ▓▓▓▓▓▓ **are at the local commander's discretion in order to accommodate different national perceptions and build rapport / influence with indigenous forces.** ▓▓▓▓▓ ▓▓▓▓▓
▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓
▓▓▓▓▓▓▓▓▓ Regular documented reviews of the insider threat should be carried out as part of the local Force Protection risk assessment to validate any changes and must be a standard mission exploitation request for information.

8 ▓▓▓▓▓▓▓. **has now been adopted by PJHQ as the UK's counter insider threat policy for all worldwide military operations.** Training is delivered by OPTAG for Rest Of World deployments.

CHAPTER 6-3
GOOD PRACTICE -
ENABLING INDIGENOUS SECURITY FORCES (EISF)

"The UK's approach to mentoring and advising, which has been much scrutinised over the years, is now the envy of many. British commanders and soldiers have an intuitive feel for the role and do it well. The employment of formed units in the BAG and PMAG delivered a capability that the USMC greatly respects."

Commander Task Force Helmand, Operation HERRICK 18[1]

BACKGROUND

1. **EISF is second nature to the British Army and this capability has been seen in some form in almost all of our campaigns throughout history.** EISF was key in Afghanistan to enabling transition to host governmental security authority and therefore the ability to reach the campaign endstate. Over the duration of the HERRICK campaign the enabling of indigenous security forces was a continually evolving process. Mentoring of indigenous security forces in Afghanistan began in early 2002 immediately after the initial intervention by UK forces. In Helmand Province the initial support to the Afghan National Army (ANA) and Afghan Uniformed / National Police (AUP/ANP) took the form of composite observer mentoring and liaison teams (OMLTs) task organised from across the deployed brigade. These OMLTs tactically supported the Afghan National Security Forces (ANSF) on operations and provided a direct link into the ISAF enablers (ISTAR, MEDEVAC, C-IED, QRF and Fires) requested by host nation security forces. These teams were led normally by a Captain (OF 2) and a variety of specialists (Combat Medical Technicians and Fire Support Elements as examples).

2. **Enabling the wide spectrum of indigenous capability evolved into the deployment of formed units in specific advisory roles.** This ranged from specialist mentoring of indigenous special forces at Tier 1 and Tier 2 (at Company or specialist TF level) to the mentoring and training of the non specialist army and police forces by battalion based units. The formation of the Brigade Advisory Group (BAG) and the Police Mentoring Advisory Group (PMAG) allowed formed combat units to deploy maintaining a degree of their organic C2 and force protection structures therefore ensuring a coherence of advising across the indigenous security force pillars.
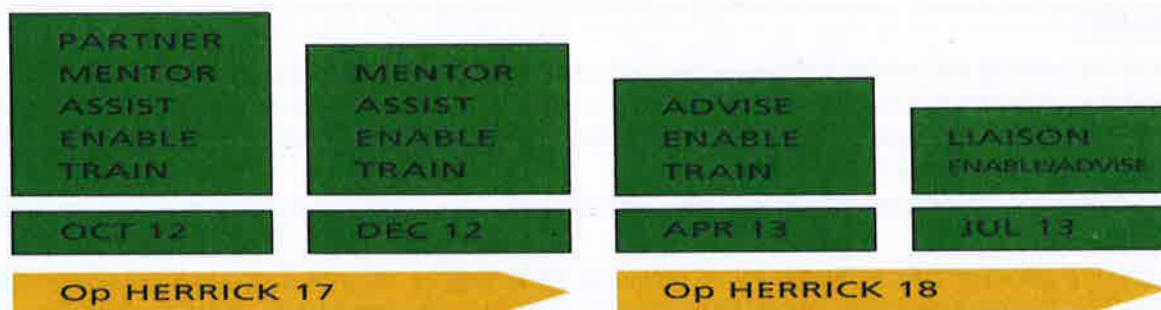
CHANGING ROLE OF PMAG

Figure 6-3-1. Police Mentoring capability drawdown at the end of the campaign.

3. The endstate that was achieved on Operation HERRICK 18 was the complete transfer of lead security responsibility (September 2013), an increase in both situational awareness and battlespace deconfliction by the ANSF and a complete 'lift off' of UK mentoring assets to minimal numbers at ANSF Bde and provincial levels (Brigade Advisory Team - BAT).

4. This good practice will only address the enabling of non specialist ANSF units. Underpinning the generic ANSF advising and mentoring at the end of the campaign was the introduction and implementation of ▄▄▄▄▄▄▄ . to ▄▄▄▄▄▄▄▄▄▄▄▄ .

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1   Operation HERRICK 18, Post Operation Report.

OVERVIEW

5. **Information available covers the following areas of Security Force Assistance (Operation HERRICK specific) but contains principles relevant to any form of EISF.** It is drawn from doctrine, from both the BAG and the PMAG – Unit level organisations deployed on HERRICK 18 and early TTPs employed by the OMLT. Information collated falls under one of the headings below:

- Advisor / Mentor pre-training and selection.
- OMLT and Police Mentoring Team (PMT) TTPs
- CONEMP – Police Mentoring and Advisory Group.
- UK SFA Doctrine note.
- UK Doctrine.
- ANSF specific handbooks.
- RC(SW) Training syllabus for indigenous forces (ANP/ALP).

INFORMATION AVAILABLE

6. **The following subject areas are accessible from the AKX and the links below;**

- JDP 3-40 Security and Stabilisation: the Military Contribution. 11A-1.
- AFM Vol 1 Combined Arms Ops Pt 9 – Tactics for stability Operations.
- H18 BAG MST Training Cadres / Guidance.
- H18 PMAG MST Cadre.
- OMLT and Police Mentoring Team Aide Memoire dated 18 Dec 08.
- H18 PMAG CONEMP.
- UK Security Force Assistance in Afghanistan Doctrine Note 13/03 dated Jun 13.
- Police Mentoring and Advising guidance for Commanders dated Jun 13.
- 3 Cdo X. Advising and mentoring best practice dated Nov 11.
- TFH Afghan Uniformed Police Smartbook dated Sep 11.
- 3/215 Bde Handbook dated Mar 11.
- RC(SW) Training Syllabus AUP.
- Observations of a Police Mentor – Article from H17 Provincial Police mentor.

SUMMARY

7. **EISF by UK military will remain a fundamental part of both military capacity building and Defence Engagement into the future as part of A2020.** Over a period of ten years in Afghanistan, UK land forces have developed their TTPs and organisational structures to reflect a developing campaign and a gradual handover of lead security responsibility to host nation forces.

The captured good practice and information within this note will enable individuals to understand how the military conducted EISF.

EISF is part of the larger Defence Engagement and Security Sector Reform. These aspects of policy require broader support from Partners Across Government (PAG) departments and are therefore beyond the scope of this document.

CHAPTER 6-4
GOOD PRACTICE – TARGETING IN COIN

'The best weapons for counterinsurgency do not shoot.'

US Army Field Manual FM 3-24, 2009.

BACKGROUND

1. **Over the duration of the COIN campaign in Afghanistan, the targeting process has been subject to continual change and influence.** Operation HERRICK 17 was regarded as the 'high water mark' for targeting at the battlegroup and sub unit level. Delegated target engagement authority was held at CO and OC level and the associated processes carried out within their organisations.

2. **Full Spectrum Targeting is a holistic approach that utilises an integrated approach of Information Activities, Outreach and Fires.** Targeting is central to the planning process in any headquarters; however, it is recognised that as the battlegroup level and below there are limited assets available for targeting. Therefore it important that targeting activity is synchronised, prioritised and effectiveness measured to ensure coherent delivery of effect. This paper seeks to define the good practice.

3. **There are 2 principal Targeting Cycles enshrined in NATO doctrine: the Joint Targeting Cycle; Tactical Targeting Cycle: D3A model (Decide, Detect (and Track) Deliver, Assess).** In addition, AFM COIN utilises the ▆▆▆▆▆▆▆ Targeting cycle as this has been recognised to have the most utility against human networks. This is the Find, Fix, Finish, Exploit, Analyse (F3EA) model. Which ever cycle is used, success of the targeting in a COIN environment is dependant upon the ability to self generate 'bottom up' and exploit to develop actionable intelligence on specific targets. The Targeting Directive (Annex to CJO directive to the JTF Comd) is a critical reference document to define parameters for the delivery of effects.

4. **Good Practice.** The following bullet points highlight areas of good practice that have evolved over the duration of the campaign;

   a. **F3EA.** The F3EA has utility in COIN operation against human networks ▆▆▆ in future operation a full spectrum approach to targeting should be adopted utilising the D3A and Joint Targeting Cycles.

   b. **Joint Effects Meeting (JEM).** JEM is a term borrowed from Joint Action doctrine[1]. It is the meeting that synchronises and orchestrates effects; it should ensure coherence between the different lines of operation being pursued by the various different security actors operating in AO exploiting all four of the levers of influence.[2] Key to the success of JEM was the selection of a suitable metrics to judge the measure of effectiveness in delivering transition. The JANIB[3] criteria were chosen, as they were the metric by which the Provincial Reconstruction Team (PRT) were going to measure effectiveness. The benefit of JEM was that transition activity was closely coordinated between the battlegroup, the Kandak Advisory Team (KAT), the police District Advisory Team (DAT), the Military Stabilisation Support Team (MSST) and the Transition Advisors (TRANAD), all of which attended JEM. It also gives the CO the opportunity to identify and focus on his areas of risk.

   c. **Target Development.** Secrets Meetings focussed J2 and ISTAR on actionable targets for subsequent prosecution and exploitation. This meeting establishes the CO's priorities for target development in the next fortnight, and specific priorities for the various ISTAR assets, particularly recce platoon, UAS and PGSS.

   d. **Lines of Operation.** In COIN, the potential targets should be divided into three lines of operation

      (1) ▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆▆

      (2) **Attack the Resource.** These targets are predominately weapon caches and the IED and small arms fire (SAF) teams that accessed them.

      (3) **Enable White/ Green Forces.** Including white and green targets at Secrets ensured that information activities are directed with the same analytical rigour and coherently with red targeting. Available influence effects included Key Leader Engagement (KLE), Radio in a Box (RIAB), and Megavoice 2. Significant effort can be dedicated to influence capability development (mainly community engagement) and encouraging local

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1   Joint Action Doctrine / Model SOHB Pg 3.1_4
2   Fires, Manoeuvre, Stabilisation, Messaging (Info Activities and Outreach).
3   JANIB: Joint Afghan NATO Inteqal Board – Inteqal meaning transition.

messaging through shura and local media –generating capability for local leaders to conduct radio or TV broadcasts at their own initiative.

(4) **Target packs & Information Management.** A collaborative approach is essential. This can be achieved through the use of target packs, saved in a collaborative folder on the Mission Secret system, with all users encouraged to update the same document, rather than working in isolation. This means that sub-unit targeting teams had access to the same (non-TS) intelligence that can be readily passed to brigade or company level as required.

(5) **CARVER.** The CARVER criteria to judge and score the significance of targets should be used. Each criterion Criticality, Accessibility, Recognisability, Effect, Recuperability receives a score out of 10.

(6) **Targeting teams.** In order to fuse all available information on specific targets, two man targeting teams can be established.

INFORMATION AVAILABLE

5. **The following subject areas are accessible from the AKX and AKS (S) (in Red) and the links below;**

- JSP 900, UK Joint Targeting Policy (1st Edition) – dated 01 Oct 09.
- PJHQ Op HERRICK Targeting Directive Ver 10, dated 26 Sep 12.
- HQ ISAF Joint Command SOP 398, Target Management and the Employment of Lethal effects.
- TFH SOP 2022 HQ TFH Targeting, dated 23 Feb 13.
- Artillery Training Volume 1, Pam 3: Land Tactical Targeting Process 2009.
- TSUNDA/H17/J2/Targeting Coy Deliberate Targeting on Op HERRICK 17, dated 26 Mar 13.
- SOHB Part 3 Chap 8 (2013).
- AJP 3.9 NATO targeting doctrine (2013); Operational Specific Targeting Directive.
- JSP900 (2014).
- AFM COIN 2010.

SUMMARY

6. **For contingency the D3A model should be adopted at the battlegroup level and below.** The Joint Targeting cycle will be used at brigade and higher. Joint Action should be utilised to synchronise effect and adopt a Full Spectrum approach to targeting. Targeting is a collaborative process that must sit at the heart of, and in some cases drive the planning process. Tactical Targeting training is delivered at The Royal School of Artillery.

CHAPTER 6-5

GOOD PRACTICE - BASE RE-ALIGNMENT AND CLOSURE / TRANSFER (BRAC/T)

BACKGROUND

1. Throughout the HERRICK campaign the UK base footprint has constantly changed, and has become a more focussed activity as the Force redeploys. BRAC/T is a fundamental activity during the transfer of lead security responsibility and the increasing redeployment of coalition forces from dispersed patrol bases too a centralised location. Realignment of bases has been conducted primarily at the infrastructure level – i.e. 'tidying up' and ordering bases that had developed in a more 'ad hoc' environment. Realignment has been driven by G3 requirements resulting in infrastructure changes.

2. Bases have been remediated to meet an enduring requirement looking to the latter stages of the campaign; closed where no requirement for coalition or ANSF presence exists or transferred to the ANSF where conditions dictate that the ground remains dominated. There have been significant observations made regarding the general conduct of BRAC/T most notably from Operation HERRICK 17 and 18.

3. The 'high water' mark of UK bases was HERRICK 15 with 119 Check Points (CPs), Patrol Bases (PBs), Forward Operating Bases (FOBs) and Main Operating Bases (MOBs) occupied. The current total of UK ▆▆▆▆ bases is 1 (June 2014). Therefore TFH and JFSP(A) have closed over 110 bases through a 2-3 year period. This activity has become one of the major activities of the controlling Britsh 1* headquarters in Afghanistan.

OVERVIEW

4. The concept of BRAC/T is an enduring one which will be as relevant to contingency deployments as it is for the end of a long-established campaign. This document will provide a start point for those seeking broad understanding of principles, process and top tips

5. The BRAC/T process is tailored to each individual base or location but has been refined into a number of distinct processes. There are considerations to be made at every level and under every tactical function. However the Tactical Doctrine Note (linked below) produced by LXC is the best starting point for an understanding of the process and considerations. TFH and BRITFOR SOIs will add detail to the higher headquarter's planning processes that evolved through Operation HERRICK enabling a starting point for higher headquarters during a contingency operation.

FUNDAMENTAL PRINCIPLES[1]

6. These have been distilled from post operational reports (mainly Operation HERRICK 17 and 18).

- Operational / planning lead. BRAC/T is a Command / G3 led operation enabled by G4. The Operational plan is SUPPORTED by the logistical process.
- Plan for closures from Day 1. Locations must be designed and occupied with a view to the inevitable requirement for closure or transition.
- Coherence with wider plan. Formation level plans must remain in concert with those of higher headquarters. Notice must be given of BRAC/T plans to allow for theatre coordination. Common and specific criteria for closure will ensure coherence. Potentially competing national and operational chain of command differences must be planned for and mitigated against.
- Early engagement and frequent interaction with stakeholders and SMEs. Identify stakeholders and their resource requirements early.
- Influence perceptions of indigenous forces and local nationals (LNs). While OPSEC must be maintained, expectations of all interested LN/indigenous forces must be managed.
- Maintenance of ISTAR coverage. Maximise available ISTAR. ISTAR can also be utilised as a deception measure – commensurate with the threat in order to maintain Force Protection.
- Offensive Spirit - DISRUPT in depth. Operations should be conducted in depth to ensure Force Protection during critical phases of drawdown.
- Deception. This is a key factor in minimising risk and generating time / space for redeployment.
- Flexibility. Remain flexible and build in time.

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1   20140113 LXC BRAC/T Tactical Doctrine Note.

INFORMATION AVAILABLE

7. The following subject areas are accessible from the AKX or AKX (S) and the links below (AKX (S) in red);

- 20140113 BRAC/T Tactical Doctrine Note.
- Royal Engineers Operation HERRICK Handbook January 2010.
- TFH SOP 3074.
- BRITFOR SOI 137.

SUMMARY

8. **BRAC/T is a detailed and ongoing process that will occur throughout a deployment potentially over months or even years.** It requires comprehensive understanding of the longer term tactical plan as well as an intuitive understanding of the local security forces and their requirements. It requires planning at both tactical and operational level with resources from across the operational environment to support it successfully.

CHAPTER 6-6

GOOD PRACTICE - SUSTAINMENT DELIVERY – COMBAT LOGISTIC PATROLS

BACKGROUND

1. **Delivery of logistic capability on HERRICK was conducted by using Close Support Logistics Regiment (CSLR) Combat Logistic Patrols (CLPs).** The highpoint of their activity was Operations HERRICK 15/16/17 (the greatest number of dispersed checkpoints and greatest drawdown of UK forces) and encompassed the majority of the delivery and drawdown of supplies to and from Joint Operating Base Bastion.

2. **These patrols were a continual evolution of capability first developed on Operation TELIC and although equipment and platform types changed to meet additional force protection requirements the greatest changes were in the utility and command of the capability.**

3. **CLPs were commanded and executed by the CSLR headquarters as a Task Force level operation across individual unit boundaries.** This required the development of headquarter level techniques, tactics and procedures and the standardisation of CLP 'doctrine' across the task force.
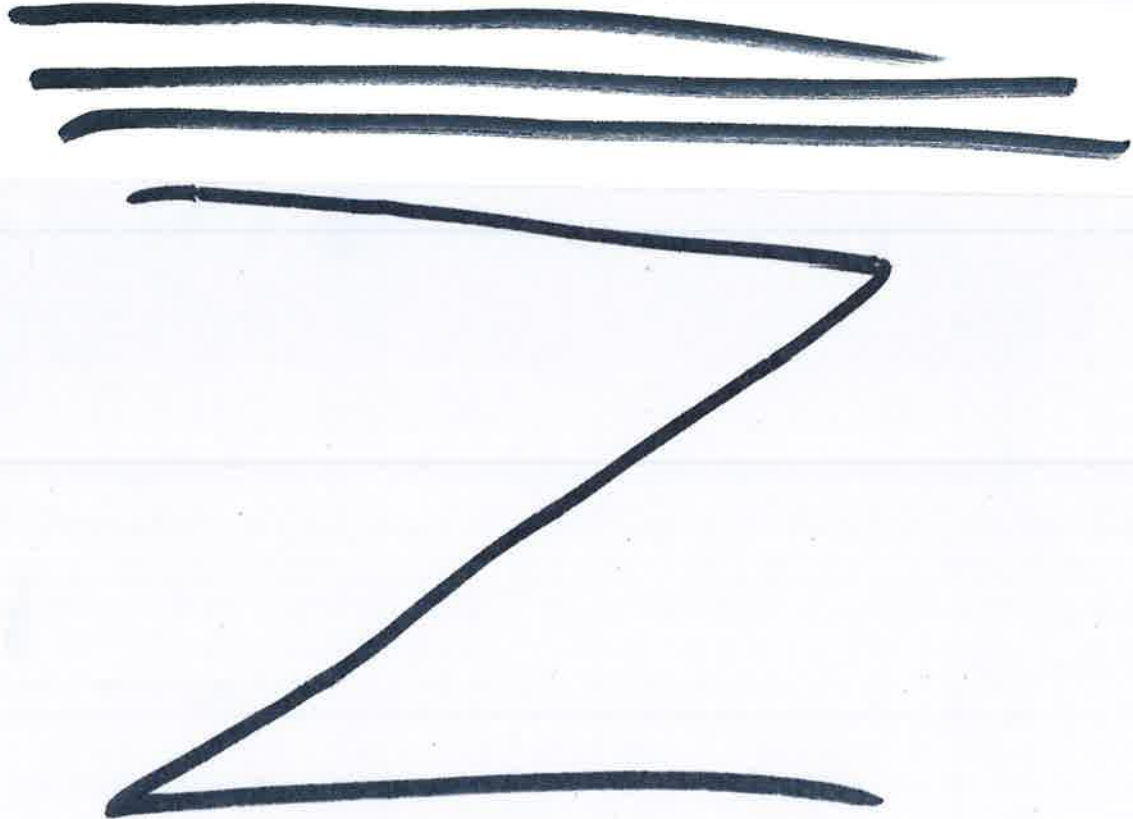
4.

Figure 6-6-1. Typical 'heavy' multinational CLP composition

OVERVIEW

5. **Key to delivering this enhanced capability provided by the CLPs was that the CSLR headquarters developed the ability to plan and execute Combined Arms, multi-national, partnered logistics operations.** The exploitation of fused intelligence, Joint Fires, ISTAR, C-IED/Route Proving and Clearing capabilities and task-organised Force Protection assets became routine.

6. **Logistic Headquarters therefore must have the capability to synchronise planning, coordination and exploitation of the array of J2/3/4 resources to execute combined arms, potentially multi-national, partnered logistics manoeuvre.**

7. **For all sustainment personnel the principle of 'Soldier First, Specialist Second' has been confirmed from CLP operations in HERRICK.** Logistic enablers need the right integrated all arms training, equipment and vehicles to fight (or 'protect') logistics through when required to ensure that logistics can deliver even when under direct threat.

8. **The nature of the threat in the 360 degree battlefield requires Combat Service Support (CSS) personnel to be trained and competent to provide organic Force Protection (in both mounted and dismounted close combat situations).** Likewise CSS vehicles must be suitably protected to meet likely threats.

INFORMATION AVAILABLE

- 2CSLR CLP TTPs dated Nov 2013.

CHAPTER 6-7

GOOD PRACTICE –
TEAM MEDIC AND MEDICAL FORCE PROTECTION.

BACKGROUND

1. **Team Medic.** The increase in traumatic injuries caused by the effects of Improvised Explosive devices and gunshot wounds during the HERRICK campaign led to the development of enhanced medical training for soldiers at all levels. This was the re-creation and updating of the Team Medic (TM) qualification.

2. **Theatre entry standards mandated differing ratios of TM qualified individuals within different organisations.** This varied from rotation to rotation dependent on the kinetic climate and operational tempo.

3. **Good practice is to qualify every individual within a sub unit – ensuring redundancy and R&R cover.**

4. **The training programme can be delivered at unit level by a qualified Combat Medical Technician (CMT) and is 2.5 days in length.**

5. **This enhanced training increases awareness and capability to deal with traumatic injury at point of injury.** It is not a substitute for CMT capability but enhances point of injury immediate treatment.

6. **Operational Safety.** Safe working practices developed and implemented in safe working environment are key force protection measures that maintain fighting power. Operational safety covers a wide remit of topics; however instilling a culture of safety in the unit will mitigate the risk from most if not all areas.

7. **Combat Health and Medical Force Protection.** Due to the initially austere and rugged conditions into which forces were deployed Disease and Non Battle Injury (DNBI) caused a loss of manpower and combat capability. Medical Force Protection and environmental health issues were critical in maintaining combat power deployed forward in the austere conditions of platoon houses and patrol bases. The qualification of key personnel in the various Environmental Health courses reduces the loss of individuals to DNBI. Teaching basic medical Force Protection as early as possible was also shown to reduce the impact of health related operational issues.

INFORMATION AVAILABLE:

- Commanders Pocket guide to operational safety.
- Commanders guide to safety and risk environmental management.
- Team Medic Training course.
- Combat Health Duties Handbook.
- Combat Health Advisors Handbook.

CHAPTER 6-8

GOOD PRACTICE GUIDE –

REAR LINK DETACHMENTS (RLDS) AND ROYAL SIGNALS INFANTRY SUPPORT TEAMS (RSISTS); DELIVERING INFORMATION COMMUNICATION SYSTEMS (ICS) SUPPORT AT THE TACTICAL LEVEL.

BACKGROUND

1. **Operation Herrick saw a steady growth in information service requirements at battlegroup level and below.** This was intensified by the need (as the key to success) to "Understand" the counter insurgency; which generated a significantly increased volume of information and users requiring access to it. This information "thirst" was met by a comprehensive uplift in complex communications and information systems and by the increased forward deployment of two distinct groups of Royal Signals soldiers.

OVERVIEW

2. **Firstly, the number of RLDs provided by TFH Signal Squadron was increased significantly.** Secondly, and for the Infantry in particular, a requirement for a longer term, structured support mechanism was agreed between Director Infantry and Signal Officer in Chief (Army). This was subsequently endorsed as an Operation ENTIRETY measure, which was reversible upon conclusion of the campaign. Following a successful trial between December 2008 and September 2009 when Royal Signals personnel were embedded within an Infantry Battalion, the concept of employment was verified. Shortly afterwards, 37 RSISTs were created, one for each of the Regular Line Infantry battalions. Royal Signals liability (and personnel) was temporarily assigned to them for the duration of Operation HERRICK.

ISSUES

3. **Employment of the RLDs and RSISTs was not initially consistent, because different commanders had differing needs and interpreted the capability of the detachments and teams in varying ways.** This was highlighted in numerous Post Operation Interviews and the Lessons process and was mitigated by the issue of an Army Tactical Doctrine Note and through close liaison with battlegroup commanders (through Brigade Signal Squadrons) prior to deployment.

HOW WERE THE RLDS AND RSISTS EMPLOYED DURING OPERATION HERRICK?

4. **RLD.** A team of Royal Signals tradesmen and equipment (normally core tactical communications and information systems) was detached from the Brigade Signal Squadron to the brigade's subordinate units (and possibly sub-units) to provide connectivity between the brigade headquarters and its subordinate units. The RLD normally remained under operational command of the Brigade Signal Squadron. If a Campaign Signal Regiment was unable to deliver operational information services effectively to battlegroup locations, an RLD may also have provided this capability, or supported the Campaign Signal Regiment in so doing.

5. **RSIST.** A team of Royal Signals tradesmen (as detailed below) was embedded within an infantry battalion to assist the Regimental Signals Officer and Signals Platoon in exploiting the complex, core and UOR, information service capabilities delivered to the battalion for its internal command and control on operations. The team was embedded throughout the campaign Formation Operational Readiness Mechanism (FORM) cycle in order to add their expertise through both Hybrid Foundation (core equipment) and Mission Specific (UOR) training. They deployed with the battalion and were employed as directed by the Regimental Signals Officer (RSO) - either as a team or as individuals, centrally or dispersed, throughout their area of responsibility.

COMPOSITION OF A RSIST

Rank	Trade/ Class	Job Role
SSgt/ Sgt	Communications Systems Operator (1)	Assistant Bowman System Manager
Cpl	Communications Systems Operator (1)	Command Vehicle Support JNCO
Sig/ LCpl	Communications Systems Operator (2/1)	BG HQ Operator
LCpl/ Cpl	Communications Systems Engineer (2/1)	Maintenance Support
Sig/ LCpl	Royal Signals Electrician (2/1)	BG HQ Power Operator/ Maintainer

SUPPORTING DOCUMENTATION

6. **The following documents provide further information relating to the generation, employment and management of RSISTs:**

    - Signal Officer in Chief (Army) Policy Directive No. 13 (Edn 1) dated Aug 2010. This explains the concept, selection, training and management of RSISTs.
    - Royal Signals Information Note 06/10, Establishment of Royal Signals Infantry Support Teams dated 19 Aug 10. This is a summarised version of the document above.
    - Royal Signals Tactical Doctrine Note 11/04 – Royal Signals Infantry Support Teams and Rear Link Detachments. Describes the training, composition and capability of RSISTs and RLDs.

SUMMARY

7. **The creation of RSISTs was a campaign specific, targeted effort by Royal Signals to ensure that battlegroup commanders could fully exploit information services at their disposal.** They provided Communications SMEs at the tactical level, where they were needed most. Whilst the RSISTs have been disbanded as the operation draws to a close, and the volume of CIS in theatre is significantly reduced, the concept and utility of both RSISTs and RLDs remains extant and the latter in particular will be required in the future contingent space, particularly for an enduring operation.

CHAPTER 6-9
GOOD PRACTICE - UNDERSTAND

THE EMPLOYMENT OF CULTURAL SPECIALISTS IN SUPPORT OF OPERATION HERRICK.

BACKGROUND

1. **The creation of the Defence Cultural Specialist Unit (DCSU) in 2010 enabled the development and deployment of a bespoke capability not seen during the early stages of the campaign.**

2. **The creation of cultural and human terrain specialists enabled a much greater understand of the local population and security forces across the UK area of operations.**

3. **There is no defined 'high water mark' for the Cultural Advisor (CULAD) or Cultural Specialist (Human Terrain) (CS(HT)) capability.** The role and responsibilities were defined by geography, unit type (TSU / CF / Mentor) and stage of the campaign. Cultural specialists delivered a continuous but different understand function in all of these environments. None was inherently more difficult or arduous than any other.

OVERVIEW

4. **The arrival of a CULAD capability in the HERRICK Campaign was a turning point in increasing tactical commanders understanding of the local population.** Trained linguists with a greater understanding of the Helmandi culture they allowed commanders at lower tactical levels to finally begin to understand some of the finer nuances of tribal and power politics. They were regarded as force multipliers often achieving greater 'effect' than multiples on the ground. Linguistic skills allowed coalition commanders to bypass potential interpreter bias and it was often found that they could wield significant influence with local officials. The concept of CULADs was firmly established in the last 4 years of the campaign and continues under the ISR Brigade in A2020. However DCSU will maintain strong links to the Security Assistance Group (SAG) for future contingency operations.

INFORMATION AVAILABLE

5. **There are a number of sources of information that explain the use of CULADs / CS(HT)s during Operation HERRICK.** The overarching authoritative document is Joint Doctrine Note 4/13 (See link below). However included in this good practice note are the CONEMP for Cultural specialists and a number of vignettes written by individuals concerning their roles and employment during various Operation HERRICK tours

   - Joint Doctrine Note 4/13 Culture and Human Terrain.
   - Cultural Specialist CONEMP.
   - Cultural Specialist Good Practice.
   - Cultural Specialist changing roles and responsibilities.
   - Cultural Specialist Vignettes.

SUMMARY

6. **Predicting the behaviours of people is inherently very difficult.** Therefore, the greater our understanding about those we are operating amongst, the greater the chance of accuracy. The role of the Cultural Specialist in support of tactical commanders during contingency operations will be key in developing the understand as part of the operational picture. The use of CULADs / CS(HT)s in Afghanistan provided commanders with nuance and a deeper understanding of the complex human terrain that they operated in.

CHAPTER 6-10

GOOD PRACTICE - REAR OPERATIONS GROUP

REFERENCE

- Army HQ Rear Operations Group Directive dated Dec 12.
- 20 Armd Bde Rear Operations Aide Memoire (attached).
- The ROG: Lessons of Necessity, Reality and Fantasy - Combat Journal 2014 E-Supplement.

INTRODUCTION

1. **Rear Operations exist to provide support to all elements of the operation.** They are focused on the provision of support to those committed to the operation, which by extension encompasses those who remain in, or are returned to, the Firm Base as well as families and friends of the deployed.

2. **The expectation of what a Rear Operations Group (ROG) can deliver may often fall short of the reality, especially if left unresourced.** Fundamental to the success of future ROGs is a command led estimate articulating what must be achieved accompanied by the appropriate resources. A ROG is, according to many commanders, a necessity for future deployments, providing support to operations whilst maintaining and preparing the unit for subsequent commitments.

OVERVIEW

3. **Ref A provides the policy guidance for the force generation, preparation and likely commitments of a ROG.** The structure is as follows:

- Section 1   General.
- Section 2   Force Generation and ORBAT.
- Section 3   Command.
- Section 4   ROG Training and Force Preparation.
- Section 5   Casualty Management.
- Section 6   Welfare and Family Support.
- Section 7   Theatre Replacements.
- Section 8   Unit Admin and Other ROG Duties and Commitments.

BACKGROUND

4. **Operations in Afghanistan and in particular the volume of casualties sustained had initially overwhelmed Unit Rear Parties (URP).** Greater casualty numbers necessitated increased levels of Firm Base support and pastoral care. A more connected theatre, the proliferation of accessible communications devices and a technology savvy, dependent community all contributed to the requirement for formally recognised ROGs[1] augmented with specialist support where necessary.[2]

SUMMARY

5. **The ROG concept will endure for future deployments.** The ROG Directive is a distillation of the experiences from operations in Iraq and Afghanistan, will be updated annually and should be considered as the capstone document for Rear Operations. Personnel Operations Branch within the Directorate of Personnel Operations is the lead point of contact .

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[1]   Included on the Operational Establishment Table (OET) for Operation HERRICK.
[2]   Qualifying units were augmented by 1 x Exercise Rehabilitation Instructor (ERI) on an 18 month contract, funded by NACMO.

EXAMPLE: 20 ARMOURED BRIGADE OPERATION HERRICK 20 ROG 'ACTIONS ON' CRIB

PRELIMINARY ACTIVITY (e.g. DAC, etc)		
• Confirm EC details • PAX / SLI • Wills • JCCC Compassionate Card • Self KINFORMING Trg • Understand family dynamics	• Create JPA Record for non-UK mil pers • Dii Secret accounts (HGMi) • Grab Bag • Media Ops Form • Eulogy • Box kit of deployed personnel	• Media LTT • Brief R&R Procedures; SP responsibilities • Transport to/from Airport • ROG Social Media Policy • Delegation of Powers (OCDA) • Review all outstanding G1 issues (incl Discipline)

SER	EVENT	IMMEDIATE (≤24hrs)	FOLLOW ON (>24hrs)	OUTPUTS	REFERENCES / REMARKS

1	Death	• CNO1
		• Appt CVO
		• BPT appt A/CNO
		• Stand up CNMT2
		• KINFORMING
		• Full JPA Print
		• Cash of SP deposited with Imprest Holder
		• Flag Lowering
		• CNO
		• Op MINIMISE
		• Liaise with Th
		• Communications Plan (for ROG). BRC to authorise
		• Cfm Loc of EC/NoK
		• Open a Learning Account
		• Log incident
			• Cttee of Adjustment
			• Allnces (ADT, etc)
			• Letter of Condolence
			• Repatriation (3-10 days) Op PABBAY / Op KEIR
			• Bearer Pty (incl DTG)
			• Personal effects:
			  • Kit / Boxes (Th / Bks)
			  • C&I (tax free goods)
			• Funeral; family attendance:
			  • Travel
			  • Subsistence (NS/DS)
			• Return to Country of Origin:
			  • Funding (grants, etc)
			• PAX SLI
			• Defence Medical Welfare Service (DMWS)
			• Update incident log, as reqd
			• Update Learning Account
			• Vigil3
			• Coroners Inquest (info only)
				• Cas Recording & Tracking
				• Media Release
				• Financial support
				• Pension
				• Retention of SFA & Status
				• Removals
				• Wills
				• BCRs
				• POSM / TRiM
				• Elizabeth Cross
				• Incident log
				• Learning Account
					• JSP 464; Housing Regs
					• JSP 751; Cas/Comp Procedures
					• JSP 752; Regs for Allowances
					• JSP 754; Regs Pay & Charges
					• JSP 800; Mov & Tpt Regs
					• SIBFG 3217 (BFG only); Families Administration
					• SIBFG 3222 (BFG only); Cas/Com Procedures for BFG
					• CNO Handbook
					• CVO Handbook
					  • CVO Checklist[4]
					  • CVO Initial Report[5]
					• Op PABBAY
					• Op KIER
					• CoO (Repatriation and Guiding Principles)

2	Mass Casualty	• As for Ser 1; JCCC Lead	• As per Ser 1; JCCC Lead	• As per Ser 1	• As per Ser 1. • In addn: • Op GARMENT
3	Non Mil Op Death (EFI, etc)	• As per Ser 1 (guidance only)	• As per Ser 1 (guidance only)	• As per Ser 1 (guidance only)	• As per Ser 1 (guidance only) • Await direction from PJHQ
4	Foreign Exchange Death	• As per Ser 1 (guidance only) • In addn: • Cfm JPA Record	• As per Ser 1 (guidance only)	• As per Ser 1 (guidance only	• As per Ser 1 (guidance only) • Await direction from higher fmn.

SER	EVENT	IMMEDIATE (≤24hrs)	FOLLOW ON (>24hrs)	OUTPUTS	REFERENCES / REMARKS

5	WIA	• Confirm Cas Cat
		• Appt A/CNO
		• Appt CVO
		• KINFORMING
		• DILFOR6, if applicable
		• Liaise with Th
		• Cas Recording & Tracking
		• M & T of soldier
		• Op Allowance
		• Op MINIMISE
		• MLOs (BZN, RCDM)
		• Open a Learning Account
		• Log Incident
			• Cas Record & Tracking
			• Allnces(DS/NS)
			• Family:
			  • Travel
			  • Subsistence (NS/DS)
			• MLOs (BZN, RCDM)
			• Liaise with Th
			• Kit/Boxes
			• Transport
			• PAX SLI Claims
			• Regimental Association
			• Personal effects:
			  • Kit / Boxes (Th / Bks)
			  • C&I (tax free goods)
			• POSM
			• TRiM
			• Leave (incl DOMCOL)
			• DcN (if EOT / no rtn to Th)
			• Update incident log, as reqd
			• Update Learning Account
			• BPT move personal effects
				• Cas Recording & Tracking
				• DILFOR, if applicable
				• BCR
				• WISMIS / PRU
				• PAP 10
				• POSM
				• TRiM
				• Welfare provisions
				• Home adaptation
				• DcN
					• JSP 751; Cas/ Comp Procedures
					• JSP 752; Regs for Allowances
					• JSP 800; Mov & Tpt Regs
					• SIBFG 3222 (BFG only); Cas/Com Procedures for BFG
					• CNO Handbook
					• CVO Handbook
					  • CVO Checklist7
					  • CVO Initial Report8
					• LFSO 3209; POSM
					• LFSO 3217; TRiM
					• AGAI 081; Army Welfare Policy
					• AGAI 99; Comd and Care of WIS
					• AGAI 110; SVRM
					• PAP 10

6	Compassionate	• Family. Inform JCCC
		• Unit. Inform JCCC; Inform Category to be granted
		• JCCC. Issue NOTICAS
		• Manage expectation of family
		• Notify / Liaise with Th
		• DOMCOL, if applicable
		• Open a Learning Account
		• Log incident
			• Comp A (fastest means)
			• Comp B (by a specified DTG)
			• Comp C (OOS) (not funded)
			  • ALA or R&R
			• Outbound flights booked
			• BPT Return flight
			• POSM
			• SVRM, if reqd
			• DcN (if EOT / no rtn to Th)
			• Update incident log, as reqd
			• Update Learning Account
				• Cas Recording & Tracking
				• Reunite SP with family
				• Rtn SP to Th or:
				  • BCR
				  • POSM
				  • DcN
					• JSP 751; Cas/ Comp Procedures
					• JSP 752; Regs for Allowances
					• JSP 800; Mov & Tpt Regs
					• AGAI 081; Army Welfare Policy
					• AGAI 110; SVRM
					• LFSO 3209; POSM

7	Death of relative	• NOTICAS; cfm JCCC classification • Arrange tpt • Padre • Liaison with Th • Buddy-buddy • Open a Learning Account • Log incident	• Comp A or B granted • Return flight • DcN (if EOT / no rtn to Th) • Allowances • DcN • SVRM • Liaison with UK Sp Det • Update incident log, as reqd • Update Learning Account	• Return kit from theatre • BCR • SVRM CAP, if reqd • POSM • DcN (if EOT/no rtn to Th)	• JSP 751; Cas/ Comp Procedures • JSP 752; Regs for Allowances • JSP 800; Mov & Tpt Regs • AGAI 081; Army Welfare Policy • AGAI 110; SVRM • CNO Handbook

SER	EVENT	IMMEDIATE (≤24hrs)	FOLLOW ON (>24hrs)	OUTPUTS	REFERENCES / REMARKS
8	Discipline	• In theatre dealing	• Stop allowance • Prisoner escort • Impact of cessation of pay/fine on family • FAMGRANT • Discharge • Housing (Cotswold Centre?)	• BCR, if reqd • MCTC9 • Stop Pay and Allowances • DcN • POSM	• JSP 464; Housing Regs • JSP 752; Regs for Allowances • JSP 800; Mov & Tpt Regs • JSP 830; Manual of Service Law (MSL) • AGAI 067; Admin Action • LFSO 3209; POSM
9	Unlisted Casualty - SELFKINFORM	• UWO check NOTICAS for KINFORMED • Verify SP has contacted EC10 • Liaise with Th • Cfm what info SP would like passed to NoK if not EC	• Welfare support visit • Whole truth	• Close notification loop • Welfare support to EC	• JSP 751; Cas/ Comp Procedures • JSP 752; Regs for Allowances • JSP 800; Mov & Tpt Regs

10	Non Return from RnR / AWOL	• Cfm leave address(es)
		• Contact via leave address
		• Loss or damaged ID Card
		• Discipline (Arrested)
			• Rtn SP to unit
			• Lost passport:
			  • Apply for replacement
			  • Arrange accn, if reqd:
			    • UK Sp Det
			    • unit assist
			  • Report loss to G2
			• Lost MoD 90:
			  • Apply for replacement
			  • Chit in lieu
			  • Report loss to G2
			• Visa
			• SOFA Status
			• Arrange tpt
			• Discipline
			• Post AWOL
			  • Alert authorities
			  • Stop Pay & Allnces
			  • FAMGRANT
			  • Escort
			• Escort, if detained by CIVPOL
			• BCR; if reqd
				• Rtn of SP
				• Replacement ID docs, if reqd
				• Renewed status stamps (incl Visa's), if reqd
				• Recover costs, if reqd
				• Discipline, if appropriate
					• JSP 752; Regs for Allowances
					• JSP 800; Mov & Tpt Regs
					• JSP 830; Manual of Service Law (MSL)
					• AGAI 067; Admin Action

1   Not to be from parent unit. Notifying Authority (NA) to action. If BFG, NA is HQ BFG; if UK, NA may be UK based (Sp Comd or LONDIST) or elsewhere via FCO.

2   Casualty Notification Management Team. Composed of CO/OC ROG, UWO, Padre (and RAO).

3   Bde policy to fol.

4   JSP 751 Vol 1; App 2 to Annex B to Chap 8.

5   JSP 751 Vol 1; Annex C to Chap 8.

6   See JSP 751 Chap 6 (Aeromed Evacuation) and Chap 7 (Visits by Relatives).

7   Ibid footnote 4 above..

8   JSP 751 Vol 1; Annex D to Chap 8.

9   Escort reqt to brief HARDFACTS

10   EC is primary contact; NoK is a legal status but does not guarantee NOTICAS if not EC

CHAPTER 6-11

GOOD PRACTICE - TRAINING DELIVERY

RECEPTION, STAGING, ONWARD INTERGRATION - BASTION TRAINING CENTRE

BACKGROUND

1. **Outwith operations, training is the most important activity that an Army can do.** The future will require an Army at Readiness and therefore will require a subtly different approach and mindset to training for a known campaign deliverable. However, Operation HERRICK has provided many lessons and good practice that should be considered in future training progression and delivery.

2. **The provision of in-theatre training (Remind, Revise, Rehearse and Reassure) as part of the Reception, Staging and Onward Integration (RSOI) package is regarded as essential to complete the operational training cycle.** The access to additional resources (ranges/equipment types) allowed the final operational focus and realism to be achieved.

OVERVIEW

3. **Forward basing personnel as part of the training organisation in theatre, coupled to a slick operational short lessons loop, closed the gap between the training environment and operational reality.** This enabled the most up to date Tactics, Techniques and Procedures (TTPs) and situational awareness to be delivered whilst also maintaining an agile training delivery organisation focussing on future operations rather than the last.

4. **The Bastion Training Centre (BTC) was created as the organisation that delivered and refined the in theatre training delivered to all individuals arriving in theatre.** Staffed by instructors from the Operational Advisory and Training Group (OPTAG) and a credible and robust chain of command it is regarded as an example of training good practice.

INFORMATION

5. **A formal Management of Training Structure (MTS) was developed in order to ensure that the RSOI training delivery organisation was validated under the Defence Systems Approach to Training (DSAT) quality assurance scheme.** The formal documentation that details all requirements (manning, instructor qualifications etc.) can be found at the following link.

    • OPTAG MTS

SUMMARY

6. **The HERRICK Campaign Study delivers the full synopsis of the training delivery and training audience perspective.** This note should serve as a remainder and prompt to those that will deliver training for the future. Outwith operations, training is the most important activity that an Army can do – it is a function of command. Training must be resourced, prioritised and realistic. It must be relevant, challenging and interesting. Training must not be seen as a hurdle to overcome, rather it must be seen as a complementary and value added opportunity that contributes towards a progression to readiness and deployment.

CHAPTER 6-12
GOOD PRACTICE – FORCE GENERATION

BATTLE CASUALTY REPLACEMENTS (BCR) AND INDIVIDUAL REPLACEMENTS (IR)

1. **Background.** As the campaign in Afghanistan evolved it became apparent that operations were being adversely affected by the time taken to deploy replacements from the home base. The time taken to identify, force generate, authorise, deploy and integrate a suitable replacement, meant that deployed formations and units were having to stand crucial gaps for uncomfortably long periods, increasing risk. In order to mitigate this, a more robust formal replacement system was established from Operation HERRICK 13 onwards. This has been further refined over time to become good practice in managing replacements.

2. **Definitions.** The following definitions have become accepted in managing replacements for an operation:

   - BCR. A BCR is a substitute from the home base for someone who was deployed against a Line Serial Number (LSN) on an Operational Establishment Table (OET), but who has either been killed or been evacuated due to a medical condition and where it is assessed that they will not return to theatre within a reasonable period of time. It should be noted that despite the title, this category encompasses cases of disease and non-battle injury (DNBI), as well as casualties sustained in combat.

   - IR. An IR is a substitute from the home base for an individual deployed against a LSN, where the individual has had to return for non-medical reasons. This is further defined as either a discretionary or non-discretionary IR. Non-discretionary IRs are individuals who have had to return to the home base for unavoidable reasons such as in-scope compassionate cases or discipline. Discretionary IRs are where individuals return at the discretion of the deployed commander; examples include out of scope compassionate cases, MS postings and career courses.

3. **Recommendations.** Whilst not an exhaustive list, it is recommended that the following be taken into consideration for managing BCRs and IRs in future campaigns:

   - A BCR cohort be established on the OET, which provides a list of LSNs against which to force generate elements at readiness.

   - The BCR cohort should seek to establish key individuals and formed elements, where it is anticipated that any delay in generation will impact operational effectiveness, in order to anticipate an expected attrition rate.

   - The BCR cohort should be met by applying the same force generation principles and timelines prescribed for the remainder of the OET.

   - The nominated force generating headquarters is to fill the BCR cohort, where unable to do so it should request augmentation from the chain of command.

   - The BCR cohort should be managed centrally by the force generating headquarters or nominated subordinate formation. This provides training assurance and ensures a more rapid deployment process. The establishment of an OC BCR/IR Company has proven particularly effective in managing replacements for Afghanistan.

   - Whilst BCRs and IRs should be managed centrally, they should only be deployed with the authorisation of the PJHQ and Army HQ. This allows the Army to mitigate undue churn, provide advice, prioritise resources where appropriate and manage the deployment of specialists and pinch point trades, by balancing their operational requirement against harmony guidelines and other operations.

   - Individual replacements should not be deployed from the BCR cohort, unless a suitably trained and qualified individual is able to augment the BCR cohort immediately.

   - Depending upon the scale of the deployment and whilst not part of an established BCR cohort, senior commander(s)[1] may be nominated by Army HQ.

   - Where capacity allows, the BCR cohort should be pulsed to the operational theatre in order to conduct the reception, staging and onward integration package; this reduces the requirement to undertake RSOI if activated, thus shortening the replacement time.

   - BCRs should be held at an agreed readiness period; for Afghanistan this was R2 (5 days NTM).

   - Where resources permit, BCRs should be individually equipped to the same level as the deploying force.

   - No individual should be held in the BCR cohort who has not met the minimum training standards for deployment.

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1   Commanders of OF-6 rank or above.

- Where resources permit, individuals allocated to the BCR cohort should be allocated equipment relative to their role from the Operational training Equipment Pool (such as vehicles), in order to conduct continuation training.
- Where possible unit integrity should be maintained. For example, if a troop is required for the BCR cohort, that troop should ideally be formed from the same unit and have undertaken collective training.

INFORMATION AVAILABLE

The following subject areas are accessible from the AKX or AKX(S):

- BRITFOR SOI 146, dated 10 Apr 13.
- Army Operation HERRICK Theatre Replacement Policy, dated 25 May 12.

SUMMARY.

4. **In the event that a BCR is required to replace an individual in theatre, it is inevitable that a gap will have to be borne; this is less frequently the case for IRs.** However the early establishment of a robust system for replacements is essential. Where possible it should seek to conduct as much of the identification, force generation and integration of deploying replacements in advance of their requirement, in order reduce the gap in theatre insomuch as resources permit, so that it extends only to their authorisation and deployment.

CONTENTS

GLOSSARY OF TERMS & ACRONYMS

A

AA	Air Assault
AAR	After Action Review
AAST	All Arms Search Team
AATF	Air Assault Task Force
ABCA	America, Britain, Canada, Australia and New Zealand
ABP	Afghan Border Police
ABTC	RAF Air Battle Training Centre
ACC	Air Component Commander or Air Control Centre
ACE	Air Command Element
ACOS	Assistant Chief of Staff
ACSC	Advanced Command and Staff Course
AD	Air Dispatch
ADO	Air Delivered Ordinance
AES	Ammunition & Explosives Search
AF	Adaptable Force
AFTS	Army Future Training Strategy
AH	Attack Helicopter
AIRB	Afghanistan Infantry Roulement Battallion
AKX	Army Knowledge Exchange
ALI	Air Land Integration
ALITAT	Air Land Integration Training and Advisory Team
ALOC	Air Lines of Communication
ALP	Afghan Local Police
ALS	Army Legal Service
AM	Air Manoeuvre
AMD	Army Medical Directorate
AMPC	Army Manning Priorities Committee
AMPT	Air Manoeuvre Planning Team
A-MOD	Afghan Ministry of Defence
AMP	Army Manning Priorities
AMR	Air Movement Request
AMTAT	Air Manoeuvre Training and Advisory Team
ANA	Afghan National Army
ANDF-P	Afghan National Detention Facility-Parwan
ANGLICO	Army and Naval Gunfire Liaison Company
ANP	Afghan National Police
ANSF	Afghan National Security Forces
AO	Area of Operations
APC	Armoured Personnel Carrier or Army Personnel Centre
APOD	Air Port of Disembarkation
ARB	Afghan Review Board
ARC	Army Recovery Capability
ARF	Airborne Reaction Force
ARRC	Allied Command Europe Rapid Reaction Corps

ASIG	Air Support Integration Group
ASOC	Air Support Operations Centre
ASM	Air Space Management
ASO	Air Staff Officers
AT	Air Transport
ATF	Afghan Territorial Force
AtN	Attack the Network
ATO	Ammunition Technical Officer or Air Tasking Order
AUP	Afghan Uniformed Police
AWC	Air Warfare Centre

B

BAEBB	British Army Electronic Battle Box
BAG	Brigade Advisory Group
BH	Battlefield Helicopter
BALO	Brigade Air Liaison Officer
BAT	Brigade Advisory Team
BATUK	British Army Training Unit Kenya
BATUS	British Army Training Unit Suffield
BCR	Battlefield Casualty Replacement
BDA	Battle Damage Assessment
Bde	Brigade
BEDT	British Embassy Drugs Team
BGAN	Broadband Global Area Network
BGE	Battlegroup Engineer
BGISS	Battlegroup Intelligence Support Sections
BGLO	Battlegroup Logistics Officer
BGTI	Battlegroup Thermal Imager
BISA	Bridge System Infantry Assault
B-ISTAR	Base Intelligence Surveillance Target Acquisition & Reconnaissance
BLS	Bastion, Leatherneck, Shorabak
Black Illume	Colloquial for Infra-Red illumination
BLoS	Beyond Line of Sight
BM	Battlespace Management (US)
Bn	Battalion
BOC	Brigade Operations Company
BRAC/T	Base Realignment and Closure or Transfer
BRF	Brigade Reconnaissance Force
BSM	Battlespace Management (UK)
BSN	Camp Bastion
BTC	Bastion Training Centre

C

C4ISR	Command Control Communications Computing Intelligence Surveillance and Reconnaissance
CAAT	COIN Advisory & Assistance Team
CAOC	Combined Air Operations Centre
CASEVAC	Casualty Evacuation
CAS	Close Air Support

CAST	Combined Arms Staff Trainer
CB	Counter Battery
CCIRs	Commanders Critical Information Requirements
CCT	Combat Camera Team
CD Cbt	Capability Directorate Combat
CD CS	Capability Directorate Combat Support
CD CS S	Capability Directorate Combat Service Support
CDE	Collateral Damage Estimates
CEGs	Career Employment Groups
CENTCOM	Central Command (US)
CERF	Commanders' Emergency Relief Fund
CeTAC	Collective Training Advisory Cell
C-FORM	Campaign – Formation Operational Readiness Mechanism
CF	Combined / Coalition Force (term for ISAF & ANSF forces in combination) or Conventional Forces
CGRS	Common Geo Reference System
C-IED	Counter Improvised Explosive Device
CIMIC	Civil Military Cooperation
CIS	Command and Information Systems
CIVCAS	Civilian Casualty (defined as a LN casualty caused or accused to have been caused by ISAF / ANSF activity
CIWG	Capability Integration Working Group
CJIIM	Combined, Joint, Interagency, Intergovernmental and Multinational
CJO	Commander Joint Operations
CLB	Casualty Locating Beacon
CLP	Combat Logistics Patrols
CLSR	Combat Logistic Support Regiment
CM	Consequence Management
CMT	Combat Medical Technician
CN	Counter Narcotics
CNR	Combat Net Radio
Combat ID	Combat Identification
COMBRITFOR	Commander British Forces
COMJAG	Commander Joint Aviation Group
CO	Commanding Officer (Battlegroup commander)
COI	Compounds of Interest
COIN	Counter-Insurgency
COIST	Company Operational Intelligence Support Team
COMISAF	Commander International Security Assistance Force
COMSEC	Communications Security
CONCO	Continuity Non-Commissioned Officers
CONDO	Contractors Deployed on Operations
CONLOG	Contractorised Logistics
CONOPS	Concept of Operations
COP	Common Operating Picture
COS	Chief of Staff
COTS	Commercially Available and Off the Shelf
Coy	Company
CP	Check Point or Close Protection

CPERS	Captured Personnel
CPG	Capability Planning Group
CPX	Command Post Exercise
CSAT	Closed Stores Accounts Team
CSF	Commanders' Stabilisation Fund
CS(HT)	Cultural Specialist (Human Terrain)
CSS	Combat Service Support
CTG	Collective Training Group
CUAT	Commanders Unit Assessment Tool
CULAD	Cultural Advisor
CT3	Collective Training Level 3
CTC	Coalition Targeting Cell
CTWG	Counter Threat Working Group
CWA	Consent Winning Activity
CWC	Captains Warfare Course
CWIED	Command Wire Improvised Explosive Device
Cz SOG	Czech Special Operations Group

D

D3A	Decide, Detect, Deliver, Assess
DAIT	Deployed Air Integration Team
DASC	Direct Air Support Centre
DAT	District Advisor Team
DATE	Decisive Action Training Environment
DCC	Dismounted Close Combat
DCLC	Defence Centre for Languages and Culture
DCOM	Deputy Commander
DCoP	District Chief of Police
DCR	Daily Consumption Rates
DCSU	Defence Cultural Support Unit
DDB	District Delivery Board (convened to agree the joint security & development plan)
DDD	District Deep Dive
DEODS	Defence EOD and Search
DE&S	Defence Equipment and Support
DEF	Defence Exploitation Facility
DF	Direction Finding
DG	District Governor
DH 3	Desert Hawk 3
DIO	Defence Infrastructure Organisation
DIRM	Device Infra Red Marker
DLIMS	Defence Lessons Identified Management System
DLOD	Defence Lines of Development
DLW	Directorate of Land Warfare
DMOC	Defence Media Operations Centre
DMS	Defence Medical Service
DN	Deployed Network
DNBI	Disease and Non-Battle Injury

DOA	Desired Order of Arrival
DOCEX	Document Exploitation
DOLS	Defence Operational Learning Strategy
DOS	Days of Supply
DOT	Detention Oversight Team
DPD	Direct, Process, Diseminate
DSA	Dismounted Situational Awareness
DSALT	Distributed Synthetic Air Land Trainer
DSCOM	Defence Supply Chain Operations and Movements
Dstl	Defence Science and Technology Laboratory
DSO	Decision Support Overlay (trace indicating where effects are required)
DSOM	Decision Support Overlay Matrix (table detailing the resourcing of the DSO)
DST	District Stabilisation Team
DtD	Defeat the Device
DTRANAD	District Transition Advisors
DTRM	District Transition Road Map
DTT	District Transition Team
DXP	Defence Exercise Programme
DZ	Drop Zone

E

E1MB	E1 Manning Bricks
E2E	End to End
EA	Electronic Architecture
Eagle VCP	VCP delivered by helicopter
EAW	Expeditionary Air Wing
EC	Equipment Capability
ECAB	Executive Committee of the Army Board
ECAS	Emergency Close Air Support
ECM	Electronic Counter Measures
EEFI	Essential Elements of Friendly Information
EF	Enemy Forces
EFI	Expeditionary Force Institute
EHRC	Explosive Hazard Reduction Course
EHT	Environmental Health Team
EKIA	Enemy Killed In Action
EO	Explosive Ordinance
EOD	Explosive Ordinance Disposal
EPM	Embedded Police Mentor
ERI	Exercise Rehabilitation Instructor
ES	Equipment Support
ET	Environmental Training
EW	Electronic Warfare
EWSI	Electronic Warfare Signals Intelligence

F

F3EAC	Find, Fix, Finish, Exploit, Analyse and Convict
FABINT	Forensic and Biometric Intelligence

FAC	Forward Air Controller
FAM	Fighting Aged Male
FARP	Forward Arming and Refuelling Point
FCO	Foreign and Commonwealth Office
FCOC	Future Character of Conflict
FDC	Force Distribution Cell
FECs	Forward Enabling Contracts
FET	Female Engagement Team
FF	Friendly Forces
FFUI	Find Feel Understand Influence
FGEN	Force Generation
FHP	Force Health Protection
FIR	First Impression Report
FLC	Front Line Command
FLOC	Future Land Operating Concept
FMCC	Force Movement Control Centre
FMV	Full Motion Video
FOB	Forward Operating Base
FORM	Formation Operational Readiness Mechanism
FP	Force Protection
FPI&W	Force Protection, Indicators and Warnings
FPM	Force Provost Marshall
FragO	Fragmentary Order
FSCC	Fire Support Coordination Centre
FSG	Fire Support Group
FSR	Field Service Representative
FST	Fire Support Team
FTC	Force Troops Command
FTRS	Full Time Reserve Service
FTS	FIST Thermal Sight
FUP	Forming Up Position

G

GBI	Ground Based ISTAR
GH	Ground Holding
GIRoA	Government of the Islamic Republic of Afghanistan
GM	Ground Manoeuvre
GMG	Grenade Machine Gun
GMLRS	Guided Multi Launch Rocket System
GMR	Ground manned Reconnaissance
GPMG	General Purpose Machine Gun
GrATS	Ground Asset Tracking System
GRF	Ground Reaction Force
GSA	Ground Sign Awareness
GSK	Gereshk
GZ	Green Zone

H

H 450	HERMES 450
H4H	Help for Heroes
HART	HERRICK Account Reconciliation Team
HASD	High Assurance Search Dog
HAST	High Assurance Search Team
HCDR	High Capacity Data Radio
HCSC	Higher Command and Staff Course
HEAT	High Explosive Anti-tank
HeATS	Helicopter Asset Tracking System
HEG	Helmand Executive Group
HERA	Human Environment Reconnaissance Analysis
HESH	High Explosive Squash Head
HFT	Hybrid Foundation Training
HIDES	Human Intelligence Data Exploitation System
HKY	Husky vehicle
HLS	Helicopter Landing Site
HME	Home Made Explosive
HMG	Heavy Machine Gun
HN	Host Nation
HOTO	Handover Takeover
HQ	Headquarters
HRT	High Readiness Team
HSS	Health Service Support
HTA/M	Human Terrain Analysis/Mapping
HUMINT	Human Intelligence
HVT	High Value Target

I

IA	Individual Augmentees or Information Assurance
IA&O	Information Activity and Outreach
IA&SS	Information Activity and Stabilisation Support
IAM	Individual Aide Memoire
IBS	Infantry Battle School
ICAT	ISAF Contracted Air Transport
ICOM	A hand held comms intercept scanner
ICRC	International Committee of the Red Cross
ICS	Information Communication Systems
ICSC(L)	Intermediate Command and Staff Course (Land)
IDAPTR	Initial Deployment and Post Training Report
IDF	Indirect Fire
IED	Improvised Explosive Device
IEDD	Improvised Explosive Device Disposal
IEF	Intelligence Exploitation Facility
IFF	Identification Friend or Foe
IJC	ISAF Joint Command

IJOC	Interim Joint Operations Centre
IM	Information Management
IMINT	Image Intelligence
INS	Insurgent
IPA	Intelligence Process Application
IPB	Intelligence Preparation of the Battlefield
IPT	Integrated Project Team
IR	Infra-Red
IRG	Immediate Replenishment Group
IRT	Immediate or Incident Response Team
ISAF	International Security Assistance Force
ISDs	In Service Dates
ISR	Intelligence, Surveillance Reconnaissance
ISTAR	Intelligence Surveillance Target Acquisition & Reconnaissance
ITTP	In Theatre Training Package
IX	Information Exploitation

J

JAIG	Joint Information Activities Group
JAG	Joint Aviation Group or (US) Judge Advocate General
JALO	Joint Air Land Organisation
JCG	Joint CIMIC Group
JEM/B	Joint Effects Management/Board
JANIB	Joint Afghan NATO Inteqal Board (Inteqal meaning transition)
JFACTSU	Joint Forward Air Controller Training and Standards Unit
JFC	Joint Force Command
JHF	Joint Helicopter Force
JHSS	Joint Helicopter Support Squadron
JIEDAC	Joint IED Analysis Centre
JIEDDO	Joint IED Defence Organisation
JIOTAT	Joint Information Operations Training and Advisory Team
JIPs	Journalist Information Packs
▬▬	▬▬▬▬▬▬
JFSp(A)	Joint Force Support (Afghanistan)
JFTG	Joint Fires and Targeting Group
JKL	Jackal vehicle
JOCS	Joint Operational Command System
JOTAC	Junior Officers Tactics Course
JPA	Joint Personnel Administration
▬▬	▬▬▬▬
JPSIL	Joint Prioritised Shaping Influence List
Jt GBAD	Joint Ground Based Air Defence
JTAC	Joint Tactical Air Controller
JTEC	Joint Theatre Education Centre

K

Kandak	ANA battalion
KATT	Kandak Advisory Training Team
KAF	Kandahar Air Field
KAG	Kandak Advisory Group
KIA	Killed in Action
KL	Key Leader
KLE	Key Leader Engagement
KS	Kinetic Strike

L

LA	Learning Account
LASM	Light Anti-Structural Munition
LAV	Light Armoured Vehicles
LBDN	Lightweight Bowman Data Node
LCC	Land Component Commander
LCMR	Lightweight Counter Mortar Radar
LEC	Locally Employed Civilian
LESPA	Land Environment Sustainment Planning Assumptions
LE TacCIS	Land Environment Tactical Communications Information Systems
LEWT	Light Electronic Warfare Team
LIFC	Land Intelligence Fusion Centre
LKG	Lashkar Gar
LMC	Low Metal Content (refers IEDs)
LMW	Loy Mandeh Wadi
LN	Local National
LO	Liaison Officers
LOAC	Law of Armed Conflict
LOO	Lines of Operation
LoCs	Lines of Communication
LRW	Locally Recruited Workers
LSCC	Land Stabilisation and COIN Centre
LST	Logistic Support Teams
LWS	Land Warfare School
LWT	Light Wheel Tractor
LXC	Lessons Exploitation Centre

M

MACE	Military Assistance to Civil Effect
MACP	Military Aide to the Civil Power
MAG	Military Assistance Group
MAGTF	Marine Air Ground Task Force
MAOT	Military Air Operations Team
MASFAT	Mass Fatality Repatriation
MASU	Mobile Aircraft Support Unit
MATT	Military Annual Training Test
MAW	Marine Air Wing
MBT	Main Battle Tank

MCC	Mounted Close Combat
MDMP	Military Decision Making Process
MEDEVAC	Medical Evacuation
MERT	Medical Emergency Response Team
Med LO	Medical Liaison Officer
MFC	Mortar Fire Controller
MISIR	MOD Information Security Incident Reporting
MJDI	Management of the Deployed Joint Inventory
MJP	Military Judgement Panel
MLC	Military Load Classification
MO	Medical Officer
MOD	Ministry of Defence
MoE	Measures of Effectiveness
MOG	Manoeuvre Outreach or Media Operations Group
MPC	Mission Planning Conference
MPE	Materiel and Personnel Exploitation
MPS	Military Provost Staff
MRX	Mission Rehearsal Exercise
MS	Mission Secret (Theatre UK IT System)
MSSG	Military Stabilisation Support Group
MSST	Military Stabilisation Support Team
MST	Mission Specific Training
MSSG	Military Stabilisation Support Group
MTF	Medical Treatment Facility
MUNS	Magnum Universal Night Sight
MXS	Mission Exploitation Symposium

N

NACMO	Net Additional Costs of Military Operations
NAMSA	NATO Maintenance and Supply Agency
NAI	Named Area of Interest
NAO	National Audit Office
NCC	National Contingent Commander
NDA	Nad-E-Ali
NDS	National Directorate of Security
NDA(N)	Nad-E-Ali North
NEM	New Employment Model
NES(N)	Nar-E-Saraj North
NES(S)	Nar-E-Saraj South
NGO	Non-governmental Organisation
NHS	National Health Service
NKETS	Non-Kinetic Effect Teams
NSC	National Support Command
NTM-A	NATO Training Mission Afghanistan
NVD	Night Vision Devices

O

OC	Officer Commanding (Company Commander)
OCC-D	Operational Co-ordination Centre – District
OCC-P	Operational Co-ordination Centre – Province
OCSS	Operational Support Capability Contract
~~■■■■~~	~~■■■■■■■■■■■■■■■■■■■■■■■■■■■~~
OET	Operational Establishment Table
OGD	Other Governmental Department
OISG	Operational Intelligence Support Group
OLAAARs	Operational Learning Accounts After Action Reviews
OMLT	Observer Mentor Liaison Team
OOA	Out Of Area
OOST	Observations from Operations for Science and Technology
OP	Observation Post
OPL	One Page Lessons
OPCP	Operational Patient Care Pathway
OPLAW	Operational Law Branch
OPTAG	Operational Training and Advisory Group
ORBAT	Order of Battle
ORK	Operational Record Keeping
OSD	Out of Service Date
OS	Offensive Support
OTEP	Operational Training Equipment Pool
OTM	On The Man

P

PAC	Public Accounts Committee
PAE	Programme Aviation Engineering
PATT	Police Advisory & Training Team
PB	Patrol Base
PBIR	Personal Beacon Infra Red
PCE	(FOB) Price
PCRU	Post Conflict Reconstruction Unit
PDATT	Police Development Advisory Training Team
PDT	Pre-Deployment Training
PECC	Patient Evacuation Co-ordination Cell
PF	Precision Fires
PGM	Precision Guided Munitions
PGST	Persistent Ground Surveillance Tower
PHC	Primary Healthcare Centres
PIC	Press Information Centre
PID	Positive Identification
PIR	Priority Information Requirement
PJHQ	Permanent Joint Headquarters
PJIL	Priority Joint Influence List
PK	Paind Kalay (PB2 AO protected community)
PKM	AK variant Medium Machine Gun
PLM	Protected Logistic Manoeuvre
PM	Protected Mobility

PMAD	Police Mentoring, Advising and Development
PMAG	Police Mentoring and Advisory Group
POD	Point of Detention
POGO	Proof of Good Order
POG	Psychological Operations Group
POL	Post Operational Leave
PoL	Pattern of Life
POLAD	Policy Advisor
POI	Post Operation Interview
P-OISG	Provincial Operational Intelligence Support Group
POO	Point of Origin
POR	Post Operation Report
PPE	Personal Protective Equipment
PPIED	Pressure Plate Improvised Explosive Device
PPWG	Pinch Point Working Group
PRC	Personnel Recovery Centres
PRIED	Pressure Release Improvised Explosive Device
PRU	Personnel Recovery Unit
PPG	Principal Planning Group
PRT	Provincial Reconstruction Team
PSE	Psychological Support Element
PSS	Persistent Surveillance Systems
PSNI	Police Service of Northern Ireland
PTDS	Persistent Theatre Detection System
PtF	Prepare the Force
PTT	Push to Talk

Q

QM	Quartermaster
QMOP	Quarterly Manpower Operations Process
QRF	Quick Reaction Force
QIP	Quick Impact Project

R

RA	Royal Artillery
RB	Ridgeback vehicle
RC	Regional Command
RCIED	Remote Control Improvised Explosive Device
RCV	Remote Controlled Vehicle
RDLs	Rating Definition Levels
RDS	Rapidly Deployed Shop
RE	Royal Engineers
REDs	Risk Estimate Distances
RESA	Royal Engineer Search Advisor
REST	Royal Engineer Search Team
RF	Reaction Force
RFI	Request For Information
RiP	Relief In Place

RIAB	Radio in a Box
RLD	Rear Link Detachment
RMO	Regimental Medical Officer
RMP	Royal Military Police
RN	Royal Navy
ROC	Rehearsal of Concept
RODET	Roll-Over Drills Egress Trainer
ROE	Rules Of Engagement
ROG	Rear Operations Group
RPG	Rocket Propelled Grenade
R&R	Rest and Relaxation
RSA	Royal School of Artillery
RSB1	Regional Standby Battalion 1
RSIST	Royal Signals Infantry Support Team
RSOI	Reception, Staging and Onward Integration
RTC	Regional Targeting Cell
RTMC	Reinforcements Training and Mobilisation Centre
RUSI	Royal United Services Institute
RW	Rotary Wing

S

S&I	Support and Influence
SAF	Small Arms Fire
SAG	Security Assistance Group
SALTA	Contact report format
SAM	Sickness Absence Management
SAMS	School of Advanced Military Studies (US)
SAW	School of Advanced Warfare (US)
SB	Story Board
SBK	Shorabak (ANA brigade HQ location)
SCIAD	Scientific Advisor
SCB	Security Capacity Building
SCS	Static Covert Surveillance
SHF	Support Helicopter Force
SI	Service Inquiry
SIGACT	Significant Act
SIED	Suicide Improvised Explosive Device
SIGINT	Signals Intelligence
SIR	Shooting Incident Review
SJS	Service Justice System
▆▆	▆▆▆▆▆▆▆▆
SFA	Security Force Assistance
SK	Sea King (utility helicopter)
SLOC	Surface Lines of Communication
SME	Subject Matter Expert
SO1	Staff Officer Grade 1 (Lt Col)
SO2	Staff Officer Grade 2 (Maj)
SO3	Staff Officer Grade 3 (Capt)
SOF	Special Operations Forces

SoM	Scheme of Manoeuvre
SOPS	Standing Operational Procedures
SoRs	Statement of Requirements
SPOD	Sea Port of Disembarkation
SPTA	Salisbury Plain training Area
SR	Surveillance and Reconnaissance
SRSAF	Single Round SAF
SSA	Shared Situational Awareness
STABAD	Stabilisation Advisor
STA	Surveillance and Target Acquisition or Special to Arm
STAP	Surveillance and Target Acquisition Plan
STIC	Sniper Thermal Imagery Camera
STRE	Specialist Team Royal Engineers
SU	Stabilisation Unit
SUSTAT	Sustainment Statement
SWS	Support Weapons School

T

TAA	Target Audience Analysis
TABM	Tactical Air Battle Management course
TAI	Target Area of Interest
Tac HQ	CO's deployable headquarters group
TACP	Tactical Air Control Party
TacSAT	Tactical Satellite
TAG	Tolay Advisory Group
TAGS	Tactical Air Ground Systems
TAM	Tactical Aide Memoire
Tashkiel	ANSF establishment table (J1 / J4)
TASKORG	Task Organisation
TAT	Tolay Advisory Team
TCAF	Tactical Conflict Assessment Framework
TCN	Troop Contributing Nation or Third Country nationals
TEA	Target Engagement Authority
TES	Theatre Entry Standard
TF	Task Force
TFH	Task Force Helmand (Brigade HQ)
TFL	Task Force Leatherneck
Tgt ID	Target Identification
THF	Temporary Holding Facility
TI	Thermal Imaging
TIC	Troops In Contact
TiGR	Tactical Ground Reporting
TLG	Theatre Logistics Group
TLSA/R	Transfer Lead Security Authority / Responsibility
TM	Team Medic
TN&SM	Theatre Network and Service Management
ToA	Transfer of Authority
Tolay	ANA Company

TPG	Theatre Provost Group
TQ	Tactical Questioning
TRANAD	Transition Advisors
TRB	Theatre Reserve Battalion
TRiM	Trauma Risk Management
TS	Top Secret
TSF	Total Support Force
▬	▬▬▬
TSU	Transition Support Unit
▬	▬▬▬▬)
TTP	Tactics, Techniques and Procedures
TXS	Theatre Exit Standard

U

UD3A	Understand Decide Detect Deliver Assess
UAV	Unmanned Aerial Vehicle
UAE	United Arab Emirates
UGL	Underslung Grenade Launcher
UGS	Unattended Ground Sensor
UGV	Upper Gereshk Valley
UHA	Unit Holding Area
UOR	Urgent Operational Requirement
USFOR-A	US Forces Afghanistan
USMC	United States Marine Corps
USUR	Urgent Statement of User Requirement
UKM	Unknown Male

V

VBIED	Vehicle Borne Improvised Explosive Device
VCP	Vehicle Check Point
VDC	Village Development Committee
VfM	Value for Money
VHR	Very High Readiness
VOIED	Victim Operated Improvised Explosive Device
VP	Vulnerable Point

W

WIS	Wounded, Injured and Sick or Weapons Intelligence Specialist
WFC	Whole Force Concept
WTI	Weapons Technical Intelligence

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3-6	Army HQ	May 2014	2014 DIN07-083 MATT 9
3-6	DE&S	Oct 2013	UOR AO1494G Project CULPRIT – Learning from Experience. Reference DES SSP/SPSCM/365/03

3-6	DE&S	Feb 2014	Defence Institutionalisation C-IED Programme Management Office Mandate - C-IED PMO/MOSS/C-IED/Command/O&I/02
3-6		Jan 2011	Defence Strategic C-IED Plan, endorsed by DCDS (Ops) on 12 January 2011.(Owned by Ops Dir Op Cap & FP).
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3-6	DLIMS	Jul 2012	DLIMS 16756: Institutionalisation of C-IED
3-6	Home Office	Jul 2011	The United Kingdom's Strategy for Countering Terrorism Dated July 2011.
3-6	DCDC	Jul 2014	JDN C-EO Threat. Sponsor by DCDC and authored by DEODS July 2014.
3-6	DG Cap Strat	Oct 2013	DG Cap/Strat/4-2-9 dated 21 October 2013: 'The Army's Contribution to Defence Engagement Draft Doctrine'
5	Cabinet Office	2010	Strategic Defence and Security Review 2010
5	DLW	Nov 2010	Operations in Iraq Jan 05 – May 09
5	Comd FDT	Jun 2011	'Skill at Information' paper, ref FDT/2/1/1/2.
5	DCDC	Aug 2013	JDN 2/13 Information Superiority
5	DCDC	2011	The Future Character of Conflict
5	General Sir Frank Kitson	1971	Low Intensity Operations
5	General Sir Frank Kitson	1977	Bunch of Five
5	DCDC	Dec 2010	JDP 04 Understanding
5	DCDC	Sep 2013	JDN 4/13 Culture and Human Terrain
5	DLW	Sep 2010	DN 10/18 Understanding Human Terrain
5	DLW	2011 & 2012	AFM Vol 1 Part 3 A-C ISTAR
5	▬▬▬▬▬▬	Jan 2010	Fixing Intel
5	DI JFIG		OISG CONEMP
5	DLW	Jan 2014	Project HORRROCKS Final Report
5	D Info	Sep 2011	Information Note 11/06 LIFC(A)
5	A2020 Team	Aug 2012	Army 2020 Report
5	12 Mech Bde	Nov 2013	Lead Armoured Task Force Training Exploiation Report, Annex C
5	▬▬▬▬▬▬	Dec 2012	Materiel and Personnel Exploitation in Afghanistan
5	HQ FTC	Jul 2013	ISR Brigade CONUSE (2*)
5	DCDC	Sep 2010	JDN 4/10 Single SIGINT Battlespace
5	DCDC	Jan 2008	JDP 6-00, 3rd edition
5	MOD Departmental Record Officer	Apr 2014	JSP 441 Defence Record Management Policies and Procedures

5	Directorate of Judicial Engagement Policy	Apr 2013	2013DIN03-009 Document and Material Retention and Preservation
5-1	OPTAG	Feb 2014	The Future of OPTAG - A Strawman Proposal
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5-2	TFH	Oct 2012	Op Herrick Capbilities and Equipment
5-2	Hansard	Mar 2011	Hansard Source Citation: HC Deb, 30 March 2011, c384W. Peter Luff (The Parliamentary Under Secretary of State for Defence: Mid Worcestershire, Conservative) as. at 2011
5-2	Hansard	Dec 2012	Hansard source Citation: HC Deb, 20 December 2012, c901W. Philip Dunne (The Parliamentary Under Secretary of State for Defence, Ludlow, Conservative) in December 2012.
5-2	DIN	Jul 2013	Defence Instructions and Notices (DIN) 2013DIN04-127 – UOR Standing Instructions V8 dated 25 Jul 13 - Annex J
5-3	DLW	Feb 2013	AFM Vol 1 Pt 10 COIN
5-3	DLW	Mar 2012	Land handbook Influence (2010)
5-3	HQ TFH	Aug 2013	HQ TFH SOP 2051 Influence Operations (SECRET)
5-3	Gen McChrystal HQ ISAF	Jul 2009	COM ISAF Tactical Directive 2009
5-3	Gen McChrystal HQ ISAF	Aug 2009	COM ISAF COIN Direction 2009
5-3	Dir FD&C	Jan 2014	FLOC Development Agenda
5-3	CDCD (IA&O)	Sept 14	Security Assistance Group (SAG) Concept of Use 2nd Jt circulation
5-3	Gen Petraeus RUSI Journal 158:4, 82-87	Aug 2013	RUSI - Reflections on the Counter-Insurgency Era
5-3	Dir FD&C	Aug 2012	Army 2020 Internal Report
5-3	David Wilson & Gareth E Conway in RUSI Journal, 154:1, 10-15	Mar 2009	Tactical Conflict Assessment framework, A Short Lived Panacea
5-3	Ayman al-Zawahiri	July 2005	Letter al Zawahiri to al Zarqawi (AQ Commanders)
5-4	DCDC	Nov 2011	JDP 0-01 British Defence Doctrine 4th edition
5-4	DLW	Mar 2012	LAND Handbook (Influence) 2012
5-4	Stabilisation Unit (FCO, DFID, MOD)	May 2014	The UK Approach to Stabilisation
5-4	Dir FD&C	Jan 2014	FLOC Development Agenda
5-4	POR H4	2007	POR H4 Commanders Comments
5-4	LXC	Dec 2013	HCS Interview Head Stabilisation Unit Lindy Cameron
5-4	LXC	May 2014	Interview Notes Hugh Powell Director PRT

5-4	CDCD (IA&O)	Sept 14	Security Assistance Group (SAG) Concept of Use 2nd Jt circulation
5-4	Stabilisation Unit (FCO, DFID, MOD)	Nov 2010	Responding to Stabilisation Challenges in Hostile and Insecure environments: Lessons Identified
5-4	DLW	Oct 2007	AFM Vol 1 Part 9 Tactics for Stabilisation Operations
5-4	DCDC	Nov 2009	JDP 3-40 Security and Stabilisation the military contribution
5-4	DCDC	Aug 2014	JDP 05 Shaping a Stable World (study Draft 1)
5-4	DLW	2005	Home - Operations In Iraq
5-4	Stabilisation Unit (FCO, DFID, MOD)	2014	Stabilisation Cse Study Infrastructure in Helmand
5-4	World Bank	2011	World bank development report 2011
5-4	DCDC	Sep 2013	JDN 4/13 Culture and Human Terrain
5-6	CLF	Jan 2011	Land Forces Standing Order (LFSO) 3210 Deployability
5-6	Defence Media & Comms	2009	Defence Internal Brief 33/09 Defence Social Media Governance
5-6	Army Media & Comms	Sep 2013	Army Briefing Note 86/13 Army Social Media Governance and Registration
5-6	Defence Movement and Transport Management Committee	Mar 2012	JSP 800 Defence Movements and Transport Regulations
5-6	Chief of Defence Personnel	Jul 2014	JSP 751 Joint Casualty and Compassionate Policy and Procedures
5-6	Director Service Personnel Policy	Jun 2014	JSP 770 Tri-Service Operational and Non-Operational Welfare Policy
5-6	Chief of Defence Personnel	Mar 2014	JSP 760 Tri-Service Regulations for Leave and Other Types of Absence
5-7	DLW	Nov 2010	Operations in Iraq Jan 05 – May 09
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5-8	CDS and PUS loose minute	Jul 2012	"Putting NATO at the heart of UK Defence"
5-9	Sergio Catagnani.	May 2013	Coping with knowledge? Organisational Learning in the British Army. Sergio Catagnani.
5-9	LXC	Oct 2013	Lessons Update - Pillow Charge IEDS
5-9	ISAF	Jun 2013	ISAF Insider Threat Handbook (UK reproduction of an ISAF handbook)

5-9	LXC Newsletter	Oct 2013	Countering SVBIED, Writing Learning Accounts, Near Miss Reports, Lessons from Learning Accounts, Police Mentoring, Advising & Development, Writing a POR/PXR
5-9	DLW	Sep 2013	Op HERRICK TAM insert, HERRICK 20
5-9	DLW	Sep 2013	Op HERRICK Individual Aide Memoire, HERRICK 20
5-9	DLW	Sep 2013	Op HERRICK Reports & returns Slate Cards, HERRICK 20
5-9	DLW	Sep 2013	Op HERRICK Operational Insights, HERRICK 20
5-9	4 RIFLES	Apr 2010	Operational Vignettes, HERRICKs 10 and 11
5-9	Sergio Catagnani.	May 2013	Coping with knowledge? Organisational Learning in the British Army. Sergio Catagnani.

ENCLOSURE
SCIENCE AND TECHNOLOGY LESSONS LEARNED: INPUT TO THE HERRICK CAMPAIGN STUDY

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[dstl]

Science and Technology Lessons Learned: Input to the Herrick Campaign Study

Tracey, SR

DSTL/CR79369 2.0
30 June 2014

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Executive summary

Dstl was tasked by Director Land Warfare to develop a Science and Technology (S&T) input to the HERRICK Campaign Study, detailing the lessons learned. This report illustrates the breadth of S&T support provided to Op HERRICK and includes some key examples of major S&T successes that have made significant and, often, life-saving contributions to operations.

In-theatre OA and SCIAD support have been key enablers throughout the HERRICK campaign. Both roles rely on having experienced and appropriately trained people ready to deploy, coupled with a recognition amongst the military of the utility and impact of both roles and how these can be exploited in-theatre. Once current operations are concluded it is crucial to maintain this capability and foster peacetime relationships with the military so that when contingency operations occur in the future this support is readily available in theatre and making an immediate contribution.

These front line roles have been underpinned by the wider UK S&T community through the Dstl-managed Reach Back process where detailed support has been provided on a vast range of operational issues throughout the HERRICK campaign. Countering the in-theatre IED threat represents a critical area where S&T was able to respond to the rapidly evolving in-theatre threat, drawing on prior experience to deliver a range of innovative solutions, both equipment and TTPs, that reduced the threat impact and saved many lives.

Insider Attack (I/A), which became a significant problem at the latter end of the HERRICK campaign, is another high profile example where S&T made a significant contribution to operations. Social science expertise was used to ascertain the specific factors that led to such incidents and a Training Needs Analysis (TNA) was developed to define and enhance the training requirements of the ▬▬▬▬▬ (▬

Urgent Operational Requirements (UORs) are a constant and key element of all operations and another area where S&T has made a major contribution. The lessons and benefits of 200+ land-based UORs have been examined and showed the vast majority delivering clear benefit to theatre. Key examples include, the Sharpshooter semi-automatic marksman rifle that enabled the enemy to be engaged at greater ranges, and enhanced armour for MASTIFF that significantly reduced the casualties resulting from IED strikes.

In the context of UORs, the rapid development programmes ▬▬▬▬ VALKYRIE and HERCULES) have provided a mechanism to enable the UK to maintain the edge in the technology battle through a challenging programme to deliver UOR-able research within a rolling 6 to 12 month timeframe. Respectively the programmes have enhanced survivability, improved tactical capability, and reduced the dismounted soldier's burden and facilitated the delivery of exceptionally capable and world-leading equipment.

The gathering of information, development of databases, analysis and reporting, have all made significant contributions in HERRICK and represent best practice that should

be carried forward. Section 6 highlights the importance of the Observations, Insights and Lessons (OILS) process where the rapidly changing nature of operations increased focus on a more responsive process on how those lessons could be better exploited, to accelerating the S&T and military 'business cycle'. The instigation of the Land Operational Reporting Database (LORD) (Section 7) and the complementary analysis of incidents have provided invaluable information on the frequency and impact of specific threats, providing invaluable evidence to support decisions. Additionally, the weekly Operational Reporting Compendium (ORC) has been established as the single "go to" reference document for staff officers and analysts.

A specific example of successful information exploitation is provided in Section 9 which covers the analysis conducted to gather a better understanding of the nature of the effects of threats on personnel and on their Personal Protective Equipment (PPE). It provided an evidence base for the actual threat faced by personnel and essential information on performance requirements to support surge research and equipment programmes.

Section 11 describes the use of Social Network Analysis (SNA) to transform the analysis of human networks. This innovative approach rapidly generated a world-leading capability that has been utilised internationally and has already been deployed on other operations (Op ELLAMY).

Some key specific conclusions that result from the analysis in this report are:
- S&T support to success in Herrick has been built on the firm foundations of many decades of sustained S&T funding. Without continued and sustained funding of S&T there is no guarantee that similar levels of S&T support could be provided to subsequent operations.
- Deployed OA and SCIAD support in theatre, coupled with Reach Back into the wider S&T community, has facilitated essential support to the front line; similar success in the future depends on maintaining the relationships in peacetime through joint training exercises and ensuring the benefits are properly understood by the military.
- UORs have provided a robust mechanism for the rapid delivery of effective capability to theatre; all examples studied show clear in-theatre benefit.
- The rapid development programmes ███████ VALKYRIE and HERCULES) have provided a mechanism to generate UOR-able research in a rolling 6-12 month timeframe that has delivered world-leading capabilities.

As well as the cutting edge S&T, there are a number of enablers that have been vital components of successful S&T support to operations:
- The establishment of trusting working relationships between key stakeholders
- A robust understanding of the customer requirements
- Excellent communications
- Having an appropriate business model to deliver S&T to theatre

In slower time, consideration should be given to generating a more in-depth review of the impact of S&T support to operations in Afghanistan.

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1 Introduction

1.1 Background

Director Land Warfare (DLW) is conducting the OP HERRICK Campaign Study (HCS), the aim of which is "to provide a synopsis of Op HERRICK land tactical lessons and best practice, drawn from the period HERRICK 4 – HERRICK 18 in order to inform Force Development"[1]. As part of this overall activity, DLW required a Science and Technology (S&T) input to cover key issues in this area, with particular interests in the SCIAD area (deployed scientific and OA support), and the rapid development programmes (██████ VALKYRIE and HECULES).

Given that the S&T support to operations in Afghanistan has been extremely broad and the timescales and resources available to produce this input were limited, it was agreed with the HCS lead[2] that Dstl would deliver a (S&T) input, consisting of an Executive Summary for the main body of the report and a number of supporting annexes (Sections 2-12 in this report) covering a range of examples from that broad spectrum of support. Some of these Sections were specifically generated for this report, whilst others (such as the Section 3 on UORs) had been developed for other purposes and are re-used here (and referenced as appropriate); thus there is some variation in format.

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[1] THE OP HERRICK CAMPAIGN STUDY - FRAMEWORK FOR DELIVERY, DLW/HCS/2_2_2_1, dated 19 July 2013
[2] Col Ian Tinsley, AD LXC and Lead Author

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2 S&T Direct Support to Operations

Operational Analysts (OA) and Scientific Advisors (SCIAD) have been deployed in support of Operation HERRICK since 2002 and 2006 respectively. At the peak of the conflict, there were OA staff deployed into Regional Command South as well as OA and SCIADs deployed into Task Force Helmand Headquarters and Joint Force Support (JFSP(A)). Initially the SCIAD post was deployed in support of HQ ISAF but the post was moved to provide direct support to UK troops in Helmand Province. The UK provided the core of the HQ ISAF Analysis Branch providing direct analytical support to the UK 4 star COMISAF in 2006/7 and the HQ ISAF Joint Command (IJC) Assessment branch supporting the US 3 star COMIJC. In both cases the analytical support contributed to the theatre level command of all NATO operations in Afghanistan.

SCIADs and Analysts have deployed alongside numerous other S&T staff addressed elsewhere in this document including: Defence Intelligence Liaison posts in Kandahar and Lashkar Gah, Deployed Exploitation staff in Bastion and Kandahar and Subject Matter Experts (SMEs) deploying regularly for short periods to provide specific advice in complex areas.

Operational Analysts have been deployed in support of HERRICK to provide objective, robust, timely analytical advice to the deployed commander and staff, in order to inform the planning, execution and effect of military operations through support to decision making. Operational Analysts have deployed in order to provide independent analytical advice and support to UK commanders and staff. Analysts have supported all aspects of command decision making especially the planning, execution and assessment of operations.

SCIADs have been deployed to military operational HQs in Afghanistan in order to provide scientific and technical advice to the UK Commander and his staff in timescales commensurate with the operational need. *Scientific* advice is drawn from both the SCIAD's personal expertise and MoD's S&T[3] base via Reach Back. SCIADs also support the delivery of enhanced capability to theatre by conducting theatre trials and obtaining user feedback at the request of the UK S&T base.

2.1 Reach-Back

Both deployed SCIADs and Analysts are supported by a reach-back capability that is co-ordinated by Support to Operations in Dstl. Scientific and analytical staff selected for deployment to HERRICK cannot be technical experts in all disciplines. Much of the work that has been delivered on HERRICK was underpinned by advice obtained through the Reach Back process, in 2012 there were over 250 Reach Back requests that were fulfilled by S&T staff based in the UK. The Reach Back process fills the knowledge gaps of deployed staff and therefore enables support to be provided to the front line across the breadth of Defence S&T. Critical to the continued success of SCIAD and OA support to operations is the existence of this technical support

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[3] Including wider Dstl, Defence Equipment & Support (DE&S), Industry and Academia.

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network that continues to provide UK and coalition forces with world leading scientific and analytical advice and analysis.

2.2 Lessons

Scientific and analytical support has been provided to HERRICK for over 10 years and over this time there has been repetition in the questions that have been posed and the issues that have been faced. Maintaining an effective knowledge base of the advice that has been provided on Op HERRICK is important in ensuring that a suitable audit trail is maintained for future reference and that consistent advice is given whilst not replicating work. The current IM solution is not as efficient and effective as it could be and work is in place to generate a knowledge base of all advice provided as a starting point for support to contingency operations.

One of the key lessons from SCIAD and OA support to Op HERRICK is the need to build effective relationships with the deploying headquarters. The importance of the following came to light through post tour interviews with deployed Analysts and SCIADs:

2.2.1 Employment of S&T support

S&T support must be employed where it can have the most positive effect on UK operations. For SCIADs this needs to be alongside the technical branches that are actively solving UK technical problems. Operational Analysis by contrast should be employed where the high level decisions are made in order to achieve Campaign and Mission success. Often this will be at multiple levels of command including multinational Operational HQs in theatre, static HQs in the UK and the tactical UK HQs in theatre.

2.2.2 The importance of location within a HQ

The location of the deployed staff within a HQ had a significant impact on the success of the S&T support provided. Although SCIADs and Analysts have been deployed in support of operations for many years, there is still limited awareness of the capability they provide and how to make effective use of the support. Those SCIADs and Analysts that were based centrally within the HQ with good situational awareness, were able to proactively offer support as issues arose. Those SCIADs and Analysts that were separated from the main HQ had limited situational awareness and were reliant on the HQ having a good understanding of their role and how to effectively employ them, which often took time to achieve. Consideration of the level of HQ that SCIAD and OA may be deployed into for contingency operations, as well as their specific location with a HQ should be well thought-out.

2.2.3 Support to Mission Specific Training and other exercises

The Support to Operations area within Dstl were not always included in exercises with sufficient notice and were not, therefore, always able to attend. In addition they were not fully incorporated into the writing weeks and Exercise Control (EXCON) elements which limited the input that they could have during the exercise and this impacted on their ability to integrate with the HQ at these events. Early incorporation

of SCIAD and OA during training of high readiness HQs will ensure a better understanding of the role and therefore support that can be provided.

2.2.4 General awareness of the roles

The level of understanding of SCIAD and OA roles within the military is limited, though is generally better for Operational Analysis. This can lead to a lengthy integration time within a HQ, during which the SCIADs and Analysts are unable to provide effective decision support, as they are not utilised effectively in the process and incorporated too late in the decision making to have an effect. Improving exposure of military of all ranks to these roles and the type of support that is available is vital in ensuring that contingency operations are effectively supported. Briefings to specific units, increased involvement in exercises and briefing or awareness days on the support available through SCIAD, OA and Reach Back would all improve general military awareness and understanding of the S&T support available to them.

2.3 Success

There are a number of key examples of SCIAD and OA support, a few of these have been mentioned below:

2.3.1 Support to C-IED Battle

SCIAD involvement in the C-IED battle has been fairly constant throughout HERRICK, including sending a designated C-IED SCIAD from 2009. SCIAD input in this area included the evaluation and testing of detection capabilities and tactics and procedures (GOLDIE, HORN, VALLON and other EOD specialist equipment). SCIAD involvement was also key in the placement and utility of Electronic Counter Measures (ECM) equipment in the protection of locations.

2.3.2 Development of Trials Area

This capability was initially developed in Kandahar in 2007 and enabled rapid and controlled testing of in-service and candidate equipment against specific threats and in an appropriate environment. This capability was deemed such a necessity in countering the IED threat that it was moved to Bastion in 2009 and would be a key enabler in the support of any future operations.

2.3.3 Vehicle Armour Development

There has been a lot of work by deployed SCIADs in driving the S&T research programme to rapidly deploy improvements to existing kit. The deployment of armour plate enhancements for Foden recovery vehicles in 2008 was an example of this and when a vehicle hit an IED following this upgrade the driver walked away with minor injuries.

2.3.4 Acquisition of Critical Theatre Data

Operational analysts and SCIADs have provided a key link between theatre and the UK in collating and developing critical theatre data sets. This resulted in the creation

of the Lord Operational Records Database which has since been used regularly to provide analytical support to decision making on HERRICK. The deployed analysts began collating kinetic data, Significant Acts (SIGACTs), in 2006 and this dataset has been used to provide tactical kinetic analysis to the UK Commander since 2006.

2.3.5   Support to Redeployment

More recently the Analysts collated with JFSP(A) have provided significant support to decision making surrounding the redeployment process. This has involved the development of models to identify bottlenecks in the system and allows multiple courses of action to be compared and assessed.

2.3.6   Campaign and Mission Assessment

Operational Analysts have supported the assessment of the campaign and elements of the various missions undertaken during operations. The Analysts have provided the commanders and staff with an independent assessment of progress in order to help the commander's and staff take remedial action and adapt future plans.

2.3.7   Decisions informed by Analysis.

Analysts have been providing decision support throughout HERRICK including:
* The development of casualty estimation tools that have been used to inform planning.
* Allocation of resources – ISTAR, Indirect Fire warning systems, positioning of assets and informing infrastructure plans.
* Campaign monitoring and polling – providing expert advice on assessment frameworks and measures of effectiveness.

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3 UOR Lessons and Benefits

3.1 The Issue

Since 2008 MOD has claimed £3 Bn from the Treasury to fund UORs. Dstl was tasked to quantify the benefits UOR have provided in theatre, to identify the operational or theatre-specific factors which resulted in the UORs, and to identify lessons from the UOR process, both good and bad, which could be used to improve the UOR delivery process.

3.2 The Outcome

This study has generated a set of recommendations, with accompanying evidence, which will be used to improve the UOR procedures and training in future. This will include;

- Updating the Capability Change Programme Board Terms of Reference (TORs). This is the body within Army HQ responsible for the introduction of UORs.
- Updating the UOR Standing Instructions.
- Updating the content of procurement courses to ensure future Requirements Managers and Capability staff are aware of the procedures.

3.3 Insights and Conclusions

1. All of the land-based UOR subset studied in detail showed clear in-theatre benefit.
2. 91% of UORs rated on the MOD UOR register are described as "effective" or "highly effective".
3. 75% of UORs studied are driven by a theatre or operation-specific requirement
4. There is often a conflict between effort spent on delivering the Equipment element of the UOR and effort spent on delivering the other DLODs.
   a. In general, simple, single-object solutions are more successful than complex systems.
   b. The inclusion of non-theatre specific requirements to meet a future Core capability tends to slow the delivery.
   c. Commercial off-the-shelf solutions to UORs generally reduce logistic demand, are quicker to deliver and have greater impact, but may not integrate with existing systems.
   d. The Information and Training DLODs are critical in ensuring the users 'buy-in' to the capability and use it. There is one opportunity to deliver a UOR to theatre; if this goes wrong, rumour control and army culture make will make subsequent adoption far harder.
   e. For complex equipment, contractor-run/supplied UORs have shown great benefit as they reduce the logistic and training burden as well as the organisational burden if persistent operators are provided.
5. Political pressure can result in UORs failing as equipment is deployed prematurely, before the supporting DLODs are in place.
6. Theatre often develops local solutions quicker and more cheaply, either borrowing equipment from Coalition Allies or improvising existing equipment.
7. If in-theatre users believe in the UOR's benefits, they will tolerate integration issues.

3.4 Recommendations

Recommendations are currently under review by PVH Board and will be provided in an update to this document.

1. A single-point-of-truth UOR database be created, containing all information related to each UOR. This would consist of underlying documentation, such as the USUR and business cases, and full data on implementation, such as dates and costs.
2. A number of brief case studies are created, providing examples of UORs which worked well and those which did not.
3. A one off working group, consisting of UOR Stakeholders, should be arranged to review the evidence and conclusions presented in this report, with a view to producing recommendations which could be implemented to improve sections of the UOR process.

3.5 Method and Findings

UOR lessons: Interviews with military personnel and Subject Matter Experts (SMEs) throughout the MOD, captured both what went well and what could have been improved regarding 90 land-based UORs and, more importantly, captured the backroom reasons why these things happened.

Figure 1 shows that the majority of UOR problems (DLOD or capability integration problems and a lack of training or trialling) were due to the rapid development and deployment of equipment which is inherent to the UOR process. The sections representing these are shown as extended in the figure below.
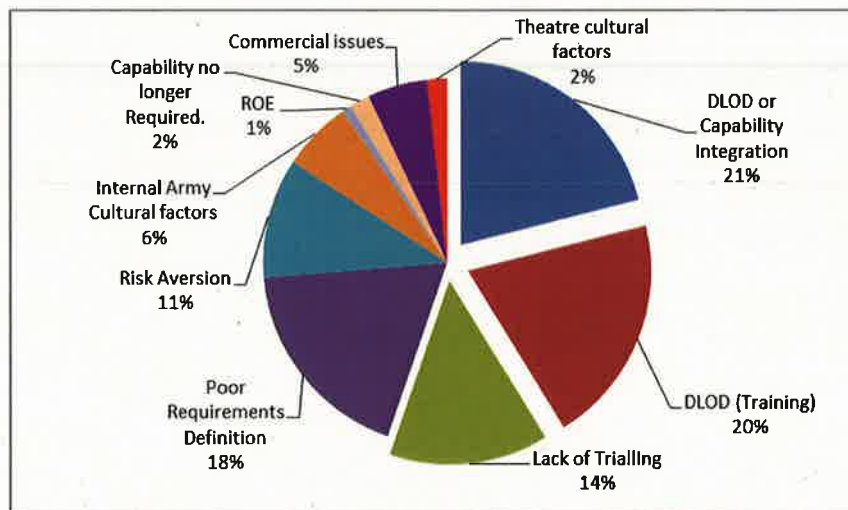
Figure 1: Reasons for problems with UORs

3.6 Why UORs were needed

Analysis of the operational requirements that lay behind 268 land-based UORs were taken from the initiating documentation, particularly the Urgent Statement of User Needs. The results are shown in Figure 2 below. It can be seen that around 75% of UORs (those wedges not exploded) are due to an unforeseeable change occurring in theatre.
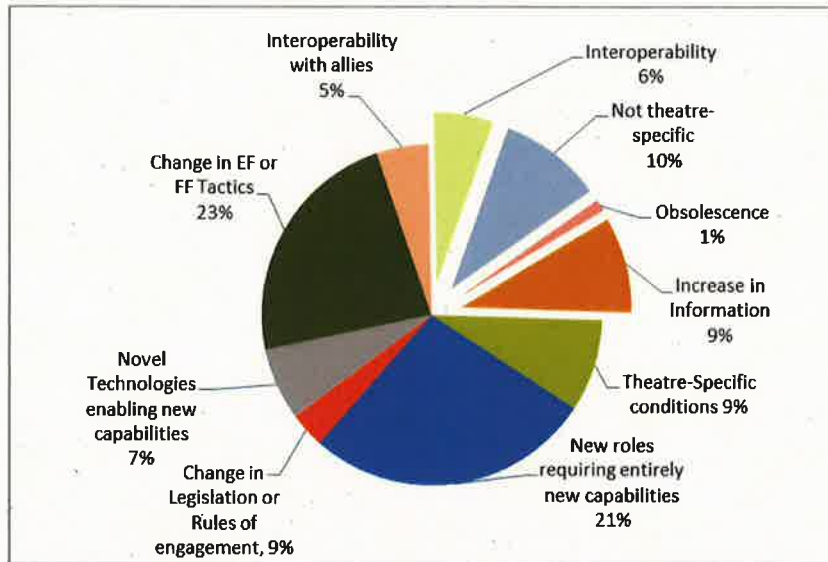
Figure 2: Reasons for introduction of UORs

## 3.7 Examples of in-theatre UOR benefits

3.7.1 Background

The following examples are extracted from a more detailed report produced as part of the VALKRIE programme that was generated to produce an evidence-based review of the Land Urgent Operational Requirements (UOR) process[4]. The examples highlighted here (and in Section 9 on Casualty Analysis) are those for which there is clear robust numerical evidence; the referenced VALKYRIE report contains further examples (e.g. the Lifesaver Water Bottle and the Black Hornet Nano-UAS) which have clearly delivered benefit but for which the evidence is based on qualitative reporting derived from a number of sources (e.g. Post Operational Tour Debriefs (POTDs) and Operational Lessons for Science and Technology (OOST)).

3.7.2 Sharpshooter

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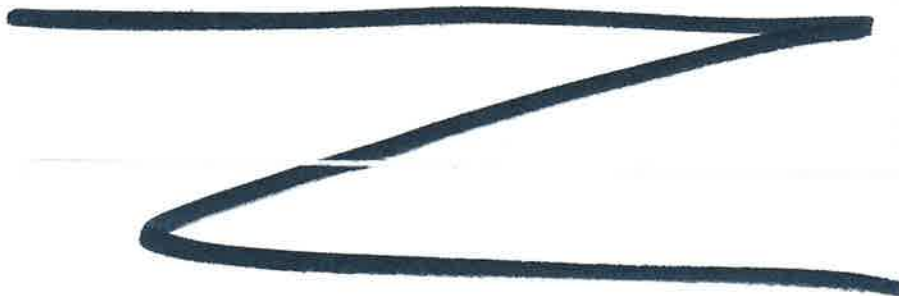
[4] VALKYRIE Work Package 34: UOR Benefits and Lessons, DSTL TR78575, Chorley, L. & Barker, P., dated February 2014
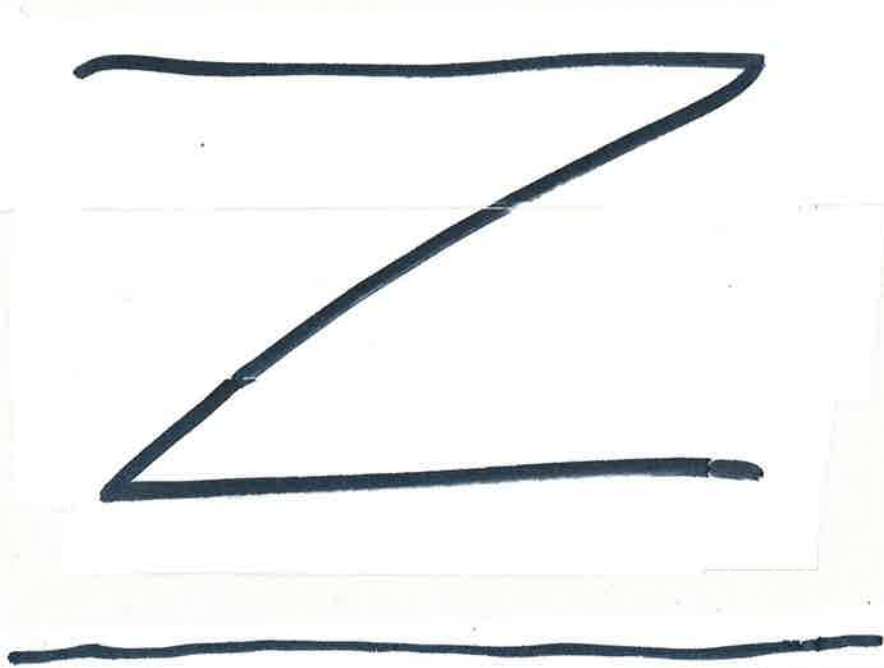
3.7.3 CVR(T) Environmental Mitigation Programme

This programme was a package of upgrades intended to improve the reliability of the CVR(T). Dstl compared Availability and Serviceability data between H8/9 and H9/10. Figure 4 shows that both measures improved after the introduction of the UOR, between H9 and H10. Availability almost doubled whilst Serviceability rose by almost a third.
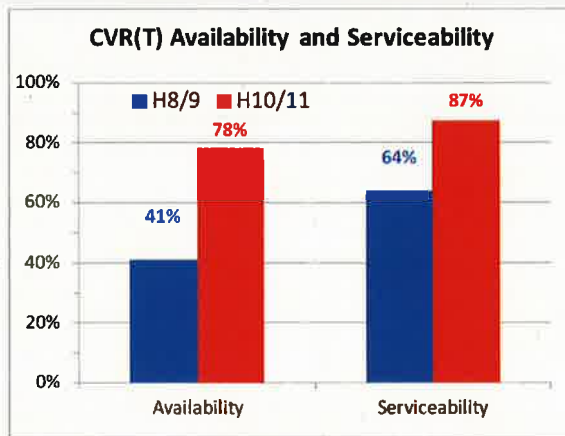

Figure 4: Availability and Serviceability of CVR(T) Theatre Holdings before (H8/9) and after (H10/H11) the Introduction of the UOR

3.7.4 Enhanced Armour MASTIFF

MASTIFF was introduced as a UOR as a response to the threat from IEDs. During its service on Op HERRICK a number of further UOR improvements were made. Data on MASTIFF vehicles involved in mine or IED incidents was taken from LORD, which allowed analysis of the frequency of strikes, numbers of UK casualties

according to severity, as well as a comparison with earlier vehicle variants. Figure 5 is a comparison of the number of troops wounded in action against number of incidents. This is a representation of real data at a higher classification[5].
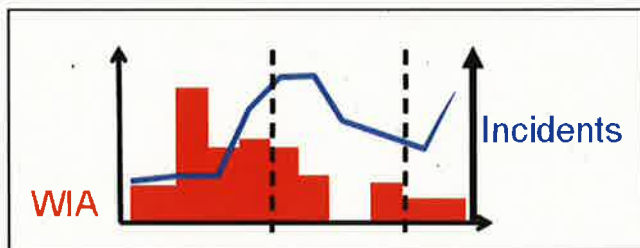

Figure 5: Schematic showing Frequency of WIA from IED Incidents involving MASTIFF over Time

Blue represents the numbers of incidents, and red the number of troops WIA per incident. The dotted lines illustrate the introduction of MASTIFF2 and MASTIFF3 respectively. It can be seen that the Casualty/Incident ratio remains low after introduction MASTIFF 2, left-hand dotted line, and MASTIFF 3, right-hand dotted line, despite the total number of strikes increasing.

Figure 6 outlines the incidents and the range of injuries incurred before MASTIFF was introduced, and subsequently for MASTIFF. It demonstrates the significant improvement that MASTIFF produced: only approximately 5% of strikes result in any T1 casualties, compared with over 25% of incidents involving pre-UOR vehicles.
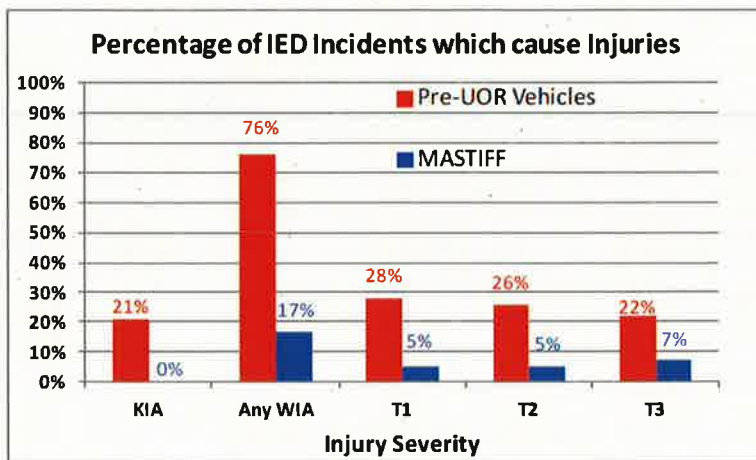

Figure 6: Proportion of IED Incidents which Caused Injury, by Severity

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[5] DSTLTR/79161 VALKYRIE WP34: UOR Lessons and Benefits, Annex C, 20 Feb 2013, Chorley, L.

7-3_22

7-3_23

4 Rapid Development Programmes (███████ VALKYRIE and HERCULES)

Dstl scientists engineers and analysts worked closely with the military customer to deliver UOR-able research into theatre within a rolling 6 to 12 month timeframe. The work was driven by operational requirements and was both proactive and reactive, responding very quickly to changes in threat and INS posture. The aim of the programme was to support UK Forces to maintain the initiative in the technology battle in order to improve our freedom of manoeuvre and to expand our tactical capabilities.

Led by Cap GM and PJHQ, the three programmes for enhancing survivability, improving tactical capability and reducing the dismounted soldier's burden delivered exceptionally capable and world-leading equipment, ranging from mine protection upgrades to vehicles, personal protective clothing for pelvic protection, MTP camouflage to manage the observable signature for ancillary equipment (e.g. "brown is the new black"). The programmes were called ███████ VALKYRIE and HERCULES.

4.1 ███████

This programme was continued from Op TELIC. Its focus was Force Protection, for soldiers in vehicles, on foot or in base locations. As example, in the vehicle field the project developed improved protection and survivability from underbelly mine threats; protection from explosively formed projectiles and RPGs; ███████ ███████, world class mine protection for FOXHOUND (IOC from standing start within 3 years); WARRIOR fire protection; ███████ mine blast ballistic improvements to JACKAL, WMIK and logistic vehicles; ballistic enhancements to VIKING and WARTHOG; and innovative attachment methods for MCC platform spall liners. In the personal protection area: improved weight/protection characteristics for personal protective clothing; development of a lightweight helmet; accelerated research to understand wound damage through fragments and blast – which resulted in the development of extremity protection schemes such as the ballistic undergarments "Porton Underpants".

4.2 VALKYRIE

This programme examined tactical capability in a number of areas for bases, dismounted and mounted troops, identifying and refining potential capability improvements and investigating technology solutions in those areas. For FOBs, the ███████ ███████. VALKYRIE undertook a thorough review of vehicle electrical power issues, leading to manufacturer development of more robust power generation for Husky. For dismounted troops, ███████ ███████, and also essential supporting analysis for procurement and employment of the Black Hornet nano-Unmanned Air System (UAS).

7-3_24

4.3   HERCULES

This programme addressed the acute issue of burden on the soldier (each soldier on a dismounted patrol on Herrick was carrying an average of over 57Kg of burden, made up of armour, weapons & ammo, electronic equipment and sustainment. The aim of the HERCULES programme was to accelerate S&T in order to reduce the physiological and cognitive burden of the dismounted soldier. The programme was split into three strands:

- Better Equipment – to investigate ways of making equipment lighter, ergonomic, more breathable, etc;
- Better Soldiers – to improve the way soldiers are prepared in order to deal with physical and cognitive burden, and
- Better TTPs – ways to improve tactical soldiering to reduce burden.

HERCULES produced a range of outcomes. Within Better Equipment, the programme investigated lightweight ammunition casings and ammunition link, a lightweight underslung grenade launcher frame, and a lightweight alternative to the GPMG. In addition, the programme investigated low burden Personal Protection Equipment (PPE), cooling sleeves, lightweight ECM battery cases, and the integration of load carriage equipment with body armour. Within Better Soldiers, the programme produced advice on nutrition, physical preparation and the relationship between burden and cognition. Finally, Better TTPs investigated the tactical resupply system and whether a risk based approach to body armour could be adopted in order to reduce burden.

4.4   Insights

These programmes revealed a range of insights that should prove enduring, and steps have been taken within Dstl to institutionalise best practice.

4.4.1   Understand the Customer Requirement

Experience showed that scientists could assist their military colleagues in refining the capability requirement into a set of objective capability outcomes that could be understood and developed within the scientific community and Industry. Also, research had to anticipate that the Customer Requirement was likely to change in a dynamically developing theatre to reflect shifts in Threat and force posture.

4.4.2   Identify and Exploit the Realisable Technology within the Given Timescale

The early engagement of Dstl scientists to support the development of the equipment and transfer of knowledge to Industry proved essential to reduced lead times and generate an optimum UOR solution

4.4.3   Build Trusted Relationships

Dstl worked closely with theatre, PJHQ, HQ Land, DE&S staff and Industry to help define, plan, develop and trial the capability improvements. Shared trust among contributors was key to success. To realise this, integrity imparted a sense of

honesty in the achievability of a project, good communication was key to maintain an accurate shared understanding among a wide stakeholder group, and a partnership approach shared the risk and sense of fulfilment.

4.4.4 Effective Business Model

To meet the operational tempo and the evolving Threat, Dstl and the military customer developed an intentionally challenging 8-week timeline for their Customer Boards, where trends were identified and assessed, and a rolling cycle of contender projects were proposed, approved, extended or cancelled as their potential was realised.

7-3_26

7-3_27

5   Project MORPHEUS (Insider Attack)

5.1   Understanding Insider Threat (I/T)

Dstl conducted statistical analysis on all Green-on-Blue (GoB) incidents. The database produced became the benchmark for MOD and Army decision-making and the information has been utilised in providing rapid responses to specific reach-back questions from theatre and PJHQ. The quarterly reports have also been used in military planning for Brigades before they deploy.

Specific factors which may lead to an Insider Attack (I/A) were ascertained in the Upstream Mitigation study through interviews with returned Cultural Specialists, Brigade Advisory Group (BAG), and Police Mentoring Advisory Group (PMAG).

Collaboration with international partners, Australia and America, has enabled the sharing of best practice.

Dstl research has become an important part of the AKX▬▬▬▬ web pages
http://akx.landforces.r.mil.uk/LXC/pages/DSTL_OTHER_analysis.aspx

5.2   Improving Training

Rapid development of a computer simulation ▬▬▬▬▬▬▬▬▬▬
▬▬▬▬▬▬▬ as been incorporated into pre-deployment training and will be implemented across the three services.

Using best practice from public sector organisations the Verbal Defence study has produced key recommendations for rapidly exploiting Verbal Defence and Influence (VD&I) tactics and techniques into military training to improve their ability to deal with conflict.

There is no capability owner across defence for soft skills, specifically the training of interpersonal skills. It has been identified that this will most likely become critical in the future with the advent of Defence Engagement and increased use of Short Term Training Teams abroad.

The development of a Training Needs Analysis (TNA) to define and enhance the training requirements of personnel ▬▬▬▬▬▬▬▬▬▬▬ has been produced and could be used as a starting point ▬▬▬▬▬▬
▬▬▬▬▬▬▬ to meet future requirements for contingency.

The Dstl investigation into the Knowledge, Skills, Attributes and Other abilities (KSAOs) for the selection and training of mentors has been provided to Sandhurst for mentor training.

5.3   Improving TTPs

A study was conducted into available Non-Lethal weapons for avoiding use of lethal force when an imminent I/A is suspected.

7-3_28

5.4   **How you got there:**

Dstl recognised the need for S&T to support the Army ██████████████ and established Project MORPHEUS to complement projects ████████ VALKYRIE and HERCULES. The project management included clear deliverables that demonstrated the S&T progress on an on-going basis. Quarterly progress meetings with PJHQ and other stakeholders offered effective engagement and pull through of the S&T.

5.5   **What does Dstl need to do to get there quicker the next time:**

Dstl needs to obtain military sponsors for each of the work strands and other stakeholder buy-in to the programme early on to enable Dstl to get to the programme outcomes quicker next time. Dstl needs to be recognised as the centre for all S&T research across defence, especially in niche areas such as Social Science and human behaviour. By placing Dstl at the centre of such issues early they would be able to share knowledge and experience across defence more effectively.

5.6   **What were the key activities?**

5.6.1   **With whom?**

The key military stakeholders included: PJHQ, Task Force Helmand, DLW, OPTAG, RTMC, RAF FPC, RMA Sandhurst, DCSU. Good use was made of Extra Mural Research (EMR) to contract commercial firms to use specialist skills not readily available in Dstl. For instance, a software company assisted with the development of the simulation trainer. Dstl also partnered with the Centre for Defence Enterprise (CDE) to gain innovative ideas from outside defence to counter the I/T.

5.6.2   **What did it take?**

5.6.2.1   **The establishment of trust**

There was a degree of scepticism from some stakeholders about Dstl's ability to contribute to aspects of (██████████ . Through regular stakeholder engagement: including a stakeholder steering group, project strand briefings and demonstrations, Dstl has been able to build significant trust. The AKX website and MOD Athena database have been utilised to exploit Dstl's Project MORPHEUS work and encourage confidence in the S&T Outputs.

5.6.2.2   **The appropriate "business model" to achieve the required operational tempo**

The project team needed to work with the existing Dstl S2O capability and TFH to understand the best model for delivering the reach back and surge capability at the right tempo. A continual challenge was maintaining awareness of the military requirements and identifying separate parallel initiatives in other parts of Defence S&T to avoid duplication of effort.

5.6.2.3   **How was innovation forced through and exploited**

The participation of a Dstl SO2 military adviser with Op HERRICK experience was crucial in providing context, facilitating links with military stakeholders, and ensuring exploitation of the output by bridging the gap between scientific report and TTPs.

The team also focussed on ensuring there was regular stakeholder engagement and support.

5.6.2.4 What were the key benefits that were realised

With I/T it is not possible to 'prove the negative', for example "this I/A did not happen thanks to the knowledge provided by Project MORPHEUS". However, many stakeholders recognised the additional understanding provided by Defence S&T. It was generally accepted that Dstl contributions improved understanding of the causes of I/A and the development of TTPs to reduce the incidences, and also in providing important recommendations for enhancing current training.

7-3_30

7-3_31

6 Operational Lessons and Historical Analysis

6.1 Lessons to Inform S&T

Op HERRICK raised the profile for gathering and utilising Observations, Insights and Lessons[6] (OILs).   Whilst gathering OILs was not new, the changing nature of operations in Afghanistan increased focused a more responsive posture for the OILs process on how those lessons could be better exploited by the S&T communities, to accelerate the S&T and military 'business cycle'.   Moreover, OILs enabled MoD to optimise the use of its intellectual capital, much of which was generated by operational experience, to inform its future thinking.   Importantly, the interviews were gathered first hand, from private soldiers to commanding officers.   Interviews were structured to gather evidence to support each lesson hypothesis, to reduce the opportunity for party line observations or unsupported conjecture.

6.2 Operational Lessons for Science and Technology (OOST)[7]

OOST was developed from an earlier STRATOS funded LORST study (Land Operational Research for S&T)[8]. The OOST process is illustrated below:
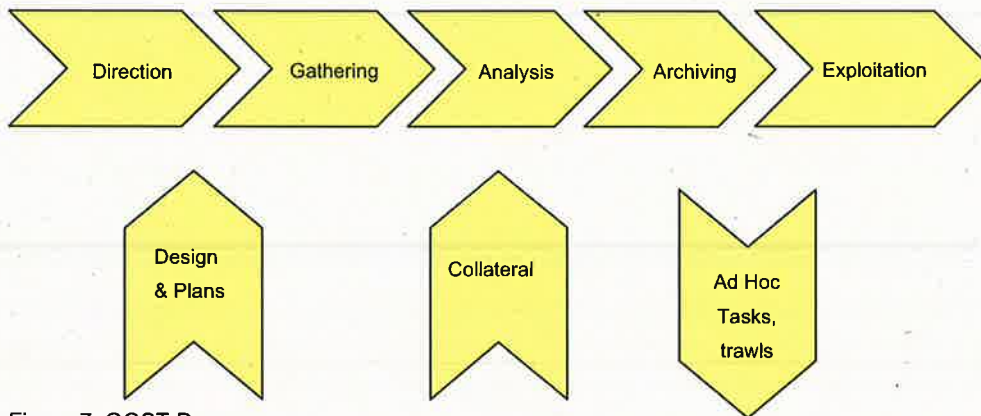

Figure 7: OOST Process

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6 Throughout the Lessons community, Observations, Insights and Lessons are also referred to as 'Lessons', 'Lessons Identified' and 'Lessons Learnt.' This project takes the view that these terms are often used interchangeably.

7 The S&T driven 'lessons' activities complement extant ones driven by the pan-MoD lessons community including: JFC Lessons – who took over the lead from DOC and are responsible for the MoD DIN 2012DON03-040; DCDC lessons - who manage the Joint Lessons Library and DLIMS (the Defence Lessons Information Management System which has 'R' and 'S ' variants; Directorate of Operational Capability (DOC) who conduct 4 Star level reviews of operational capability including audits; Corporate Memory – the final repository of operational archives but also significantly involved in trawling the data for legal cases; Front Line Command (FLC) lessons branches, currently the largest being the Army Lessons Exploitation Centre (LXC); Dstl Support to Ops (S2O), lessons studies teams, historical analysis and supporting contractors.

8 Gathering and Use of Lessons from Operations for Science and Technology – Final Report. C Blendell, D Lewthwaite, Dstl CR30382/1.0 dated 31 Jul 08.

7-3_32

6.3 Best Practice

6.3.1 Overarching Management and Generation of Lessons Capability

A mixed team of senior analysts and military advisers ensured that the military context of the interviews and the significance of the reporting were understood. A shared report archive allowed ready access across Dstl, and was networked across the MOD lessons community. Interview technique training was given, an interview protocol was agreed with JFC and the Army, and direction for interviews was gained from the key stakeholders who would be the likely exploiters of the information. Interview staff pre-read PORs before the interview, and specialists were added to the core team for particular subjects. For the contractor-delivered OOST programme, QinetiQ obtained suitably experienced SMEs, typically ex-military, to substitute for the Dstl military advisers. No electronic recordings were made and interviewees told that comments were not personally attributed. Hard data was taken where possible; firings logs, traces etc. Headline notes were drafted and returned to the unit for its correction and approval, ahead of publication. OOST staff attended the LXC run Mission Exploitation Symposia (MXS) to share information.

6.3.2 Historical Analysis

Once OILs have been obtained from an operation they are by definition 'historic'. Short term insights, lessons and actions (e.g. a new TTP or UOR) within the 'business cycle' of the operation were regarded as 'current'. For longer term analysis formal Historical Analysis (HA) was used. At its most simple this could be aggregation of insights with basic analysis or themed studies from current OILs (e.g. HERRICK 1 to HERRICK 18 etc). HA also allowed a review of other similar operations, (e.g. TELIC) or other nations operations (e.g. Newcombe/Serval (Mali), Lebanon, Vietnam etc). HA and current OILs are highly complementary to other OA evidence sources, such as modelling, gaming and simulation, fast tools and Warfighting Experiments (WFE). All were employed to bring added value to the overall analytical picture.

6.4 Insights

- Maintain some S&T staff in the overall lessons and HA networks both within MOD and internationally.
- From the outset of a contingency operation, be prepared to institute an S&T lessons system as used in LORST/OOST using the practices and protocols recorded, initially with Dstl staff.
- Encourage wider use of operational data in studies where appropriate including in COEIAs (Combined Operational Effectiveness Investment Appraisal – a formal comparison of acquisition options on a cost versus effectiveness basis to satisfy a User Requirement).
- Use wider insights and evidence from a range of operations including for other countries

7-3_34

7   Incident Analysis, LORD and the ORC

Dstl provided detailed and accurate incident analysis, and introduced the LORD database to support UOR development and to inform Intelligence assessments. Dstl's complementary analysis of actual incidents and attacks in Theatre yielded data on the frequency of specific threats and their impact on our offensive and defensive capabilities. Its weekly Operational Reporting Compendium (ORC) brigaded all operational reporting into a single "go to" reference document for staff officers and analysts.

Dstl analysts at the Land Threat Focus & Coordination Team synthesised information from a range of operational reporting.[9] The team's Operational Research provided hard data and insight on the circumstances, weapons used and the impact of enemy attacks: this in turn revealed the frequency and impact of the enemy's use of each weapon system and its different tactical employments. Analysis was passed forward to Theatre where it was available to inform Commanders' planning on the ground. In UK it was also used within UOR development by PJHQ, the Research community and by DE&S to help prioritise emerging capability requirements, highlight the need for additional research, modifications to existing equipment or the provision of new equipment and countermeasures.

Operational reporting from Theatre was collated within a single Dstl database – the Land Operational Reporting Database (LORD) – which provided a single authoritative source of operational reporting, available to all authorised researchers across Dstl, and which responded to RFIs from Theatre, MoD, PJHQ, Land and DE&S stakeholders. This ensured a consistent source of data and analysis to inform the Land environment Threat on Herrick. The LORD Database Entry Screen is shown at Figure 8.

The LTFCT also produced a weekly compendium of all operational reporting from Theatre (the ORC) on DII to facilitate wider access across the breadth of Herrick stakeholders, and to provide a single reference document for staffs to monitor events within Theatre without having to consult each individual report. It provided a summary of all principal incidents involving UK casualties or attacks on vehicles or static locations, which included logs of all the incidents involving each of the vehicle platform types. The vehicle incident logs were acknowledged as the most comprehensive records held within MOD.

The daily monitoring of operational reporting allowed Dstl analysts to develop sufficient familiarity with events in Theatre that they were able to spot the unusual or incongruous as it occurred, from even small changes to either our or the enemy's

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[9] These included significant incident reports (SINCREPs), method of attack reports from Weapons Intelligence Specialists (WISREPs), C-IED AssessReps and monthly reports, Afghan/Pak weekly reporting, details of the impact of an attack from casualty reporting (CASREPs), vehicle damage in Serious Equipment Failure Inspection Team reports (SEFITs), SCIAD and OA reports, and Operational Learning Accounts and After Action Reviews (OLAAARs).

posture. This information allowed appropriate responses to be initiated promptly in both the research and equipment programmes. The LORD incident analysis complemented intelligence assessments and casualty analysis to provide key underpinning for work within the ~~███████~~ . VALKYRIE and HERCULES programmes, and provided numerical data and analysis to answer Reachback requests from Theatre.

Figure 8: LORD Database Entry Screen

The analysis was also exploited to underpin evidence for HM Coroners' inquisitions, and to inform the work of the Directorate of Judicial Engagement Policy. Beyond the requirements of Herrick, the material was used in Land Force Development to populate SAG scenarios and other studies addressing future force packaging and balance of investment decisions. The enduring utility of LORD was demonstrated by its increased use even as the level of violence in central Helmand reduced as result of Transition.

Insight
The utility of accurate objective Threat data and analysis and a means to exploit it to aid the understanding of the military and the research customer will be an enduring requirement from the outset in Contingent operations, and will provide a lasting historical record.

7-3_36

7-3_37

8 C-IED Detection

8.1 Background

The IED threat had a profound effect on the conduct of Op HERRICK, and led to significant investment to identify effective countermeasures and make them available in theatre as battlefield equipment or effective TTPs. The speed of evolution of the threat and its devastating consequences on casualties demanded an innovative approach in response.

No single area within MoD had the responsibility to develop capabilities to counter an IED threat, and so an overarching strategy and management mechanism was established.
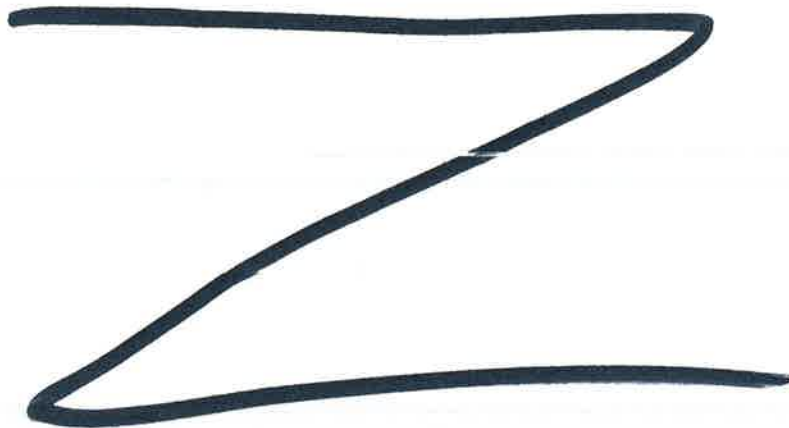
The Detect area of C-IED established the C-IED Detect Options Transition Board. That military and civilian body adopted a cross-DLOD effect-based approach from its outset, and demanded a holistic solution from its stakeholders, through which each stakeholder could be held to account for the delivery of contributing elements of the solution. That collegiate mechanism drew in the professional knowledge and conceptual thinking from each member of the wide stakeholder group, and allowed a broad spectrum of candidate solutions to be introduced, examined and assessed. It was expensive in human and financial capital, since some options inevitably failed: for example through immature technology; inability to productionise; or changed requirement in theatre. Central funding was essential, and was made available through NACMO[10].

That successful business model, and similar mechanisms within Projects ▬▬▬ VALKYRIE and HERCULES influenced the establishment of Programme Management within Dstl, integrating the delivery of smaller projects into Programmes which focused on real, useable customer benefit alongside their more narrowly defined project outputs.

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[10] Net Additional Cost to Military Operations

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8.2 Insights

Early C-IED detect solutions drew on existing research that could be accelerated to meet the new threat. Although it follows that research should restock its shelves to best prepare for the next contingency, the possibilities are wide and it is unlikely that ready solutions would be available for an unknown threat. Some restock will be essential, and greater emphasis should be given to cross-fertilization between research disciplines and in exploiting cross-DLOD synergy across the military and research communities, to broaden people's horizons so that when the unfamiliar arises they are better attuned to tackle it.

7-3_40

9 Casualty Analysis, Equipment Inspection and Fragment/Bullet Analysis

Dstl conducted a range of activity in casualty, equipment and fragmentation analysis to gather a better understanding of the nature of the effects of threats on personnel and on their Personal Protective Equipment (PPE). Many hurdles were overcome, principally due to the ethical and legal implications of handling particularly sensitive and personal data. A network was developed between experts in Dstl, SIB RMP, Weapons Intelligence Specialists, SG, Defence Statistics, HM Coroners and the Defence Inquests Unit to gain all of the necessary approvals to handle personal medical data, criminal investigation information and incident reports. Trust, integrity and security of personal information were essential in developing the mechanism, which provided a significant evidence base to the MOD Combat Casualty Trends WG to inform priorities for improved PPE. This work was also shared internationally, to gain insights into lessons identified from other allied nations.

9.1 Casualty Analysis

Dstl gained experience in this field from the Hostile Action Casualty Survey (HACS) analysis it conducted in support of operations in Northern Ireland. That work was discontinued when hostilities ended, and during Op TELIC and initially in Op HERRICK no system existed to indicate the cause of casualties in the conflicts, the effectiveness of protection, or to provide evidence on the effect on personnel of a changing threat. Dstl and the SG's academic department of military emergency medicine established a reporting system, leading to the Joint Theatre Trauma Registry (JTTR) to record medical, threat, injury and force protection data for personnel seriously injured and killed on operations. The sensitivities in this data are significant: the handling of the medical information is strictly controlled by medical ethics and legal constraints; and the handling of information on threat and PPE effects controlled by security considerations. The former was controlled by the SG's medical director (for survivors) and HM Coroner (for the dead) and maintained by Defence Statistics (for data integrity/control); and the latter was matched and validated from the LORD database, maintained by Dstl. The security and ethical considerations were overcome in time and a protocol to handle the information was established at Dstl.

The current casualty Analysis capability holds the most extensive records for personnel killed and seriously injured on operations in Iraq and Afghanistan, and, at the time of writing, was trying to reinstate data from previous conflicts, including NI, Balkans, Falklands Islands and Sierra Leone). Should this work form an enduring capability, it would be used to provide timely advice on threats and the nature of the injuries in future conflicts where military personnel will face different threats. Based on experience gained in establishing the current capability (people, infrastructure, knowledge and protocols) reinstatement from a standing start would take between 3 – 5 years.

Significant work was also done to refine the quality of data recorded from casualties. Software was developed to map wounds on a three dimensional representation of the human body. The software provided a graphical representation of the effect of

various protection measures that could be used in training as well as an analytical tool, and used an internationally recognised injury severity scoring system. Figure 9 indicates the efficacy of fragment protection provided by body armour to the torso.
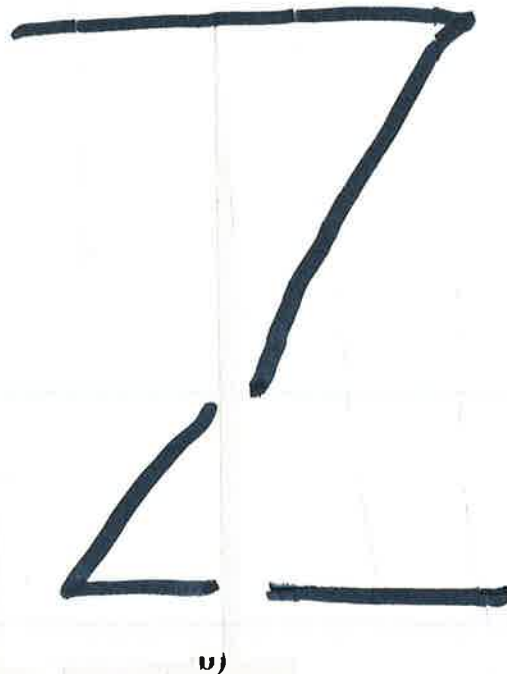

a)   b)

Figure 9: Screenshots from IMAP demonstrating the anterior surface wound locations for survivors of fragmentation wounds; a) Wearing a ballistic vest; b) Unprotected.

9.1.1   Examples of Casualty Analysis work and outputs

Casualty Analysis work highlighted trends in the nature of injury patterns to personnel when in vehicles and dismounted. The analysis of casualties in vehicles provided evidence for modifications, and in some situations prevented nugatory work where modifications were not justified. It also helped focus effort on additional protective measures and TTPs due to the changing threat. As example information on any increase in eye injuries that may have resulted from poor compliance with instructions to wear ballistic eye protection were fed to theatre; moreover the confirmation of a trend of increased genital and pelvic injuries as the threat changed identified the need and the performance requirement for tiered pelvic protection. Figure 10 shows the number of casualties with upper leg, genital or pelvic injuries divided by the number of casualties for a specific threat type).
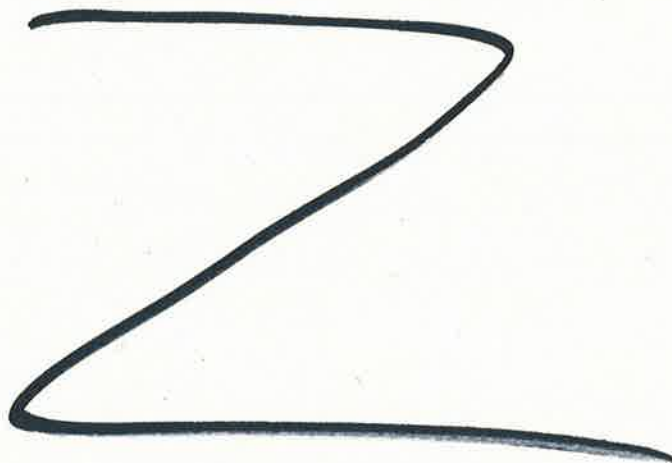
Figure 10: Graph showing change in injury type for a specific threat generated by the Casualty Analysis, leading to the work on pelvic protection

That work was exploited through regular surge research programme boards (e.g. ██████ , VALKYRIE and HERCULES) and the Combat Casualty Trends WG, with representation from FLC, SG, Defence Statistics, MOD HOCs, PJHQ and DE&S.

9.2   Equipment Inspection

In the wake of adverse press over the provision of PPE, in particular body armour, Dstl was tasked to provide expert witness support to police investigations of suspicious deaths on operations. The response was the formalisation of a forensic examination of the PPE of personnel killed on operations along with a detailed expert report provided to SIB RMP and HM Coroner. In addition, PPE equipment from personnel who had been subjected to a kinetic threat was sent to Dstl, irrespective of their condition, for detailed examination, and the analysis passed to DE&S and Commands for action. The examination determined whether the equipment was correctly worn (i.e. appropriate UK military issued equipment), correctly manufactured, properly maintained or modified in any way. The results of this examination would determine whether any lessons could be identified for the equipment procurement authorities, the equipment trainers or for deployed personnel, to reduce the risks of injury. Examples of advice provided as a result of that are:

- The inclusion of side-plate pockets in the later designs of Osprey (since personnel were modifying their equipment to fit armour plates under the arms) – to inform equipment design.
- Advice on the correct assembly of Osprey (fillers incorrectly fitted, plates not in pockets, plates not in covers, etc) – to provide lessons for equipment trainers.
- Advice on the carriage of rope (so that it did not affect emergency access to a casualty wearing Osprey) – to inform personnel in theatre.
- Notes on the folding of fillers in the Tier 2 Pelvic Protection – to inform equipment design and routine checks in theatre.
- Notes on the areas of damage – to inform equipment design.

This work also had other advantages including the support to HM Coroner in their investigations, peace of mind to families about the equipment provided to their deceased relatives, defence of media challenges about the quality of equipment and examples of success stories to reinforce the correct use and maintenance of equipment.

9.3   Fragment/Bullet Analysis

In addition to examining the returned equipment, Dstl established a programme to identify the nature of the threat items that were removed from personnel and equipment. This provided an understanding of the injurious items, and allowed a realistic threat spectrum to be defined based on ground truth rather than theory.

This work provided analysis of bullets that had been recovered, demonstrating threats that were not originally anticipated as well as providing profiles of fragment sizes and where they were recovered. In addition to the Casualty Analysis work that provided evidence of an increase in pelvic injuries, this item of work identified the threat spectrum for the pelvic protection enabling a protection in the form of lightweight silk that provided improved protection. The fragment spectrum is shown below in Figure 11.

Fragment Mass Compared to Position Found in the Body
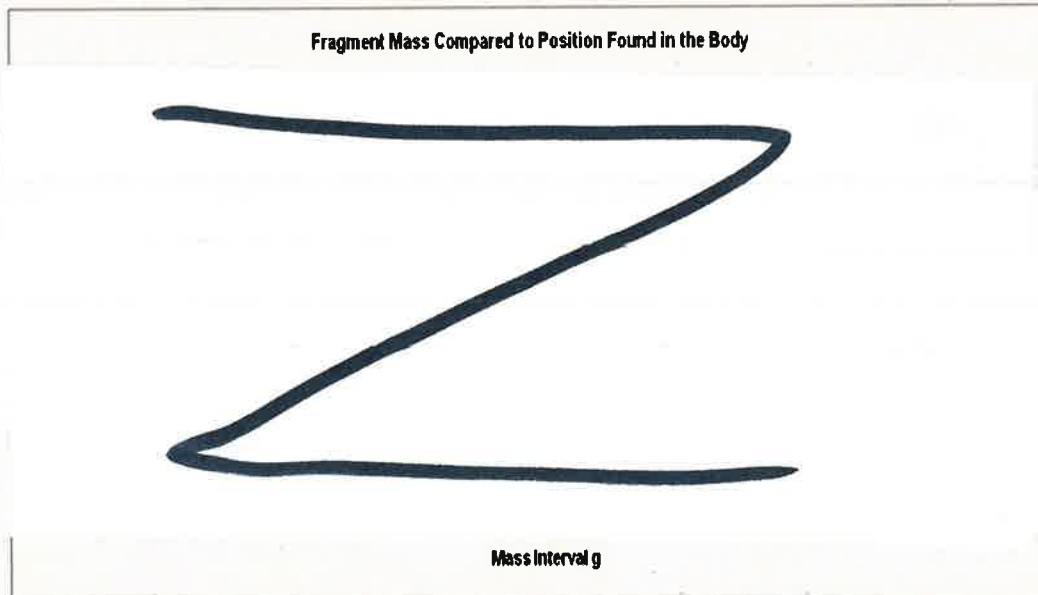
Mass Interval g

Figure 11: Different sized fragments and locations of recovery.

Overall, the work provided an evidence base for the actual threat faced by personnel on current operations and its effects, in contrast to a perceived threat based upon legacy information, typically from a previous conflict or an assessment of the possible threat. It provided essential information on performance requirements to support surge research and equipment programmes, and provided significant support to Defence Intelligence to inform its threat assessments.

9.4 Insight

The development of trusted relationships, an effective enterprise and exploitable data takes time to mature. Casualty analysis, equipment inspection, and fragmentation analysis provided significant support to equipment improvements on Op HERRICK, instilling confidence, reducing injury and saving life. Its expert support to MOD, SIB RMP, and to HM Coroner provided authoritative evidence and insight in the conduct of enquiries. Strong consideration should be given to maintaining the capability.

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10 Human and Social Influence

10.1 Highlights

There are two highlights in this area:
- A new operating model for Dstl to provide reach back and in-theatre surge human and social science analysis support to current theatre in support of TFH influence activities.
- S&T support to mainstreaming military capability in influence activities in pre-deployment training, SOPs and TTPs.

These outcomes were achieved by planning a long term (multi-year) research programme that had clear short term (in-year) deliverables that demonstrated the S&T progress on an on-going basis. There was also a comprehensive stakeholder engagement plan to ensure effective engagement and pull through of the S&T.

Through this plan, trust with key stakeholders (Task Force Helmand, TIO (now MSE), 15 POG, DLW, DCDC, JOITAT) was built by delivering coordinated engagement activities. There was a stakeholder steering group, seminar series and SharePoint site that could be accessed via DII. These activities enabled Dstl to establish its credibility as the centre for S&T for Influence Activities.

The project team needed to work with the existing Dstl S2O capability and TFH to understand the best model for delivering the reach back and surge capability at the right tempo.

With all deliverables the project team identified existing publications and activities that the S&T advice could be inserted in to. The team also worked hard to ensure regular stakeholder engagement.

Key benefits were ensuring that the human and social influence S&T was readily accessible to theatre and that the work produced was meeting current operational requirements. Through the stakeholder engagement activities the research programme also enabled a more unified military influence activity community.

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11   Evolution of the Network Analysis Capability – S&T Support to Defence Intelligence

11.1   Introduction

This section highlights how Dstl assisted Defence Intelligence Assessment Staff (DIAS) transform its analysis of human networks, and outlines the evolution of S&T support. Within Dstl it is managed through the Strategic Analysis Group in the Policy and Capability Studies Department.

11.2   Concept Development

Until 2004 DIAS produced intelligence assessments of human networks using qualitative, judgement based analysis from intelligence reporting. A junior Dstl analyst identified the potential of using Social Network Analysis (SNA) methodologies in intelligence assessments to inform analysis of terrorist and insurgent networks[11]. A small case study demonstrated the concept successfully to DIAS. A number of increasingly complex case studies were conducted in conjunction with them and other Intelligence partners to prove the concept fully for use in support of operations. From that work it was seen that other systematic analytical processes to structure raw intelligence reporting would yield significant additional benefits.

11.3   Operationalising the Capability

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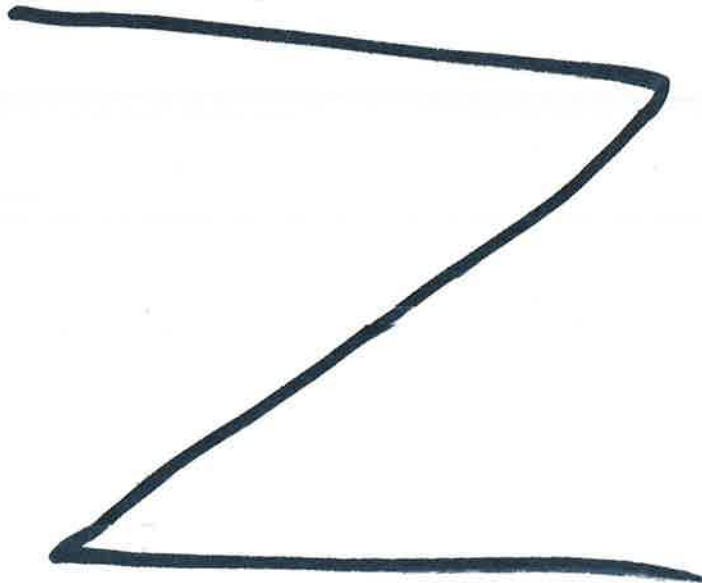
[11] This has subsequently expanded to analysis of key political and tribal power-brokers.

[12] Social Network Analysis Research Exploitation.

[13]

- Development of training to inform the wider Intelligence Community of network analysis methodologies and their application.
- Investigation of the utility of open source data for network analysis[18].

11.4   Enduring Benefits

- The SNA approach demonstrated significant added-value on Op HERRICK at the strategic, operational and tactical level resulting in several accolades.

     . The team received a VCDS commendation for its operational utility, a CSA commendation for the scientific approach and a TTCP award for effective international research collaboration[20]. Its analysis has also facilitated improvements in the way collection agencies report Intelligence.

- The methodologies were applied successfully to other theatres: Dstl provided surge manning to set up SNA capabilities to inform understanding on Op ELLAMY and subsequent contingency operations.

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[18] DSTL/CR67465. Open Source Intelligence Network Analysis Coding Guide.
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[20] A TTCP collaboration led to the development of the 'ISNA Universal Process Guide'.

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12 Novel Operational ISR System Collaboration[21]

Between 2009 and 2013, Dstl scientists were involved in supporting a novel Operational ISR system deployed to Afghanistan. This US owned/operated system has been very successful in providing intelligence and identifying targets for US and UK forces and as a result has had a significant impact on insurgent ability to target coalition forces.

Dstl deployed a total of 17 civilian scientists to Afghanistan over this 4 year period, with deployments lasting between 1 to 6 months. The Dstl scientists provided world class technical expertise in direct support of this programme, resulting in significant benefit to ISAF forces.

The capability of the Dstl scientists was developed through more than a decade of internationally collaborative Research and Development. This international collaboration was crucial, not only in ensuring the maturity of the technology and providing a deep understanding of how to interpret the results in the context of an operation environment, but also ensuring that an international team of scientists and military staff were able to work as a strong and productive team. This strong collaboration enabled the Dstl scientists to make a significant contribution to the success of this deployed programme. Such international collaborations will undoubtedly play similar vital roles in any future conflict scenarios

The impact of Dstl's contribution has been acknowledged and recognised formally by many organisations. This includes specific awards and accolades from the UK MoD Chief Scientific Advisor and the US Office of the Director of National Intelligence.

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[21] The high level of classification of this activity precludes the provision of significant detail in this document, but it is included as an important illustrative example of the benefits that can accrue from international collaboration.

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13 Summary

This section of the report attempts to summarise and discuss some of the key findings from this activity. Whilst recognising it covers only a representative snapshot of the overall S&T enterprise's support to operations in Afghanistan, there are some key messages that can be drawn from it and a number of common threads can be identified that will underpin the lessons identified (and hopefully learned) to enable optimum S&T support to operations in the future.

The preceding Sections (2-12) clearly illustrate the breadth of S&T support provided to Op HERRICK. As MoD's S&T organisation, the majority of this work has been channelled through Dstl. This report includes some key examples of major success stories where S&T has contributed significantly and, in many cases, been able to react rapidly to in-theatre threats and deliver solutions that have made significant and, often, life-saving contributions. A number of these contributions have been recognised, both nationally and internationally (e.g. Sections 11 and 12).

At the spearhead, provision of in-theatre (both OA and SCIAD) support has been a key enabler throughout the HERRICK campaign (Section 2). Both roles rely on having experienced and appropriately trained people ready to deploy, coupled with a recognition amongst the military of the utility and impact of both roles and how these can be exploited in-theatre. This can only be facilitated through appropriate levels of investment in developing S&T people with the right skill set and, most importantly, pre-deployment experience of working in the military operational environment that enables them to develop the relationships with their military colleagues and add value from the outset. Once current operations are concluded it is crucial to maintain this capability and foster peacetime relationships with the military so that when contingency operations in the future occur this support is readily available in theatre and making an immediate contribution. This issue has already been recognised by SCIAD Land.

Of course, these front line roles have been underpinned by the wider UK S&T community through the Dstl-managed Reach Back process where detailed support has been provided on a vast range of operational issues throughout the HERRICK campaign. Much of this would not have been possible without continued investment in the S&T base through the CSA-funded research programme and other MoD funding streams, such as project support. Not only does this funding provide the resources to maintain a strong S&T base in the UK, but it also facilitates international research collaboration with allies which develops trusted relationships that can be exploited on operations, as illustrated on the Novel ISR Systems collaboration (Section 12). It also provides a suitably vibrant and nurturing scientific environment that generates innovative solutions, such as the Social Network Analysis highlighted in Section 11.

This report contains a number of prime examples of where S&T has facilitated the ability to respond to rapidly evolving threats in theatre. Countering the in-theatre IED threat (Sections 2 and 8) represents a critical where S&T was able to respond to the challenges posed by the rapidly evolving in-theatre threat, drawing on prior experience in other theatres and extant research, to deliver a range of innovative

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solutions, both equipment and TTPs, that much reduced the threat impact and saved many lives amongst both military and civilians alike.

Another high profile example is in the area of social sciences, where the S&T base was able to respond to other types of in-theatre issues; a particular example of this was that of Insider Attack (I/A), often referred to as Green on Blue (GoB) incidents, which became a significant problem at the latter end of the HERRICK campaign (Section 5). Not only was it possible to ascertain the specific factors that led to such incidents, but a Training Needs Analysis (TNA) was developed to define and enhance the training requirements of the ▬▬▬▬▬▬ Although specifically focused on HERRICK, the knowledge and could (and should) be readily extended to contingency operations.

Urgent Operational Requirements (UORs) are a constant and key element of all operations and another area where S&T has made a major contribution during the HERRICK campaign. Section 3 examines the lessons and benefits of 200+ land-based UORs, the vast majority delivering clear benefit to theatre. It includes some key examples, such as the Sharpshooter semi-automatic marksman rifle that enabled the enemy to be engaged at greater ranges, and enhanced armour for MASTIFF that significantly reduced the casualties resulting from IED strikes.

In the context of UORs, the rapid development programmes ▬▬▬▬ VALKYRIE and ▬▬▬ – Section 4) have provided a mechanism to enable the UK to maintain the edge in the technology battle through a challenging programme to deliver UOR-able research within a rolling 6 to 12 month timeframe. Respectively the programmes have enhanced survivability, improved tactical capability, and reduced the dismounted soldier's burden and facilitated the delivery of exceptionally capable and world-leading equipment.

Sections 6, 7 and 9 highlight a number of areas where the gathering of information, development of databases, analysis and reporting, have made significant contributions in HERRICK. Section 6 highlights the importance of the Observations, Insights and Lessons (OILS) process to the HERRICK campaign; whilst not a new approach in itself, the rapidly changing nature of operations increased focus on a more responsive process on how those lessons could be better exploited, to accelerating the S&T and military 'business cycle'.

The instigation of the Land Operational Reporting Database (LORD) (Section 7) and the complementary analysis of incidents in theatre have provided invaluable information on the frequency and impact of specific threats. Additionally, the weekly Operational Reporting Compendium (ORC) has been established as the single "go to" reference document for staff officers and analysts.

A specific example of this is provided in Section 9 which covers the analysis conducted to gather a better understanding of the nature of the effects of threats on personnel and on their Personal Protective Equipment (PPE). It provided an evidence base for the actual threat faced by personnel and essential information on performance requirements to support surge research and equipment programmes.

Section 11 describes the use of Social Network Analysis (SNA) to transform the analysis of human networks. This innovative approach, identified by a junior Dstl analyst, rapidly generated a world-leading capability that has been utilised internationally and has already been deployed on other operations (███████).

Whilst excellence in a key range of scientific disciplines has been absolutely essential in delivering key S&T inputs to support operations in Afghanistan, there is a number of other important enablers that underpin the overall enterprise without which success would have been much harder to achieve. These include the establishment of trusting relationships with the Customers and within the Stakeholder community, a detailed understanding of the Customer requirements, and the existence of appropriate business models for the delivery of S&T into theatre, all underpinned with excellent communications.

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14   Conclusions

Some key specific conclusions that result from the analysis in this report are:
- S&T support to success in Herrick has been built on the firm foundations of many decades of sustained S&T funding. Not only does this support the S&T base in the UK, but also facilitates international collaboration with allies which can deliver additional benefits within operational scenarios. Without continued and sustained S&T funding there is no guarantee that similar levels of S&T support could be provided to subsequent operations.
- Deployed OA and SCIAD support in theatre, coupled with Reach Back into the wider S&T community, has facilitated essential support to the front line; similar success in the future depends on maintaining the relationships in peacetime through joint training exercises and ensuring the benefits are properly understood by the military.
- UORs have provided a robust mechanism for the rapid delivery of effective capability to theatre; all examples studied show clear in-theatre benefit.
- The rapid development programmes ⬛⬛⬛ , VALKYRIE and HERCULES) have provided a mechanism to generate UOR-able research in a rolling 6-12 month timeframe that has delivered world-leading capabilities.

As well as the cutting edge S&T, there is a number of enablers that have been vital components of successful S&T support to operations:
- The establishment of trusting working relationships between key stakeholders
- A robust understanding of the customer requirements
- Excellent communications
- Having an appropriate business model to deliver S&T to theatre

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The author would like to acknowledge the contributions of a large number of people across Dstl who have made significant contributions to the individual sections of this report, and to Fraser Haddow who did much of the initial groundwork to get this activity underway.

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List of abbreviations

AKX	Army Knowledge eXchange
AO	Area of Operations
BAG	Brigade Advisory Group
Cap GM	Capability Ground Manoeuvre
CASREP	Casualty Report
C-IED	Counter Improvised Explosive Device
CSA	Chief Scientific Advisor
CVR(T)	Combat Vehicle Reconnaissance (Tracked)
DCDC	Defence Concepts and Doctrine Centre
DF	Direct Fire
DIAS	Defence Intelligence Assessment Staff
DIFC(A)	Defence Intelligence Fusion Centre (Afghanistan)
DLIMS	Defence Lessons Information Management System
DLODs	Defence Lines of Development
DLW	Director Land Warfare
DOC	Directorate of Operational Capability
Dstl	Defence Science and Technology Laboratory
ECM	Electronic Countermeasure
EF	Enemy Forces
EOD	Explosive Ordnance Disposal
EXCON	Exercise Control
FF	Friendly Forces
FLC	Front Line Command

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GoB	Green on Blue
GPMG	General Purpose Machine Gun
HA	Historical Analysis
HACS	Hostile Action Casualty Survey
HCS	HERRICK Campaign Study
HQ	Headquarters
IA	Insider Attack
IED	Improvised Explosive Device
IOC	Initial Operating Capability
JFC	Joint Forces Command
JTTR	Joint Theatre Trauma Registry
KSAO	Knowledge, Skills, Attributes and Other
LORD	Land Operational Reporting Database
LORST	Land Operational Research for Science & Technology
LXC	Lessons Exploitation Centre
MCC	Mounted Close Combat
MSE	Military Strategic Effects (formerly TIO)
MTP	Multi Terrain Pattern
MXS	Mission Exploitation Symposia
NACMO	Net Additional Costs to Military Operations
OA	Operational Analysis
OILS	Observations, Insights and Lessons
OOST	Operational Lessons for Science and Technology
ORC	Operational Reporting Compendium
PMAG	Police Mentoring Advisory Group

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POR	Post Operational Report
PPE	Personal Protective Equipment
PVH	▬▬▶ VALKYRIE HERCULES
RCIED	Radio Controlled Improvised Explosive Device
RPG	Rocket Propelled Grenade
S2O	Support To Operations
SAG	Studies Assumptions Group
SCIAD	Scientific Advisor
SIB RMP	Royal Military Police Special Investigations Branch
SIG ACTS	Significant Acts
SINCREP	Significant Incident Report
SME	Subject Matter Expert
SOPs	Standard Operating Procedures
SNA	Social Network Analysis
S&T	Science and Technology
TFH	Task Force Helmand
TIO	Targeting and Information Operations(now MSE)
TNA	Training Needs Analysis
TORs	Terms of Reference
TTPs	Techniques, Tactics and Procedures
UOR	Urgent Operational Requirement
VD&I	Verbal Defence and Influence
WIA	Wounded In Action
WISREP	Weapons Intelligence Specialists Report

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This report contains a range of examples of science and technology contributions to recent operations in Afghanistan as an input to the Herrick Campaign Study. It identifies a number of lessons that have been learned with a view to ensuring that future operations can benefit from the experiences gained.

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