



Defence
Safety Authority

Service Inquiry

INVESTIGATION INTO THE
ALLEGED EXPOSURE OF UK
DEFENCE PERSONNEL
TO ASBESTOS DURING
OVERSEAS EXERCISES AND
TRAINING SINCE 2018

Defence Safety Authority

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PART 1.1

Covering Note and Glossary

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PART 1.1 – COVERING NOTE

21-003-Asbestos-SI

Feb 22

DG DSA

SERVICE INQUIRY INVESTIGATION INTO THE SUSPECTED EXPOSURE OF UK DEFENCE PERSONNEL TO ASBESTOS DURING OVERSEAS EXERCISES AND TRAINING SINCE 2018

1.1.1. The Service Inquiry Panel assembled at Boscombe Down, on the 17 June 2021, by order of the DG DSA for the purpose of investigating the suspected exposure of UK Defence personnel to asbestos during overseas exercises and training since 2018. The aim of the Service Inquiry is to make recommendations in order to prevent a recurrence. The Panel has concluded its investigation and submits the Service Inquiry report for the Convening Authority's consideration.

1.1.2. The following inquiry papers are enclosed:

Part 1 REPORT	Part 2 RECORD OF PROCEEDINGS
Part 1.1 Covering Note and Glossary	Part 2.1 Diary of Events
Part 1.2 Convening Orders & TORs	Part 2.2 List of Witnesses
Part 1.3 Narrative of Events	Part 2.3 Witnesses Statements
Part 1.4 Findings	Part 2.4 List of Attendees
Part 1.5 Recommendations	Part 2.5 List of Exhibits
Part 1.6 Convening Authority Comments	Part 2.6 Exhibits
	Part 2.7 List of Annexes
	Part 2.8 Annexes
	Part 2.9 Schedule of Matters Not Germane to the Inquiry
	Part 2.10 Master Schedule

PRESIDENT

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██████████

Lieutenant Colonel Royal Electrical and Mechanical Engineers
President
Asbestos SI

MEMBERS

[Signature]

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Lieutenant Royal Navy
Panel Member One
Asbestos SI

[Signature]

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Chief Technician Royal Air Force
Panel Member Two
Asbestos SI

GLOSSARY

AA Bde	Air Assault Brigade
AAP	Allied Administrative Publication
ACM	Asbestos Containing Material
ACSO	Army Command Standing Order
AJMP	Allied Joint Medical Publication
AJP	Allied Joint Publication
ALARP	As Low As Reasonably Practicable
AJMedP	Allied Joint Medical Publication
ATSB	Australian Transport Safety Bureau
BG	Battle Group
Bde	Brigade
Bn	Battalion
BP19	BALTIC PROTECTOR 2019
BR	Books of Reference
CAR	Control of Asbestos Regulations
CBRN	Chemical, Biological, Radiological and Nuclear
Cdo	Commando
CHA	Combat Health Advisor
CHD	Combat Health Duties
CLR	Commando Logistics Regiment
CO	Commanding Officer
CoC	Chain of Command
COMATG	Commander Amphibious Task Group
Coy	Company
CMA	Competent Medical Authority
CSM	Company Sergeant Major
CSM	Conceptual Site Model
DACCC	Deployable Air Command and Control Centre
DBS CHR	Defence Business Services Civilian Human Resources
DG DSA	Director General Defence Safety Authority
DI	Deployment Instruction
DIN	Defence Instructions and Notices
DLE	Defence Learning Environment
DMS	Defence Medical Services
DRO	Daily Routine Order
EASP	Exercise Action and Safety Plan
EH	Environmental Health
EHT	Environmental Health Technician
EIH	Environmental and Industrial Hazard
EMT	Environmental Monitoring Team
Ex	Exercise
EXCON Fwd	Exercise Control Forward
Fd Army	Field Army
FHP	Force Health Protection
FHPB	Force Health Protection Brief
FHPI	Force Health Protection Instruction
FIBUA	Fighting in a Built-Up Area
FP	Force Protection

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GDMO	General Duties Medical Officer
HN	Host Nation
HQ	Headquarter
IPC	Initial Planning Conference
IPCC	Intergovernmental Panel on Climate Change
IX	Information Exploitation
JDP	Joint Doctrine Publications
JEF(M)	Joint Expeditionary Force (Maritime)
JNCO	Junior Non-Commissioned Officer
JPA	Joint Personnel Administration
JSP	Joint Service Publication
JTTP	Joint Tactics Techniques and Procedures
KBDE COM	National Guard Kurzeme Brigade Commander
LAF	Latvian Armed Forces
LO	Liaison Officer
LRT	Light Role Team
LTG	Logistical Task Group
MA	Medical Assistant
MCSSG	Maritime Component Strategic Steering Group
Med FP	Medical Force Protection
MedInfo	Medical Information
MedInt	Medical Intelligence
Mne	Marine
MOD	Ministry of Defence
MOU	Memorandum of Understanding
MPC	Main Planning Conference
MTO	Motor Transport Officer
NATO	North Atlantic Treaty Organisation
NAVY Cts	Navy Commitments
NCHQ	Navy Command Headquarters
NLIMS	Navy Lessons and Information Management System
OC	Officer Commanding
OSW	Operational Staff Work
PJHQ	Permanent Joint Headquarters
PXR	Post Exercise Report
RA	Risk Assessment
RADT 19-II	RAMSTEIN DUST II
RAF	Royal Air Force
RE	Royal Engineers
RLS	Real Life Support
RMB	Royal Marines Barracks
RMO	Regimental Medical Officer
RM	Royal Marine
RN	Royal Navy
SbS18	SABRE STRIKE 2018
SI	Service Inquiry
SME	Subject Matter Expert
SMO	Senior Medical Officer
SNCO	Senior Non-Commissioned Officer
SNR	Senior NATO Representative

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SO	Staff Officer
SOI	Standard Operating Instructions
SOP	Standard Operating Procedure
SQEP	Suitably Qualified and Experience Person
Sqn	Squadron
SRS	Surveillance Reconnaissance Squadron
TOR	Terms of Reference
TTP	Tactics, Techniques and Procedures
USA	Urgent Safety Advice
USMC	United States Marine Corps
WO ES	Warrant Officer Equipment Support

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PART 1.2

Convening Order and Terms of Reference

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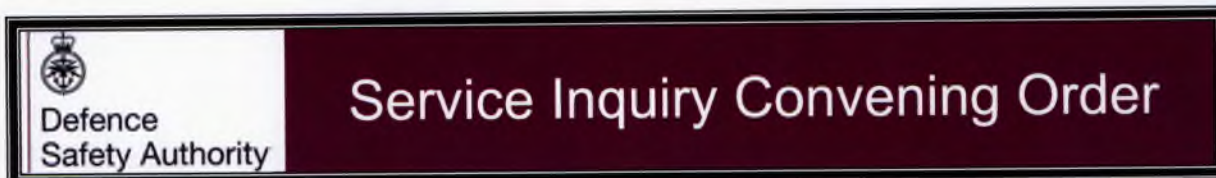
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17 Jun 21

SI President
SI Members

Hd DAIB
DSA HQ Legad

DAIB Mentor
DAIB Office Manager

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DJEP
Navy Safety-Dir
ASCen CS-A
Air-Inspector Safety RAF
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DDC Dir
DDC Head of News
DDC PR News Navy

DSA DG/SI/03/21 – CONVENING ORDER FOR THE SERVICE INQUIRY INTO ALLEGED EXPOSURE OF UK DEFENCE PERSONNEL TO ASBESTOS DURING OVERSEAS TRAINING AND EXERCISES SINCE 2018 – AL4

1. In accordance with Section 343 of Armed Forces Act 2006 and JSP 832 – Guide to Service Inquiries (Issue 1.0 Oct 08), the Director General, Defence Safety Authority (DG DSA) has elected to convene a Service Inquiry (SI).
2. The purpose of this SI is to investigate the circumstances surrounding the incidents and to make recommendations in order to prevent reoccurrence.
3. The SI Panel will commence administrative briefing at 1200 on Thursday 17 June 2021 at DAIB, B120 at MoD Boscombe Down, and will be formally convened by the DG at 1500.
4. The SI Panel comprises:

President: **LIEUTENANT COLONEL** [REDACTED]
Members: **LIEUTENANT** [REDACTED]
CHIEF TECHNICIAN [REDACTED]

5. The legal advisor to the SI is Major [REDACTED] (DSA-HQ-Legad1) and technical investigation/inquiry support is to be provided by the Defence Accident Investigation Branch (DAIB). The nominated mentor for this SI is Major [REDACTED] (DSA-DAIB-AIR-Ops2).

6. The SI is to investigate and report on the facts relating to the matters specified in its Terms of Reference (TOR) and otherwise to comply with those TOR (at Annex A). It is to record all evidence and express opinions as directed in the TOR. An Initial Report on the commencement of the investigation is to be submitted by Friday 16 July 2021.

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7. Attendance at the SI by advisors/observers, unless extended by the Convening Authority, is limited to the following:

Head DAIB – Unrestricted Attendance.

DAIB investigators in their capacity as advisors to the SI Panel – Unrestricted Attendance.

Technical and specialists in their capacity as advisors to the SI Panel – Unrestricted Attendance.

Human Factors specialists in their capacity as advisors to the SI Panel – Unrestricted Attendance.

8. The SI Panel will initially undertake induction training at the DAIB facility at MOD Boscombe Down immediately after convening. Thereafter, permanent working accommodation, equipment and assistance suitable for the nature and duration of the SI will be requested at a location decided by the SI President in due course.

9. Reasonable costs will be borne by DG DSA under UIN D0456A.

Original Signed

S C Gray CB OBE FREng
Air Marshal
DG DSA – Convening Authority

Annex:

A. Terms of Reference for the Service Inquiry into alleged exposure of UK Defence Personnel to Asbestos **during Overseas Training and Exercises since 2018.**

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Record of Changes

Date	Change No.	Detail	Made by
23 Jun 21	1	Annex A, additional TOR at para 2.	DSA SI SO1
26 Jul 21	2	Page 1, Para 4, Temporary SI President in place (DAIB Mentor). Page 1, Para 5 – Removal of reference to DAIB Mentor.	DSA SI SO1
6 Sep 21	3	Page 1, Para 4, Replacement of SI President. Page 1, Para 5, reversion of Temporary SI President to Mentor.	DSA SI SO1
30 Sep 21	4	Page 1, Amendment to Title to reflect broadening of scope beyond initial 2 incidents. Page 2, Annex Title. Page A1, Title. Page A1, Para 2 removed.	DSA SI SO1

Annex A To
DSA DG/SI/03/21 Convening Order
Dated 17 Jun 21

TERMS OF REFERENCE FOR THE SERVICE INQUIRY INTO ALLEGED EXPOSURE OF UK DEFENCE PERSONNEL TO ASBESTOS DURING OVERSEAS TRAINING AND EXERCISES SINCE 2018

1. As the nominated Inquiry Panel for the subject SI, you are to:
 - a. Investigate the levels of planning and preparation that took place ahead of the Exercises, and determine any contributory, aggravating and other factors and observations.
 - b. Examine any Environmental Risk Assessments conducted ahead of the Exercises and assess the suitability of any mitigations put in place at the time.
 - c. Establish the level of training, relevant competencies, qualifications and currency of the individuals involved in planning the activities.
 - d. Review the levels of authority and supervision covering the task during which the exposure occurred.
 - e. Examine what policies, orders and instructions were applicable and whether they were complied with.
 - f. Determine whether post exposure management procedures were complied with and were adequate, and review whether post incident actions, including medical attention and ongoing care, were appropriate, adequate and carried out correctly.
 - g. Report and make appropriate recommendations to DG DSA.
2. The investigation should not seek to attribute blame and you should use JSP 832 Guide to Service Inquiries and DSA 03.10 as guidance for the conduct of your inquiry. You are to report immediately to the DG DSA should you have cause to believe a criminal or Service Offence has been committed.
3. If at any stage the Panel discovers something that they perceive to be a continuing hazard presenting a risk to the safety of personnel or equipment, the President should alert DG DSA without delay to initiate remedial actions. Consideration should also be given to raising an Urgent Safety Advice note.

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PART 1.3

Narrative of Events

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PART 1.3 – NARRATIVE OF EVENTS

All Times Local

Inquiry approach

1.3.1. This Service Inquiry (SI) was convened on 17 June 2021, to investigate the circumstances surrounding the alleged exposure of UK Defence personnel to asbestos, at the Skrunda-1 training area in Latvia, during Exercise BALTIC PROTECTOR 19 (Ex BP19). An internal investigation, conducted by Headquarters 3 Commando Brigade Royal Marines (HQ 3 Cdo Bde RM), identified that Skrunda-1 had also been used during Ex SABER STRIKE 18 (Ex SbS18). On 22 June 2021, the Director General Defence Safety Authority (DG DSA) issued Urgent Safety Advice (USA) regarding the risk management of asbestos overseas. In early July 2021, this SI was further expanded to investigate all other instances of alleged exposure to asbestos during overseas training and exercises since 2018; this brought Ex RAMSTEIN DUST II (Ex RADT 19-II) and Ex GHOST into scope. Finally, during the course of the SI, the SI panel (the panel) were made aware of Ex NAMEJS, which despite the initial USA, was due to deploy to Skrunda-1 during September 2021. This prompted the issue of a second USA, on 1 October 2021, reinforcing the requirement to conduct effective risk management. The panel have elected to focus on Ex BP19. The other instances, outlined above, were then compared with the analysis and findings for Ex BP19.

Exhibit 1
Exhibit 181
Exhibit 186

Exercise BALTIC PROTECTOR 19 synopsis

1.3.2. Skrunda-1 is situated 95 miles from Riga, Latvia (Figure 1.3.1). Built in the 1960s by the former Soviet Union, the then secret military base contained radar installations and domestic accommodation for circa 5,000 personnel. The site was abandoned when the Russian military withdrew from Latvia in 1998. The abandoned radar installations have since been demolished but 60 of the original domestic buildings remained in the 800m² area. Surviving buildings included apartment blocks, catering buildings and a gymnasium, all of which fell into a derelict state. The buildings continued to be utilised for hosting multinational military urban operations training.

Exhibit 113
Exhibit 5

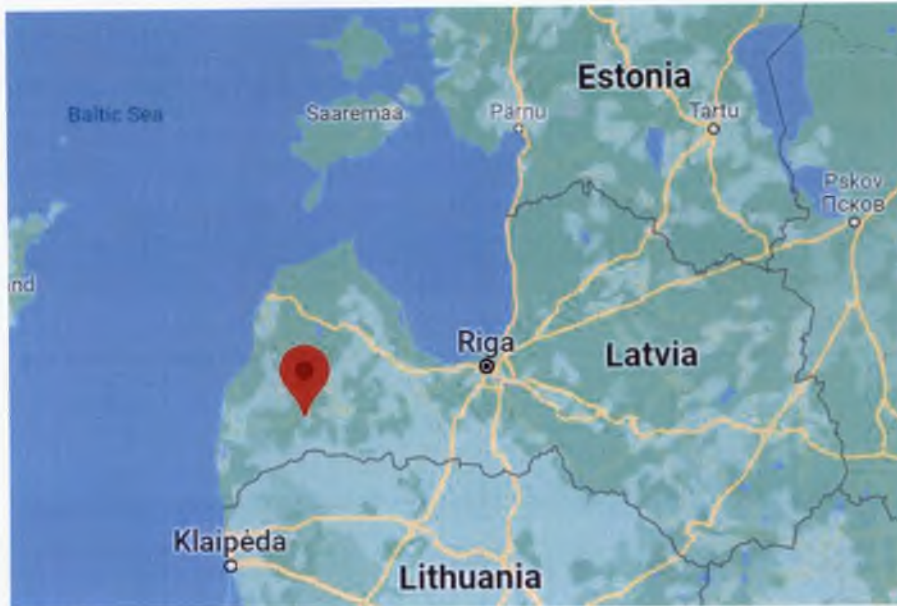


Figure 1.3.1 – Red pin showing the location of Skrunda-1 in Latvia.

1.3.3. On 25 July 2019, elements of 3 Cdo Bde RM deployed to the Skrunda-1 urban operations training area in Latvia as part of Ex BP19. After the exercise concerns were raised by exercising personnel that the dust present within the building in which they had been accommodated potentially contained asbestos. HQ 3 Cdo Bde RM conducted an internal investigation into the incident, including identification of the personnel present, to enable the conduct of post-asbestos exposure management.

Exhibit 1
Exhibit 2

Exercise BALTIC PROTECTOR 19 pre-deployment events

Identification of Skrunda-1 and Brigade planning

1.3.4. The initial planning for Ex BP19 took place in Navy Command HQ (NCHQ), as part of the Joint Expeditionary Force (Maritime) (JEF(M)¹). The first planning documents, providing the initial direction for Ex BP19, were dated 16 May 2017 and were written following the 28th Maritime Component Strategic Steering Group (MCSSG²). As a result of the initial direction provided by the MCSSG, Navy Commitments (Navy Cts)³ led strategic⁴ reconnaissance (recce) of the Baltic states. The aim of this initial high-level recce was to begin identification of areas which could be utilised by 3 Cdo Bde RM during the exercise. The recce was conducted during June and July 2017 and the recce report was released on 3

Exhibit 70
Exhibit 31
Exhibit 186

¹ The Joint Expeditionary Force is the UK led military framework designed to ensure high readiness with partner nations Denmark, Finland, Estonia, Iceland, Latvia, Lithuania, the Netherlands, Sweden and Norway.

² MCSSG was a multinational forum with JEF partner nations to discuss high-level maritime cooperation.

³ Navy Cts were the organisation tasked with assigning units to operations.

⁴ The strategic level of warfare is defined in JDP 0-01 as the level at which national resources are allocated to achieve the policy goals.

August 2017. The report provided an overview of the capability of the Latvian Armed Forces (LAF) and training areas, including Skrunda-1. In a paragraph on the Skrunda-1 training area it stated that “Skrunda is Latvia’s premier FIBUA (Fighting In Built Up Areas) facility”.

1.3.5. In order to further evaluate the Ex BP19 training areas identified on the initial Navy Cts recce, a further recce to Latvia and Lithuania was conducted over the period of 5 to 9 February 2018, by a joint team of Navy Cts and HQ 3 Cdo Bde RM planning staff. The associated recce report discussed the suitability of Skrunda-1 for hosting raids⁵ and providing a FIBUA environment. Of note footnote 9 stated: ‘Many of the buildings are derelict and a thorough safety assessment is recommended before use’. This report was distributed within NCHQ, to Commander Amphibious Task Group (COMATG), and widely within HQ 3 Cdo Bde RM, as well as to each of the 3 Cdo Bde RM units.

Exhibit 70
Exhibit 69

1.3.6. The next stage of the Ex BP19 planning was the JEF(M) 19 Initial Planning Conference (IPC).⁶ The IPC took place over the period of 4 to 6 September 2018. It further developed the direction from the MCSSG, incorporating the information gathered from the two initial recces. The output of the IPC was the early identification of units to be deployed⁷ and the first exercise scheme of manoeuvre.⁸ This identified that Skrunda-1 was to be utilised over the period of 28 to 30 June 2019 for raiding operations and shore-based logistics.

Exhibit 32
Exhibit 77
Witness 7

1.3.7. Further evaluation of sites to identify specific training opportunities was conducted over the period of 22 to 26 October 2018 by a joint COMATG and HQ 3 Cdo Bde RM team. This exclusively focused on the Baltic states of Lithuania, Latvia and Estonia. The post-recce report, dated 5 November 2018, identified Skrunda-1 as providing opportunities to conduct company (Coy) sized raids. It was deemed capable of being concurrently used as a training area, an aviation raid target, a suitable location for the Logistics Task Group (LTG), Real Life Support (RLS) and Exercise Control Forward (EXCON Fwd). The report focused solely on whether the training areas could support the mission objectives. It did not assess training area safety. In the closing paragraph, on future activity, it identified the period of 26 to 30 November 2018 for COMATG and unit level recces to be conducted as required. A communications team who were part of the recce issued a separate report. This report stated that there were still multiple options available to locate the Ex BP19 LTG but Skrunda-1 was one of the most likely.

Exhibit 46
Exhibit 33
Exhibit 35
Exhibit 43

⁵ A raid is a swift penetration of hostile territory to secure information, confuse the adversary, seize a high value individual or target or to destroy physical positions. The raid is withdrawn upon completion of the assigned mission.

⁶ Large deployments go through three planning conferences as the deployment plan matures: Initial Planning Conference (IPC), Main Planning Conference (MPC) and Final Planning Conference (FPC).

⁷ Six units from the UK were identified: HMS ALBION, RFA LYME BAY, RFA ARGUS, RFA TIDEFORCE, HMS KENT, 45 Commando Royal Marines with supporting Commando elements (29 Commando Regiment Royal Artillery and 24 Commando Regiment Royal Engineers).

⁸ The scheme of manoeuvre defines the order in which activities will take place.

1.3.8. Despite the window for unit level recce being deemed closed on 30 November 2018, recce to Skrunda-1 continued into 2019. Through 6 to 11 January 2019, 45 Cdo RM conducted a recce of possible sites to be used in Ex BP19. The report author explained this recce was self-generated by 45 Cdo RM and that this was due to the unit requiring information for their own planning. The resulting recce report commented on the condition of the buildings in Skrunda-1 training area. It stated that there were several buildings which the Host Nation (HN) had placed out-of-bounds due to asbestos. It further stated that the HN had plans to remove asbestos and refurbish structures. A significant amount of this work was expected to be completed by July 2019. The 45 Cdo RM Quartermaster (QM), who took part in the recce, recalled the HN Liaison Officers (LOs) stating that the process of removal was already underway. Further to this, the QM stated that several out-of-bounds buildings were marked by mine tape.⁹ The recce report was distributed internally within 45 Cdo RM and to HQ 3 Cdo Bde RM planning staff to assist in further planning.

Exhibit 44
Exhibit 68
Exhibit 122
Witness 26

1.3.9. Annex A of the recce report contained a colour coded map of Skrunda-1. This map was provided to 45 Cdo RM on arrival at Skrunda-1 by the HN LOs. While not mentioning asbestos on the map, it was the first formal mapping of in-bounds and out-of-bounds structures to be given to a unit within 3 Cdo Bde RM. The map key was in Latvian and so the 45 Cdo RM recce party were verbally briefed by the HN LOs that red marked buildings contained asbestos and were out-of-bounds, the green marked buildings had been cleared and were in-bounds. Of note, the building colours annotated on 45 Cdo RM's map, were the same as those in the in-country brief presentation given to deploying forces by the HN LOs during Ex BP19.

Exhibit 44
Exhibit 122
Witness 26

1.3.10. Over the period of 15 to 17 January 2019, the Ex BP19 Main Planning Conference (MPC) took place in Royal Marines Barracks Stonehouse. The aim of the MPC was to assess all aspects of exercise planning to date and identify areas that required further development. It directed activity to achieve this where required. It was also the point at which planning responsibility was formally handed over from the higher initiating HQ to the HQ which would execute the exercise. During the MPC it was briefed that, following the 45 Cdo RM recce, several areas of Skrunda-1 were out-of-bounds. The lead 3 Cdo Bde RM planning officer recalled discussions at the MPC between unit representatives and Bde HQ staff on what training could be conducted, given the out-of-bounds areas. It was eventually agreed that sufficient training could be conducted in Skrunda-1 within the restrictions laid out by the HN.

Exhibit 72
Exhibit 21
Exhibit 77
Witness 7

1.3.11. Following the MPC, the responsibility for planning was handed from Navy Cts to HQ 3 Cdo Bde RM, which issued the Ex BP19 Warning Order on 22 February 2019. This contained an updated scheme of manoeuvre, as well as defining the planning leads for each phase of the exercise.

Exhibit 72

⁹ Mine tape is coloured tape used by military forces as a visual warning, despite the name it is used widely to indicate the presence or suspected presence of mine and other hazards.

1.3.12. Over the period of 11 to 12 March 2019, a further recce to Skrunda-1 was conducted. This recce consisted of three personnel: SO3¹⁰ Med A,¹¹ the Environmental Health Senior Non-Commissioned Officer (EH SNCO) from HQ 3 Cdo Bde RM and an individual from 30 Commando Information Exploitation Group Royal Marines (30 Cdo IX Gp RM), who specialised in urban operations training. The recce was organised at short notice by 30 Cdo IX Gp RM to accommodate a change in the exercise scheme of manoeuvre. SO3 Med A identified this recce as an opportunity to conduct a medical recce of the Baltic states and informed the EH SNCO of the recce requirement less than two working days before deployment. The EH SNCO was additionally informed that the purpose of the visit to Skrunda-1 was to test the water supply. Upon arrival in Latvia, the SO3 Med A went to Riga to assess the suitability of hospitals, while the EH SNCO and the 30 Cdo IX Gp RM urban operations specialist went to Skrunda-1. The EH SNCO stated in interview that the EH recce was conducted in less than an hour, in poor light, with thick snow on the ground and without the support of a HN LO.

Exhibit 160
Exhibit 90
Witness 17
Exhibit 159
Exhibit 64
Witness 1

1.3.13. During an undetermined period in March 2019, the Officer Commanding (OC) 54 Squadron Royal Engineers (54 Sqn RE), of 24 Commando Regiment Royal Engineers (24 Cdo Regt RE), conducted a recce of Skrunda-1. They were given a copy of a map with the same in-bounds and out-of-bounds areas presented to 45 Cdo RM. OC 54 Sqn RE recalled specifically asking the HN LO about asbestos in Skrunda-1 and being informed that the buildings marked green on the map had been confirmed safe. The OC stated that, prior to the recce, they had not seen any of the reports from any previous recces conducted by other units or groups.

Exhibit 132
Witness 28

1.3.14. 30 Cdo IX Gp RM personnel also visited Skrunda-1 prior to deployment, however the panel was unable to ascertain an exact date of the recce. The recce presentation was dated 17 April 2019.

Exhibit 113

1.3.15. The recce presentation provided an overview of the site and included potential accommodation and training locations. These training locations utilised a combination of buildings that were marked both in-bounds and out-of-bounds on the map attached to the 45 Cdo RM recce report. It also contained an early draft of the exercise synchronisation matrix¹² and a brief overview of planned tasks.

Exhibit 113
Exhibit 44

Deployment instructions and medical directives

1.3.16. On 17 April 2019, four weeks before deployment, HQ 3 Cdo Bde RM issued the Ex BP19 Deployment Instruction (DI) to individual units, detailing the scheme of manoeuvre, Chain of Command (CoC) and delegated tasks. This

Exhibit 38
Exhibit 20

¹⁰ SO3 refers to Staff Officer [grade] 3 which is a NATO term and equates to: Navy – Lieutenant; Royal Marines and Army – Captain; and RAF – Flight Lieutenant.

¹¹ SO3 Med A was the EH SNCO's line manager and the lead medical planner for Ex BP19.

¹² A synchronisation matrix shows the activities being conducted by different units against the exercise timeline. It is used to synchronise and, where required, deconflict activities by time and location.

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included the Medical Directive (Annex F of the DI), which gave direction on medical plans for the deployment. Appendix 1 to the Medical Directive provided Environmental Health and Medical Force Protection guidance.¹³ Shortly after the issue of the DI, 3 Cdo Bde RM personnel began their Easter block leave.

1.3.17. The Medical Directive covered all elements of the 3 Cdo Bde RM deployment. Regarding Environmental and Industrial Hazards (EIH) it stated: 'Exposure to the full spectrum of environment (sic) industrial hazards due to damaged industrial installations (LOW RISK)'. Regarding Force Health Protection (FHP), it stated that: 'FHP is an individual and Command responsibility. It is the main mechanism to mitigate health and occupational risks associated with the deployment. All personnel are to be familiar with the BP19 FHPI¹⁴ and comply with all direction given. All EHT¹⁵ requests are to be initiated via CoC to 3 Cdo Bde HQ SO3 Med.'

Exhibit 20

1.3.18. Within the Environmental Health and Medical Force Protection guidance document, EIH were listed within Table 4, titled 'Other health threats', which stated: 'Asbestos within buildings in Skruna Training camp'. It then directed completion of a Tier 1 assessment¹⁶ for all locations occupied for more than 48hrs. It referenced 2017DIN06-004, and directed that additional advice was available from the HQ 3 Cdo Bde RM EH Team if this was not clear. In addition, para 19 stated that: 'any exposure to substances in Table 4 should be reported to the Medical Reception Station immediately'.

Exhibit 20
Exhibit 28
Exhibit 90
Witness 17

1.3.19. The HQ 3 Cdo Bde RM Medical Directive mandated that a Force Health Protection Brief (FHPB) be provided to all personnel deploying on Ex BP19. The HQ 3 Cdo Bde RM EH SNCO prepared a brief and distributed it to the units. However, medical staff deemed there was insufficient time to deliver the brief to personnel before deployment. Instead, the brief was to be delivered once deployed. The panel saw no evidence to suggest that the brief was delivered by either the EH staff or unit medical staff.

Exhibit 154
Exhibit 40
Exhibit 132
Witness 28
Exhibit 110
Witness 20
Exhibit 111
Witness 21
Exhibit 115
Witness 23
Exhibit 89
Witness 16
Exhibit 76
Witness 6

¹³ Appendix 1 to the Ex BP19 Medical Plan was titled Environmental Health Medical Force Protection Guidance rather than the doctrinally correct term Force Health Protection Instruction (FHPI). However, the purpose and content were the same.

¹⁴ Force Health Protection Instruction.

¹⁵ Environmental Health Technician.

¹⁶ The conduct of Tier 1 assessments was direct by 2017DIN06-004 and was analysed in detail in the EIH assessments sub-section of this report from para 1.4.27 of this SI.

1.3.20. After the issue of the HQ 3 Cdo Bde RM medical directive, 30 Cdo IX Gp RM, 45 Cdo RM and 24 Cdo Regt RE all issued their own unit medical directives. There was no reference to EIH within the unit level medical directives.

Exhibit 94
Exhibit 61
Exhibit 62
Exhibit 112

Exercise BALTIC PROTECTOR 19 incident

1.3.21. Ex BP19 took place over the period of 24 May 2019 to 10 July 2019, beginning in Denmark and moving through Germany and Sweden, to the Baltic states for Phase 3 (25 June 2019 to 10 July 2019). Activity in Skrunda-1 was part of Phase 3, with the main body of troops occupying Skrunda-1 over the period of 25 June 2019 to 3 July 2019.

Exhibit 36
Exhibit 41
Exhibit 47

Activity in Skrunda-1

1.3.22. On 24 June 2019, prior to the arrival of the main force, the Warrant Officer Equipment Support (WO ES) and a Sergeant of 30 Cdo IX Gp RM LTG were sent forward as an advance party to Skrunda-1. On arrival, they were met by a HN LO who briefed them on the site. The HN LO provided a map with the same colour coding for in-bounds and out-of-bounds buildings as seen by the 45 Cdo RM recce party. However, this time the map key had been translated into English. The LO also outlined which buildings would be used by Latvian forces. This was the first time the 30 Cdo IX Gp LTG advance party were made aware of out-of-bounds areas. Before the arrival of further units and in discussion with the HN LO, a building was selected to house the contingent from 30 Cdo IX Gp RM LTG. On arrival at the building, the WO ES enquired about the safety of the dust on the floor. In interview they stated that they were told by the HN LO that this building had been declared safe for use. Despite this assurance, the WO ES decided that placing boards on the floor to walk on and directing personnel to avoid sweeping would prevent the disturbance of the dust. These measures were subsequently briefed to members of the LTG, including the Senior Clinician, as they arrived.

Exhibit 89
Witness 16
Exhibit 5
Exhibit 3
Exhibit 86
Witness 12
Exhibit 76
Witness 6
Exhibit 95
Exhibit 96
Exhibit 97

1.3.23. Units began to enter Skrunda-1 on 25 June 2019 and conducted training until 3 July 2019. This consisted of urban operations training, company level battle exercises and demolition training. The first elements of 30 Cdo IX Gp RM LTG to arrive included approximately ten vehicle mechanics who were accommodated in the building selected by the WO ES. After being instructed not to sweep the dust by the WO ES, the vehicle mechanics requested to sleep outside, but were told this was not possible. The WO ES stated that this was due to the thick bramble covering large areas of the camp, leaving little available clear space to safely manoeuvre their vehicles. This meant that there was insufficient space for personnel to sleep safely outside. Therefore, personnel were accommodated inside the buildings throughout the Skrunda-1 phase of the deployment.

Exhibit 76
Witness 6
Exhibit 89
Witness 16
Exhibit 6

1.3.24. The Motor Transport Officer (MTO) (a RM captain) was the Commander of the 30 Cdo IX Gp RM LTG and arrived with the LTG main body. The MTO was briefed by the WO ES on the availability of buildings soon after arrival and both confirmed that they had initially been unaware that some buildings were out-of-

Exhibit 89
Witness 16

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bounds. The final accommodation plan was confirmed between the MTO and the WO ES, and highlighted that personnel were to stay in the building allocated.

1.3.25. The senior clinician in Skrunnda-1 was the Regimental Medical Officer (RMO) of 24 Cdo Regt RE. The RMO arrived with the final elements of 30 Cdo IX Gp RM on 25 June 2019 and was briefed on arrival by the MTO and the WO ES. The RMO stated that the brief included the mitigations for reducing the disturbance of dust put in place in 30 Cdo IX Gp's accommodation by the WO ES. The RMO also stated that they were briefed that their accommodation building had been declared safe to occupy by the HN and that the direction not to sweep the floor, and the use of boards to prevent disturbance of dust, was a "belt and braces measure".

Exhibit 25
Exhibit 86
Witness 12

1.3.26. On 25 June 2019, Yankee Company (Y Coy) of 45 Cdo RM and 54 Sqn RE arrived at Skrunnda-1 to conduct urban operations training. Both were accommodated in separate buildings from 30 Cdo LTG. OC 54 Sqn RE was also tasked with a coordination role, based on deconfliction of training and safety regarding the proposed demolitions within the training area. This included daily discussions with the senior members of other units to deconflict training events and liaison with the Latvian units based in Skrunnda-1.

Exhibit 108
Witness 18
Exhibit 132
Witness 28
Exhibit 115
Witness 23
Exhibit 118
Exhibit 119
Exhibit 121
Exhibit 148

1.3.27. On 1 July 2019, 54 Sqn RE conducted a controlled demolition of a disused chimney. Prior to the demolition a full risk assessment was completed, including the use of a drone to ascertain the chimney's construction materials. No materials, other than masonry, were detected.

Exhibit 109
Witness 19
Exhibit 131
Witness 28

1.3.28. The HQ 3 Cdo Bde RM nominal roll, compiled after the exercise, showed that a total of 147 UK Defence personnel spent a period of time in Skrunnda-1 during Ex BP19. Due to the nature of the exercise, which involved training being conducted on and off site during the Skrunnda-1 phase, coupled with the passage of time, it has not been possible to ascertain the duration that individual personnel spent in each building or on the Skrunnda-1 training area during Ex BP19.

Exhibit 27

Exercise BALTIC PROTECTOR 19 post-incident events

1.3.29. On return to the UK, Mne A raised concerns to the 30 Cdo IX Gp RM medical centre that the dust present within the building in which they had been accommodated potentially contained asbestos. Mne A also informed the 30 Cdo IX Gp RM CoC of the potential presence of asbestos within Skrunnda-1 and their intention to pursue a civil claim against the MOD.

Exhibit 76
Witness 6
Exhibit 2
Exhibit 17

1.3.30. On 23 July 2019, the EH team in HQ 3 Cdo Bde RM were made aware by 30 Cdo IX Gp RM's medical centre that personnel were reporting exposure to asbestos. Subsequently, in order to provide evidence on individual medical

Exhibit 25
Exhibit 86
Witness 12

records, the EH Junior Non-Commissioned Officer in HQ 3 Cdo Bde RM requested that a Tier 1 assessment be completed retrospectively by RMO 24 Cdo Regt RE. The retrospective Tier 1 assessment was completed on 25 July 2019.

Exhibit 4

1.3.31. After Mne A's concerns had been reported to HQ 3 Cdo Bde RM, direction was given to the individual units that deployed to Skrunda-1 on Ex BP19 to brief personnel about the alleged exposure to asbestos. Personnel were also made aware of MOD Form 960 (Asbestos Personal Record Annotation Self Certification).¹⁷ This unit level action was completed in different ways: 45 Cdo RM announced it in daily routine orders, whilst 24 Cdo Regt RE and 30 Cdo IX Gp RM held briefings in their lecture theatres. In addition, in September 2019, 30 Cdo IX Gp RM issued guidance to all LTG ranks to wash any equipment that had been in Skrunda-1. The panel has seen no further evidence from units regarding actions taken to clean equipment.

Exhibit 75
Witness 4
Exhibit 86
Witness 12
Exhibit 93
Exhibit 90
Witness 17
Exhibit 22
Exhibit 25
Exhibit 23

1.3.32. In December 2019, HQ 3 Cdo Bde RM, under the lead of the Deputy Commander, conducted its own internal investigation into the Skrunda-1 phase of Ex BP19. As part of the investigation, Defence's personnel database, Joint Personnel Administration (JPA), was used to produce a nominal roll of personnel who had deployed to Latvia. This nominal roll was subsequently used to track whether those personnel had completed the MOD Form 960. The panel found discrepancies between personnel who deployed to Skrunda-1 and those annotated on the HQ 3 Cdo Bde RM nominal roll. The findings of the internal investigation were issued to all 3 Cdo Bde units and the Navy Safety Centre on 10 December 2019.

Exhibit 1
Exhibit 63
Exhibit 29
Exhibit 27

Exercise BALTIC PROTECTOR 19 timeline

1.3.33. The table below summarises the timeline of Ex BP19.

Date	Event
16 May 2017	Initial Ex BP19 planning documents issued post MCSSG.
Late June to early July 2017 (dates unknown)	Strategic recce by NCHQ Cts.
3 August 2017	Strategic recce report issued post Navy Cts recce to the Baltic states during June and July 2017.
5 to 9 February 2018	Joint Navy Cts and HQ 3 Cdo Bde RM recce to Latvia and Lithuania.

¹⁷ This recorded alleged exposure to asbestos, in individual medical records.

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4 to 6 September 2018	JEF(M) 19 IPC.
22 to 26 October 2018	Joint COMATG and HQ 3 Cdo Bde RM conduct recce to Baltic states.
5 November 2018	Joint COMATG and HQ 3 Cdo Bde RM recce report issued.
6 to 11 January 2019	45 Cdo RM conducted recce to the Baltic states including Latvia.
14 January 2019	45 Cdo RM recce report issued.
15 to 17 January 2019	MPC at Royal Marine Barracks Stonehouse.
22 February 2019	HQ 3 Cdo Bde RM issued Ex BP19 Warning Order.
11 to 12 March 2019	EH SNCO recce to Skrunda-1.
March 2019 (date unknown)	OC 54 Sqn RE recce to the Baltic States including Skrunda-1 in Latvia.
8 April 2019	30 Cdo IX Gp RM issued Ex BP19 unit medical directive.
17 April 2019	30 Cdo IX Gp RM recce report issued (presentation).
17 April 2019	HQ 3 Cdo Bde RM issued Ex BP19 deployment instructions.
24 May 2019	Ex BP19 commenced.
24 June 2019	WO ES and SNCO arrived at Skrunda-1 as 30 Cdo IX Gp RM LTG advance party.
25 June 2019	Main body of 30 Cdo IX Gp RM LTG arrived at Skrunda-1 and allocated accommodation.
25 June 2019	54 Sqn RE arrived at Skrunda-1.
25 June 2019	Y Coy 45 Cdo RM arrived at Skrunda-1.
1 July 2019	54 Sqn RE demolished chimney.
1 July 2019	Y Coy 45 Cdo RM departed Skrunda-1.
2 July 2019	30 Cdo IX Gp RM LTG depart Skrunda-1.

3 July 2019	54 Sqn RE departed Skrunda-1.
10 July 2019	Ex BP19 concluded.
23 July 2019	3 Cdo Bde EH team made aware that members of 30 Cdo IX Gp RM requesting asbestos exposure be annotated on medical documents.
25 July 2019	Retrospective Tier 1 assessment completed by RMO 24 Cdo Regt RE.
10 December 2019	Deputy Commander 3 Cdo Bde RM issued findings of internal investigation.

Table 1.3.1 – Timeline of key events.

Exercise SABER STRIKE 18 (SbS18) synopsis

1.3.34. Ex SbS18 was a Latvian-hosted NATO exercise that took place across the Baltic states over the period of 24 May to 21 June 2018. The scenario simulated the preparation and execution of a NATO Article V event¹⁸ in the Baltic states. It utilised the deployment of a combined task force, including multi-national land and air assets into Latvia.

Exhibit 66

1.3.35. The UK was represented by Zulu Coy of 45 Cdo RM, with attachments from 24 Cdo Regt RE, and logistical support from the Commando Logistics Regiment (CLR). UK forces joined the larger VIKING Battle Group (VIKING BG). This was alongside elements from the United States Marine Corps (USMC) and Norwegian Armed Forces, which played the role of attacking forces throughout the Exercise.

Exhibit 49
Exhibit 50
Witness 2
Exhibit 73

1.3.36. VIKING BG actions in the vicinity of Skrunda-1 took place in the final phase of the Exercise, with the final day culminating in an assault on the Skrunda-1 urban operations training area.

Exhibit 50

1.3.37. A small contingent of assault engineers from 45 Cdo RM and 24 Cdo Regt RE entered Skrunda-1 ahead of the VIKING BG's assault. This contingent then remained in Skrunda-1 until the day after the VIKING BG's departure to assist with the conduct of a VIP visit. This meant that the assault engineers were accommodated in Skrunda-1 for a period of four to five days.

Exhibit 117
Witness 25

¹⁸ Article V is the NATO collective defence agreement which states that NATO partners will assist another party or parties if they are attacked.

1.3.38. The potential presence of asbestos in Skrunđa-1 was not known to deployed units at the time, therefore no post-exposure management was performed until after the events of Ex BP19.

Exhibit 73
Witness 2

Exercise RAMSTEIN DUST II (Ex RADT-II) synopsis

1.3.39. During the period of 21 to 27 August 2019 a number of UK personnel deployed to 71st Air Base Romania, known as Câmpia Turzii (Figure 1.3.2). These were from the NATO Deployable Air Command and Control Centre (DACCC) on Ex RADT 19-II. During the planning stage of the Exercise, the UK Senior NATO Representative (SNR) in the DACCC raised concerns about the potential presence of asbestos at the Air Base. These concerns were communicated to the Romanian government by the senior NATO staff. The asbestos was professionally cleared and clearance certification was provided. Upon recovery from Ex RADT 19-II, and despite the asbestos clearance certification being provided, the UK contingent completed the MOD Form 960 to annotate the potential exposure to asbestos on their individual medical records.

Exhibit 176

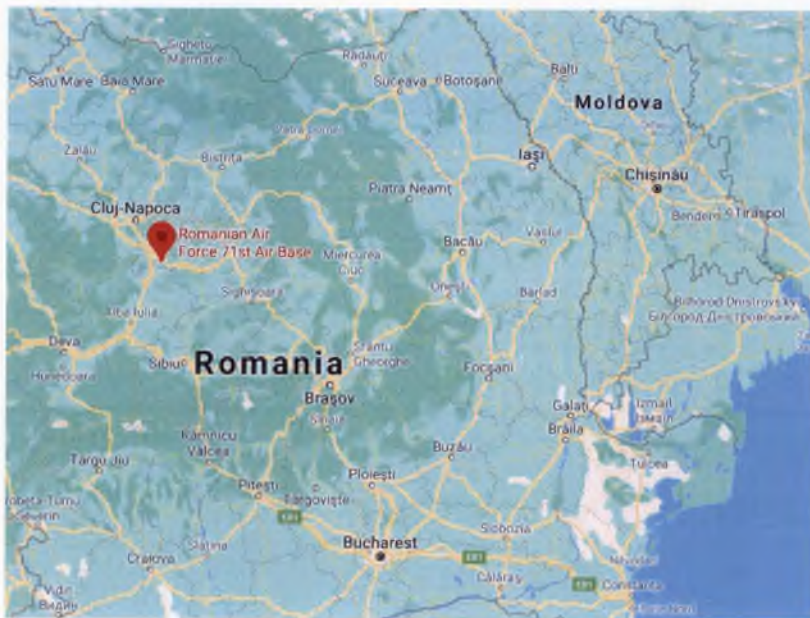


Figure 1.3.2 – Red pin showing the location of Câmpia Turzii in Romania.

Exercise GHOST synopsis

1.3.40. On 9 June 2021, personnel from Surveillance and Reconnaissance Squadron (SRS) of 30 Cdo IX Gp RM were deployed to Lithuania as part of Ex GHOST. At 22:50 a 6-person SRS team entered a disused cinema to establish an observation post. At 23:50 one of the team raised concerns that the debris and dust in the building may contain asbestos. At 00:01 the team reported the concern to the SRS HQ and at 00:40 they moved to the roof of the building to prevent further exposure to the dust. The team was extracted from the area at 04:30 and

Exhibit 98
Exhibit 78

post-exposure management procedures, including completion of MOD Form 960, were conducted over subsequent days.

Exercise NAMEJS synopsis

1.3.41. On 21 September 2021, the panel were made aware of an upcoming deployment of the 2nd Battalion, the Duke of Lancaster's Regiment (2 LANCS)¹⁹ to Latvia. This was to include a 7-day period in Skrunda-1 to facilitate urban reconnaissance training. The SI President contacted 2 LANCS personnel to enquire as to what work had been done to identify and mitigate against the risk of asbestos. The Battalion CoC was aware of the initial USA, issued by the DG DSA, however, the Ex NAMEJS planning staff had not seen it. Shortly after this the panel were informed that 2 LANCS had cancelled the Skrunda-1 element of Ex NAMEJS and conducted an internal investigation into the planning of the exercise. The report was issued on 09 November 2021 and a copy was sent to the panel.

Exhibit 177
Exhibit 164

¹⁹ 2 LANCS were one of 3 Battalions within the Duke of Lancaster's Regiment. They were a Specialised Infantry Battalion focused on reconnaissance and dismounted close combat operations.

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PART 1.4

Analysis and Findings

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PART 1.4 – ANALYSIS AND FINDINGS

Introduction

Inquiry context

1.4.1. In June 2019, Exercise BALTIC PROTECTOR 19 (Ex BP19) utilised the Skrunda-1 training area¹ in Latvia for urban operations training. During this exercise concerns were raised that the dust present within the buildings where personnel were accommodated potentially contained asbestos. An internal investigation into the concerns raised was conducted by Headquarters 3 Commando Brigade Royal Marines (HQ 3 Cdo Bde RM). This identified that Skrunda-1 had also been used by UK Defence personnel during Ex SABER STRIKE 18 (Ex SbS18).

Exhibit 1
Exhibit 2
Exhibit 49

1.4.2. This Service Inquiry (SI) was convened on 17 June 2021 to investigate the circumstances surrounding the alleged exposure of UK Defence personnel to asbestos at Skrunda-1. On 22 June 2021, the Director General Defence Safety Authority (DG DSA) issued Urgent Safety Advice (USA) regarding the risk management of asbestos overseas. In early July 2021, the SI was expanded to investigate all other reported instances of alleged exposure during overseas training and exercises since 2018 and to make recommendations in order to prevent reoccurrence. The DG DSA directed that the suspected exposure to asbestos on operations to be out of scope of the Terms of Reference (TORs) for the SI (see part 1.2).

Exhibit 181

1.4.3. Soon after convening, the SI panel (the panel) identified two additional exercises (in addition to exercises BP19 and SbS18) where exposure to asbestos may have occurred: Ex RAMSTEIN DUST II (Ex RADT 19-II) and Ex GHOST. To ensure all instances were sufficiently identified the panel also conducted a search of the single Service accident reporting systems² dating back to 2018. No additional incidents were found. Finally, during the course of the SI, the panel were made aware of Ex NAMEJS, which despite the initial USA was due to take place in Skrunda-1 during September 2021. This prompted the issue of a second USA on 1 October 2021, reinforcing the requirement to conduct effective risk management. Ex NAMEJS differed from the other exercises being investigated as the Skrunda-1 phase was cancelled before deployment, therefore no personnel were exposed to the asbestos suspected to be present at Skrunda-1.

Exhibit 180
Exhibit 23
Exhibit 15
Exhibit 187

Inquiry approach

1.4.4. The primary focus of Part 1.4 was the analysis of all factors and generation of panel findings related to Ex BP19. The other instances outlined above were compared to the analysis and findings regarding Ex BP19. Similarities with factors that were present on Ex BP19 assisted in reinforcing the findings. Where there

¹ Referred to as Skrunda-1.

² Navy Lessons and Information Management System (NLIMS), Army Incident Notification Cell (AINC) database, Air Safety Information Management System (ASIMS).

were differences, further specific analysis and recommendations have been made. Ex BP19 was selected as the primary focus for analysis for the following reasons: it was the original reported incident that led to the convening of the SI; it had the largest number of personnel involved over the longest duration; and it had the largest amount of evidence available for analysis.

1.4.5. Across all of the incidents of potential exposure to asbestos investigated during this SI, and in accordance with the SI TORs, the panel did not seek to confirm the presence of asbestos in specific locations. Additionally, the panel did not seek to confirm the veracity of claims that the samples of suspected asbestos collected were collected from Skrunnda-1. Throughout this report the panel has treated the suspected and reported presence of asbestos as if asbestos were present. In addition, due to the lack of evidence available, where it is suspected that exposure of UK Defence personnel to asbestos occurred, the panel did not attempt to assess the duration, or severity of the exposure to any individual or groups, or to predict any potential future health implications.

1.4.6. The panel has drawn conclusions and made recommendations throughout the Part 1.4. A summary of Factors is included at the end of Part 1.4 and a summary of Recommendations is in Part 1.5.

Asbestos

1.4.7. Asbestos is a naturally occurring material which was commonly used in building and equipment due to its heat and chemical resistance, fireproofing and strength properties. Asbestos is sub-divided into six mineral types, all of which are known human carcinogens:

- a. Actinolite.
- b. Amosite (brown asbestos).
- c. Anthophyllite.
- d. Chrysotile (white asbestos).
- e. Crocidolite (blue asbestos).
- f. Tremolite.

1.4.8. Asbestos is a Category 1 carcinogen³ and all six types can cause cancer. Risks vary by type, for example blue and brown asbestos are evidenced to be more dangerous than white asbestos.

1.4.9. If Asbestos Containing Materials (ACMs) are in good condition and left undisturbed they present little risk to health. Where they have deteriorated or

Exhibit 7

Exhibit 7
Exhibit 167

Exhibit 166

³ Defined by the International Agency for Research on Cancer. Detailed study can be found in – Asbestos, IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man Volume 14.

become friable,⁴ there is an increased risk that fibres will be released into the air. These airborne fibres present a risk to the health of any exposed individuals. ACMs that are hard and have a lower asbestos content, such as undamaged asbestos cement products, are less likely to release fibres. ACMs that are soft and have a high asbestos content and considered more easily damaged, for example laggings or sprayed coatings, are more likely to release fibres. Throughout this report the risk to health from disturbed or damaged ACMs will be referred to as 'the risk from asbestos'.

1.4.10. **Medical impact.** Evidence surrounding the medical impact of asbestos has increased since initial investigations began in the early 1900s. In the UK, according to the Health and Safety Executive, previous asbestos exposure causes circa 5,000 fatalities annually. There is no cure for asbestos-related disease. When ACMs are damaged or disturbed, asbestos fibres may be released into the air, which, if breathed in, can cause serious and often fatal diseases. Following exposure to asbestos, a person may develop one of the following diseases:

- a. **Mesothelioma.** Mesothelioma is a cancer which affects the lining of the lungs and the lining surrounding the lower digestive tract. It is almost exclusively related to asbestos exposure and, by the time it is diagnosed, it is almost always fatal.
- b. **Lung cancer.** Asbestos related lung cancer presents similar symptoms to lung cancer caused by smoking.
- c. **Asbestosis.** Asbestosis is a serious scarring condition of the lungs that normally occurs after exposure to asbestos over many years. This condition can cause progressive shortness of breath and, in severe cases, can be fatal.
- d. **Pleural thickening.** Pleural thickening is generally a problem that happens after heavy asbestos exposure. The lining of the lung thickens and swells. If this gets worse, the lung itself can be squeezed and can cause shortness of breath and discomfort in the chest.
- e. **Other cancers.** Ingested asbestos fibres may build in the stomach and intestines and may cause other cancers.

Many of these conditions take a long time to develop and few treatment options are available.

1.4.11. **UK legislation.** The UK banned blue and brown asbestos in 1986 and white asbestos in 1999. In 2012, the Control of Asbestos Regulations (CAR) came into force, amalgamating a variety of different statutes (Figure 1.4.1). A key part of the CAR was the introduction of a 'duty to manage' asbestos in all buildings, removing it if necessary. In the UK asbestos may still be found in buildings that were built or refurbished before the year 2000.

⁴ Friable: easily crumbled.

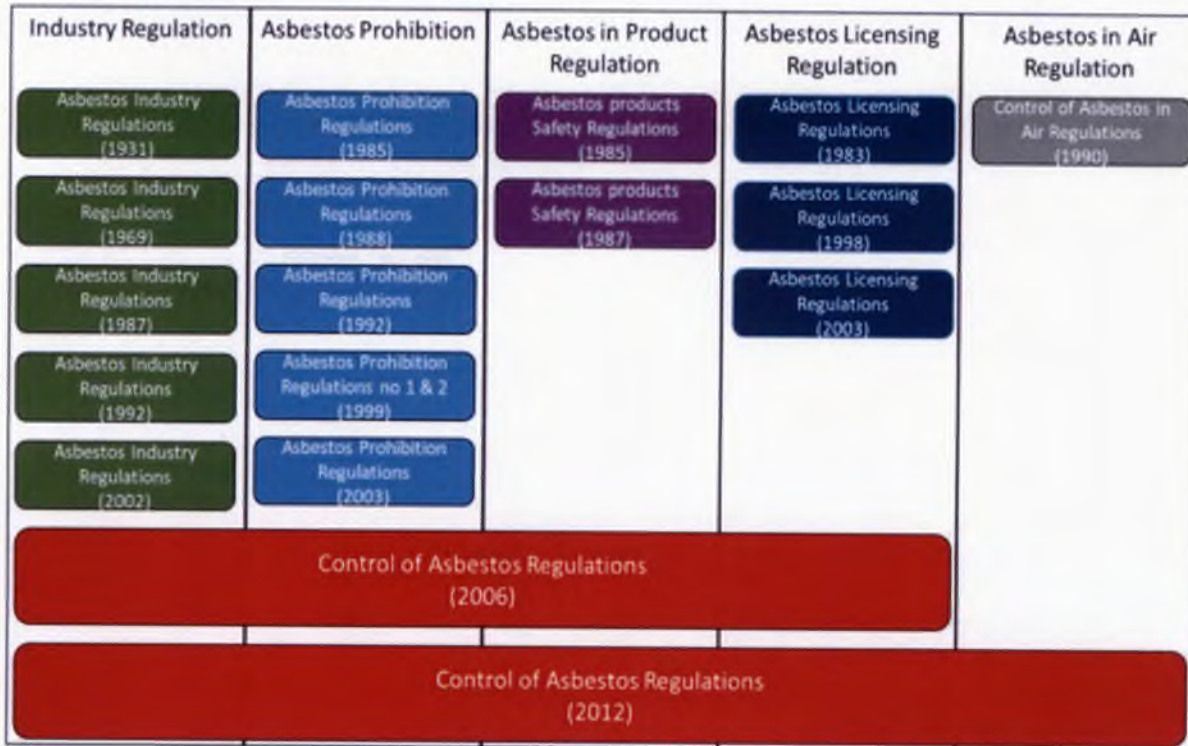


Figure 1.4.1 – Overview of UK asbestos legislation.

1.4.12. **International legislation.** The earliest international asbestos bans began in 1972, with prohibitions on the import and use of asbestos increasingly common worldwide. Many countries still have asbestos in older buildings as laws are only applicable to new builds or refurbishments. Asbestos was widely used in the Baltic states.⁵ On 26 July 1999, Commission Directive 1999/77/EC set the deadline for the prohibition of Chrysotile use in European Union member states by 1 January 2005. Latvia implemented the ban ahead of this deadline in 2001. Estonia and Lithuania enacted the ban on 1 January 2005. There was no requirement to remove asbestos in older buildings unless they were undergoing refurbishment.⁶ Therefore, much of the remaining Soviet-era architecture in the Baltic states still contained asbestos materials, especially asbestos insulation.

Methodology

Factors

1.4.13. The analysis of Ex BP19 required the identification of factors. These factors were identified as the evidence was collected and assessed. Once a factor had

⁵ Estonia, Latvia and Lithuania.

⁶ Full international chronology of asbestos regulations can be found here - http://www.ibasecretariat.org/chron_ban_list.php.

been determined to have been present it was assigned to one the following categories:

- a. **Causal factor(s).** 'Causal factors' are those factors which, in isolation or in combination with other causal factors and contextual details, led directly to the incident. Therefore, if a causal factor was removed from the incident sequence, the incident would not have occurred.
- b. **Contributory factor(s).** 'Contributory factors' are those factors which made the incident more likely to happen. That is, they did not directly cause the incident. Therefore, if a contributory factor was removed from the incident sequence, the incident may still have occurred.
- c. **Aggravating factor(s).** 'Aggravating factors' are those factors which made the final outcome of the incident worse. However, aggravating factors do not cause or contribute to the incident. That is, in the absence of the aggravating factor, the incident would still have occurred.
- d. **Other factor(s).** 'Other factors' are those factors which, whilst shown to have been present played no part in the incident in question, but are noteworthy in that they could contribute to or cause a future incident. Typically, other factors would provide the basis for additional recommendations or observations.
- e. **Observations.** Observations are points or issues identified during the investigation that are worthy of note to improve working practices, but which do not relate to the incident being investigated and which could not contribute to or cause future incidents.

Probabilistic language

1.4.14. The probabilistic terminology detailed below clarifies the terms used in this report to communicate levels of uncertainty within the report. It is based on terms published by the Intergovernmental panel on Climate Change (IPCC) in their Guidance Note for Consistent Treatment of Uncertainties⁷ as well as the Australian Transport Safety Bureau (ATSB) in their paper on Analysis, Causality and Proof in Safety Investigations.⁸ This is illustrated in Figure 1.4.2.

⁷ <https://www.ipcc.ch/pdf/supporting-material/uncertainty-guidance-note.pdf>.

⁸ <https://www.atsb.gov.au/media/27767/ar2007053.pdf>.

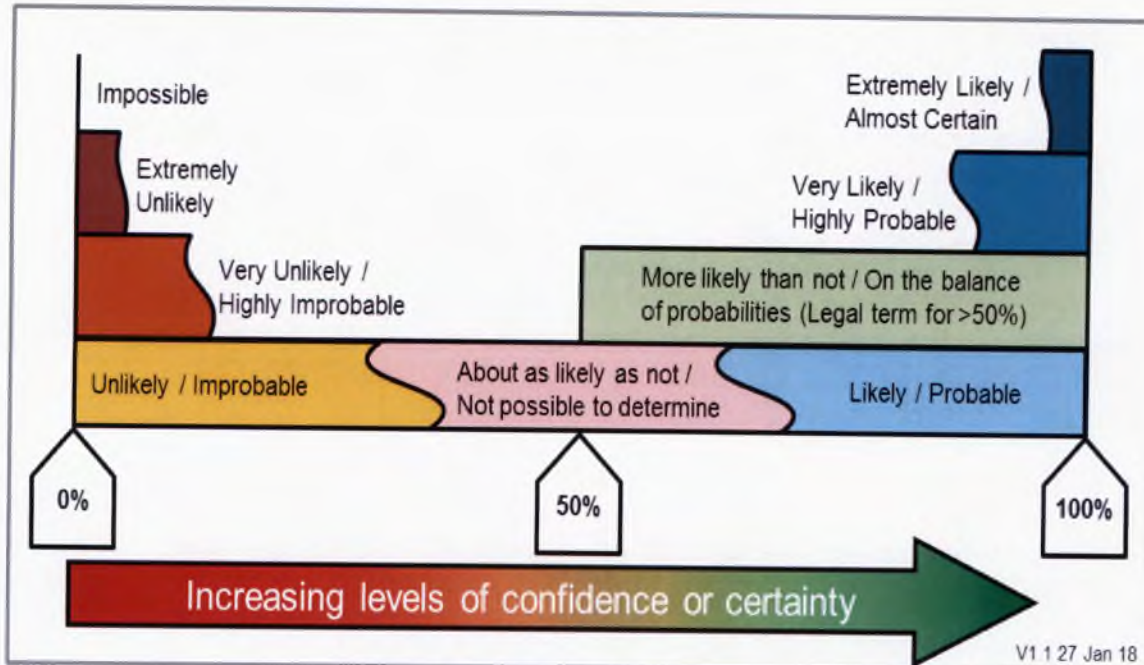


Figure 1.4.2 – Probabilistic Terminology.

Australian Transport Safety Bureau model

1.4.15. In order to assist in the identification and assessment of the Ex BP19 incident factors, the panel employed the ATSB investigation analysis model. The ATSB investigation analysis model provides a general framework that guides data collection and analysis activities during an investigation. The model represents the operation of a system via five levels of 'safety factors', where a safety factor is an event or condition that increases safety risk. The first three levels correspond to 'safety indicators', i.e. safety factors dealing with the individual or local aspects of an accident. Safety indicators are not generally safety issues, but may provide indications that safety issues exist. The upper two levels address 'safety issues', i.e. safety factors associated with organisational or systemic issues. This is illustrated in Figure 1.4.3.

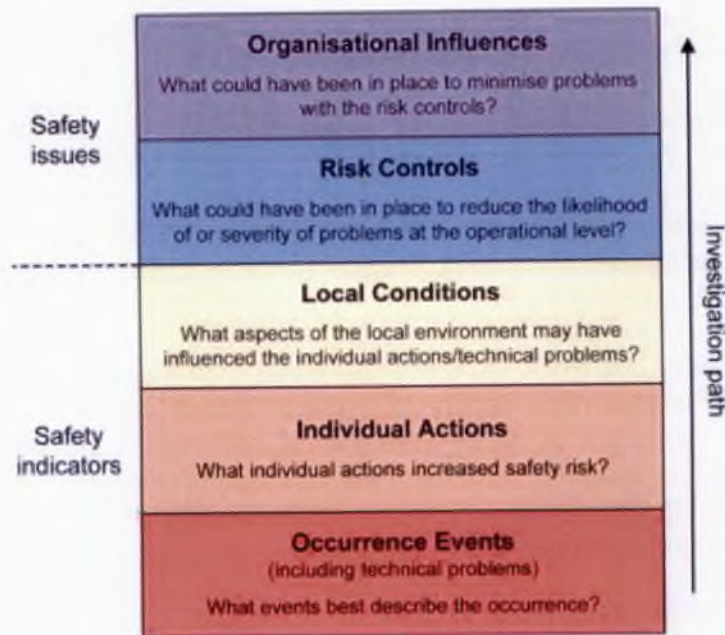


Figure 1.4.3 – ATSB Model.

1.4.16. **ATSB definitions.** The following definitions are used within the ATSB Framework to categorise events, actions and policies. These definitions include specifics as to how they have been applied to this report.

- a. **Occurrence events.** Occurrence events are the key events which describe an occurrence (accident or incident), or the events which ultimately need to be explained by an occurrence investigation.
- b. **Individual actions.** Individual actions are observable behaviours performed by personnel. Individual actions can both reduce or increase risk. These may be as a result of the local conditions prior to the occurrence event.
- c. **Local conditions.** Local conditions are those conditions which exist in the immediate context or environment in which individual actions or events occur, and which can have an influence on the individual actions or events. Local conditions include characteristics of the individuals and equipment involved, as well as the nature of the task and the physical environment. Local conditions can increase the likelihood of individual actions which increase safety risk (for example, fatigue, insufficient knowledge, high workload).
- d. **Risk controls.** Risk controls are the measures put in place to facilitate and assure safety; these are sometimes termed 'defences', 'safeguards' or 'barriers'. For this report this can either be MOD, single Service and unit policies, or it can be a local risk control through Standing Orders or memoranda. Finally, it may be the case that 'mitigations' form a risk control such as mandating personal protective equipment or the cordoning of

areas; these may be formed as a result of individual actions during the incident. There are two main types of risk controls:

(1) **Preventive controls.** Controls put in place to minimise the likelihood of undesirable local conditions, individual actions and occurrence events. These controls facilitate and guide performance to ensure individual actions and technical events are conducted effectively, efficiently and safely. Such controls include processes, training and equipment.

(2) **Recovery controls.** Control measures put in place to detect and correct or otherwise minimise the adverse effects of local conditions, individual actions and occurrence events. Such 'last line' controls include warning systems, emergency equipment and emergency procedures. On rare occasions where these risk controls are breached an accident will result.

e. **Organisational influences.** Organisational influences are those conditions that establish, maintain, or otherwise influence the effectiveness of an organisation's risk controls. For this report the organisation is taken as the brigade level unless otherwise stated.

1.4.17. **Regulatory oversight.** Within the framework of the ATSB, regulatory oversight covers external or government regulators that set the mandated standards that must be met. In this report, however, it is defined as the Service Authority responsible for setting the mandated standards and policy that units must adhere to and the assurance process to confirm compliance. In the MOD context, this can mean multiple authorities regulating the same activity. For example, a Joint Service Publication (JSP) author/policy owner and a single Service HQ may both be active providing oversight in the same activity.

1.4.18. Due to the specific nature of this investigation, the panel decided to utilise a level above organisational influences to address possible safety factors in regulatory oversight, as illustrated in Figure 1.4.4. This level falls within safety issues and is defined at Para 1.4.17.

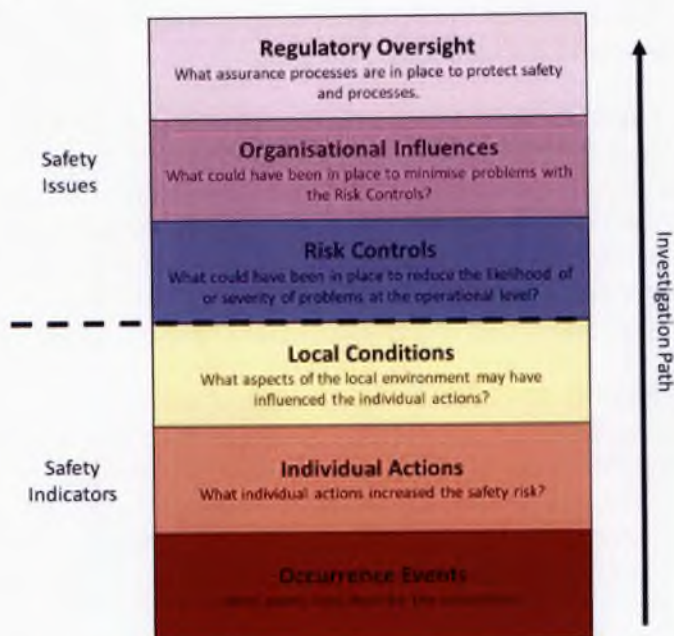


Figure 1.4.4 – ATSB Model as adapted by the panel.

1.4.19. Further detail can be found in ATSB (2007): Analysis, Causality and Proof in Safety Investigations. ATSB Transport Safety Research Report. Aviation Research Discussion Paper – AR-2007-053⁹ and Underwood and Watson (2013) Accident Analysis Models and Methods: Guidance for Safety Professionals.¹⁰

1.4.20. Further key definitions.

a. **As Low As Reasonably Practicable (ALARP).** A risk can be said to be reduced to a level that is ALARP when the sacrifice of further reduction is 'grossly disproportionate' to the decrease in risk that would be achieved. The potential impact of societal concern may also need to be considered. This 'cost' may include more than just financial cost and will include the time and trouble involved in taking measures to avoid that risk. Therefore, an ALARP argument must balance the 'sacrifice' (in time, money or effort) of possible further risk reduction measures with their expected safety benefit (incremental reduction in risk exposure). The balance must be weighted in favour of safety, with a greater 'disproportion factor' for higher levels of risk exposure.¹¹

Exhibit 10
Exhibit 11
Exhibit 12
Exhibit 14
Exhibit 18
Exhibit 186

⁹ <https://www.atsb.gov.au/media/27767/ar2007053.pdf>.

¹⁰ http://safeship.ca/uploads/3/4/4/9/34499158/accident_analysis_models_and_methods_-_guidance_for_safety_professionals.pdf.

¹¹ BRd 10, Glossary of safety terms page x.

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- b. **Domains.** Discrete spheres of military activity within which operations are undertaken can be divided into operational domains. The Royal Navy (RN) predominantly operates in the maritime domain, the Army in the land domain and the Royal Air Force (RAF) in the air domain.¹² There is operational overlap between single Services across the domains, for example 3 Cdo Bde RM sits within the RN (maritime domain) yet operates in both the maritime and land domains.
- c. **Duty Holder.** A key person appointed by the Secretary of State to Discharge a Duty of Care for complex Military Capability such that others do not suffer unreasonable harm or loss from Defence activity. The Duty Holder will be an accountable person with sufficient control to supervise operations significantly affecting the safety or environmental protection of MOD Shipping activities with responsibility and accountability beyond normal managerial duties that cross line management responsibilities.¹³
- d. **Environmental Health (EH).** EH is the practice of assessing, controlling and mitigating factors in the natural and built environment that can potentially affect health. It covers food safety, water potability, sanitation, occupational health, disease prevention and control as well as the Environmental and Industrial Hazards aspects of the Chemical Biological Radioactive and Nuclear (CBRN) spectrum.¹⁴
- e. **Environmental and Industrial Hazards (EIH).** There is a broad spectrum of EIH. It includes hazardous chemicals (other than chemical warfare agents), pathogenic micro-organisms (including animal disease) other than when used as biological warfare agents and radiation hazards other than those arising from the use of nuclear weapons. It also includes physical hazards such as dust, noise, asbestos and smoke.
- f. **Force Protection (FP).** FP comprises all measures and means to minimize the vulnerability of personnel, facilities, equipment, materiel, operations and activities from threats and hazards in order to preserve freedom of action and operational effectiveness of the force, thereby contributing to mission success.
- g. **Force Health Protection (FHP).** FHP is the sum of all efforts to reduce or eliminate the incidence of disease and non-battle injuries to enhance operational health readiness and combat effectiveness.
- h. **Hazard.** A hazard is anything that has the potential to cause harm.¹⁵

¹² There are three other domains: space, cyber and electromagnetic. The RAF is the lead for the space domain and UK Strategic Command is the lead for the cyber and electromagnetic domains.

¹³ BRd 10, Glossary of safety terms page xi

¹⁴ JTTP 4.10.1 Para 5 C

¹⁵ BRd 10, Glossary of safety terms page xi

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- i. **Risk.** Risk is a measure of exposure to possible loss or harm and it combines the severity of loss or harm ('how bad') and the likelihood of suffering that loss or harm ('how often').¹⁶
- j. **Risk/hazard identification.** Risk/hazard identification is the process of identifying what could potentially cause harm.
- k. **Risk assessment.** Risk assessment is the process of understanding the likelihood and severity of harm arising from identified potential hazards. Furthermore, the assessment looks at what can be done to reduce this likelihood of occurrence and severity of harm if it does occur.
- l. **Risk management.** Risk management is the set of activities that enables the identification, assessment, control and communication of risks throughout the Department and through the military CoC. On operations, risk management encompasses the entire process of identifying, assessing and controlling risk.
- m. **Staff branches.** Military staff roles are split into branches denoted by numbers one to nine: 1. Personnel; 2. Intelligence; 3. Current Operations; 4. Logistics and Support; 5. Planning; 6. Communications; 7. Training; 8. Finance; 9. Policy and Legal. A prefix is added to designate the originating single Service (N for Navy, G for Army and A for RAF) or if prefixed with J it designates a Joint organisation. Within HQs at brigade level or above an additional planning function is added after higher level planning (5), to further refine a plan before passing to current operations (3), to execute. This intermediate role is called 3/5 plans.
- n. **Sub-unit.** The term used to describe a subordinate element of a military unit. Within the Royal Marines and the Army sub-units are referred to as a Company (Coy) or Squadron (SqN) and may contain up to 200 personnel. Sub-units are typically able to operate independently from their unit and are commanded by an Officer Commanding (OC) which is typically a major.
- o. **Unit.** The term used to describe a military grouping of a specific role, made up of a number of sub-units. Within the Royal Marines, a unit is a commando; within the Army and depending on the role, a unit can be a regiment or battalion. Within the Royal Navy, individual ships can also be described as units. A unit is commanded by a Commanding Officer (CO).

Available evidence

1.4.21. The panel had access to evidence including:

¹⁶ BRd 10, Glossary of safety terms page xi

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- a. The initial investigation into potential exposure to asbestos carried out by HQ 3 Cdo Bde RM.
- b. Formal written witness statements and correspondence.
- c. Witness statements and transcripts from panel interviews.
- d. Reconnaissance reports, EIH assessments and risk assessments.
- e. MOD, NATO, Navy, Army and Joint Service documentation.
- f. 45 Cdo RM Daily Routine Orders.
- g. HQ 3 Cdo Bde RM Standard Operating Procedures (SOPs).
- h. Combat Health Advisor course training data and nominal rolls.
- i. The Host Nation (HN) brief for Skrunda-1.
- j. Planning conference reports and post-deployment reports.
- k. The near miss report submitted by 2nd Battalion, The Duke of Lancaster's Regiment (2 LANCS).
- l. Army Incident Notification Cell (AINC) reports.
- m. Navy Lessons Identified Management System (NLIMS) reports.
- n. The Memorandum of Understanding (MOU) between Latvia and NATO.

Services

1.4.22. The panel was assisted by the following personnel and agencies:

- a. The Defence Accident Investigation Branch (DAIB).
- b. The Royal Navy (RN).
- c. The Institute of Naval Medicine (INM).
- d. The Navy Safety Centre (NSC)
- e. The Corps of Royal Marines (RM).
- f. Headquarters Field Army.
- g. The Army Incident Notification Cell (AINC).
- h. The Permanent Joint Headquarters (PJHQ).

- i. The Ministry of Defence (MOD).
- j. Defence Medical Services (DMS).
- k. The Environmental Health Defence Specialist Advisor.

Analysis of Factors

Section 1 – Occurrence event

1.4.23. During the analysis of Ex BP19, the panel identified the suspected exposure of UK Defence personnel to asbestos as the occurrence event. Throughout this report each of the factors identified will be analysed against this occurrence event.

Section 2 – Risk controls

Overview of policy

1.4.24. **Policy documents.** The actions of units within the MOD are governed by multiple levels of doctrine and policy. Policy documents are not considered risk controls in themselves. They contain the direction and method by which risk controls are to be employed. The policy documents pertinent to the occurrence event are listed below:

- a. **Allied Administrative Publication (AAP)-06.** NATO glossary of terms and definitions.
- b. **Allied Joint Publications (AJPs).** AJPs form NATO doctrine which builds the fundamental principles by which military forces guide actions to support objectives. Under the NATO standardisation policy, the UK should use NATO doctrine where possible and ensure that, if this is not possible, UK doctrine is coherent with NATO to ensure interoperability. Where necessary the UK produces versions of AJPs that contain national elements which highlight specific differences in the UK approach. This is the case with all three AJPs that the panel considered pertinent to this inquiry and which are listed below:
 - (1) AJP-4.10 – Allied Joint Doctrine for Medical Support.
 - (2) AJP-5 – Allied Joint Doctrine for Planning of Operations.
 - (3) AJP-3.14 – Allied Joint Doctrine for Force Protection.
- c. **Allied Joint Medical Publications (AJMedPs).** AJMedPs form medical specific NATO doctrine and are subject to the same caveats as AJPs.

Exhibit 12
Exhibit 13
Exhibit 11
Exhibit 149
Exhibit 173
Exhibit 185
Exhibit 8
Exhibit 163
Exhibit 16
Exhibit 18
Exhibit 19
Exhibit 10
Exhibit 152
Exhibit 9
Exhibit 48

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(1) AJMedP-3 – Allied Joint Medical MedInt [Medical Intelligence] Policy.

(2) AJMedP-4.12 – Allied Joint Medical Force Health Protection Policy.

d. **Joint Doctrine Publications (JDPs).** JDPs are UK national doctrine which are used if the UK is unable to follow NATO doctrine or no NATO doctrine exists.

(1) JDP 0-01 – UK Defence Doctrine.

(2) JDP 2-00 – Intelligence.

(3) JDP 3-61 – Counter-CBRN the Military Contribution.

e. **Joint Service Publications (JSPs).** JSPs provide tri-Service policy on general subjects. Unless parts are superseded by DINs (see Para 1.4.24.g) they are the authoritative MOD policy on their respective subject.

(1) JSP 375 – Management of Health and Safety in Defence.

(2) JSP 892 – Risk Management.

(3) JSP 950 – Medical Policy.

(4) JSP 909 – Mod Policy for the Force Protection of Deployed UK Defence Personnel.

f. **Joint Tactics Techniques and Procedures (JTTPs).** JTTPs are 'Joint Force instructions for the conduct of military tasks.' They are prescriptive, describing how forces and capabilities will be employed and integrated on joint operations. They are subordinate to joint doctrine, but placed at a level above single Service TTPs, SOPs and standard operating instructions (SOIs).

(1) JTTP 4.10.1 – Force Health Protection and Health Risk Management.

g. **Defence Instructions and Notices (DINs).** DINs are tri-Service policy usually on specific matters that do not warrant a JSP. However, they may also be an elaboration or change in policy that is yet to be amalgamated into a JSP.

(1) 2016DIN06-009 – MEDINT.

(2) 2017DIN06-004 – EIH.

(3) 2009DIN03-004 – EIH (predecessor to 2017DIN06-004).

h. **Single Service policy.** Where applicable, single Services construct their own policy or produce documents that elaborate on how tri-Service policy should be applied to Service specific matters.

- (1) **Books of Reference (BR).** BRs are specific to the RN and RM.
- (2) **Army Command Standing Orders (ACSOs).** ACSOs are applicable to Army units.

Overview of risk management

1.4.25. 'Risk management consists of choosing the appropriate response to a risk, by selecting one or a combination of the following possibilities: avoidance, transference, mitigation, or acceptance. It should be based on minimizing risk wherever possible, and not risk elimination. Risk management integrates the risk response evaluation and selection processes by assessing the value of assets, threats, hazards, and vulnerabilities, and weighs the risk of compromise or loss against the cost of implementing controls and measures and the impact on mission success. Following risk assessment, the implementation of appropriate controls and measures will reduce the likelihood or severity of the various risks and hazards involved.'¹⁷

Exhibit 11

1.4.26. There are multiple different models for risk management in the MOD however, they are broadly similar in scope and approach. The definition in Para 1.4.25 is from AJP-3.14 Allied Joint Doctrine for Force Protection Policy. This was used by the panel during analysis. The risk management process in AJP-3.14 is comparable to AJP-4.10 Allied Joint Doctrine for Medical Policy, as well as JSP 892, which is the MOD policy on risk management. AJP-3.14 is also the risk management process referenced in JTTP 4.10.1, specific to environmental health and force protection. The commonality between stages of the three risk management processes is shown below in Table 1.4.1. While they use subtly different terminology, the stages are the same. The panel also reviewed the risk assessment process in JSP 375. Chapter 8 of JSP 375 outlines the MOD's risk management process and although the stages are not named, they are analogous to AJP-3.14. Chapter 36 of JSP 375, which covers asbestos specifically, is focused on the ongoing management of asbestos in Defence fixed infrastructure. Therefore, the panel favoured the use of AJP-3.14, which is a force protection specific model, to support its analysis.

Exhibit 11
Exhibit 12
Exhibit 163
Exhibit 10
Exhibit 8

¹⁷ AJP-3.14, Annex B, Para B001

AJP-3.14	AJP-4.10	JSP 892
Identify Hazards and Threats	Hazard Identification	Risk Identification
Assess Hazards and Threats	Risk Assessment	Risk Assessment
Develop Controls	Risk Management	Risk Response
Implement Controls		
Supervise and Evaluate	Programme Evaluation	Risk Monitoring and Reporting

Table 1.4.1 – Table of MOD and NATO risk management systems.

1.4.27. The stages of risk management in AJP-3.14 are described as follows:

Exhibit 11

a. **Identify hazards and threats.** This stage looks at 'What can possibly go wrong?'. Hazards and threats may arise from any number of areas and can be associated with: enemy activity, accident potential, environmental conditions, health, sanitation, materiel, and equipment. This phase includes an analysis of the mission, listing of hazards and threats, and identification of underlying causes.

b. **Assess hazards and threats.** Once hazards have been identified, they need to be evaluated, firstly for their importance and secondly for the threat each hazard poses. A basic assessment should include estimation of:

- (1) Likelihood of exposure to the hazard(s).
- (2) Likelihood that such exposure will cause an adverse health effect.
- (3) The anticipated impact (severity) of the hazard on the outcome of interest,¹⁸ for example individual and/or population health, mission success.

c. **Develop controls.** This stage analyses the potential ways to address the risk and, of these, which strikes the best balance between being affordable and effective. It is then assessed whether the residual risk is

¹⁸ The outcome of interest is what the risk is being measured against, for example, a financial institution may well use monetary value as their outcome of interest.

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acceptable. This analysis continues until the level of risk is deemed ALARP by the risk owner. This is often where the '4Ts' are used, defined as follows:

- (1) **Treat.** Application of mitigations and controls to reduce the risk to an acceptable residual level.
 - (2) **Transfer.** Pass the risk to a more appropriate owner, usually a senior commander, for management.
 - (3) **Tolerate.** Accept the risk and continue with activities.
 - (4) **Terminate.** No longer conduct activities where the hazard or risk is applicable.
- d. **Implement controls.** This stage integrates controls and measures which could include incorporating into SOPs, written and verbal orders, mission briefings and / or staff estimates. This is usually achieved by converting controls into clear and simple execution orders, establishing proper authorities and accountabilities, whilst providing the necessary support for implementation.
- e. **Supervise and evaluate.** Commanders ensure that risk controls are implemented and enforced to standard and that a feedback mechanism is in place to assure them. Risk controls are also evaluated periodically to assess whether they remain the most effective way of controlling a risk.

Ex BP19 risk controls

1.4.28. The panel has identified the following risk controls, as defined by the ATSB Model,¹⁹ which were pertinent to the Ex BP19 occurrence event. These are shown in the bracketed numbers below. Additionally, to aid analysis, the panel assigned each risk control to its place within the risk management cycle (risk identification, risk assessment, develop and implement controls).²⁰

- a. **Risk identification.**
 - (1) HN information.
 - (2) Medical Intelligence (MedInt) and Medical Information (MedInfo).
 - (3) EIH assessments.
 - (4) Reconnaissance.
- b. **Risk assessment.**

¹⁹ As defined in Para 1.4.16.d.

²⁰ As defined in Para 1.4.27.

- (1) Risk assessment.

c. **Develop and implement controls.**

- (1) Force Health Protection Briefs (FHPBs).
- (2) Tier 1 assessments while deployed.
- (3) Post-exposure management assurance.

1.4.29. The risk controls identified above were applicable at different phases of Ex BP19. The risk identification and risk assessment controls were applicable during pre-deployment. FHPBs and Tier 1 assessments while deployed were applicable during the deployment. Finally, the post-exposure management assurance risk control was applicable after the deployment.

Host Nation information

1.4.30. The use of Skrunnda-1 during Ex BP19 was facilitated by the HN, Latvia. Throughout the planning and execution of the exercise, Liaison Officers (LOs) were provided to 3 Cdo Bde RM units to assist integration with the Latvian Armed Forces (LAF) units and use of their training infrastructure. Interoperability training between UK and the LAF was also conducted during the execution phase.

Exhibit 5
Exhibit 69

1.4.31. As a NATO partner, Latvia operated under an MOU with the UK, which formalised the planning of operations and sharing of information between the two countries. This included regulations regarding health and safety and any FP measures used to 'minimise the vulnerability of personnel, facilities, equipment and operations to any threat and in all situations'. As such, HN information offered an early risk control to UK exercises overseas.

Exhibit 153

1.4.32. The initial HQ 3 Cdo Bde RM reconnaissance (recce) report, dated 27 February 2018, referenced large portions of the Skrunnda-1 training area²¹ being in disrepair, but with the majority of buildings considered accessible for training. The report further stated that the training area was about to be fully taken over by the Latvian Army, with the aspiration to develop it into a full urban operations training area.

Exhibit 69

1.4.33. The 45 Commando Royal Marines (45 Cdo RM) recce report from January 2019 was the first example seen by the panel of a HN provided map of Skrunnda-1, which illustrated specific in-bounds and out-of-bounds buildings. In-bounds buildings were marked green and out-of-bounds buildings were marked red. The map key was in Latvian but the 45 Cdo RM recce party were verbally briefed by the HN LOs that red marked buildings contained asbestos or posed a structural risk. Green marked buildings had been cleared and were considered safe by the LAF. The panel translated the Latvian key into English, via online translation software.

Exhibit 44
Exhibit 74
Witness 3
Exhibit 122
Witness 26

²¹ The recce report highlights the facility as Skrunnda-2; however, the mapping and pictures confirm it as the facility UK Defence recognises as Skrunnda-1.

This confirmed that the verbal descriptions of green and red marked buildings provided by the LOs correlated with the information in the original map key. At the time of the recce, the LAF were enacting plans to remove both asbestos from the site and to improve the structural integrity of buildings as part of a refurbishment programme.

1.4.34. In March 2019, 54 Squadron Royal Engineers (54 Sqn RE) of 24 Commando Regiment Royal Engineers (24 Cdo Regt RE) conducted a further recce of Skrunda-1. The recce party received the same map as the 45 Cdo RM recce party, with verbal assurance that green buildings were safe to occupy. The Officer Commanding (OC) 54 Sqn RE stated that they had specifically asked about asbestos. They were then assured by HN LOs that asbestos had been removed from those buildings that were marked green on the map.

Exhibit 132
Witness 28

1.4.35. During the Ex BP19 deployment phase, on arrival at Skrunda-1, UK personnel were again provided with a similarly colour-coded map to the one seen by the 45 Cdo RM recce party. On this occasion the map was already translated into English by the HN with the key denoting buildings coloured as:

Exhibit 5

- a. Red (Buildings that will be demolished, CAN'T be used).
- b. Amber (Buildings that CAN'T be used right now. Possible use in future after making them safe).
- c. Yellow (Buildings that CAN be used for ADMIN purposes only with 4.KBDE COM²² permission).
- d. Green (Buildings that CAN be used)
- e. Blue (Storage – CAN'T be used).

1.4.36. Multiple personnel, from both the staff involved in planning Ex BP19 and those who deployed to Skrunda-1, stated that they believed the HN's in and out-of-bounds demarcations were sufficient to indicate the safety of the buildings. Therefore, they considered the HN assessment of the buildings adequate to assure the safety of UK personnel using them.

Exhibit 5
Exhibit 132
Witness 28
Exhibit 89
Witness 16
Exhibit 115
Witness 23
Exhibit 86
Witness 12
Exhibit 196

1.4.37. JSP 375 – Management of Health and Safety in Defence, was the policy which directed the health and safety standards for UK Defence. In the introduction it stated that 'overseas, Defence committed to apply UK standards where reasonably practicable'. Chapter 36 of JSP 375 was specific to asbestos but did not outline a testable standard of asbestos removal by an overseas contractor. Chapter 36 directed that an overseas contractor should be 'competent'.

²² 4.KBE COM: National Guard 4th Kurzeme Brigade Commander.

1.4.38. The MOU provided UK forces assurance of Force Protection under Latvian regulations, including health and safety. It stated that the HN was responsible for informing the visiting nation of all FP measures, limitations and restrictions. This would have included information regarding EH. The panel judged that it was therefore reasonable to expect that information regarding the clearance of asbestos in Skrunda-1 would have been made available to UK HQs, and units planning to train in Skrunda-1, had it been requested.

Exhibit 153

1.4.39. The presence of asbestos in Skrunda-1 and the Latvian aspiration to have it removed had been identified by the 45 Cdo RM recce. This was reinforced by the verbal assurance by the HN LOs of removal of asbestos from green buildings given during the subsequent 54 Sqn RE recce. The panel believed that it would have been reasonable to expect that information on the status of the Latvian asbestos removal project should have been requested during the exercise planning process. Additionally, had removal been completed, certification should have been requested by the exercise planners. There was no MOD policy to direct this. Given that asbestos was identified by the 45 Cdo RM recce, the panel opined that proof of its removal or, where applicable, confirmation of its integrity or undisturbed state should have been a factor for consideration as part of the Ex BP19 risk management process.

Exhibit 74
Witness 3
Exhibit 122
Witness 26

1.4.40. The panel found no EH policy, beyond the requirement to use a 'competent contractor', to assess the state and subsequent removal of asbestos by a HN, to a standard sufficient to meet UK legislation. Whilst there were clear standards for UK laboratories and removal contractors laid down in UK CAR (2012),²³ there was no MOD policy position on the assessment of competency of overseas asbestos laboratories or removal contractors.²⁴

Exhibit 196

1.4.41. The assumption that the green marked buildings were safe was not challenged throughout the Ex BP19 planning process. The panel opined that this assumption was not challenged as the risk posed by asbestos had not been correctly identified. The methods of identification of this risk are explained in the Medical Intelligence and Reconnaissance sections.²⁵ Additionally, there was no policy imperative to request proof from the HN as to the state of asbestos in their training areas.

1.4.42. The panel concluded that not testing or challenging, during the Ex BP19 planning process, the assumption that the HN assessment that green marked buildings were safe to use, resulted in a missed opportunity to assess the risk of asbestos within Skrunda-1. The panel finds the assumption that the green marked buildings were safe to use was a **contributory factor**.

1.4.43. Recommendation. Director Health Safety and Environmental Protection, supported by the Director General Defence Medical Services staff,

²³ The Control of Asbestos Regulations 2012, Part 2, Provisions 19-21 - <https://www.legislation.gov.uk/uksi/2012/632/contents/made>

²⁴ Paras 1.4.190 to 1.4.191 on RADT-II addresses this matter further in the NATO context.

²⁵ Medical Intelligence – Paras 1.4.44 to 1.4.56; Reconnaissance – Paras 1.4.72 to 1.4.99.

should update Defence Health Safety and Environmental Protection policy to include direction on the identification and assessment of Environmental and Industrial Hazards in overseas locations in order to inform risk management.

Medical Intelligence and Medical Information

1.4.44. MedInt was defined as 'the product of the processing of medical, bio-scientific, epidemiological, environmental and other information related to human or animal health. This intelligence, being of a specific technical nature, requires informed medical expertise during its direction and processing within the intelligence cycle.'²⁶

Exhibit 149

1.4.45. MedInfo was defined as 'any information on medical or environmental threats, or medical facilities or capabilities which has been gathered through non-intelligence channels and which has not been analysed for intelligence content.'

Exhibit 152

1.4.46. MedInt formed the first 'principle' of EIH management, as directed in DIN 2017DIN06-004. It stated that: 'General and medical Intelligence, including the locations and types of hazards, are required to provide an initial assessment of risks to health, including those posed by EIH.' Furthermore, it was later referred to as being a means of identifying sites requiring Tier 2 assessments.'²⁷

Exhibit 9

1.4.47. MedInt functions as an EH risk control by commencing the identification of threats and hazards, in order to inform early EH planning and estimates. It also begins the risk assessment process by informing the requirement for further investigation, through EH reces and specialist assessments.'²⁸

Exhibit 10
Exhibit 11

1.4.48. The HQ 3 Cdo Bde RM EH team indicated that, during the planning for Ex BP19, general MedInfo relevant to Latvia and the Baltic states was collected from both internal MOD and open sources. MOD MedInt was requested from Navy Command Headquarters (NCHQ), Permanent Joint Headquarters (PJHQ) and Army HQ sources. No information specifically referencing the Skrunda-1 training area was available.

Exhibit 64
Witness 1
Exhibit 90
Witness 17

1.4.49. The HQ 3 Cdo Bde RM EH team was the only land domain focused EH capability within the RN. In comparison, the Army had an EH team within each regional Bde, as well as within 1 (UK) Division, 3 (UK) Division, 6 (UK) Division and 16 Air Assault Brigade (16 AA Bde). There was also a standalone Environmental Monitoring Team (EMT).²⁹ This wider pool of EH expertise within the Army provided greater capacity to generate land domain focused EH MedInt and MedInfo, which was used to inform future planning. While the HQ 3 Cdo Bde RM EH team did reach back to the Field Army (Fd Army) for land domain EH MedInt and MedInfo,

Exhibit 134
Exhibit 75
Witness 4
Exhibit 82
Witness 8
Exhibit 90
Witness 17

²⁶ AJMedP-3 – Ch 1 Para 2.

²⁷ 2017DIN06-004 Para 14. d. (2) (a).

²⁸ EH specialist assessments are defined as Tier 2 assessment. See EIH assessment section from Para 1.4.58 for further details.

²⁹ The Regions were commanded by HQ Home Comd. The Divisions, 16 AA Bde and the EMT were commanded by HQ Field Army.

this was not a formalised arrangement and was largely based on personal relationships between the staff.

1.4.50. During its investigation the panel became aware of a Skrunnda-1 infrastructure assessment report³⁰ produced by Op CABRIT Est,³¹ dated 4 June 2018. The report was compiled for the CO 1 Royal Welsh Battle Group (1 R WELSH) on the suitability of Skrunnda-1 for urban operations training. This report assessed the Skrunnda-1 infrastructure, highlighting multiple buildings that should be declared out-of-bounds for training. During the assessment, 35 buildings were visually assessed and the report identified risks such as structural integrity, potential asbestos and stagnant water. This report was not seen by the HQ 3 Cdo Bde RM planning staff. Of note, the Company Sergeant Major, Zulu Company, 45 Cdo RM, was on the external distribution list. The HQ 3 Cdo Bde RM EH and planning staffs were unaware of this report in the preparation for Ex BP19.

Exhibit 71
Exhibit 77
Witness 7
Exhibit 90
Witness 17
Exhibit 64
Witness 1

1.4.51. The Op CABRIT Est infrastructure assessment report provided an example of a detailed expert assessment of Skrunnda-1, including photos and mapping, which could have been used to form MedInt.³² While the Op CABRIT Est report did not directly assess buildings subsequently used by personnel on Ex BP19, the state of buildings in the photographs were analogous to the state of those used and identified by 3 Cdo Bde RM.

Exhibit 71

1.4.52. The lack of a formal arrangement or forum enabling the HQ 3 Cdo Bde RM EH team to access land domain focused MedInt and MedInfo resulted in an over reliance on personal relationships. If these personal relationships had not existed, the HQ 3 Cdo Bde RM EH team would have had to rely on open-source information, previous experience and Operational Staff Work (OSW) to inform risk identification. The panel believed that this may result in scenarios where hazards within an area were known by the Army, but this information was not communicated or available to other Front Line Commands³³ or PJHQ.

1.4.53. As the report was commissioned by 1 R WELSH for internal training it was only shared with a limited distribution. The panel opined that, had this report been available to HQ 3 Cdo Bde RM, rather than focused at Zulu Company, 45 Cdo RM, this may have informed, at an earlier stage, the wider risk management surrounding the use of Skrunnda-1 during Ex BP19. This demonstrated that there was pertinent information regarding Skrunnda-1 within Defence but, with no effective process to share or distribute reports, an opportunity was missed to develop this information into MedInt or MedInfo.

³⁰ An Infrastructure assessment is not conducted by an EH practitioner and therefore did not apply a medical interpretation to the hazards identified.

³¹ Op CABRIT Est is the UK led NATO Enhanced Forward Presence (eFP) deployment to Estonia. The report was compiled for the Commanding Officer of 1 Royal Welsh Battle Group on the suitability of Skrunnda-1 for urban operations training.

³² Despite being an infrastructure rather than EH assessment there are numerous photographs of the interior of buildings and suspected asbestos was mentioned 13 times.

³³ The Front Line Commands are the RN, Army, RAF and Strategic Command.

1.4.54. The panel opined that the lack of specific MedInt in the case of Ex BP19 created a local condition that subsequently resulted in EH and asbestos not being factored into early planning. This omission meant that EH was not sufficiently integrated into reconnaissance and further risk management. The lack of specific MedInt on Skrunnda-1 was also a factor in Ex SbS18 and Ex NAMEJS.³⁴

1.4.55. The panel concluded that the absence of Skrunnda-1 specific MedInt being available to the HQ 3 Cdo Bde RM EH team during Ex BP19, resulted in an increased reliance on effective EH reconnaissance. The panel finds that the lack of Skrunnda-1 specific MedInt and a reliance on personal relationships to inform planning and recce requirements was a **contributory factor**.

1.4.56. Recommendation. Director General Defence Medical Services should develop an appropriate method for sharing Force Health Protection Instructions and Environmental Health reconnaissance reports among the Front Line Commands and the Permanent Joint Headquarters in order to enhance risk identification.

Environmental and Industrial Hazards assessments

1.4.57. EIH assessments were directed by 2017DIN06-004. They were a source of pre-deployment MedInt which could be used to inform planning and the development of the exercise risk picture. EIH assessments could also be used during deployment to assure the safety of deployed personnel or highlight EIH that may have subsequently arisen. This sub-section of the report assesses pre-deployment EIH assessments. EIH assessments during deployment are discussed in the Tier 1 assessments deployed sub-section.³⁵

Exhibit 9

1.4.58. 2017DIN06-004 stated that EIH assessments could be conducted at two levels,³⁶ as follows:

Exhibit 9
Exhibit 92

a. **Tier 1.** This was a site assessment undertaken by unit personnel who had the Combat Health Adviser (CHA) qualification or were medically trained. Assessments were to be completed for all locations occupied for longer than 48 hours, or in the event of an EIH exposure with the potential to impact upon health. The assessment followed a standard template which could be used to identify hazards that required further assessment from EH personnel.

b. **Tier 2.** A Tier 2 assessment was a more detailed assessment undertaken by vocational EH practitioners. Again, this followed a standard template but allowed for a greater detail of assessment and development of

³⁴ Paras 1.4.185 and 1.4.204 respectively.

³⁵ Paras 1.4.128 to 1.4.147.

³⁶ Above this there was a Tier 3 which used specialist monitoring teams above the capability of what a Tier 2 assessment could provide. The Tier 3 assessment was unlikely to be used in an exercise scenario as the requirement for the exercise risks to be ALARP would usually have ruled out a site requiring specialist monitoring prior to deployment.

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mitigations. Tier 2 assessments were to be undertaken in the following circumstances:

- (1) When sites or areas were identified pre-deployment by MedInt or PJHQ/single Service HQs as requiring an EIH assessment.
- (2) When units requested support following their Tier 1 assessment.
- (3) When the Operation was at steady state, EH teams were to undertake confirmation of the unit Tier 1 assessments.

1.4.59. As stated in 2017DIN06-004, Tier 1 assessments were to be performed by unit personnel (unit personnel were defined as persons holding a CHA qualification or unit medical staff). CHA courses were run by the Defence Medical Services (DMS) at DMS Whittington. The CHA course was aimed at any OR8-OF3³⁷ and the qualification was valid for three years. The role of the CHA was to identify, through the Tier 1 assessment, the hazards that may have been present within the location and to assess them. This allowed the Commander to make informed decisions and allocate scarce resources accordingly. The CHA course content was reviewed by the panel and did not include any specific material relating to the identification of asbestos.

Exhibit 9
Exhibit 107

1.4.60. While 2017DIN06-004 required Tier 1 assessments 'for all locations occupied for longer than 48 hours or in the event of an EIH exposure with the potential to impact upon health', it did not specifically direct them to be conducted prior to deployment. However, 2017DIN06-004 did highlight that EIH avoidance should be the primary consideration and that a CHA was an appropriately qualified individual to be included in pre-deployment reconnaissance teams to facilitate informed assessments. Prior to deployment to Skrunnda-1, no Tier 1 or Tier 2 assessments were conducted on the training area. The lack of a Tier 2 assessment could be attributed to the EH recce, which is discussed in the reconnaissance sub-section.³⁸

Exhibit 9

1.4.61. The Tier 1 assessment had guidance and was recorded via a standard template on a single side of A4 at Annex A of 2017DIN06-004. The template directed the assessor to provide information or evidence regarding civilian activities on site, hazardous materials present, military activities being conducted, evidence of pollution, surrounding area use, types of water supply available, waste disposal methods in use and evidence of disease vectors (biting insects, rodents, etc). Within each of the sections were questions to guide the assessor. Possible identification of asbestos would be recorded in the hazardous materials section. Finally, the assessor was directed to make a subjective assessment of the collective risk (Low, Medium or High). An assessment of High risk directed the assessor to request a Tier 2 assessment.

Exhibit 30

³⁷ OR8 to OF3 are the NATO rank terms, for the single Services equate to: RN/RM - Warrant Officer Class 2 to Lieutenant Commander/Major, Army - Warrant Officer Class 2 to Major, and RAF - Warrant Officer to Squadron Leader.

³⁸ Paras 1.4.89 to 1.4.99.

1.4.62. The RN did not have a policy that stipulated a minimum allocation of CHAs per unit within 3 Cdo Bde RM. In comparison, Army workforce policy required at least one CHA per unit. Inquiries by the panel highlighted that, at the time of the investigation, 3 Cdo Bde RM had no in-date CHAs. The last course attended by 3 Cdo Bde RM personnel was in July 2018, however there was no nominal roll available. Furthermore, the Joint Personnel Administration (JPA)³⁹ competency for CHAs was only created on 9 July 2020, therefore identifying personnel who qualified prior to this placed a reliance on unit records. The panel established that 3 Cdo Bde RM did not hold any record of CHA qualified personnel at the time of Ex BP19. Given the time elapsed since Ex BP19, and exacerbated by the fact that personnel were now dispersed across the MOD, the panel were unable to establish if any person who exercised in Skrunnda-1 was CHA qualified.

Exhibit 162
Exhibit 168
Exhibit 174
Exhibit 161

1.4.63. It is unclear why 2017DIN06-004 directed a Tier 1 assessment to be conducted by a CHA, or medical staff, within 48hrs of arrival at a location. It encouraged CHAs to be part of pre-deployment recce teams, yet did not refer to the completion of the Tier 1 assessment as a recce tool. The panel opined that the Tier 1 assessment offered utility to provide a brief overview of possible hazards at the early operational planning stages.⁴⁰ Employing Tier 1 assessments during initial recces would have allowed for subsequent recces to be tailored and prioritised as the risk picture developed. The process by which recces should develop the risk picture is addressed in the reconnaissance sub-section.⁴¹ In the case of Ex BP19, the panel opined that, had a Tier 1 assessment been conducted during the initial recces, vital information could have been passed directly to the HQ 3 Cdo Bde RM EH team. The EH team could then have subsequently informed the Ex BP19 planning team of the risks and highlighted the requirement for a Tier 2 assessment.

Exhibit 9

1.4.64. The CHA course included instruction on how to complete a Tier 1 assessment, but it did not include hazard identification. Therefore, the panel opined that, while CHAs may have had a better understanding of the process of a Tier 1 assessment, they were no better placed to identify EIH hazards, such as asbestos, than any other person who had not completed the CHA course.

Exhibit 107
Exhibit 106

1.4.65. Additionally, 2017DIN06-004 empowered medical staff to complete the Tier 1 assessment. However, they received no specific training on identifying EIH or completing Tier 1 assessments. Therefore, the panel believed that medical staff were no better qualified to complete Tier 1 assessments than non-medical personnel.

Exhibit 9
Exhibit 131
Exhibit 86
Witness 12
Exhibit 87
Witness 14
Exhibit 85
Witness 11

³⁹ JPA is the system that administrates pay, reporting and other human resources information records for MOD military personnel. Competencies are records within JPA that record qualifications as well further information such as when the qualifications were achieved and if/when they expire.

⁴⁰ JDP 0-01 defines operational as 'the level at which operations are planned, conducted and sustained, to contribute to achieving strategic aims, as well as synchronising action, within theatres or areas of operation'.

⁴¹ Paras 1.4.72 to 1.4.88.

1.4.66. In the opinion of the panel, a reliance on a CHA or medical staff to complete the Tier 1 assessment relied on a small pool of specialists, therefore reducing the likelihood of completion. However, as highlighted, the assessment was not overly complex and simply relied on the completion of a basic risk assessment template to provide a view on elements that could pose a risk, and that should be reported back to the EH team at Bde level. This could have been utilised to gauge the requirement for a Tier 2 assessment,⁴² which could have been conducted during an EH recce. The panel opined that expanding the responsibility of completing Tier 1 assessments to all OR8 to OF3 personnel would provide greater opportunity to collect EIH information to inform the risk management process.

1.4.67. The panel concluded that the lack of EIH information, in particular regarding asbestos, gathered during recces resulted in an incomplete risk picture during planning. The panel finds the lack of EIH information gathered as part of the unit recces was a **contributory factor**.

1.4.68. The panel further concluded that early, pre-deployment, Tier 1 assessments had utility as a risk control by providing an indicator of potential risk posed by EIH. Recces conducted prior to deployment provided opportunities to identify suspected asbestos and trigger a Tier 2 assessment. The panel finds that the lack of clear policy to conduct a Tier 1 assessment during pre-deployment recces was an **other factor**.

1.4.69. **Recommendation. Director General Defence Medical Services should amend 2017DIN-06-004 to expand the range of personnel able to complete Tier 1 assessments, in order to increase the likelihood of Environmental and Industrial Hazard assessment being conducted.**

1.4.70. **Recommendation. Director Health Safety and Environmental Protection, supported by the Director General Defence Medical Services should update Defence Health Safety and Environmental Protection policy to recommend that, during planning and if Environmental Health staff are not able to attend reconnaissance visits, Combat Health Advisors or empowered individuals be included and directed to conduct Tier 1 assessments, in order to identify Environmental and Industrial Hazards and inform the development of the exercise plan.**

1.4.71. A change of policy would in future enable CHAs to act as a Unit EH focal point instead of being an assessor. This would allow them to become both the POC for EH within the unit as well as ensuring Tier 1 assessments are conducted and communicated up the CoC by the unit. The panel finds this is an **observation**. The assurance of Tier 1 assessments is discussed further in the Tier 1 assessment deployed sub-section.⁴³

⁴² Of note Tier 2 assessments may be triggered prior to a Tier 1 assessments if MedInt suggests there is a heightened risk.

⁴³ Paras 1.4.128 to 1.4.147.

Reconnaissance

1.4.72. Following MedInt, reconnaissance formed the second 'principle' of EIH management. 2017DIN06-004 stated: 'Pre-deployment reconnaissance must include EIH to inform the estimate process and to identify appropriate Force Protection measures, including recommendations pertaining to those areas within theatre to be avoided if possible. EIH reconnaissance will also be required during the deployment. Appropriately qualified medical personnel, (EH, CHA (Combat Health Adviser) and in specific circumstances LRTs (Light Role Team)) are to be included in reconnaissance parties as they are best placed to identify possible hazards that pose a significant potential risk to health.'

1.4.73. There were six known recce visits to Skrunda-1 in preparation for Ex BP19;

a. **5 to 9 February 2018 – Joint Navy Commitments (Navy Cts) and HQ 3 Cdo Bde RM recce.** This was a high-level recce to identify possible training areas to be used during Ex BP19, including Skrunda-1. There were no EH specialists in attendance but the recce report dated 27 February 2018 did reference the requirement for a safety assessment.

b. **22 to 26 October 2018 – Joint Commander Amphibious Task Group and HQ 3 Cdo Bde RM J3/5 Phase 3 recce.** This recce conducted further evaluation of training areas, including Skrunda-1. It included a specialist communications (J6) recce, which referred to Skrunda-1 as a likely location for the 30 Commando Information Exploitation Group Royal Marines Logistic Task Group (30 Cdo IX Gp RM LTG). There were no EH specialists in attendance, nor any reference to safety or risks recorded in either the J6 recce report dated 29 October 2018, or the COMATG and HQ 3 Cdo Bde RM recce report dated 5 November 2018.

c. **6 to 11 January 2019 – 45 Cdo RM recce.** This recce was initiated by 45 Cdo RM to assess unit training opportunities. No EH specialists attended. Notably, asbestos was highlighted as being present in several buildings, which were out-of-bounds due to ongoing refurbishment. The recce report containing this information was dated 14 January 2019.

d. **11 to 12 March 2019 – HQ 3 Cdo Bde RM EH SNCO recce.** This recce was initially instigated by 30 Cdo IX Gp RM to assess urban training opportunities at Skrunda-1. This was then additionally used by the 3 Cdo Bde RM HQ EH SNCO to test the water supply. This was the sole visit of an EH specialist to Skrunda-1. Due to adopting the timings from the 30 Cdo IX Gp RM urban operations training assessment the visit was limited to less than an hour in Skrunda-1. This recce was conducted in low light conditions and in the snow. No written report was produced to document this recce.⁴⁴

e. **March 2019 – 54 Sqn RE recce.** This recce was conducted by 54 Sqn RE personnel to assess training opportunities in Skrunda-1. This visit

Exhibit 9

Exhibit 69
Exhibit 46
Exhibit 43
Exhibit 44
Exhibit 90
Witness 17
Exhibit 132
Witness 28
Exhibit 113

⁴⁴ This recce is examined in further detail in Paras 1.4.89 - 1.4.99.

focused predominantly on engineering training opportunities, such as the controlled demolitions conducted on Ex BP19. No written report was produced to document the recce.

f. **April 2019 – 30 Cdo IX Gp RM recce.** This recce was conducted by 30 Cdo IX Gp RM personnel to finalise the tactical considerations of the exercise at Skrunnda-1. This included identifying potential accommodation positions on the site. The presentation dated 17 April 2019 that documented the recce made no reference to safety or risks.

1.4.74. The initial joint Navy Cts and HQ 3 Cdo Bde RM recce stated that 'many of the buildings are derelict and a thorough safety assessment is recommended before use. However, this recommendation to complete a safety assessment of the site prior to use was not directed as a task to be completed in subsequent recces of Skrunnda-1. This is further evidenced by the fact that the information which highlighted the risk of asbestos within the 45 Cdo RM recce report was not developed by subsequent recce visits.

Exhibit 45
Exhibit 42
Exhibit 44
Exhibit 69
Exhibit 46
Exhibit 113
Exhibit 90
Witness 17
Exhibit 132
Witness 28

1.4.75. The Ex BP19 Main Planning Conference (MPC)⁴⁵ took place over the period of 15 to 17 January 2019 in RM Barracks Stonehouse. It was attended by circa 120 personnel, which included representatives from deploying units and sub-units. There was no nominal roll taken at the MPC to confirm exactly who attended. The 45 Cdo RM recce report was verbally discussed at the MPC with a single reference to in and out of bound areas in Skrunnda-1 appearing on the MPC briefing slides.⁴⁶ The discussions were centred on whether there would be sufficient facilities available in Skrunnda-1 to achieve the exercise training objectives. The map from 45 Cdo RM's recce report, with the red and green building demarcations, was also discussed to determine if this would impact on the training objectives. The SO2⁴⁷ J3/5 of HQ 3 Cdo Bde RM confirmed that the presence of asbestos was mentioned and acknowledged that the hazard from asbestos was not captured in the Ex BP19 risk register. They could not recall why this omission occurred. A link to the electronic copy of the 45 Cdo RM recce report was included in the Warning Order issued to all deploying units on 22 February 2019.

Exhibit 77
Witness 7
Exhibit 72
Exhibit 39

1.4.76. Para 15 of the Warning Order, titled 'Information Gap', identified the requirement to conduct further recces to Lithuania, Latvia and Estonia. It acknowledged the three recces conducted to date; the Phase 3 recce (joint COMATG and HQ 3 Cdo Bde RM recce), a J6 recce (part of the COMATG and HQ 3 Cdo Bde RM recce) and the 45 Cdo RM recce. However, in the 'required recce' section of the table it did not direct specific actions, such as the conduct of a safety

Exhibit 72
Exhibit 46
Exhibit 43
Exhibit 44

⁴⁵ MPC is the middle of three levels of planning conference used during the planning process of an exercise or operation. It follows the Initial Planning Conference (IPC) and precedes the Final Planning Conference (FPC). The timing of the three planning conferences will be dictated by the planning time available before deployment.

⁴⁶ Slide 31 Freedoms/Constrains 'C- in-use buildings in SKR, land available in TAPA for GMR'.

⁴⁷ SO2 refers to Staff Officer [grade] 2 which is NATO term and equates to: Navy - Lieutenant Commander, Royal Marines & Army – Major, RAF - Squadron Leader.

assessment or investigation into asbestos in Skrunnda-1, to any unit or specific specialist.

1.4.77. Written reports from recces conducted after the MPC by other 3 Cdo Bde RM units made no reference to 45 Cdo RM's report or each other. Interviews with 54 Sqn RE staff, who conducted a recce in March 2019, stated that they were unaware of the 45 Cdo RM report. Further to this, no planning documents or recce reports from 54 Sqn RE or 30 Cdo IX Gp RM contained a reference to 45 Cdo RM's report. The HQ 3 Cdo Bde RM EH SNCO, who conducted a recce to Skrunnda-1 in February 2019, had also not seen the 45 Cdo RM recce report prior to visiting. Details on this recce are addressed in the Reconnaissance sub-section.⁴⁸

Exhibit 132
Witness 28
Exhibit 90
Witness 17

1.4.78. Personnel from 30 Cdo IX Gp RM LTG who deployed on Ex BP19 were unaware of buildings being out-of-bounds prior to their arrival at Skrunnda-1. This was despite other personnel from the unit attending the MPC. In addition, 30 Cdo IX Gp RM had based their plans on utilising buildings which were subsequently found to be marked red on the colour coded map. 30 Cdo IX Gp RM later adjusted their plans to only use green marked buildings. Given the limits to recollection and time elapsed since Ex BP19 the panel was unable to establish exactly how information about Ex BP19, and specifically Skrunnda-1, was disseminated within the CoC of the deploying units.

Exhibit 115
Witness 23
Exhibit 89
Witness 16

1.4.79. The planning for Ex BP19 started with the NCHQ and HQ 3 Cdo Bde RM plans teams (J5), who developed the basic scheme of manoeuvre. The initial recce in February 2018 did not have any EH specialists in attendance. This was not considered inappropriate considering the immature nature of the planning. The recce did, however, recommend a safety assessment to be conducted of Skrunnda-1. As the Ex BP19 planning was refined by the J3/5 team, the exercise risk picture also developed, as did the understanding of the intelligence required to correctly categorise and mitigate the risks.

Exhibit 69
Exhibit 77
Witness 7

1.4.80. While not a bespoke intelligence activity the process of collecting and processing information through reconnaissance to develop a picture can be analysed through the lens of the 'Intelligence Cycle'. AAP-6 defines this as: 'The sequence of activities whereby information is obtained, assembled, converted into intelligence and made available to users. The sequence comprised the following four phases:

Exhibit 184

- a. **Direction.** Determination of intelligence requirements, planning the collection effort, issuance of orders and requests to collection agencies and maintenance of a continuous check on the productivity of such agencies.
- b. **Collection.** The exploitation of sources by collection agencies and the delivery of the information obtained to the appropriate processing unit for use in the production of intelligence.

⁴⁸ Paras 1.4.89 to 1.4.99.

- c. **Processing.** The conversion of information into intelligence through collation, evaluation, analysis, integration and interpretation.
- d. **Dissemination.** The timely conveyance of intelligence, in an appropriate form and by any suitable means, to those who need it.'

1.4.81. The final stage of the intelligence cycle is the dissemination of intelligence, which is then analysed to develop a further understanding of what information gaps remain, and which then feeds the direction for the next cycle to collect and process the required information. Within the model, new recces should only have been required if there was a known information gap from a previous report or circumstances had changed to require new information.

1.4.82. In addition to the intelligence cycle, another example more specific to EH is the Conceptual Site Model (CSM) approach. The CSM model was not currently used within UK EH Policy but was in NATO EH Doctrine AJMedP 4-12.⁴⁹ This was the EH doctrine used to assist the building of an EH risk picture. The CSM approach involved building a list of hazards from MedInfo/MedInt and placing them into a table such as the one shown in Figure 1.4.5.

Exhibit 173

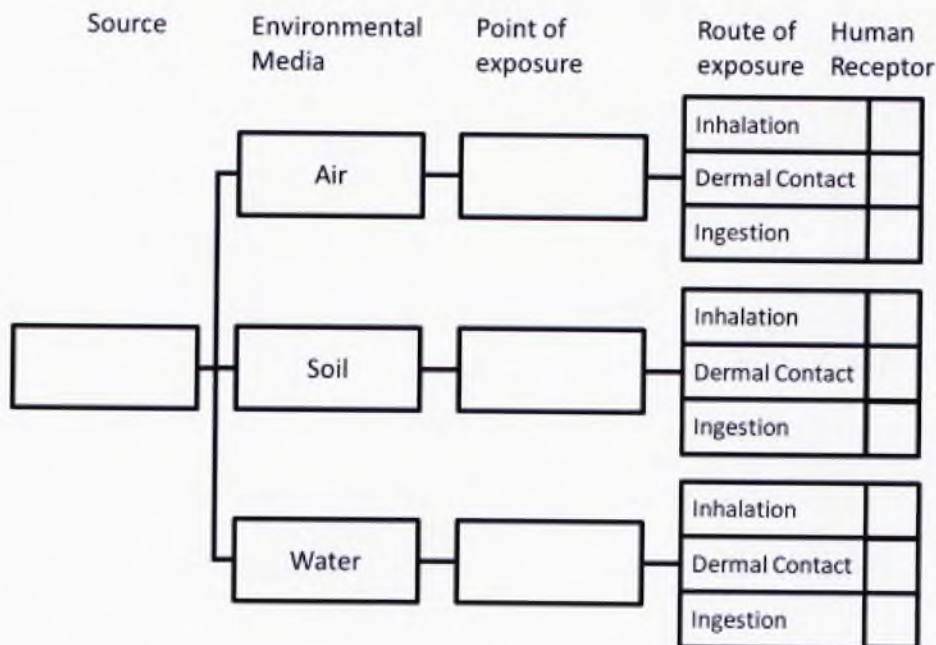


Figure 1.4.5 – CSM example template.

1.4.83. The CSM could then be adapted to accommodate any change in activity and new information. The CSM was iterative where information was used to both assess risk and clarify where further investigation was needed. If necessary, the use of further recces or sampling could be used to refine the CSM, evaluate

⁴⁹ Section 0204.

potential exposure pathways, vectors or transport mechanisms and to develop an appropriate risk management plan.

1.4.84. Finally, the CSM also emphasised the retention of evidence in support of risk decisions. It stated: 'Four key elements shall be considered in the evaluation process: findings, conclusion, discussion and recommendations. These four key elements shall be supported by documentation. If certain documentation is excluded in the report, the rationale behind the decision must be explained. Supporting documentation shall be included in order to facilitate a fundamental understanding of the assessment. Sources that revealed nil findings shall be included.' This enabled risk owners to scrutinise assessments further if they needed additional assurance, as well as providing useful information if the same area was to be used again.

1.4.85. In the case of Ex BP19 the OSW did not reflect this process, with hazards and considerations either being revisited several times or not developed. In the context of the intelligence cycle this showed that the 3 Cdo Bde RM process of dissemination and subsequent direction did not function efficiently. The lack of direction, following the initial recce, that a safety assessment should be completed demonstrated that the understanding HQ 3 Cdo Bde RM had of Skrunnda-1 was not being developed over the pre-deployment stage. Instead, recces to Skrunnda-1 were conducted in isolation and did not develop the picture sufficiently to inform the risk management process. This led to a lack of clear direction to establish the risk of asbestos in Skrunnda-1 for the next iteration of the process. The intelligence cycle and CSM processes demonstrated that Ex BP19 reconnaissance should have been an iterative process used to develop incomplete information. The panel opined that, had the recces to Skrunnda-1 informed and built upon one another, rather than being standalone events, this would have allowed for subsequent recces to inform planning, to target information gaps and to develop the identification and assessment of hazards including asbestos.

1.4.86. The initial Ex BP19 recce reports were discussed at the MPC and distributed electronically via links in the Warning Order. However, personnel who conducted recces after the MPC, including the EH SNCO, stated that they had not seen any previous OSW prior to their visits to Skrunnda-1. The panel was unable to establish where the communication chain ended. It is the opinion of the panel that this provided further evidence of the weakness in the dissemination of recce reports. As a result, the opportunity to provide specific direction on tasks to be achieved by recces was missed. Interviews with the EH team highlighted that a reliance on the medical planners and unit General Duties Medical Officers (GDMOs) to feed information to them, resulted in EH actions being taken late or not at all. This is considered in further detail in the EH awareness in planning subsection.⁵⁰ Should any recce reports or information collected have amounted to MedInfo or MedInt these should have been incorporated in the process developed under the MedInt recommendation in Para 1.4.56.

⁵⁰ Paras 1.4.167 to 1.4.171.

1.4.87. The panel concluded that the inefficient dissemination and direction to support future reces meant that the information collection on asbestos and development of the risk picture in Skrunda-1 was not completed prior to deployment. The panel finds that the lack of processing of EH relevant information collected on reces to direct future reces to be a **contributory factor**.

1.4.88. Recommendation. Commander 3 Commando Brigade Royal Marines should improve their pre-deployment reconnaissance processes in order to ensure that information relevant to Environmental and Industrial Hazards is sufficiently developed to inform risk management.

EH reconnaissance planning

1.4.89. In February 2019, 30 Cdo IX Gp RM identified the opportunity to conduct urban training activities in Skrunda-1 and initiated a recce. At the same time the HQ 3 Cdo Bde RM SO3 Med A realised that there was an outstanding requirement to assess the suitability of Latvian hospitals to support Ex BP19. There was also a requirement to assess the quality of water in Skrunda-1; this was tasked to the EH SNCO. As the 30 Cdo IX Gp RM recce had already received diplomatic clearance to proceed over the period of 11 to 12 March 2019 from the Latvian Defence Attaché, it was decided that SO3 Med A and the EH SNCO would join the 30 Cdo IX Gp recce.

1.4.90. The arrival and departure dates of the SO3 Med A and EH SNCO were determined by the approvals provided within the diplomatic clearance of the 30 Cdo IX Gp RM recce. The SO3 Med A, EH SNCO and 30 Cdo IX Gp RM urban training instructor flew into Riga late evening of 11 March 2019. SO3 Med A separated from the group to assess the hospitals, while the EH SNCO and 30 Cdo IX Gp RM urban training instructor drove approximately three hours to their hotel accommodation in Skrunda village. This was 10km from Skrunda-1. The following morning (12 March 2019) they drove from their accommodation to Skrunda-1 where they were met by a HN gate guard. There was thick snow on the ground and visibility was poor due to low light. Due to the return flights from Riga to the UK being scheduled for mid-afternoon they were under significant time pressure. The recce was completed in less than an hour, touring the site to gather their respective information before having to leave for the airport.

1.4.91. The EH SNCO had been directly tasked by the SO3 Med A to test water quality. The EH SNCO stated that this was unusual as they would normally expect to be tasked to assess the full spectrum of EIH on a recce. However, there was no water supply at Skrunda-1. This fact was included in the 45 Cdo RM recce report from January 2019 stating: 'Services on site are limited with no power or potable water available, there is however a single water source that could be developed by engineer assets with support from Bde EHT. The refurbishment plans are on-going, and they expect a significant amount of work to be completed by Jul 19.' This work was not completed in time for Ex BP19 with UK forces deploying with their own supplies of water. The HQ 3 Cdo Bde EH SNCO confirmed that they had not seen the 45 Cdo RM recce report. Due to being directed to test for water and the short timeframe given to attend a recce, the EH SNCO only took water testing equipment

Exhibit 158

Exhibit 158
Exhibit 159
Exhibit 160
Exhibit 90
Witness 17

Exhibit 90
Witness 17
Exhibit 157
Exhibit 44
Exhibit 178
Witness 17

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to Skrunda-1; no other EH testing equipment was taken. The SO3 Med A could not recall as to whether they had seen the 45 Cdo RM recce report.

1.4.92. The EH SNCO had assumed that communication with the HN prior to deployment on the recce had arranged for a HN LO to escort the team around Skrunda-1 and provide information. This was not the case, therefore the EH SNCO was escorted around Skrunda-1 by the gate guard. The EH SNCO stated that the gate guard did not know which buildings were planned to be used during Ex BP19. By observing the state of disrepair of the buildings and discussing their age with the gate guard, the EH SNCO assessed that the buildings could contain asbestos.

Exhibit 90
Witness 17
Exhibit 178
Witness 17

1.4.93. Following this recce, the EH SNCO stated that a report on the Skrunda-1 recce was produced which, due to the age and state of the buildings, recommended further investigation into the potential presence of asbestos. The panel could not find evidence of the report, nor was it referenced in any further OSW from HQ 3 Cdo Bde RM or its units. After the recce, the EH SNCO also recalled discussing the requirement for further investigation into asbestos at Skrunda-1 within the HQ 3 Cdo Bde medical CoC. The EH SNCO could not remember exactly who within medical CoC this discussion had been with. However, they did recall that they were told that, due to insufficient time before commencement of the exercise, no further EH recces could take place and that the decision had been made to use Skrunda-1 as part of Ex BP19. Instead, the mitigation consisted of only using buildings deemed safe by the HN and the completion of a Tier 1 assessment within 48hrs of arrival of the exercising personnel. This information was then written into Table 4 of the Force Health Protection Instruction (FHPI).

Exhibit 90
Witness 17
Exhibit 178
Witness 17
Exhibit 156

1.4.94. Combining the EH SNCO recce with that of the existing 30 Cdo IX Gp RM recce dictated the time available at Skrunda-1. The panel opined that the limitations of time and environmental conditions during the EH recce did not allow for an effective assessment of hazards across the EH spectrum. Additionally, the potential risk of asbestos had been identified by observing the age and state of the buildings in Skrunda-1. Further EH recces were deemed not possible due to the time available before commencement of Ex BP19, therefore the mitigations of using HN assured buildings and conducting a Tier 1 assessment upon deployment had been discussed. These points had not been developed into a risk analysis with proper control measures and mitigations considered to determine if the residual risk was ALARP and assessed to be tolerable.

Exhibit 64
Witness 1
Exhibit 90
Witness 17

1.4.95. The panel assessed that, had the EH SNCO seen in sufficient time that asbestos had been identified at Skrunda-1 during the 45 Cdo RM recce, the EH recce could have been planned and resourced appropriately to allow for investigation and specialist sampling. This would have informed the Ex BP19 planning, decision making and risk management process.

Exhibit 90
Witness 17

1.4.96. The EH SNCO stated that, after the EH recce to Skrunda-1, there was a verbal discussion with a member of the HQ 3 Cdo Bde RM medical CoC regarding further recces to investigate the presence of asbestos at Skrunda-1. These were ruled out with a desire to utilise the mitigations of directing the use of green marked buildings and the requirement to conduct a Tier 1 assessment upon arrival. It is the

opinion of the panel that the HQ 3 Cdo Bde RM medical CoC were unaware that the assumption that the green marked buildings were free from asbestos had not been confirmed during the planning process. They were also likely to be unaware that, as no unit or individual had been directed to complete the Tier 1 assessment in the FHPI, it was unlikely to have been completed.⁵¹

1.4.97. The panel understands that participation in recces can be limited on occasion. It should be noted that, without proper assessment, both risk to mission success and risk to individual health can be adversely affected by the lack of identification of EIH. In the worst cases, exercises may have to be recalled if a significant EIH is identified upon deployment.

1.4.98. In the Host Nation information sub-section it should be noted that a properly resourced EH recce would have offered the opportunity to assess the validity of HN information. The result of this not being achieved was that HN information and the assumptions based upon them regarding the safety of the green marked buildings went unchallenged.

1.4.99. The panel concluded that reconnaissance as a risk control⁵² did not work as an effective barrier to prevent potential exposure to EIH. Identification of EIH was not factored into planning early, via use of a Tier 1 assessment conducted by a CHA or an appropriately resourced and proactive EH recce. Either of these would have begun the risk assessment process with regards to asbestos. The panel finds that a lack of an effective EH recce was a **contributory factor**. The recommendation within the Environmental and Industrial Hazards sub-section (Para 1.4.70) which recommends the use of a Tier 1 assessment during reconnaissance when a member of EH staff is unavailable will also address this factor.

Medical risk assessment

1.4.100. The identification and assessment of hazards and the development and implementation of controls is part of the planning process. For Ex BP19 this was the responsibility of HQ 3 Cdo Bde RM. A medical risk assessment is used to form elements of the deployment instructions, exercise risk assessment and, for medical specific matters (including EH), the medical plan and medical risk assessment. The medical risk assessment is the key document which informs the Commander of the medical and EH risks they hold during deployment. This hierarchy is illustrated in Figure 1.4.6. The accuracy of this document was crucial in allowing the Commander to make informed decisions as to whether the risks were acceptable in their current state, or whether further mitigations were required. This process of analysing risks and developing controls for review by the risk owner is how rigorous risk assessment acts as a risk control.

Exhibit 64
Witness 1
Exhibit 75
Witness 4
Exhibit 82
Witness 8

⁵¹ Tier 1 assessments deployed is discussed in detail in Paras 1.4.128 to 1.4.147.

⁵² Para 1.4.198 - 1.4.200 in the analysis of Ex GHOST discusses situations where reconnaissance is either unachievable or degrades the training objective. In summary, in accordance with ALARP, the aim should always be to conduct reconnaissance. However, if this is not conducted this should be highlighted to the Commander as a risk to the operation; mitigations should be enhanced accordingly. Ultimately, not knowing if asbestos is present may result in the exercise being prematurely ended or amended in theatre if it were suspected to be present.

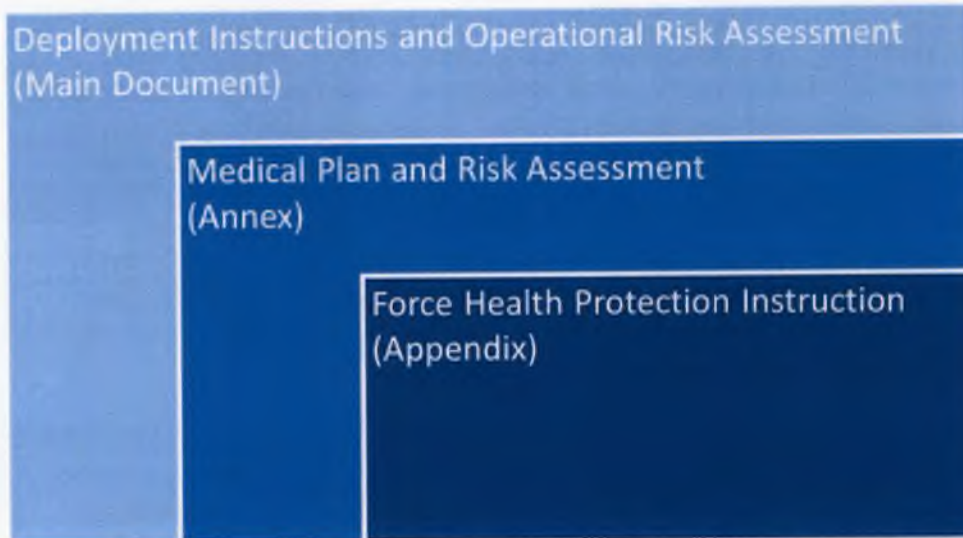


Figure 1.4.6 – Panel representation of EH OSW and Risk Assessments.

1.4.101. As part of the deployment process the medical plan was also assured by the Competent Medical Authority (CMA). The CMA's role was to advise on medical planning, assess medical support plans and advise the CoC, particularly about medical risk, in order to support decision-making. Detail of this oversight and factors related to it can be found in the CMA sub-section of this report.⁵³

1.4.102. How a risk is articulated could vary according to the overall aim of a mission or exercise. Risks were assessed against the 'outcome of interest' and, for MOD risk assessments, this was predominantly 'Operational Risk',⁵⁴ often referred to as risk to mission.

1.4.103. As noted in Joint Tactics Techniques and Procedures (JTTP) 4.10.1 assessment based on risk to health⁵⁵ may sometimes be pertinent. It stated that: 'risk to health of personnel may not translate to the same operational risk. For example, exposure to asbestos fibres presents a significant risk to the chronic health of personnel but, due to the time before health effects manifest (this can be as long as 30 years), would not impact on the actual operation. Therefore, the risks to health of personnel should be assessed separately from the operational risk but should be made available to commanders for them to factor the risks to health of personnel into the operational risk assessment.'

Exhibit 163

Exhibit 10

⁵³ Paras 1.4.173 to 1.4.183.

⁵⁴ Operational risk is formally defined in JDP 3-61 Annex 2A, it is based on 5 dimensions for assessing impact, these being: 1. Casualties 2. Military and social disruption 3. Cost 4. Anxiety (morale) and 5. Mission impact.

⁵⁵ While risk to health does inevitably consider casualties, its scope is wider looking at longer term chronic issues such as hearing and sight degradation, increased risk of cancers etc.

1.4.104. The panel compared the articulation of medical risk across the Ex BP19 medical plan, FHPI and operational medical risk assessment. The medical plan directed all aspects of preventative and reactive medical care for the exercise. The FHPI was an Appendix of the medical plan and provided direction on EH force protection, such as identification of hazards, mitigations, 'actions on' and sources of further information. Finally, the operational medical risk assessment document⁵⁶ was used to articulate the Ex BP19 risk to the CMA and used to support the medical plan endorsement process. The major risks highlighted by the Ex BP19 medical plan were climatic, illness and road traffic collision, all of which were assessed against the risk to the mission. While asbestos was written in the FHPI (an Appendix to the medical plan), following the assessment of the EH SNCO's recce in February 2019, it was described only as being present in Skrunda-1 and not assessed either as a risk to mission or risk to health.⁵⁷

Exhibit 20
Exhibit 34
Exhibit 169

1.4.105. Within the medical plan main body, 'exposure to the full spectrum of environment industrial hazards due to damaged industrial installations' was categorised as being a low risk by the HQ 3 Cdo Bde RM Senior Medical Officer (SMO). The risk to health posed by asbestos was not included in the EIH section of the operational medical risk assessment. Of the Ex BP19 OSW seen by the panel there was no further mention or classification of asbestos risk. The HQ 3 Cdo Bde RM SMO was unable to recall how the risk of exposure to EIH was categorised as low in the medical plan and was unable to explain the incoherency between the documents regarding how risks were included or assessed. They added that the planning for the exercise had been 'complex'.

Exhibit 20
Exhibit 34
Exhibit 169

1.4.106. The Ex BP19 risk management process identified the hazard posed by asbestos in Skrunda-1. However, this hazard was not included or assessed in the medical risk assessment. In the risk management process, early risk identification and assessment is assured by the preceding risk controls. The factors that led to this not being achieved were analysed in the Host Nation information, MedInt & MedInfo, Reconnaissance and EIH assessments sub-sections.⁵⁸

Exhibit 20
Exhibit 34

1.4.107. It was noted that Commanders may still wish to operate in areas where there is a known presence of asbestos, either because the asbestos is in a known safe state,⁵⁹ or the risk of exposure was deemed acceptable by the risk owner. In this instance, the state, specific location and type of asbestos should be considered in detail, with advice sought from an EH team or other MOD SMEs if necessary, in order to develop effective control measures and to reduce the residual risk to ALARP. In these instances, a formal record of controls should be included as part of the risk management process.

⁵⁶ Full title Operational Medical Risk Assessment for Competent Medical Authority (CMA) Endorsement (Ex BALTIC PROTECTOR 19).

⁵⁷ Within the FHPI the 3 highest risks were: Travellers' Diarrhoea/ Gastroenteritis, Heat Illness and Tick-Borne Encephalitis.

⁵⁸ Paras 1.4.30., 1.4.44 and 1.4.57 respectively.

⁵⁹ Most types of asbestos pose little risk unless they are disturbed or broken, therefore activities in their vicinity will be tolerable in most cases. The mere presence of asbestos should not be considered a barrier to operations however where asbestos containing materials are in an unknown condition or known to be fragmented airborne risk analysis should be conducted to assess the risk.

1.4.108. The SMO stated that the classification of the medical risk of exposure to EIH was weighed against the 'likelihood that risk would disrupt the combat effectiveness of that unit'. However, the state of potential asbestos not being established prior to deployment meant that the assessment of the likelihood of exposure could not be done accurately. The panel assessed that, had proper identification, through recce, been conducted it is highly probable that the likelihood of exposure would have been assessed as higher and therefore attracted more substantial mitigations through the risk management process. The panel opined that the reason that the risk posed by exposure to EIH was categorised as low and did not feature on the medical risk assessment, was because the asbestos risk associated with Skrunnda-1 had not been correctly identified. This resulted in a flawed risk assessment process.

Exhibit 169

1.4.109. Additionally, the SMO HQ 3 Cdo Bde RM stated that the categorisation as 'Low' for exposure to EIH was an amalgamated risk for the entire exercise. The panel opined that amalgamating EIH risks for exercises involving multiple activities, over multiple locations, presents the potential to dilute individual higher risks. To avoid this there should be a requirement to identify hazards for each phase and activity of the exercise, showing clear assessment of how the individual risks contributed to the amalgamated categorisation. Where increased EIH risks exist for a specific location or activity within the exercise plan, this should be articulated clearly in the medical plan or as a specific element of the risk assessment. This is reinforced in Navy policy Br 10: 'A specific RA⁶⁰ is an extension to a generic RA covering activity conducted outside the envelope/context considered by the generic RA and therefore needs to consider further mitigation. For example, driving in convoy off-road at night, conducting a passage with reduced navigational aids or in extreme weather, conducting sport with limited medical cover, etc. A specific RA can also be used for a discrete one-off activity.' The panel opined that, had the spectrum of EIH been assessed for each location, or exercise phase, it is more likely that the asbestos risk within Skrunnda-1 would have been assessed and categorised.

Exhibit 169
Exhibit 20
Exhibit 14

1.4.110. Although the identification and early assessment of asbestos risk in Skrunnda-1 was limited due to MedInt gaps, insufficient reconnaissance and an assumption of safety, it was still stated as present in the FHPI. The panel opined that the suspected presence of asbestos in Skrunnda-1 should have been included in the operational medical risk assessment prior to deployment. This discrepancy was not highlighted as part of the CMA assurance of the Ex BP19 medical plan. The panel assessed that this was due to a lack of EH assurance within the CMA. CMA assurance is explored in detail in Section 4 – Regulatory Oversight. Additionally, that analysis should have considered this information gap and, given the known likelihood of asbestos, triggered a further specialist recce or request for information from the HN. This would have enabled suitable risk controls to be developed. For example, attendance of EH practitioners may have reduced the likelihood of potential exposure. This would have meant a more accurate risk picture for the commander/risk owner.

⁶⁰ Risk Assessment.

1.4.111. The panel concluded that the potential exposure of UK Defence personnel to asbestos was caused by the lack of a specific risk assessment to address the known presence of asbestos within the Skruna-1 stage of the exercise. This meant that the required risk controls to address the asbestos risk were not identified or communicated. The panel finds the lack of assessment of the risk posed by asbestos in Skruna-1 and lack of subsequent implementation of associated controls to be the **causal factor**.

1.4.112. The panel further concluded that, in order to ensure the correct categorisation, asbestos risks should be assessed as a risk to health as opposed to risk to mission due to the delayed emergence of symptoms. The panel finds that this was an **other factor**.⁶¹

1.4.113. Recommendation. Director Health Safety and Environmental Protection, supported by the Director General Defence Medical Services staff, should update Defence Health Safety and Environmental Protection policy to include direction on the risk assessment of Environmental and Industrial Hazards in overseas locations in order to inform risk management.

Force Health Protection Briefs

1.4.114. The aim of the FHPB was to inform deploying personnel of the EIH risks identified in the FHPI and the mitigation measures required to reduce the residual risk to ALARP. These mitigations were implemented as risk controls. For example, if the deployment is to an area known to have a risk of Malaria, then risk controls, such as the taking of Chemoprophylaxis (anti-Malarial medicines) and the rolling down of sleeves at dusk to prevent bites, would be detailed in the FHPI and conveyed to the deploying personnel via the FHPB. Therefore, personnel deploying without receiving a FHPB may be unaware of the required Med FP risk controls and, potentially, then operate outside the risk envelope designated as ALARP by the risk owner.

1.4.115. JSP 950 Leaflet 3-2-2 directed pre-deployment health briefs as a requirement for deployment on PJHQ joint operations. As the PJHQ pre-deployment health briefs convey the health risks likely to be encountered by personnel during an operational deployment they were equivalent to FHPBs. JSP 950 Leaflet 3-2-2 did not mandate the delivery of pre-deployment health briefs, and therefore FHPBs, prior to exercises. On investigating single Service policy relevant to 3 Cdo Bde RM, FHPBs were not mandated prior to exercise deployments. The Navy Book of Reference 2 – Queen's Regulations for the Navy Chapter 15, Para 1510, directed that health lectures were to be delivered to the entire ship's company, but it did not provide the detail on content⁶² or on which type of deployment. For the Army, ACSO 3215 was applicable to operations and exercises, however within Para 6. b. it mandated the requirement for an FHPI but did not reference FHPBs.

Exhibit 151
Exhibit 150
Exhibit 136
Exhibit 156
Exhibit 155

⁶¹ Risks to morale and reputation may be considered immediate operational risks of exposure to asbestos.

⁶² The two mandated topics are sexually transmitted diseases and how to use the Oral Tran-Mucosal Fentanyl Citrate (OTFC) single lozenge.

1.4.116. Within 3 Cdo Bde RM the FHPIs and FHPBs were written by the EH team. The content and responsibility for delivery of the FHPBs depended upon the scale and location of the deployment. For larger deployments (unit to Bde), FHPBs were primarily delivered in person by the HQ 3 Cdo Bde RM EH team. For smaller scale deployments (sub-unit or smaller), or where attendance by the EH team was unachievable, a script was prepared to enable the FHPB to be delivered by the unit medical staff. For Ex BP19 the EH cell within HQ 3 Cdo Bde RM had the responsibility for producing the FHPI (as an Appendix to the medical plan)⁶³ and the FHPB.

Exhibit 84
Witness 10
Exhibit 94
Exhibit 155

1.4.117. The Ex BP19 FHPI dated 26 February 2019 mandated that 'ALL deploying ranks were to receive an Environmental Health brief/lecture to provide country/regional specific Med FP guidance and counter measures'. The FHPB was produced by the HQ 3 Cdo Bde RM EH team in early May 2019. The brief contained a single slide on EIH (see Figure 1.4.7). The slide notes provided general advice on the risk to exposure to potential hazards in industrialised areas, as well as the Tier 1 and Tier 2 assessment process (named Role 1 and Role 2 on the slide), as laid down in 2017DIN06-004. The Tier 1 assessment process was discussed further in the Tier 1 Assessments Deployed sub-section.⁶⁴ Despite the specific reference in Table 4 of the FHPI to the presence of asbestos in Skrunnda-1, the risk of asbestos and associated risk controls were not specifically mentioned on the slides or in the accompanying notes.

Exhibit 156
Exhibit 155
Exhibit 154
Exhibit 9

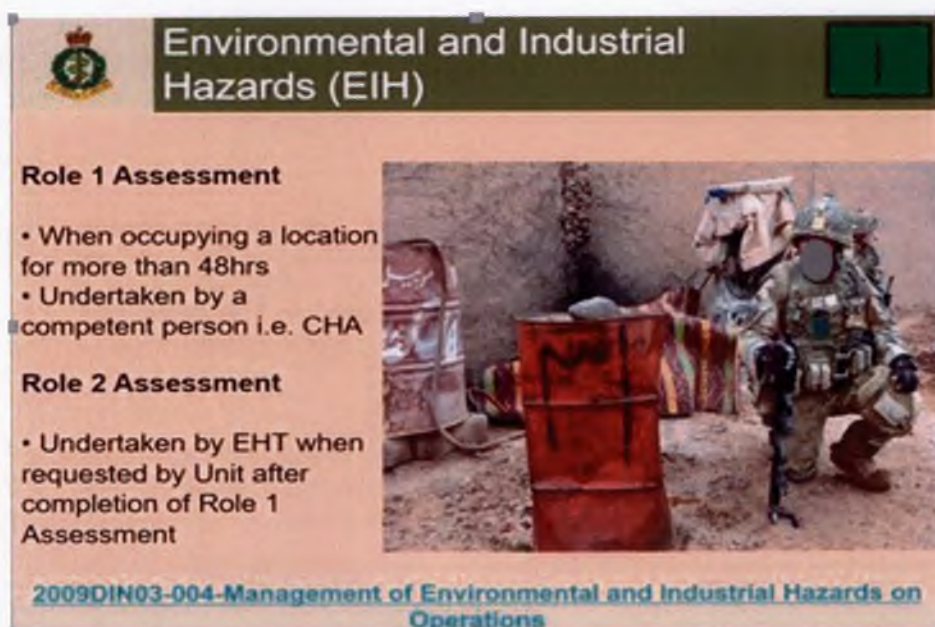


Figure 1.4.7 – Slide from the Ex BP19 FHPB referring to EIH assessments.

⁶³ Appendix 1 to the Ex BP19 medical plan is titled Environmental Health Medical Force Protection Guidance rather than the doctrinally correct term Force Health Protection Instruction (FHPI) however the purpose and content is the same.

⁶⁴ Paras 1.4.128 to 1.4.147.

1.4.118. On 15 May 2019, the SO3 Med A directed the EH SNCO to distribute the Ex BP19 FHPB to 30 Cdo IX Gp RM, 45 Cdo RM and 29 Commando Regiment Royal Artillery (29 Cdo Regt RA).⁶⁵ The GDMO of 24 Cdo Regt RE subsequently deployed on the exercise in place of GDMO 29 Cdo Regt RA as part of the pre-hospital treatment team. Due to the timing of the issue of the Ex BP19 FHPB, it was suggested by the GDMO of 29 Cdo Regt RA that the brief would have to be delivered after deployment. The panel found no evidence from 30 Cdo IX Gp or 45 Cdo RM confirming receipt of the FHPB or correspondence regarding when, and by whom, it would be delivered to the exercising personnel. The EH SNCO stated that the FHPB could be produced within 48 hours of knowing the exercise location, however it was noted that coordination with units to receive and deliver briefs took time. The EH team regularly found out about exercise deployments with insufficient time to produce a brief and deliver it to the deploying personnel. When FHPBs were produced close to exercise deployment dates, it reduced the time available for the EH team to deliver the briefs in person and, instead, they relied on the unit medical staff to deliver them. The panel found no evidence to explain the timing of release of the Ex BP19 FHPB so close to the deployment date. The EH SNCO could not recall whether any of the units deploying on Ex BP19 had the FHPB delivered by a member of the EH team. Additionally, they could not recall any factors affecting the issue of the FHPB, noting the FHPI was issued on 17 April 2019. From interviews with personnel who deployed on Ex BP19, the panel found no evidence of the FHPB being delivered either before or during the deployment.

Exhibit 154
Exhibit 110
Witness 20
Exhibit 111
Witness 21
Exhibit 109
Witness 19
Exhibit 132
Witness 28
Exhibit 76
Witness 6
Exhibit 116
Witness 24
Exhibit 172
Exhibit 86
Witness 12
Exhibit 104

1.4.119. Whether delivered by HQ 3 Cdo Bde RM EH team, or on their behalf by the unit medical staff, it was the deploying unit's⁶⁶ responsibility to ensure that the correct personnel receive the brief as part of the pre-deployment preparations. The panel found no evidence of any nominal rolls confirming which personnel had received the brief.

Exhibit 82
Witness 8
Exhibit 178
Witness 17
Exhibit 105

1.4.120. Prior to deployment on exercises or operations, units conducted pre-deployment assurance checks of personnel to ensure they had the correct training, equipment, documentation and were medically prepared to deploy. The panel confirmed with HQ 3 Cdo Bde RM that the receipt of a FHPB did not feature as part of 3 Cdo Bde RM unit pre-deployment assurance checks.

Exhibit 179

1.4.121. The general level of understanding and awareness in identifying the risk of asbestos appeared to be low within the personnel interviewed. Of the non-EH personnel interviewed across the breadth of the SI, those who were aware of the risk posed by asbestos had either previous experience in the building trade or had completed the Defence Learning Environment (DLE) Asbestos Awareness course.⁶⁷ The Asbestos Awareness course was aimed at all levels of employees who may undertake or plan work that may be carried out in buildings or who managed buildings.

Exhibit 89
Witness 16
Exhibit 114
Witness 22
Exhibit 117
Witness 25

⁶⁵ These units were providing GDMOs for Ex BP19. All of the personnel deploying with 3 Cdo Bde RM would have fallen under the care of one of these GDMOs throughout the duration of the exercise.

⁶⁶ Unit definition at Para 1.4.20.o.

⁶⁷ Version V.1.1.1.

1.4.122. Although not directed by policy, FHPBs were regularly conducted ahead of exercise deployments within 3 Cdo Bde RM. The panel opined that it was unusual that no FHPB was delivered as part of the Bde preparations for Ex BP19, particularly as the conduct of the FHPB was mandated in the FHPI within the exercise medical plan. Due to the lack of a process in the units to assure the brief was delivered this omission was not identified.

Exhibit 103
Exhibit 104
Exhibit 82
Witness 8
Exhibit 75
Witness 4

1.4.123. In the panel's opinion the Ex BP19 FHPB was very unlikely to have been delivered to exercising personnel as it was issued too late to be delivered prior to deployment on 16 May 2019. The panel could not ascertain a reason for this delay, considering the FHPI was issued on 19 April 2019. The panel believed that, had the FHPB been issued with, or soon after the FHPI, it was more likely that deploying personnel would have received it.

Exhibit 104

1.4.124. The aim of the FHPB was to highlight EH risks and associated mitigations and it formed part of the exercise risk management process through the implementation of risk controls. The lack of a formal assurance process within units that would account for which individuals had received the brief meant that there was no guarantee that the Med FP risk controls would be briefed. Therefore, personnel deployed without receiving the FHPB and may have been unaware of the required Med FP risk controls and, potentially therefore, operated outside that risk envelope designated as acceptable by the risk owner. For Ex BP19 this meant that the general advice to be aware of the risk of exposure to potential hazards in industrialised areas and the process to highlight concerns to the CoC, which would initiate specialist EH advice and intervention, was missed.

1.4.125. Although the panel did not conduct an exhaustive survey of 3 Cdo Bde RM personnel, the panel opined that it was unlikely that the levels of general awareness amongst the personnel deployed would be sufficient to identify the risk posed by asbestos. This lack of general awareness highlighted the importance of the Ex BP19 FHPB and the risk posed by asbestos and related risk controls that it covered. The lack of delivery of the FHPB to personnel deploying on Ex BP19, coupled with general lack of asbestos awareness, meant a reduced level of understanding of the potential hazards of asbestos amongst the personnel deployed to Skruna-1.

1.4.126. The panel concluded that, had the FHPB been delivered before or during deployment on Ex BP19, the personnel in Skruna-1 may have recognised the hazard posed by the dust and debris found. These personnel could have then highlighted their concerns to the CoC and requested EH advice or a Tier 2 assessment from the Bde EH team. The panel finds that the lack of delivery of the FHPB to be an **aggravating factor**.

1.4.127. **Recommendation. Commander 3 Commando Brigade Royal Marines should implement an assurance process within Bde units to record the delivery of Force Health Protection Briefs to exercising personnel as part of pre-deployment checks in order to ensure that the Force Health Protection information is communicated.**

Tier 1 assessments deployed

1.4.128. 2017DIN06-004 mandated that a Tier 1 assessment was to be completed within 48hrs of occupation of a new location. This assessment was to be conducted at unit level by a CHA or unit medical staff and then sent to the relevant Bde EH team. The instruction to complete this assessment in accordance with the DIN was included in the Ex BP19 FHPI, which stated: 'Completion by Unit of Tier 1 EIH Assessment for all locations occupied for longer than 48 hours or in the event of an EIH exposure with the potential to impact upon health by a SQEP⁶⁸. Further information can be found within 2017DIN06-004-The Risk Assessment and Management of Force Health Protection, CBRN, Environmental and Industrial Hazards on Operations and Exercises or from the 3 Cdo Bde EHT.'

Exhibit 9
Exhibit 30
Exhibit 20
Exhibit 156

1.4.129. On 24 June 2019 prior to the arrival of the main force, the Warrant Officer Equipment Support (WO ES) and a Sergeant (Sgt) from 30 Cdo IX Gp RM LTG were sent forward as an advance party to Skrunnda-1. On arrival they were met by a HN LO who briefed them on the site and gave them a copy of the colour coded map that listed in-bounds and out-of-bounds buildings, as well as briefing which buildings would be used by Latvian forces. It was confirmed by the WO ES that this was the first time they had been made aware of in-bounds and out-of-bounds areas. Before the arrival of further units, and in discussion with the HN LO, one of the green marked buildings was selected to house the contingent from 30 Cdo IX Gp RM LTG. On arrival in the building, the WO ES enquired about the dust present on the floor and was told by the HN LO that the building had been declared safe for use. In addition to this assurance, the WO ES decided that placing boards on the floor to walk on and avoiding sweeping, would be a further measure to keep the unidentified dust down. These mitigations were subsequently briefed to the Motor Transport Officer (MTO), who was commander of the LTG, the 24 Cdo Regt RE RMO (senior clinician in Skrunnda-1) and the remaining members of the LTG as they arrived throughout 25 June 2019. It is unclear how widely these measures were applied across the site.

Exhibit 89
Witness 16
Exhibit 5
Exhibit 86
Witness 12
Exhibit 115
Witness 23
Exhibit 76
Witness 6
Exhibit 3

1.4.130. Soon after arrival, and during the setting up of the accommodation, Mne A raised a concern regarding the dust present with the WO ES, requesting that they and some of the other vehicle mechanics be allowed to sleep outside the building in the tent that they had brought with them. The WO ES denied this request due to the lack of available space, which was required to safely manoeuvre unit vehicles. Mne A accepted this decision and did not raise their concerns further.

Exhibit 76
Witness 6

1.4.131. OC 54 Sqn RE arrived in Skrunnda-1 with their Sqn on 25 June 2019. They were tasked with coordinating and deconflicting activity between UK units and the LAF within Skrunnda-1. This involved a daily coordination meeting to discuss plans and raise any issues. This meeting was attended by senior representatives from each of the units present but they did not recall any concerns being raised during the daily coordination meetings regarding the safety of the building. It was also stated that they had been assured that all green marked buildings were safe,

Exhibit 132
Witness 28
Exhibit 115
Witness 23

⁶⁸ Suitably Qualified and Experienced Person.

having previously enquired about asbestos during their recce in March 2019, when OC 54 Sqn RE was informed that asbestos had been removed from those buildings.

1.4.132. The RMO 24 Cdo Regt RE was accommodated in the same building as 30 Cdo IX Gp RM. The RMO stated that they also assumed that the green marked buildings were safe and did not raise any concerns regarding the dust present, nor did they provide any further mitigations beyond the laying of boards on the floor and avoidance of sweeping, as suggested by the WO ES. The RMO could not recall if any of the medical personnel under their command in Skrunnda-1 had any specific EH experience or qualifications, although they thought it would have been unlikely.

Exhibit 86
Witness 12

1.4.133. The senior personnel in command during the initial occupation of Skrunnda-1 were OC 54 Sqn RE and the MTO of 30 Cdo IX Gp LTG. The senior clinician present was the RMO of 24 Cdo Regt RE. Despite them having the operational and medical (respectively) authority, and responsibility for the personnel in Skrunnda-1, none of them were aware of the requirement to complete a Tier 1 assessment when occupying a new location. They were not sufficiently concerned by the dust identified in the LTG accommodation to raise the issue with HQ 3 Cdo Bde for specialist direction.

Exhibit 132
Witness 28
Exhibit 115
Witness 23
Exhibit 86
Witness 12

1.4.134. Throughout the occupation of Skrunnda-1 by UK Defence personnel, no Tier 1 assessment was completed. After Ex BP19, a Tier 1 assessment was completed retrospectively by the RMO. This was triggered by exercise personnel, on return to the UK, presenting themselves to the 30 Cdo IX Gp RM medical centre with concerns regarding exposure to asbestos in Skrunnda-1. In this retrospective Tier 1 assessment, the RMO categorised the exposure to asbestos as low risk but could not recall how the categorisation had been reached.

Exhibit 4
Exhibit 25
Exhibit 86
Witness 12

1.4.135. Despite the specified requirement within the FHPI to complete a Tier 1 assessment within 48 hours of arrival at a new location, there was no request by HQ 3 Cdo Bde RM for one to be completed during the standard exercise reporting requirements. The completion, reporting and collation of Tier 1 assessments did not feature on any 3 Cdo Bde RM unit or Bde J3 or medical reports and returns.⁶⁹

Exhibit 38

1.4.136. The completion of a Tier 1 assessment on deployed exercises or operations acted as a risk control. As per the risk management process in AJP 3-14⁷⁰ the implementation of controls was done 'by converting controls into clear and simple execution orders, establishing proper authorities and accountabilities, and providing the necessary support to implement.'⁷¹

Exhibit 11

1.4.137. In order to provide comparison of the utilisation of Tier 1 assessments across the land domain, the panel requested statistics from HQ Fd Army and 3 Cdo Bde RM. HQ Fd Army divisions had received six Tier 1 assessments between May

Exhibit 91
Exhibit 162
Exhibit 82

⁶⁹ Reports and returns (R2) are the standardised updates passed up the CoC when deployed. The frequency of the R2 is time or occurrence dependent and outlined in the deployment instruction.

⁷⁰ Outlined in Paras 1.4.27 to 1.4.28.

⁷¹ AJP-3.14 Annex B, B002(d).

2020 and November 2021. HQ 3 Cdo Bde RM had received no Tier 1 assessments between January 2020 and October 2021. However, it was acknowledged that they had received emails and Post-Exercise Reports which gave EH feedback on locations. 2017DIN-06-004 directed Tier 1 assessments completed on operational deployments were to be sent to SO2 Med FP PJHQ. As a further comparison, the panel contacted SO2 Med FP in PJHQ who confirmed that no Tier 1 assessments had been received over the period September 2020 to July 2021.

Witness 8

1.4.138. The actions of the WO ES to mitigate disturbance of the dust in the 30 Cdo IX Gp LTG accommodation, considered with the request by Mne A to be accommodated outside, indicated that, despite assurances from HN LOs, the dust within the accommodation building was a concern. The panel believed that it was reasonable to expect that further specialist advice should have been sought.

1.4.139. The 3 Cdo Bde RM EH SNCO stated that, due to the difficulties with the EH recce to Skrunnda-1 and the insufficient time to complete a subsequent recce, a Tier 1 assessment conducted upon arrival in Skrunnda-1 was required. The Tier 1 assessment on deployed exercises or operations was a risk control which, if implemented effectively, should have highlighted the issue with dust and potential asbestos which, in turn, would have led to communication with the EH team in the HQ 3 Cdo Bde RM to discuss the potential hazard and subsequent actions needed to protect personnel.

Exhibit 178
Witness 17

1.4.140. The senior personnel in Skrunnda-1 were unaware of the requirement to complete a Tier 1 assessment, as directed in the Ex BP19 FHPI and mandated in 2017DIN06-004. This lack of understanding meant that an opportunity was missed to highlight a potential issue and seek expert EH advice.

Exhibit 132
Witness 28
Exhibit 115
Witness 23
Exhibit 86
Witness 12

1.4.141. The paragraph of the FHPI which mandated Tier 1 assessments did not direct a specific role, group or individual to be responsible for completion. Throughout Ex BP19, units were moving independently and amalgamating within training areas where required. Specific to Skrunnda-1, multiple units were operating in the training area, with OC 54 Sqn RE ensuring training deconfliction. The panel opined that, had the Ex BP19 OSW directed a specific individual to complete a Tier 1 assessment upon arrival at Skrunnda-1, it would have increased the likelihood that the assessment would have been completed.

1.4.142. As described in Para 1.4.62, the panel was unable to ascertain whether any CHA qualified personnel were present in Skrunnda-1 during Ex BP19. However, as per 2017DIN06-004, in addition to CHAs, medical personnel were also empowered to complete Tier 1 assessments. During interviews the panel established that the RMO of 24 Cdo Regt RE was not aware of the requirement to conduct Tier 1 assessments and only became aware once prompted after the exercise by the HQ 3 Cdo Bde RM EH team. The panel opined that this further reinforced the requirement discussed in Paras 1.4.114 to 1.4.127 that clear direction to conduct Tier 1 assessments needed to be included in FHPBs. This was

Exhibit 86
Witness 12
Exhibit 4

especially important when there was a reliance on medical personnel to perform them, for whom Tier 1 assessments were not part of their core role.

1.4.143. The fact that the Tier 1 assessment was not requested by HQ 3 Cdo Bde RM during the exercise, despite being identified in the FHPI as a risk control, demonstrated that there was no assurance process for the timely completion of Tier 1 assessments. The inclusion of Tier 1 assessments within 3 Cdo Bde RM reports and returns would have ensured the timely completion and dissemination of Tier 1 assessments. Analysis of Tier 1 assessments during Ex SbS18 and Ex GHOST is provided in the 'Similar incidences' sub-section.⁷²

1.4.144. The panel concluded that, had a Tier 1 assessment been conducted on Ex BP19 by suitably qualified personnel, it is likely that the presence of asbestos would have been identified as a potential risk factor. This would have triggered engagement with the HQ 3 Cdo Bde RM EH team, who would have provided specific advice or mitigations. The panel finds that the lack of a Tier 1 assessment being conducted in Skrunnda-1 was an **aggravating factor**.

1.4.145. The panel further concluded that a lack of management process to assure the completion of Tier 1 assessments led to noncompliance of 2017DIN06-004. The panel finds that the lack of a process to assure the completion of Tier 1 assessments was an **aggravating factor**.

1.4.146. Finally, the panel opined that it was reasonable to expect that across the whole of Defence in the preceding 12 months, there would have been more than six occasions when a Tier 1 assessment would have been required (occupation of a new location for more than 48hrs). The panel finds that not utilising Tier 1 assessments in line with 2017DIN04-006 was an **other factor**.

1.4.147. **Recommendation. Director Health Safety and Environmental Protection, supported by the Director General Defence Medical Services should update Defence Health Safety and Environmental Protection policy to include the requirement for Tier 1 assessments to be, when necessary, communicated up the Chain of Command to the operational medical staff in order to ensure that Tier 1 assessments are completed.**

Post-exposure management assurance

1.4.148. Once HQ 3 Cdo Bde RM had become aware of potential exposure of personnel to asbestos in Skrunnda-1, an internal investigation was initiated. A crucial part of the investigation would have been the production of a complete nominal roll of individuals who were present in Skrunnda-1 and to confirm whether they had gone through the correct post-exposure management process within JSP 375 – Management of Health and Safety in Defence.

Exhibit 146
Witness 31
Exhibit 83
Witness 9

⁷² Paras 1.4.185.e and 1.4.193.c respectively.

OFFICIAL – SENSITIVE

<p>1.4.149. The policy for post-exposure to asbestos was governed by JSP 375, Volume 1, Chapter 36. Para 53 stated 'Defence personnel who had been exposed to asbestos or believe they had been exposed to asbestos during their careers in defence can have it recorded on their personal files by completing MOD Form 960 – Personnel Record Annotation; the completed form was to be forwarded to the local Services medical officer (for Service personnel - hardcopy) or DBS CHR (civilian personnel – electronic copy). Personnel files should be annotated with MOD Form 960 Asbestos'. Para 49 stated that 'the completed MOD Form 960 was to be countersigned by the manager' however the MOD Form 960 has no provision for recording a managerial signature. The panel confirmed that this was the only action required for those suspected of exposure to asbestos, with no MOD policy directing regular medical surveillance. Further medical intervention would only occur if symptoms of diseases related to asbestos were presented.</p>	Exhibit 8 Exhibit 24 Exhibit 165
<p>1.4.150. As MOD personnel deploy on exercises and operations, the country they were in, or ship embarked upon and final recovery at the end of the deployment, was recorded via the Move and Track function of JPA. HQ 3 Cdo Bde RM began establishing nominal rolls of potentially impacted individuals in November 2019, using the Move and Track function within JPA, to establish personnel who had attended Skrunda-1. The location of personnel was manually inputted, usually by the unit clerical staff. As the Move and Track function used the country as the location, it did not provide the granularity to identify specific training areas and, therefore the Ex BP19 JPA search was only able to establish whether personnel had been in Latvia, rather than those in Skrunda-1 itself.</p>	Exhibit 83 Witness 9 Exhibit 29
<p>1.4.151. HQ 3 Cdo Bde RM mandated that units coordinate completion of MOD Form 960 with interviews being conducted with those individuals who had been identified as being in Latvia to establish those present in Skrunda-1. Those indicated as being in Latvia on the JPA Move and Track search but not present in Skrunda-1 were annotated accordingly. This action included Army personnel who had been attached to 3 Cdo Bde RM units for Ex BP19. The date of the interviews, and the details of the interviewer, were recorded on HQ 3 Cdo Bde RM's nominal roll.</p>	Exhibit 27
<p>1.4.152. However, the panel became aware of personnel from Yankee Company (Y Coy), 45 Cdo RM who were not included in the HQ 3 Cdo Bde RM nominal roll, despite being present in Skrunda-1. Investigation into pertinent JPA Move and Track information indicated that they were correctly annotated on JPA as being in Latvia during Ex BP19, therefore it was unclear why these personnel were not reflected in HQ 3 Cdo Bde RM's nominal roll.</p>	Exhibit 27 Exhibit 108 Witness 18 Exhibit 147 Exhibit 123
<p>1.4.153. In addition to the action mandated by HQ 3 Cdo Bde RM, individual units began to undertake their own actions to identify personnel deployed to Skrunda-1. This approach varied between units, for example, 45 Cdo RM collected nominal rolls from senior unit personnel, while also putting a notice in daily Routine Orders⁷³ to ensure data capture of individuals. 24 Cdo Regt RE, and 30 Cdo IX Gp RM</p>	Exhibit 117 Witness 25 Exhibit 93 Exhibit 89 Witness 16

⁷³ This process from 45 Cdo RM also captured Ex SbS18 personnel. Post-exposure management for this exercise is discussed at Para 1.4.186.

adopted a mass briefing process, calling personnel into lecture theatres to brief them on the potential dangers of asbestos exposure, and then completed individual MOD Form 960s after the briefing. 24 Cdo Regt RE also followed this up with deployed personnel who had initially been missed being briefed at a later date. Interviews with personnel, which the panel identified that had not been included in HQ 3 Cdo Bde RM's process, have shown that they were identified by the unit level processes. The panel observed that the unit level follow-up action, through use of a combination of JPA, exercise OSW, nominal rolls and informal channels, was better placed to establish an accurate account of those personnel impacted than HQ 3 Cdo Bde RM, which only had direct access to JPA.

Exhibit 115
Witness 23
Exhibit 86
Witness 12

1.4.154. The gaps found in the original nominal roll from HQ 3 Cdo Bde RM illustrated the limitations of a JPA led approach alone, which was reliant on correct interpretation of information within the system. In the case of Ex BP19, units which identified affected personnel and recorded MOD Form 960 actions utilising both their own OSW and JPA records, produced a more accurate result that could have been presented to HQ 3 Cdo Bde RM for assurance.

1.4.155. JSP 375 Chapter 36, Para 53, stated that personnel suspected of being exposed to asbestos should complete the MOD Form 960 action, but did not state how it was to be done. The panel opined that from the evidence collected, it was very likely that the MOD Form 960 action was completed sufficiently for Ex BP19⁷⁴ personnel who deployed to Skrun-da-1. However, the panel could not be certain that all personnel had been offered the opportunity to complete MOD Form 960 action as there was no assurance process.

Exhibit 8

1.4.156. Additionally, the completion of MOD Form 960 action was voluntary, while completed forms could be tracked by retaining a copy of the form and annotating it into personal medical records. There was no method of tracking whether personnel have been given the opportunity to complete the form or, indeed, recording if an individual had declined to complete the form. The lack of a recording method meant that it was impossible to tell historically if personnel had been offered and completed MOD Form 960, or if they had declined the opportunity.

1.4.157. The panel opined that the only assurance within the MOD Form 960 process was that it had to be countersigned by a manager, before being passed to medical officers. Additionally, the language used in JSP 375, 'Managers should ensure that Defence personnel were made aware that following exposure to asbestos or suspected exposure to asbestos the exposure should be recorded on their personnel file or medical file by completing MOD Form 960' (panel emphasis added) did not mandate action to follow up exposure. Finally, there was no mandated action for units to maintain a record of all personnel of who were potentially exposed to asbestos, whether this had been recorded on their medical documentation, or a record that the offer had been declined by the individual. In the

Exhibit 8

⁷⁴ Within Ex SbS18 there was no confirmation that this process had been effectively achieved, see Para 1.4.186.

case of Ex BP19, HQ 3 Cdo Bde RM did do this, although there were gaps within the original JPA approach.

1.4.158. The panel concluded that, to ensure impacted personnel are correctly recorded, to provide accurate historical records and to provide an audit trail for future purposes, units needed to be direct personnel to complete MOD Form 960 when suspected exposure to asbestos occurred and record accurately against deployment nominal rolls. There was no defined process in policy to direct personnel to complete MOD Form 960 or record completion. The panel finds that a lack of direction to Commanders for personnel to complete the MOD Form 960 action within JSP 375 was an **aggravating factor**.

1.4.159. Recommendation. Director Health Safety and Environmental Protection should update JSP 375 Chapter 36 to include direction to Commanders that MOD Form 960 must be completed when suspected asbestos exposure occurs in order to ensure that all potentially impacted personnel are correctly recorded and enable assurance.

Section 3 – Organisational influences

HQ 3 Cdo Bde RM EH team workload and workforce

1.4.160. Multiple personnel stated that the workload was very high within HQ 3 Cdo Bde RM and across its subordinate units over the period of Ex BP19. This workload was attributed to the high readiness role 3 Cdo Bde RM had within Defence, which demanded frequent deployments overseas. HQ 3 Cdo Bde RM SMO also specifically stated that the EH team within the Bde had a high workload.

1.4.161. Within HQ 3 Cdo Bde RM during Ex BP19 there were three established EH positions: one Sgt and two Junior Non-Commissioned Officers⁷⁵ (JNCO), all Royal Army Medical Corps. All three positions were filled during the planning and execution phases of Ex BP19. The panel compared the established EH positions of HQ 3 Cdo Bde RM to that of HQ 16 AA Bde. The Bde was a Fd Army high readiness brigade that was able to operate independently in a similar manner to 3 Cdo Bde RM. At the time of Ex BP19, 16 AA Bde had a three person EH team consisting of: one Staff Sergeant (SSgt), one Sgt and one JNCO. There was also a difference in the EH hierarchy that sat above 16 AA Bde. In the Fd Army EH organisation, 16 AA Bde sat underneath HQ Fd Army. HQ Fd Army contained an EH SO2 and EH Warrant Officer Class 1 (WO1) who were able to provide advice, assistance and assurance to the EH teams within the Fd Army brigades, including 16 AA Bde (Figure 1.4.8). This assistance included support in the production of EH OSW if required. By comparison, HQ 3 Cdo Bde RM EH team had a sole EH SO2 above them in the EH hierarchy, who worked in NCHQ. Moreover, the EH SO2 in NCHQ had a portfolio that included writing FHPIs for all deploying maritime units

Exhibit 64
Witness 1
Exhibit 74
Witness 3
Exhibit 75
Witness 4
Exhibit 146
Witness 31
Exhibit 134
Exhibit 145
Witness 30
Exhibit 123
Witness 27

⁷⁵ JNCO includes the ranks Corporal and Lance Corporal.

and providing EH advice on RN Policy. Interviews with incumbents of the SO2 EH position described the HQ 3 Cdo Bde RM EH team as being relatively autonomous and only contacting NCHQ when advice was required.

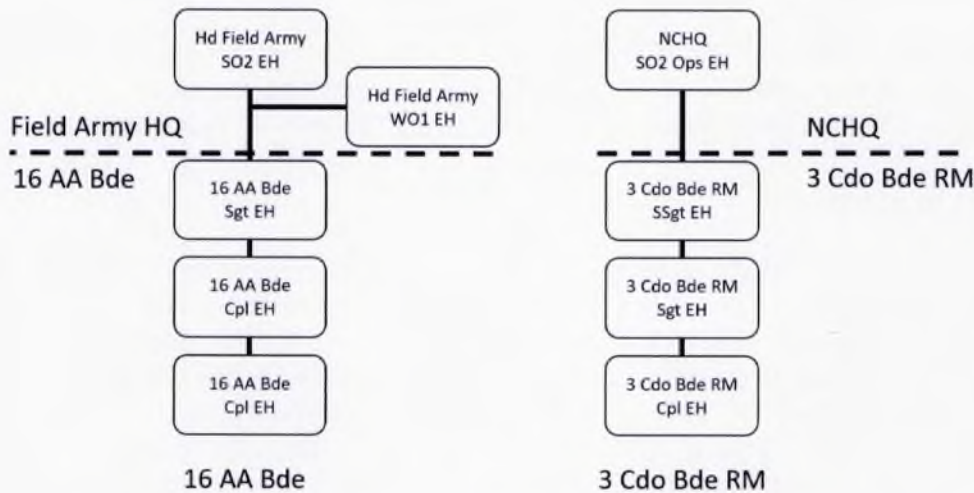


Figure 1.4.8 – 16 AA Bde and 3 Cdo Bde RM EH Organisations.

1.4.162. Throughout the inquiry, the panel found no evidence of any lack of staff capacity within the HQ 3 Cdo Bde RM EH team that affected the planning of Ex BP19. Since Ex BP19, the EH positions within HQ 3 Cdo Bde RM have been upscaled in rank to: one SSgt, one Sgt and one JNCO. This matched the established positions within 16 AA Bde. The HQ 3 Cdo Bde RM EH SNCO stated that the upscaling increased the EH team’s staff capacity, as well as improving Army EH career progression.

Exhibit 82
Witness 8
Exhibit 178
Witness 17

1.4.163. The panel opined that, due to the high readiness role that 3 Cdo Bde RM provided for Defence, all of the staff roles within the Bde HQ would continue to have a high workload. Within the RN the HQ 3 Cdo Bde RM EH team, were solely supported by the NCHQ SO2 EH. However, as SO2 EH did not have daily interaction with 3 Cdo Bde RM activities, the HQ 3 Cdo Bde RM EH team were solely responsible for their own EH research and production of OSW. In comparison, 16 AA Bde were supported by both an SO2 EH and WO1 EH within Fd Army HQ, who provided additional assistance and staff capacity. While the EH team in HQ 3 Cdo Bde RM did receive support from Fd Army, this was informal and driven by inter-personal relationships within the Army EH cadre.

Exhibit 145
Witness 30
Exhibit 123
Witness 27

1.4.164. Despite no evidence to suggest that a lack of staff capacity impacted on the EH research, planning and OSW production for Ex BP19, the panel opined that the upscaling of the EH team since Ex BP19 would have assisted in increasing the team’s staff capacity. This increase in capacity would have been due to the level of experience brought by the SSgt role, compared to the JNCO that was replaced.

1.4.165. The panel concluded that, despite the mismatch in the ranks of EH teams between HQ 3 Cdo Bde RM and HQ 16 AA Bde, and different EH hierarchy above HQ 3 Cdo Bde EH team, the workforce capacity available was sufficient and had no negative impact on EH support to Ex BP19. The panel finds that neither the team nor its workload contributed to the suspected exposure of UK Defence personnel to asbestos and was therefore **not a factor**.

1.4.166. The panel noted that the HQ 3 Cdo Bde RM EH team establishment would benefit from periodic review, to ensure there continues to be sufficient capacity to achieve the required outputs. The panel finds this was an **observation**.

EH awareness in planning

1.4.167. The panel were informed that EH was often considered late in HQ 3 Cdo Bde RM's planning processes and that the EH team were not fully aware of activities being planned within the HQ. This resulted in reduced timelines for FHPIs to be produced and FHPBs to be delivered. In the case of Ex BP19, the EH team were reliant on the SMO and SO3 Med A to feed information through to them. There was little integration with any other HQ planning staff. Lack of awareness of the function of the EH team throughout the Bde planning staff was a key finding of HQ 3 Cdo Bde RM's own internal investigation into the events of Ex BP19. The panel observed that, after this investigation, steps were taken to increase awareness of EH throughout 3 Cdo Bde RM.

Exhibit 82
Witness 8
Exhibit 90
Witness 17
Exhibit 84
Witness 10
Exhibit 1
Exhibit 146
Witness 31

1.4.168. EH risk was informed by both the location that personnel were going to visit or occupy and the activity to be conducted whilst there. Detail of planned activities, which could affect the EH picture, needed to be considered by the EH team in order to tailor FHPIs, and to allow the EH team to engage in the risk assessment process. For example, an activity involving demolitions, or use of explosives, increased the risk of disturbing asbestos and therefore increased the likelihood of fibres becoming airborne. Members of the HQ 3 Cdo Bde RM EH team highlighted that they frequently had to request information on unit deployments, usually through the SO3 Med A for Bde activities, or the GDMO for unit level activities, rather than it being passed to them directly.

Exhibit 82
Witness 8

1.4.169. Throughout the planning phase of Ex BP19, opportunities were missed by the HQ 3 Cdo Bde RM planning staff to inform the EH team of the intentions for the use of Skrunnda-1 and to include them in the planning process. As previously discussed under the reconnaissance risk control,⁷⁶ the EH team were unaware of the previous reces to Skrunnda-1, unaware of the activities being planned to take place whilst there, and unaware of the discussions at the MPC referring to in-bounds and out-of-bounds buildings. The panel opined that, had the EH team been made aware by the HQ 3 Cdo Bde planning staff of the presence of asbestos, which had been recorded in the 45 Cdo RM recce, or the concerns regarding the use of buildings discussed at the MPC as they occurred, specialist advice and

Exhibit 90

⁷⁶ Paras 1.4.171 to 1.4.99.

investigation could have been initiated in sufficient time to produce a fully informed risk picture.

1.4.170. The panel opined that liaison with the EH team regarding locations and the effects of activities needed to be considered early and consistently, throughout the planning process. This would have enabled the risk controls, described within Section 2, to work effectively. The core planning staff within HQ 3 Cdo Bde RM were best placed to inform the EH team on locations of deployments, and the activities to be conducted, whether through direct communication, or passed via the SMO and SO3 Med A for their attention.

1.4.171. The panel concluded that, throughout Ex BP19 planning, an integrated approach to the consideration of EH hazards and the effect of activities would have improved the understanding of EH risk. The lack of awareness of the responsibilities of the EH team amongst the HQ 3 Cdo Bde RM planning staff made this less likely to happen. The panel finds that a lack of EH awareness amongst the HQ 3 Cdo Bde RM planning staff was a **contributory factor**.

1.4.172. **Recommendation. Commander 3 Commando Brigade Royal Marines should ensure that core planning staff are aware of the responsibilities of the Headquarters 3 Commando Brigade Royal Marines Environmental Health team, in order to reduce the risk of exposure to Environmental and Industrial Hazards.**

Section 4 – Regulatory oversight

Competent Medical Authority

1.4.173. Annex F to the HQ 3 Cdo Bde RM Ex BP19 deployment instruction was the medical directive. This provided specific medical direction to units participating in Ex BP19, as well as Med FP guidance. It also established the medical CoC (Figure 1.4.9) for the exercise as follows:

Exhibit 1
Exhibit 146
Witness 31

Exhibit 38
Exhibit 105
Exhibit 86
Witness 12

- a. **CMA.** The CMA sat at the top of the Medical CoC. For Ex BP19 the CMA was NCHQ OF5⁷⁷ Deputy Assistant Chief of Staff Medical Operations and Capability. The role of the CMA was to advise on medical planning, assess medical support plans and advise the CoC, particularly about medical risk, in order to support decision-making. The CMA held no responsibility for the execution of medical planning.
- b. **Co-ordinating Authority.** For Ex BP19 the medical directive gave co-ordinating authority to SMO HQ 3 Cdo Bde RM. This granted the SMO authority to coordinate specific functions or activities involving two or more forces, commands, Services or organisations. The SMO was also the signature authority on the medical directive.
- c. **SO3 Med A.** While holding no authority, the SO3 Med A acted as part of the CoC supporting the deployed Commanders. As a representative in the HQ, SO3 Med A was listed on the medical directive as a point of contact for EH team requests, as well as co-ordinating casualty information for the SMO.
- d. **RMO, GDMO and Medical Assistant.** Medical staff on the ground were outlined in the medical directive. Of note, there was a change for the Skrunnda-1 phase wherein, due to a medical issue, the 24 Cdo Regt RE RMO was substituted for the 29 Cdo Regt RA RMO.



Figure 1.4.9 – Medical CoC for Ex BP19.

1.4.174. Within the RN, the CMA assured and advised on medical plans for deploying ships, as well as 3 Cdo Bde RM deployments. The level of CMA

Exhibit 64
Witness 1
Exhibit 20

⁷⁷ OF5 – Captain (RN), Colonel (Army), Group Captain (RAF).

involvement and assurance depended on the size of the population at risk,⁷⁸ and the level of residual medical risk in the plan. Within 3 Cdo Bde RM, medical plans covering unit level activities were produced by the unit GDMO and assured by HQ 3 Cdo Bde RM SMO, while medical plans for Bde level activities were produced by the SMO and assured by the CMA. In addition to this, all medical plans covering activities assessed as having high or very high residual risk were assured by the CMA, regardless of the size of the population at risk. Since Ex BP19 the CMA has issued approval certificates for 3 Cdo Bde RM.

1.4.175. EIH was factored into medical plans once the medical planner (unit or Bde depending on scale) requested a FHPI from the HQ 3 Cdo Bde RM EH team. The FHPI was then amalgamated into the medical plan. For Bde level deployments, the medical plan was then assured by the CMA in its entirety and the SMO was advised as to its suitability.

1.4.176. The CMA for the RN was from RN medical branch and the role could be filled by a clinician or non-practicing Medical Services Officer. Within the organisation⁷⁹ there was also a non-clinical EH SO2, panel interviews with incumbents of the EH SO2 post showed that their role was predominantly focused on the EH of maritime units. They did not routinely view or approve FHPIs from 3 Cdo Bde RM as part of the CMA's assurance of the medical plan. They would, however, advise the HQ 3 Cdo Bde RM EH team and the SMO on EH matters more generally when contacted. A diagram of the RN CMA approval of the FHPI within the medical plan was shown in Figure 1.4.10.

Exhibit 82
Witness 8
Exhibit 90
Witness 17
Exhibit 105

Exhibit 123
Witness 27
Exhibit 145
Witness 30
Exhibit 75
Witness 4
Exhibit 105

⁷⁸ Population at risk is the term used for the personnel (either military or public) who are at risk of injury or death resulting from a hazard.

⁷⁹ Since Ex BP19 the organisation changed name from MEDIV to RN Healthcare.

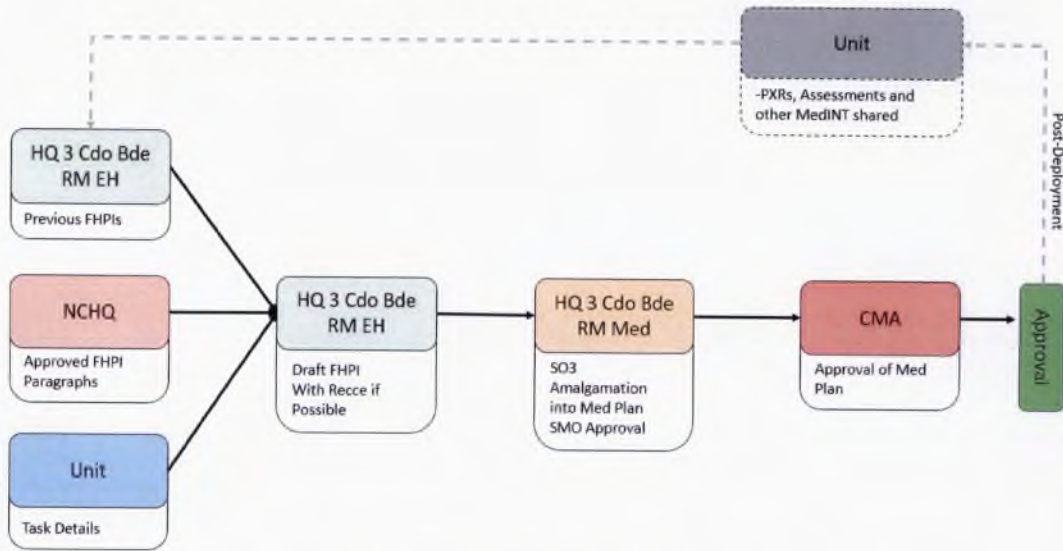


Figure 1.4.10 – HQ 3 Cdo Bde RM FHPI approval process.

1.4.177. An FHPI from HQ 3 Cdo Bde RM or 3 Cdo Bde RM units was not reviewed or assured by another EH specialist once authored by the HQ 3 Cdo Bde RM EH team. This meant that the FHPI for Ex BP19 was not reviewed by an EH specialist. The SMO and the CMA reviewed the FHPI, as part of the wider medical plan, however they were not EH specialists.

1.4.178. In comparison, 16 AA Bde FHPIs were reviewed via the Army Public Health team, which consisted of EH specialists, and then by the Army CMA. This extra review by the Army Public Health team was performed prior to the FHPI becoming part of the medical plan, being assured as a standalone document. A diagram of the Fd Army CMA approval of the FHPI within the medical plan is shown in Figure 1.4.11.

Exhibit 136
Exhibit 137
Exhibit 138

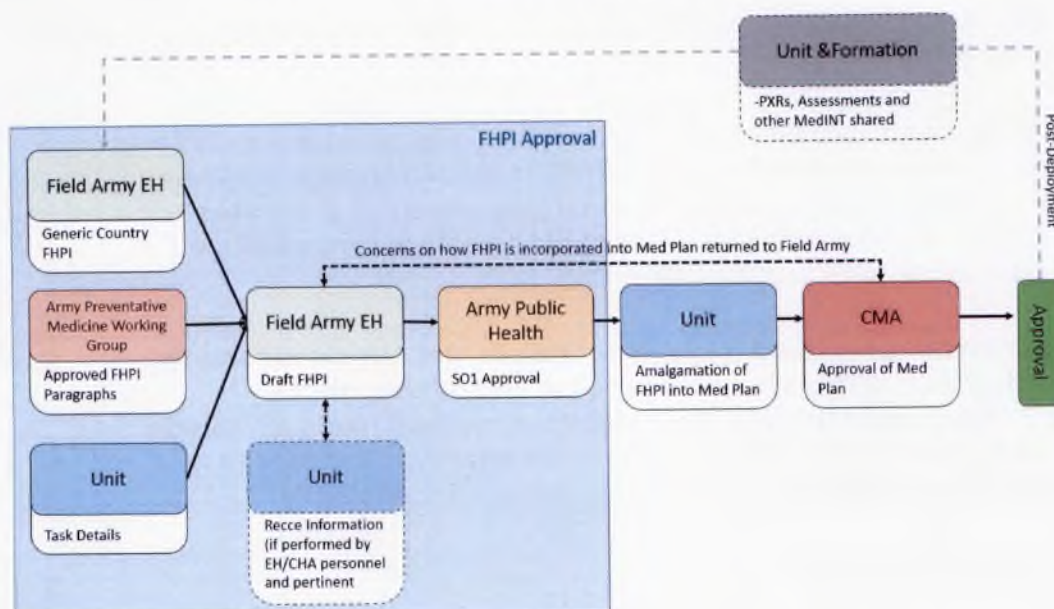


Figure 1.4.11 – 16 AA Bde FHPI approval process.

1.4.179. The Ex BP19 medical plan, accompanied by the operational medical risk assessment, was believed to have been sent to the NCHQ CMA for assurance on or after 13 May 2019. The panel found no evidence to confirm the exact date. The Ex BP19 FHPI (Appendix 1 to the medical plan) was not reviewed by the NCHQ SO2 EH. The CMA at the time of the inquiry confirmed to the panel that the Ex BP19 FHPI had been received and archived by NCHQ RN Healthcare. However, the panel found no specific evidence to confirm the assurance of the Ex BP19 medical plan or the CMA's response to the HQ 3 Cdo Bde RM SMO regarding its suitability.

Exhibit 34
Exhibit 133
Exhibit 123
Witness 27

1.4.180. It was not possible to determine whether an assurance check of the FHPI by NCHQ SO2 EH would have questioned the reference to asbestos, subsequently recommended further investigation and directed inclusion in the operational medical risk assessment. However, the fact that no EH specialist outside of the EH team in HQ 3 Cdo Bde RM assessed the FHPI showed that there was a lack of EH specific assurance of 3 Cdo Bde RM activities. In comparison, the Fd Army model had a WO1 and SO2 EH within HQ Fd Army, as well as an EH specific assurance check within Army Public Health, prior to an FHPI being submitted to the CMA for approval. The panel opined that, the increased level of specialist EH involvement in the Fd Army FHPI approvals process provided a greater level of assurance that the EH risks presented within the FHPI had been adequately assessed.

Exhibit 133
Exhibit 169

1.4.181. The panel also believed that, despite no evidence of confirmatory email correspondence, it was very likely that the RN CMA had assured the Ex BP19 medical plan and operational medical risk assessment. This view was supported by the CMA holding a copy of the Ex BP19 FHPI in their archive, as well as the high-profile nature of the exercise, meaning it would have been very unlikely not to have

Exhibit 133
Exhibit 169

been seen by the CMA. The issue of a CMA approval certificate only became mandatory after Ex BP19.

1.4.182. The panel concluded that the lack of dedicated EH assurance meant that the FHPI and EH considerations within the Ex BP19 medical plan were not assured by an individual qualified to sufficiently inform deploying personnel of the risks posed by asbestos. The panel finds that a lack of EH specific assurance of the Ex BP19 medical plan by the CMA was a **contributory factor**.

1.4.183. **Recommendation. Head Royal Navy Healthcare should amend the Competent Medical Authority assurance process and oversight of Headquarters 3 Commando Brigade Royal Marines medical plans to include the requirement for specific Environmental Health approval, in order to ensure environmental health risks have been assessed sufficiently.**

Section 5 – Similar incidences

1.4.184. As described in the opening inquiry context and approach paragraphs,⁸⁰ the collection and subsequent testing of a sample of dust taken from Skrunnda-1 by Mne A during Ex BP19 was the catalyst for the convening of the SI. However, the TORs required the investigation of all reported incidents involving suspected asbestos exposure to UK Defence personnel on overseas exercises and training, since 2018. After convening, the DG DSA issued USA regarding asbestos, which led to the identification of Ex RADT 19-II. A further exercise where asbestos had been reported, Ex GHOST, was identified by the panel through NLIMS. Finally, during the course of the inquiry, the panel identified a fourth exercise, Ex NAMEJS, that was due to deploy to Skrunnda-1 in September 2021. These similar instances were compared to the analysis and findings for Ex BP19. Similarities with factors that were present on Ex BP19 assisted in reinforcing the relevant findings. Where there were differences, further specific analysis and recommendations have been made.

Exhibit 181
Exhibit 37
Exhibit 180

Ex SABER STRIKE 18

1.4.185. Ex SABER STRIKE 18 (Ex SbS18) was a NATO exercise which saw Zulu Company (Z Coy) 45 Cdo RM deploy to Skrunnda-1 in June 2018 during the exercise's final phase. This exercise was identified by HQ 3 Cdo Bde RM during the internal investigation into Ex BP19 as having previously used Skrunnda-1. Z Coy deployed on Ex SbS18 as part of a United States Marine Corps Battle Group, under a Canadian led Task Force. Although a different exercise CoC to Ex BP19, it should be noted that the NATO exercise CoC did not have responsibility for the implementation of risk controls, which were a national responsibility. Due to the smaller scale of the UK's involvement with Ex SbS18 (Z Coy 45 Cdo RM), compared to Ex BP19 (the HQ and elements of 3 Cdo Bde RM), the level of planning complexity was reduced. This also meant a reduced amount of evidence

Exhibit 53
Exhibit 101
Exhibit 141
Witness 33
Exhibit 175
Exhibit 54
Exhibit 73
Witness 2
Exhibit 117
Witness 25
Exhibit 170
Witness 35

⁸⁰ Paras 1.4.1 and 1.4.3.

was available to the panel in order to conduct a comparison. As a result, the comparison of some of the risk controls were grouped together:

Exhibit 68
Exhibit 48
Exhibit 9

a. **HN information, MedInt and MedInfo.** The earliest risk controls applicable to the planning of Ex SbS18 were HN information, MedInt and MedInfo. Similar to Ex BP 19, open-source information on the locations to be used during Ex SbS18 was available to the exercise planners to develop MedInt and MedInfo. Furthermore, deploying forces were able to request information from supporting nations. During the planning of Ex SbS18, the only HN provided information was an assessment of Latvian medical capabilities, which did not refer to Skrunda-1. Unlike Ex BP19, no colour coded mapping was provided to denote in-bounds and out-of-bounds buildings. These buildings were instead marked with mine tape. However, during the only recce to Skrunda-1, which was conducted by 45 Cdo RM, verbal assurance was provided by the HN LO that the in-bounds buildings were free from asbestos and safe to use. No additional information was requested by HQ 3 Cdo Bde RM or 45 Cdo RM on Skrunda-1 to develop MedInt and MedInfo to assure the safety of the in-bounds buildings. The panel believed that, had there been specific MedInt or MedInfo on Skrunda-1 available to the exercise planners, or the assumption that the in-bounds buildings were safe had been tested, it was more likely than not that the potential risk posed by asbestos would have been identified. The panel concluded that these factors reinforce the findings for Ex BP19 within the HN information, MedInt and MedInfo sub-sections.⁸¹

b. **Reconnaissance and EIH assessments.** During the planning for Ex SbS18, 45 Cdo RM personnel conducted a recce to Skrunda-1. During this recce, the recce party questioned whether asbestos was present in Skrunda-1. They were informed by the HN LO that asbestos had been removed and that the out-of-bounds buildings were unsafe due to poor structural integrity. No information regarding in-bounds and out-of-bounds buildings or asbestos was briefed by the recce party at the MPC, or raised to HQ 3 Cdo Bde RM. There was also no mention of building restrictions or asbestos included in any exercise OSW. Due to the small scale of the deployment, there were no members of the HQ 3 Cdo Bde RM EH team within the Skrunda-1 recce party. The panel believed that, had the information regarding in-bounds and out-of-bounds buildings and the HN removal of asbestos been discussed at the MPC or had been raised to HQ 3 Cdo Bde RM, it may have initiated further investigation or directed the HQ 3 Cdo Bde RM EH team to conduct an EIH recce and assessment as assurance. The panel concluded that these factors reinforced the findings for Ex BP19 within the EIH assessment and reconnaissance sub-sections.⁸²

c. **Risk assessment.** Ex SbS18 was subject to the same planning and risk assessment process as Ex BP19, however, at a greatly reduced scale.

⁸¹ Paras 1.4.30 and 1.4.44 respectively.

⁸² Paras 1.4.57 and 1.4.72 respectively.

Due to the smaller scale of the deployment the risk assessment assurance process was conducted by HQ 3 Cdo Bde RM, whereas for Ex BP 19 this assurance was conducted by NCHQ. However, similar to Ex BP19, the Ex SbS18 risk assessments did not factor in EIH in general or asbestos specifically. The panel opined that, similar to Ex BP19, the omission of the risk posed by EIH and asbestos from the exercise risk assessment was due to the flawed risk identification process. Had the potential risk of asbestos been identified through the use of HN information, collection of MedInt and MedInfo and dissemination of information after the 45 Cdo RM recce, it was more likely to have been included in the Ex SbS18 risk assessment process. Once included, the risk posed by asbestos could have been categorised. This could have directed further investigation, via EIH assessment, or other mitigations to have been put in place. The panel concluded that this further reinforced the findings within the Ex BP19 medical risk assessment sub-section,⁸³ and the recommendation that, where asbestos may be present, it should be specifically included in the risk assessment.⁸⁴

d. **FHPB.** Personnel deployed on Ex SbS18 could not recall if a FHPB had been delivered prior to deployment. As no evidence of an Ex SbS18 FHPB was provided by HQ 3 Cdo Bde RM or 45 Cdo RM the panel considered it unlikely that a FHPB had been delivered. As the potential risk of asbestos had not been identified on the 45 Cdo RM recce, the panel believed it very unlikely that, had an FHPB been produced, it would have included specific information regarding asbestos. However, it could have covered the requirement to conduct Tier 1 assessments within 48rs of occupation of a location and the requirement to report any EIH identified to the HQ 3 Cdo Bde RM EH team. The panel concluded that this reinforced the findings within the Ex BP19 FHPB sub-section⁸⁵ and further reinforced the recommendation to record formally the receipt of FHPBs as part of pre-deployment readiness checks.⁸⁶

e. **Tier 1 assessments deployed.** The Ex SbS18 FHPI incorrectly referenced 2009DIN-03-004 as the authoritative policy regarding the completion of a Tier 1 assessment. However, 2017-DIN03-004 was extant during the planning and execution phase of the Exercise. Regardless of this error, both DINs required a Tier 1 assessment to be completed by personnel occupying a new location for longer than 48hrs. As with Ex BP19, no Tier 1 assessment was completed by the small contingent of assault engineers from 45 Cdo RM who remained in Skrunnda-1 for more than 48hrs after the majority of Z Coy had departed. Interviews suggested that neither CHAs nor medical personnel were present within the Skrunnda-1 contingent who could have completed one. The panel found no evidence to suggest any concerns were raised to the CoC regarding potential exposure

⁸³ Para 1.4.100.

⁸⁴ Para 1.4.113.

⁸⁵ Para 1.4.114.

⁸⁶ Para 1.4.127.

to asbestos, or other EIH, throughout the use of Skrunnda-1 on Ex SbS18. Throughout the SI, the panel established that Tier 1 assessments were rarely completed within 3 Cdo Bde RM. The panel opined, therefore, that even if there had been CHA or medical personnel within Skrunnda-1, it was unlikely that a Tier 1 assessment would have been completed. However, the panel believed that, had the small contingent that remained in Skrunnda-1 for more than 48hrs raised concerns regarding asbestos to the CoC, a Tier 1 assessment could have been used to capture the relevant information required to inform the HQ 3 Cdo Bde RM EH team. The panel concluded that this supported the findings within the Ex BP19 EIH assessments sub-section and the recommendation to widen the use of Tier 1 assessments beyond CHAs and medical personnel.⁸⁷

Ex SbS18 post-exposure management

1.4.186. After the asbestos risk had been identified following Ex BP19, HQ 3 Cdo Bde RM launched an internal investigation. Part of this investigation involved a search of JPA for personnel who had deployed to Latvia.⁸⁸ This process highlighted that 3 Cdo Bde RM personnel had deployed to Latvia before Ex BP19 as part of Ex SbS18. This fact was not included in the HQ 3 Cdo Bde RM internal investigation, nor formally followed up separately. Some personnel had, however, been identified via unit level actions. For example, 45 Cdo RM, which deployed coys on both Ex SbS18 and Ex BP19, notified personnel from Ex BP19 by placing a statement in daily Routine Orders for personnel exposed while in Skrunnda-1. This brought the potential exposure to asbestos to the attention of personnel who had deployed to Skrunnda-1 on Ex SbS18. The panel was also informed, by other personnel who had deployed on Ex SbS18, that they had been made aware of the risk by different means, usually where the CoC had identified them, along with Ex BP19 personnel. Additionally, the panel interviewed individuals where the panel's contact with them was the first they had heard of the potential asbestos risk at Skrunnda-1.

Exhibit 27
Exhibit 93
Exhibit 87
Witness 14
Exhibit 1
Exhibit 146
Witness 31
Exhibit 117
Witness 25
Exhibit 73
Witness 2
Exhibit 170
Witness 35
Exhibit 171

1.4.187. The panel opined that it was highly likely that, due to the flawed risk identification process, the risk of exposure to asbestos was not sufficiently categorised or assessed for Ex SbS18. This was a similar situation to Ex BP19 and supported the recommendation in Para 1.4.113. Furthermore, the changes discussed in Paras 1.4.57 to 1.4.69, to enable a wider scope of personnel to complete Tier 1 assessments, would have likely assisted in highlighting the asbestos hazard to the CoC. Finally, the HQ 3 Cdo Bde RM's internal investigation should have prompted investigation into personnel deployed on Ex SbS18 to ensure the completion of the MOD Form 960.

1.4.188. The panel concluded that, had the HQ 3 Cdo Bde RM investigation directed post-exposure management action for personnel who had deployed to Skrunnda-1 on Ex SbS18, the chance of ensuring that all affected individuals completed the MOD Form 960 process would have greatly increased. The panel finds that the omission of Ex SbS18 from the HQ 3 Cdo Bde RM investigation into

⁸⁷ Para 1.4.69

⁸⁸ This is discussed further in Para 1.4.151.

the use of Skrunnda-1 on Ex BP19 and the subsequent omission of direction for affected personnel to complete the MOD Form 960 process to be an **aggravating factor**.

1.4.189. Recommendation. Royal Navy Director People and Training should support Commander 3 Commando Brigade Royal Marines to ensure that all personnel who deployed to Skrunnda-1, as part of Exercise SABER STRIKE 18, are offered the opportunity to complete a MOD Form 960 in order to ensure that all potential affected personnel are formally recorded.

Ex RAMSTEIN DUST II

1.4.190. Exercise RAMSTEIN DUST II (Ex RADT 19-II) was a NATO exercise in August 2019 where UK Defence personnel from the Deployable Air Command and Control Centre (DACCC) were deployed to a Romanian Air Force base. Unlike Ex BP19, concerns about asbestos had been raised formally, at a senior level, by other NATO nations before Ex RADT 19-II was due to deploy. The HN (Romania) was directed to clear the asbestos by the NATO 2* Command, with certification provided, after clearance, to assure the process. In addition, Italian and German assurance testing was also conducted to ensure the safety of their personnel. As highlighted in Para 1.4.40, there was no stated standard that the UK accepted as proof of removal. The UK OF5 in the DACCC requested advice from PJHQ and the Defence Infrastructure Organisation; both agreed that an EU accredited contractor was acceptable assurance to allow for the safe deployment of UK personnel on Ex RADT 19-II.

Exhibit 37
Exhibit 187
Exhibit 188
Exhibit 189
Exhibit 190
Exhibit 191
Exhibit 192
Exhibit 193

1.4.191. The panel opined that the process followed for Ex RADT 19-II identified the means by which Defence could assure the safe use of buildings suspected to contain asbestos, without having to deploy their own testing or survey capability. This allowed any asbestos hazards to be assessed early by planning staff, before deploying on operations and exercises. In addition, if the UK was operating as part of a multinational grouping, assurance test results from partner nations could also be used to further inform the process.

1.4.192. The panel concluded this example further reinforced findings within the Ex BP19 Host Nation information sub-section,⁸⁹ and the recommendation that the MOD directs a standard of proof from a HN to assure that the clearance of asbestos can be deemed acceptable.⁹⁰

Ex GHOST

1.4.193. Ex GHOST was a 3 Cdo Bde RM exercise which saw the Special Reconnaissance Squadron (SRS) of 30 Cdo IX Gp RM deploy to Lithuania in 2021. One of the Exercise serials saw a small team deploy to a disused cinema, which was subsequently suspected to contain asbestos. Ex GHOST was reported on NLIMS on 15 June 21 and identified by the panel for investigation. As the

Exhibit 100
Exhibit 57
Exhibit 88
Witness 15
Exhibit 82

⁸⁹ Para 1.4.30.

⁹⁰ Para 1.4.43.

preparations for Ex GHOST overlapped with the HQ 3 Cdo Bde RM internal investigation into Ex BP19, the Ex GHOST planners benefitted from some early lessons regarding the asbestos risk being highlighted. The risk controls that were common between Ex BP19 and Ex GHOST were as follows:

a. **Risk assessment.** Due to the predominantly reactive scenario of the exercise, the EIH and therefore asbestos risk within specific locations was not able to be assessed in advance. Asbestos was highlighted specifically in the main text of the Ex GHOST medical plan and developed further in the FHPB. The risk assessment within the medical plan did consider EIH as a general category, however it did not consider asbestos specifically. 'Industrial Hazards' were considered with the sole mitigation being to 'avoid industrial areas'. The panel opined that the mitigation to reduce the risk posed by EIH, by avoiding industrial areas, was contrary to the exercise aspiration to exploit urban locations, which included reactive plans to use disused buildings or industrial sites. Therefore, the panel believed that the assessment of the risk posed by asbestos should have been specifically recorded and weighed against the exercise aim of exploiting the urban environment. Furthermore, this assessment should have considered the age and state of repair of the buildings to be used. The panel concluded that this reinforced the findings within the Ex BP19 medical risk assessment sub-section,⁹¹ recommending that, when there is an aspiration to utilise disused or industrial areas, the risk posed by asbestos needs to be specifically included within the risk assessment process.

b. **FHPB.** The Ex GHOST FHPB was produced by the HQ 3 Cdo Bde RM EH SNCO. The presentation included multiple slides on EIH and asbestos hazards, specifically mentioning the increased prevalence in the Baltic states. Due to the timing of Ex GHOST in 2021, much of the pre-deployment activity was conducted during the COVID-19 pandemic. As such, the FHPB was delivered remotely, via a presentation, with pre-recorded audio by the EH SNCO to accompany each slide. The panel had confirmed that this presentation was distributed to the CoC of exercising personnel, for delivery prior to deployment. However, there was no record that confirmed which, or how many, individuals viewed it. While it was not possible to determine who viewed the presentation, it should be noted that the slides included detailed information of likely places to find asbestos, pictures of what to look for and follow up actions, which instructed personnel on what to do should they encounter asbestos. Furthermore, the presentation explained that all actions to ensure safety were to be taken if there was suspicion of the presence of asbestos. The presentation did explicitly state that samples were not to be taken and that personnel should depart the area on suspicion of asbestos. In interview, personnel deployed to the cinema could not recall if they had seen the Ex GHOST FHPB. The panel believed that, despite a comprehensive FHPB brief being produced by the HQ 3 Cdo Bde EH SNCO, which included early lessons from the internal investigation into Ex BP19, the members of the SRS team which

Witness 8
Exhibit 85
Witness 11
Exhibit 140
Exhibit 98
Exhibit 9
Exhibit 129

⁹¹ Para 1.4.113.

deployed to the cinema had not received the FHPB. The panel concluded that this reinforced the findings within the Ex BP19 FHPB sub-section⁹² and further reinforced the recommendation to formally record the receipt of FHPBs as part of pre-deployment readiness checks.⁹³

c. **Tier 1 assessment.** 2017-DIN06-004 directed that a Tier 1 assessment should be completed upon exposure to EIH, or within 48 hours of occupation of a new location; contrary to policy this was not completed during the suspected exposure to asbestos during Ex GHOST. However, the dispersed nature of the exercise meant that medical teams were not in the immediate vicinity; furthermore none of the team within the cinema were CHA trained. Therefore, it was decided to extract the team without conducting a Tier 1 assessment. The 30 Cdo IX Gp RM GDMO subsequently completed a detailed report into the circumstances surrounding the suspected exposure. The panel opined that extracting the team without completing a Tier 1 assessment was the safest course of action. However, to aid learning from experience in future scenarios, units could either perform a Tier 1 assessment retrospectively, or include detailed information in the Post-Exercise Report (PXR). In the case of Ex GHOST, the 30 Cdo IX Gp GDMO produced a comprehensive report covering the incident to inform organisational learning. It is the opinion of the panel that, had the policy allowed any personnel to complete the Tier 1 assessment, rather than it being limited to CHAs and medical personnel, a retrospective assessment could have been produced by a member of the SRS team after their extraction from the cinema. The panel concluded that this reinforced the finding within the Ex BP19 EIH assessments sub-section, which recommends the change to policy to allow a wider range of personnel to conduct Tier 1 assessments⁹⁴ and which would therefore increase the likelihood of their completion.

d. **Post-exposure management.** Unlike Ex BP19, post-exposure management for the small number of individuals on Ex GHOST who entered the cinema was completed quickly and without external assistance. It was also greatly assisted by the 30 Cdo IX Gp GDMO being deployed to Lithuania with the unit and therefore able to conduct a brief on asbestos and oversee completion of the MOD Form 960 action, within hours of potential exposure. The panel opined that the GDMO's actions to record and report the details of the suspected exposure to asbestos and the coordination of the completion of MOD Form 960 action for the SRS team were excellent. This task would have been more complex had the GDMO not been deployed on the exercise. The panel also believed that these actions demonstrated an improved level of awareness regarding the risks posed by asbestos within 3 Cdo Bde RM since Ex BP19. The panel concluded that the GDMO's actions after the suspected exposure to asbestos provided an example of a robust, and auditable, post-exposure

⁹² Para 1.4.114.

⁹³ Para 1.4.127.

⁹⁴ Para 1.4.69

management procedure. This reinforced the findings within the Ex BP19 post-exposure management assurance sub-section.⁹⁵

Ex GHOST learning from experience

1.4.194. During the initial exercise planning, it was intended for two SRS exercises to take place in Lithuania; these being Ex GHOST and Ex BLACK PORTAL 21. Ex BLACK PORTAL 21 was eventually cancelled however, it had been based on Ex BLACK PORTAL 19, which took place in Klaipeda, Lithuania, as a sub-element of Ex BP19. During Ex BLACK PORTAL 19, the same disused cinema was used as part of a disaggregated SRS HQ by a small number of personnel. However, none of the OSW or PXR from Ex BLACK PORTAL 19 provided any information on the buildings used, other than locations. The panel was unable to identify whether any personnel on BLACK PORTAL 19 had been potentially exposed to asbestos.

1.4.195. As highlighted in the MedInt and MedInfo sub-section,⁹⁶ and the EIH assessments sub-section,⁹⁷ the collection of information to inform the MedInt on locations was key to informing future operations. The panel opined that mention of the disused cinema within Ex BLACK PORTAL 19 PXR meant that the building was considered suitable for use again on Ex GHOST in 2021, without proper consideration of the EIH that it may have contained.

1.4.196. The panel concluded that, had additional EH information been included in the Ex BLACK PORTAL PXR regarding the locations used, it would have informed the Ex GHOST planners of the state of the disused cinema, which may have highlighted the risk posed by asbestos. The panel finds that the lack of EH information produced on locations used on Ex BLACK PORTAL 19 was a **contributory factor**.

1.4.197. The panel further concluded that, where sites or structures are recommended for use in future training activities, these sites should be highlighted in PXR with any relevant EH information included. The panel finds that this is an **observation**.

Ex GHOST reconnaissance against mission objective

1.4.198. Recces contribute to control risk by providing greater detail on hazards,⁹⁸ allowing for effective hazard assessment, and development of local controls, to ultimately reduce the likelihood, and severity, of an occurrence. Interviews with the Ex GHOST planning staff highlighted that, as the aim of the exercise was to be a discreet collection activity against 45 Cdo RM, no recces were conducted of the

Exhibit 88
Witness 15
Exhibit 127
Exhibit 125
Exhibit 126

Exhibit 88
Witness 15

⁹⁵ Para 1.4.148.

⁹⁶ Paras 1.4.44 - 1.4.56.

⁹⁷ Paras 1.4.58 - 1.4.71.

⁹⁸ For asbestos this can be information such as location, state, or type.

Observation Post locations. This was done to maintain location security and mask movements.

1.4.199. The importance of recces as a risk control was highlighted in paras 1.4.72 to 1.4.99. However, the panel noted that there could be scenarios where recces are either detrimental to exercise objectives or could not be conducted for operational reasons.⁹⁹

1.4.200. In the context of Ex GHOST, where there was a conscious decision not to conduct specific site recces, the ability to assess hazards was severely reduced. The panel opined that, as a major risk control was not utilised in order to maintain exercise objectives, it should have been articulated in the medical risk assessment to reflect the greater level of unknown hazards. The requirement to quantify the unknown hazard should then have prompted further investigation via MedInt or HN information. For example, where a building was known to be built at a time when asbestos was routinely used and was now in disrepair, the presence of asbestos would be likely but its state should be considered to be unknown. The fact a recce could not be utilised to assess the hazard meant that the risk assessment should have highlighted the potentially higher risk and offered mitigations that reduced the likelihood or severity of exposure. For example, this could have led to deploying with EH personnel or receiving bespoke asbestos training prior to deployment.

1.4.201. The panel concluded that, although other sources such as MedInt and MedInfo (including open-source information) remained available, where reconnaissance was not used to ascertain the level of risk posed by a hazard, the CoC must continue to mitigate towards the highest credible potential risk, to ensure the safety of UK Service personnel. Failure to do so could result in exposure of personnel without any suitable mitigation measures in place, as well as risking having activities curtailed or amended.

1.4.202. The panel further concluded that, where reconnaissance was not possible, the increased risk of consciously omitting this control needs to be articulated to the risk owner, via the medical risk assessment, unless the level of risk can be assured by specific HN information or MedInt. The panel finds that this was a **contributory factor**.

1.4.203. **Recommendation. Director Health Safety and Environmental Protection, supported by the Director General Defence Medical Services staff, should update Defence Health Safety and Environmental Protection policy to include direction on the risk assessment of Environmental and Industrial Hazards in overseas locations when reconnaissance is not possible in order to inform risk management.**

⁹⁹ During investigation the panel was made aware of a case on Op RUMAN where asbestos was suspected (later tested negative). In the disaster relief context recces may not be possible due to the effort focusing on humanitarian assistance.

Ex NAMEJS

1.4.204. During the course of the SI, the panel was made aware that A Coy, 2 LANCS were due to deploy to Skrunda-1 in early October 2021, as part of Ex NAMEJS. Due to concerns that the asbestos risk had not been sufficiently identified, the panel intervened and the Skrunda-1 element of the exercise was cancelled. As a result, further USA was issued by the DG DSA on 1 October 2021. 2 LANCS then conducted an internal investigation into the near miss. The risk controls that were common between Ex BP19 and Ex NAMEJS were as follows:

Exhibit 164
Exhibit 181
Exhibit 182
Exhibit 183

a. **MedInt and information sharing.** The Ex NAMEJS planning team had no previous information on Skrunda-1. They were unaware of the extant USA, the previous reces and the two exercise deployments conducted by 3 Cdo Bde RM units. The 2 LANCS near miss investigation highlighted that the Battalion (Bn) CoC had received the first USA relating to Skrunda-1, however, internal information sharing process issues meant it was not seen by the Ex NAMEJS planning team. The Bn has since updated its SOPs to ensure location specific USAs were filed within the Bn's regional information repository. The panel opined that, had the Ex NAMEJS planning team seen the USA relating to Skrunda-1, they would have questioned the suitability of Skrunda-1 for their exercise and sought specialist advice from their Divisional EH staff. The panel concluded this supported the observation on information sharing to enable informed reces, and further reinforced the recommendation regarding the requirement for sharing MedInt and MedInfo Defence wide.¹⁰⁰

b. **Reconnaissance.** The Ex NAMEJS planners first visited Skrunda-1 in May 2021, before the first USA was issued. They then conducted a confirmatory recce on 13 September 2021. The recce party included a Combat Health Duties¹⁰¹ (CHD) trained JNCO, who was confident that there were no signs of damaged or disturbed asbestos. The recce focused on three newly refurbished buildings, with the recce party specifically enquiring about asbestos and being told by the HN LO that it was not present. The panel opined that the inclusion of a CHD, as part of the recce party, showed consideration for the identification of EIH. However, no location specific assessment featured in the OSW. It was also reasonable to expect that some refurbishment of buildings within Skrunda-1 would have taken place since Ex BP19. However, as Skrunda-1 was still subject to extant USA due to the presence of asbestos, an assessment by EH staff would have been more appropriate. The panel concluded that this reinforced the findings of the Ex BP19 reconnaissance sub-section¹⁰² and

¹⁰⁰ Para 1.4.56.

¹⁰¹ The CHD qualification sits below the CHA and is responsible for the practical elements of unit EH tasks such as basic testing of unit water carriage equipment for cleanliness and contamination. (CHA Handbook)

¹⁰² Para 1.4.89.

the recommendation that EH specialists should be included on recces where there is a known or suspected presence of EIH.¹⁰³

c. **Risk assessment.** The Ex NAMEJS Exercise Action and Safety Plan (EASP) was written after the confirmatory recce to Skrunnda-1. It included a risk assessment against likely hazards, although EIH and specifically asbestos, were omitted. An FHPI was included as part of the exercise medical plan (Annex B to the EASP). The FHPI was produced by the 6 (UK) Division EH staff in June 2021¹⁰⁴ and it provided generic advice for Latvia. Within the FHPI the risk from asbestos was mentioned but no assessment provided. When the panel was made aware of the Ex NAMEJS deployment to Skrunnda-1, it was the lack of identification and assessment of the risk posed by EIH that raised concern. Despite the confidence of the 2 LANCS recce team that asbestos was not present in the three refurbished buildings they intended to use, the panel opined that asbestos may still have been present within the remainder of the site. Therefore, the risk from asbestos should have been identified and assessed as part of the risk assessment process and, where appropriate, mitigations put in place. This could have included, for example, direction only to use the recently refurbished buildings, with all other buildings placed out-of-bounds. The panel concluded that the lack of identification and assessment of the risk presented by asbestos reinforced the findings within the Ex BP19 medical risk assessment sub-section¹⁰⁵ and the recommendation that, where asbestos may be present, it should be specifically included in the risk assessment.¹⁰⁶

Summary of findings

Occurrence event

1.4.205. During the analysis of Ex BP19, the panel identified the suspected exposure of UK Defence personnel to asbestos as the occurrence event. Throughout this report each of the factors identified will be analysed against this occurrence event. 1.4.23

Causal factor

1.4.206. The panel concluded that the potential exposure of UK Defence personnel to asbestos was caused by the lack of a specific risk assessment to address the known presence of asbestos within the Skrunnda-1 stage of the exercise. This meant that the required risk controls to address the asbestos risk were not identified or communicated. The panel finds the lack of assessment of the 1.4.111

¹⁰³ Para 1.4.99.

¹⁰⁴ Exact date unknown, first USA covering Skrunnda-1 issued 23 June 21.

¹⁰⁵ Para 1.4.100.

¹⁰⁶ Para 1.4.113.

risk posed by asbestos in Skruna-1 and lack of subsequent implementation of associated controls to be the **causal factor**.

Contributory factors

- 1.4.207. The panel concluded that not testing or challenging, during the Ex BP19 planning process, the assumption that the HN assessment that green marked buildings were safe to use, resulted in a missed opportunity to assess the risk of asbestos within Skruna-1. The panel finds the assumption that the green marked buildings were safe to use was a **contributory factor**. 1.4.42
- 1.4.208. The panel concluded that the absence of Skruna-1 specific MedInt being available to the HQ 3 Cdo Bde RM EH team during Ex BP19, resulted in an increased reliance on effective EH reconnaissance. The panel finds that the lack of Skruna-1 specific MedInt and a reliance on personal relationships to inform planning and recce requirements was a **contributory factor**. 1.4.55
- 1.4.209. The panel concluded that the lack of EIH information, in particular regarding asbestos, gathered during recces resulted in an incomplete risk picture during planning. The panel finds the lack of EIH information gathered as part of the unit recces was a **contributory factor**. 1.4.67
- 1.4.210. The panel concluded that the inefficient dissemination and direction to support future recces meant that the information collection on asbestos and development of the risk picture in Skruna-1 was not completed prior to deployment. The panel finds that the lack of processing of EH relevant information collected on recces to direct future recces to be a **contributory factor**. 1.4.87
- 1.4.211. The panel concluded that reconnaissance as a risk control did not work as an effective barrier to prevent potential exposure to EIH. Identification of EIH was not factored into planning early, via use of a Tier 1 assessment conducted by a CHA or an appropriately resourced and proactive EH recce. Either of these would have begun the risk assessment process with regards to asbestos. The panel finds that a lack of an effective EH recce was a **contributory factor**. 1.4.99
- 1.4.212. The panel concluded that, throughout Ex BP19 planning, an integrated approach to the consideration of EH hazards and the effect of activities would have improved the understanding of EH risk. The lack of awareness of the responsibilities of the EH team amongst the HQ 3 Cdo Bde RM planning staff made this less likely to happen. The panel finds that a lack of EH awareness amongst the HQ 3 Cdo Bde RM planning staff was a **contributory factor**. 1.4.171
- 1.4.213. The panel concluded that the lack of dedicated EH assurance meant that the FHPI and EH considerations within the Ex BP19 medical plan were not assured by an individual qualified to sufficiently inform deploying personnel of the risks posed by asbestos. The panel finds that a lack of EH specific assurance of the Ex BP19 medical plan by the CMA was a **contributory factor**. 1.4.182

1.4.214. The panel concluded that, had additional EH information been included in the Ex BLACK PORTAL PXR regarding the locations used, it would have informed the Ex GHOST planners of the state of the disused cinema, which may have highlighted the risk posed by asbestos. The panel finds that the lack of EH information produced on locations used on Ex BLACK PORTAL 19 was a **contributory factor**. 1.4.196

1.4.215. The panel further concluded that, where reconnaissance was not possible, the increased risk of consciously omitting this control needs to be articulated to the risk owner, via the medical risk assessment, unless the level of risk can be assured by specific HN information or MedInt. The panel finds that this was a **contributory factor**. 1.4.202

Aggravating factors

1.4.216. The panel concluded that, had the FHPB been delivered before or during deployment on Ex BP19, the personnel in Skruna-1 may have recognised the hazard posed by the dust and debris found. These personnel could have then highlighted their concerns to the CoC and requested EH advice or a Tier 2 assessment from the Bde EH team. The panel finds that the lack of delivery of the FHPB to be an **aggravating factor**. 1.4.126

1.4.217. The panel concluded that, had a Tier 1 assessment been conducted on Ex BP19 by suitably qualified personnel, it is likely that the presence of asbestos would have been identified as a potential risk factor. This would have triggered engagement with the HQ 3 Cdo Bde RM EH team, who would have provided specific advice or mitigations. The panel finds that the lack of a Tier 1 assessment being conducted in Skruna-1 **was an aggravating factor**. 1.4.144

1.4.218. The panel further concluded that a lack of management process to assure the completion of Tier 1 assessments led to noncompliance of 2017DIN06-004. The panel finds that the lack of a process to assure the completion of Tier 1 assessments **was an aggravating factor**. 1.4.145

1.4.219. The panel concluded that, to ensure impacted personnel are correctly recorded, to provide accurate historical records and to provide an audit trail for future purposes, units needed to be direct personnel to complete MOD Form 960 when suspected exposure to asbestos occurred and record accurately against deployment nominal rolls. There was no defined process in policy to direct personnel to complete MOD Form 960 or record completion. The panel finds that a lack of direction to Commanders for personnel to complete the MOD Form 960 action within JSP 375 was an **aggravating factor**. 1.4.158

1.4.220. The panel concluded that, had the HQ 3 Cdo Bde RM investigation directed post-exposure management action for personnel who had deployed to Skruna-1 on Ex SbS18, the chance of ensuring that all affected individuals completed the MOD Form 960 process would have greatly increased. The panel finds that the omission of Ex SbS18 from the HQ 3 Cdo Bde RM investigation into the use of Skruna-1 on Ex BP19 and the subsequent omission of direction for 1.4.188

affected personnel to complete the MOD Form 960 process to be an **aggravating factor**.

Other factors

1.4.221. The panel further concluded that early, pre-deployment, Tier 1 assessments had utility as a risk control by providing an indicator of potential risk posed by EIH. Recces conducted prior to deployment provided opportunities to identify suspected asbestos and trigger a Tier 2 assessment. The panel finds that the lack of clear policy to conduct a Tier 1 assessment during pre-deployment reces was an **other factor**. 1.4.68

1.4.222. The panel further concluded that, in order to ensure the correct categorisation, asbestos risks should be assessed as a risk to health as opposed to risk to mission due to the delayed emergence of symptoms. The panel finds that this was an **other factor**. 1.4.112

1.4.223. Finally, the panel opined that it was reasonable to expect that across the whole of Defence in the preceding 12 months, there would have been more than six occasions when a Tier 1 assessment would have been required (occupation of a new location for more than 48hrs). The panel finds that not utilising Tier 1 assessments in line with 2017DIN04-006 was an other factor. 1.4.146

Observations

1.4.224. A change of policy would in future enable CHAs to act as a Unit EH focal point instead of being an assessor. This would allow them to become both the POC for EH within the unit as well as ensuring Tier 1 assessments are conducted and communicated up the CoC by the unit. The panel finds this is an **observation**. The assurance of Tier 1 assessments is discussed further in the Tier 1 assessment deployed sub-section. 1.4.71

1.4.225. The panel noted that the HQ 3 Cdo Bde RM EH team establishment would benefit from periodic review, to ensure there continues to be sufficient capacity to achieve the required outputs. The panel finds **this** was an **observation**. 1.4.166

1.4.226. The panel further concluded that, where sites or structures are recommended for use in future training activities, these sites should be highlighted in PXR's with any relevant EH information included. The panel finds that this is an **observation**. 1.4.197

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PART 1.5

Recommendations

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PART 1.5 – RECOMMENDATIONS

1.5.1. The protection of UK Defence personnel from the risk of exposure to asbestos when on overseas training and exercises consists of a number of factors. However, if a robust and informed risk management process is followed throughout the planning and execution of training and exercises, the risk of exposure to asbestos can be ALARP and UK Defence personnel would be protected. This report provides analysis of the issue and gives recommendations that would adjust the current system to improve safety. However, it should be noted that, as these recommendations are implemented, any changing variables may require another approach and further assessment of remaining recommendations.¹ However, any approach should seek to encompass the core principles of:

- a. EH awareness and Resource.
- b. Informed risk assessment and Decision Making.
- c. An Integrated FP approach.
- d. Learning from experience.

The following recommendations are made in order to enhance Defence Safety:

1.5.2. Director Health Safety and Environmental Protection should:

- | | |
|---|---------|
| a. Recommendation. Director Health Safety and Environmental Protection, supported by the Director General Defence Medical Services staff, should update Defence Health Safety and Environmental Protection policy to include direction on the identification and assessment of Environmental and Industrial Hazards in overseas locations in order to inform risk management. | 1.4.43 |
| b. Recommendation. Director Health Safety and Environmental Protection, supported by the Director General Defence Medical Services should update Defence Health Safety and Environmental Protection policy to recommend that, during planning and if Environmental Health staff are not able to attend reconnaissance visits, Combat Health Advisors or empowered individuals be included and directed to conduct Tier 1 assessments, in order to identify Environmental and Industrial Hazards and inform the development of the exercise plan. | 1.4.70 |
| c. Recommendation. Director Health Safety and Environmental Protection should update JSP 375 Chapter 36 to include direction to Commanders that MOD Form 960 must be completed when suspected | 1.4.159 |

¹ This is especially the case with asbestos, which sits within EIH policy, and therefore EIH policy needs to reflect a range of differing hazards, not just asbestos.

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asbestos exposure occurs in order to ensure that all potentially impacted personnel are correctly recorded and enable assurance.

d. **Recommendation.** Director Health Safety and Environmental Protection, supported by the Director General Defence Medical Services staff, should update Defence Health Safety and Environmental Protection policy to include direction on the risk assessment of Environmental and Industrial Hazards in overseas locations in order to inform risk management. 1.4.113

e. **Recommendation.** Director Health Safety and Environmental Protection, supported by the Director General Defence Medical Services should update Defence Health Safety and Environmental Protection policy to include the requirement for Tier 1 assessments to be, when necessary, communicated up the Chain of Command to the operational medical staff in order to ensure that Tier 1 assessments are completed. 1.4.147

f. **Recommendation.** Director Health Safety and Environmental Protection, supported by the Director General Defence Medical Services staff, should update Defence Health Safety and Environmental Protection policy to include direction on the risk assessment of Environmental and Industrial Hazards in overseas locations when reconnaissance is not possible in order to inform risk management. 1.4.203

1.5.3. **Director General Defence Medical Services should:**

a. **Recommendation.** Director General Defence Medical Services should develop an appropriate method for sharing Force Health Protection Instructions and Environmental Health reconnaissance reports among the Front Line Commands and the Permanent Joint Headquarters in order to enhance risk identification. 1.4.56

b. **Recommendation.** Director General Defence Medical Services should amend 2017DIN-06-004 to expand the range of personnel able to complete Tier 1 assessments, in order to increase the likelihood of Environmental and Industrial Hazard assessment being conducted. 1.4.69

1.5.4. **Royal Navy Director People and Training should:**

a. **Recommendation.** Royal Navy Director People and Training should support Commander 3 Commando Brigade Royal Marines to ensure that all personnel who deployed to Skrunda-1, as part of Exercise SABER STRIKE 18, are offered the opportunity to complete a MOD Form 960 in order to ensure that all potential affected personnel are formally recorded. 1.4.189

1.5.5. **Head Royal Navy Healthcare should:**

- a. **Recommendation.** Head Royal Navy Healthcare should amend the Competent Medical Authority assurance process and oversight of Headquarters 3 Commando Brigade Royal Marines medical plans to include the requirement for specific Environmental Health approval, in order to ensure environmental health risks have been assessed sufficiently. 1.4.183

1.5.6. **Commander 3 Commando Brigade Royal Marines should:**

- a. **Recommendation.** Commander 3 Commando Brigade Royal Marines should improve their pre-deployment reconnaissance processes in order to ensure that information relevant to Environmental and Industrial Hazards is sufficiently developed to inform risk management. 1.4.88

- b. **Recommendation.** Commander 3 Commando Brigade Royal Marines should implement an assurance process within Bde units to record the delivery of Force Health Protection Briefs to exercising personnel as part of pre-deployment checks in order to ensure that the Force Health Protection information is communicated. 1.4.127

- c. **Recommendation.** Commander 3 Commando Brigade Royal Marines should ensure that core planning staff are aware of the responsibilities of the Headquarters 3 Commando Brigade Royal Marines Environmental Health team, in order to reduce the risk of exposure to Environmental and Industrial Hazards. 1.4.172

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PART 1.6

Convening Authority Comments

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PART 1.6 – CONVENING AUTHORITY COMMENTS

Introduction

1.6.1 This Service Inquiry (SI) was convened on 17 June 2021 to investigate the circumstances surrounding the suspected exposure of UK Defence personnel to asbestos at the Skrunda-1 urban operation training area in Latvia, during exercise BALTIC PROTECTOR 19 (Ex BP19).

1.6.2 During its initial lines of enquiry, the SI panel was made aware of the use of the Skrunda-1 training area during Ex SABER STRIKE 18. Due to the identification of this, and other suspected asbestos incidents (Ex RAMSTEIN DUST II (Romania 2018) and Ex GHOST (Lithuania June 2021)), the scope of the SI was expanded to investigate all other instances of suspected exposure of UK Defence personnel to asbestos during overseas training and exercises since 2018.

1.6.3 The SI panel has submitted its report to me after 9 months of detailed evidence gathering, interviews and analysis. I am grateful to the panel members for their diligent approach and satisfied that they have met their Terms of Reference. The panel has produced a comprehensive report and I agree with both the findings and the recommendations. While the SI has identified the factors that directly relate to the specific incidents being investigated, there are recommendations that are more widely applicable across Defence, particularly relating to the planning and execution of Defence activity in overseas locations.

Urgent Safety Advice

1.6.4 The identification of suspected asbestos exposure during Ex GHOST led to the issuing of an Urgent Safety Advice (USA) notice. The USA highlighted the Risk to Life (RtL) that a failure to correctly implement the Environmental and Industrial Hazards (EIH) procedures and risk assessments, as stipulated in Defence policy, represented.

1.6.5 Additionally, the SI panel became aware that there was an intention to use the Skrunda-1 training area again in October 2021 – this time, as part of Ex NAMEJS. Following engagement, the Skrunda-1 element of Ex NAMEJS was subsequently cancelled and a further USA notice was issued reinforcing the importance of assessing the risk posed by EIHs.

Risk management

1.6.6 Effective risk management is a fundamental element in the planning and execution of all Defence activity. To enable this, Defence trusts its commanders to accurately identify and assess the risks their people face and, where required, implement mitigations to reduce the impact of hazards to an acceptable level. However, the assessment of risks, and the resulting decisions, must be properly informed if they are to be effectively managed. This means hazards need to be correctly identified in order to provide commanders with an accurate picture of the risks they are taking and managing.

1.6.7 In the case of Ex BP19, the panel found that the asbestos hazard in the Skrunda-1 training area was identified as a risk but not fully assessed in order to establish its

presence, state, and therefore, likely impact. This meant the exercise commander did not accurately understand the risk he was being presented with and that the mitigations employed did not fully address the risk.

1.6.8 Headquarters staff and specialist advisers to commanders need to be aware of how risk is articulated and recorded:

a. **Risk Aggregation.** While it is useful to aggregate risks to simplify briefing requirements, such an approach can obscure those individual risks which are highly specific to a particular activity or location. To facilitate accurate risk decision-making, specific risk assessments or detailed risk registers are required to inform commanders where they are exposed to risks that may only pertain to a small, but specific, aspect of a deployment.

b. **Outcome of Interest.** Risk is assessed against an “Outcome of Interest” - often Risk to Life (RtL). As asbestos does not pose an immediate RtL, it is instead classed as a long-term Risk to Health (RtH). While asbestos exposure poses no immediate risk to mission success all commanders *must* be aware of their long-term duty of care responsibility for the health and safety of their people.

Force Protection and Environmental Health awareness

1.6.9 Force Protection covers a wide spectrum of threats and hazards, including the subset of Force Health Protection (FHP). To accurately assess FHP requirements during planning, Environmental Health (EH) must be considered early and across all branches of the planning team. Identification and mitigation of the risks posed by EIH also requires an integrated approach to be taken, yet the SI panel identified that such an approach was lacking between the Headquarters 3 Commando Brigade Royal Marines (HQ 3 Cdo Bde RM) EH team and the core exercise planning staff. This meant that EH was a late consideration for dissemination of information and reconnaissance requirements.

1.6.10 Acknowledging that EH information needs to be collected during early reconnaissance visits and given that spaces on reconnaissance visits are invariably limited and EH practitioners are a finite resource, best use must be made of unit Combat Health Advisors and the Tier 1 assessment¹ to provide an insight into location-specific hazards. This will ensure that EH practitioners can build upon the early insights gained in order to fully assess the risks during follow on activities.

1.6.11 Additionally, the SI panel noted that there is no formal process or system to enable the sharing of extant or previous Force Health Protection Instructions (FHPI) and EH reconnaissance reports across EH practitioners within the Front Line Commands and the Permanent Joint Headquarters. Access to previous EH staff work would provide a useful additional source of information in the assessment of potential hazards. A system to enable this sharing is already under development by Defence Medical Services (DMS).

1.6.12 When deployed on exercise or training, personnel need to be aware of the dangers they may encounter in the field. To facilitate this, pre-deployment processes need

¹ 2017DIN06-004 refers.

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to ensure that the assessment and associated mitigations developed during the risk management process are briefed to, and understood by, deploying personnel. This will ensure they are aware of any EIH they may face and know the actions to take when encountered. This is best achieved through the delivery of a Force Health Protection Brief (FHPB) to all deploying personnel. During its investigation, the SI panel found no evidence that the Ex BP19 FHPB had been delivered to exercising personnel and, therefore, an opportunity to inform individuals of the hazards that may be present was missed.

1.6.13 I am satisfied that the HQ 3 Cdo Bde RM EH team workforce level during the planning of Ex BP19 was sufficient to discharge its duties and was not a factor in the incident. Comd 3 Cdo Bde RM has already taken steps to improve awareness of the role of the EH team in the HQ. Improvements have also been made in Bde reconnaissance and FHPB delivery processes to improve risk identification and to assure FHPB delivery.

Post Exposure Management

1.6.14 Where suspected exposure to asbestos does occur, whether as a result of its confirmed presence or its potential presence, UK Defence personnel must be afforded the opportunity to complete the MOD Form 960 (Personal Record Annotation). It is within the duty of care responsibilities of the chain of command to direct and oversee that a robust and auditable process is followed to ensure all affected personnel have had the potential exposure recorded on their individual medical documentation. Director Health Safety and Environmental Protection (HS&EP) has commenced an update to Chapter 36 (Asbestos) of JSP 375, Management of Health and Safety in Defence, to improve this process.

Conclusion

1.6.15 I have reviewed the SI report and am content that these incidents have been investigated, analysed and reported on rigorously and accurately. I did not deem the character or reputation of anyone involved in the incidents investigated to be affected by the findings. I am assured that the recommendations contained within it have been, or will be, implemented in order to reduce the likelihood of a similar occurrence in the future. I am also encouraged by the efforts already made by HS&EP, DMS, Royal Navy Healthcare and HQ 3 Cdo Bde RM to improve their policies and processes to mitigate the risk posed by EIH and asbestos to UK Defence personnel.

1.6.16 The findings of this SI identify the factors that directly relate to the incidents listed however, the recommendations are applicable to wider Defence and our NATO and Allied training partners. It is imperative, therefore, that this SI report is made available to all audiences, including sharing its conclusions with the Host Nations noted within, to further strengthen our collective learning and collaborative operations, to raise awareness and mitigate further occurrences.

S J Shell CB OBE MA
Air Marshal
Director General Defence Safety Authority

