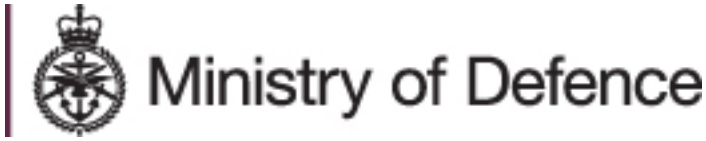


SAFETY AND ENVIRONMENTAL PROTECTION

ASSURANCE REPORT

2012/13

INTRODUCTION

1. This report covers 15 months from January 2012 to March 2013 to align it with the timetable for Defence Plan (DP)12. Previous reports have been aligned to the calendar year.

2. The report has been compiled on the basis of self-assessments produced by the TLBs and TFAs and comments on those self-assessments by Defence Regulators in the MAA and DSEA. Where these comments identify weaknesses or non-compliances, a response by the TLB and TFA is included.

3. Overall, there has been a distinct improvement in safety performance across the Department since last year. Sadly, the rate of safety related fatalities remains in line with historic trends as shown in para 12 below. The rate of major injuries (number of injuries per 100,000 personnel), however, has decreased by 4.3%[1].

4. There have been major improvements in governance since the previous report. The most significant of these is that all TLBs and TFAs (except the Hydrographic Office which does not conduct hazardous activities) have produced detailed plans for the introduction of Duty Holders at the three levels prescribed by Haddon-Cave: Senior Duty Holder (TLB holder), Operating Duty Holder (2 star) and Delivery Duty Holder (operational commander/head of establishment). In some TLBs and TFAs these have already been implemented and are operating now. The remainder are in the process of being rolled out. All have confirmed that they will have fully implemented their Duty Holder regimes by the end of 2013/14, which is the target in DP13. This represents a major change in the Department's approach to safety, decisively shifting the primary responsibility away from those who supply equipment to those who use it, which is where the risk to life arises.

5. Substantial progress has been made too on the regulatory front. The MAA was subject to an external audit which confirmed that it had met all the requirements of the Haddon-Cave report and that the concept of duty holding in aviation was well established.

6. The DSEA assumed responsibility for the independent regulation of all domains outside aviation at the beginning of the year and has achieved full operating capability in all domains except maritime, where there is now common agreement that the regulatory regime inherited from the former Ships Environment and Safety Board is not appropriate to the era of independent regulation. Work to revise it has begun and will be complete by December.

7. Taken together, these changes in independent regulation and duty holding, when fully embedded, will represent a transformation in the Department's approach to safety and compliance with the principles of Haddon-Cave across Defence.

8. There remain some difficult challenges. Duty Holder structures will need time to bed down, and Duty Holders will need to develop arrangements for obtaining the assurance reporting they will need where this is not already in place. This will be a particular challenge given that numbers are reducing, all TLBs are undergoing change programmes, and that all TLBs report shortages of Suitably Qualified and Experienced Personnel (SQEP). Duty Holders will also need to establish relationships across interfaces with other duty holders and establish processes for holding to account those who supply them with equipment, infrastructure and services.

[1] These figures are provisional and may change; the final figures will be published in October 2013 as Official Statistics.

TLB AND TFA PERFORMANCE AGAINST DEFENCE PLAN 12 TARGETS

9. Performance targets were set out in DP12 and expressed in terms of performance in the key areas that lead to good safety. TLBs (and TFAs) were required to achieve, or have resourced plans to achieve, Level 4 on a maturity model (which broadly equates to Substantial Assurance in the previous measurement system) for each target. TLBs and TFAs have assessed their own performance against these targets and the results are shown below. None of the TLBs or TFAs have claimed that they are yet at Level 4 against all targets, but all have confirmed that they have resourced plans to achieve Level 4 by the end of 2013/14. They have thus achieved the target in DP12. The target in DP13 is that TLBs should achieve level 4 in all areas.

TLBs

DP12 Targets		**Navy Cmd**	**Army Cmd**	**Air Cmd**	**JFC**	**DE&S**	**HOCS**	**DIO**
1	A Learning Organisation	2 - 4	4	3	4	4	4	2
2	Leadership & Culture	1 - 5	3	4	3	4	4	2
3	Competence	2 - 5	3	3	3	3	4	2
4	Understanding and Managing Hazards & Risks	2 - 4	3	4	3	4	4	2
5	Compliance in Specific Domains:							
	• Aviation	4	4	4	3	4	N/A	N/A
	• Ordnance, Munitions and Explosives	4 - 5	4	3	3	4	4	N/A
	• Nuclear	4	N/A	N/A	N/A	5	N/A	N/A
	• Maritime	3 - 5	4	N/A	4	3	4	N/A
	• Land	4	4	3	3	4	N/A	3
	• Fuel & Gas	4	4	3	4	3	N/A	3
	• Movement & Transport	4	4	4	4	3	4	3
	• Diving	3 - 4	N/S	N/A	N/A	3	N/A	N/A
	• Occupational Health and Safety	2 - 4	4	3	3	4	4	3

The spread of results from Navy Command represent the variety of scores from its individual ODHs.

The scores from the other TLBs and TFAs represent the lowest score seen from the reporting areas within each TLB or TFA

TFAs

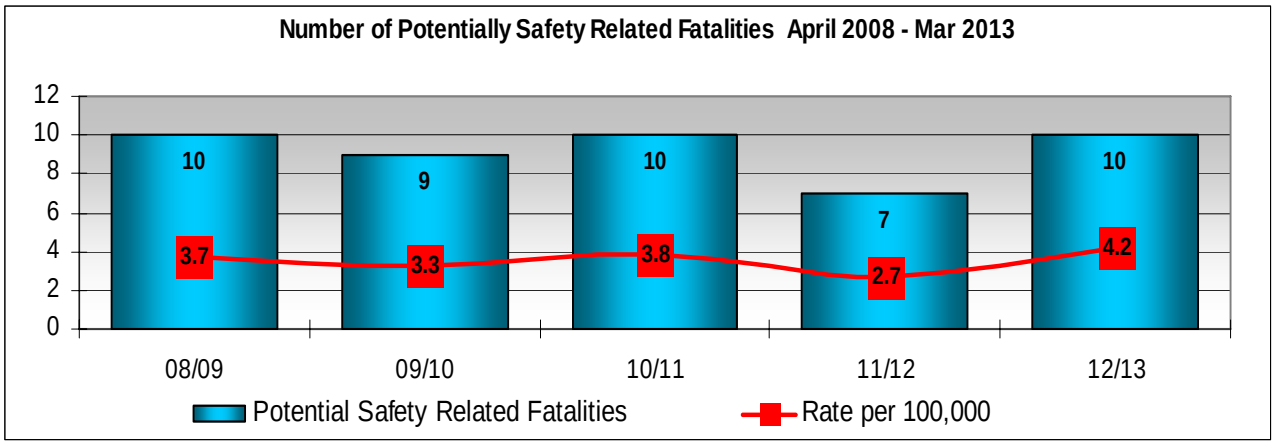
DP12 Targets		**DSTL**	**DSG**	**UKHO**
1	A Learning Organisation	3	4	5
2	Leadership & Culture	4	3	5
3	Competence	4	4	5
4	Understanding and Managing Hazards & Risks	4	4	5
5	Compliance in Specific Domains			
	• Aviation	N/A	4	N/A
	• Ordnance, Munitions and Explosives	4	N/A	N/A
	• Nuclear	N/A	N/A	N/A
	• Maritime	N/A	N/A	N/A
	• Land	4	4	N/A
	• Fuel & Gas	4	4	N/A
	• Movement & Transport	4	4	N/A
	• Diving	N/A	N/A	N/A
	• Occupational Health and Safety	4	4	5

10. As noted, the scores above are based on self-assessments by the TLBs and TFAs. The scores for Target 5 (compliance with regulation) have been subject to some independent verification by the Department's internal regulators, but the scores for the other targets have not yet been independently assessed. The DSEA will do so during audits later in the year.

DEPARTMENT SAFETY-RELATED FATALITIES, MAJOR INJURIES AND ILLNESSES

11. There were a total of 11 potentially safety-related fatalities in the period covered by this report, 1 Jan 2012 – 31 Mar 2013. For annual comparison, in FY 2012/13, there were 10 safety-related fatalities, compared to 7 for FY 2011/12. Annex A contains the detail surrounding each fatality.

12. The graph below presents, by FY, both the actual number, and the rates per 100,000, of safety-related deaths during the period 01 Apr 2008 – 31 Mar 2013.

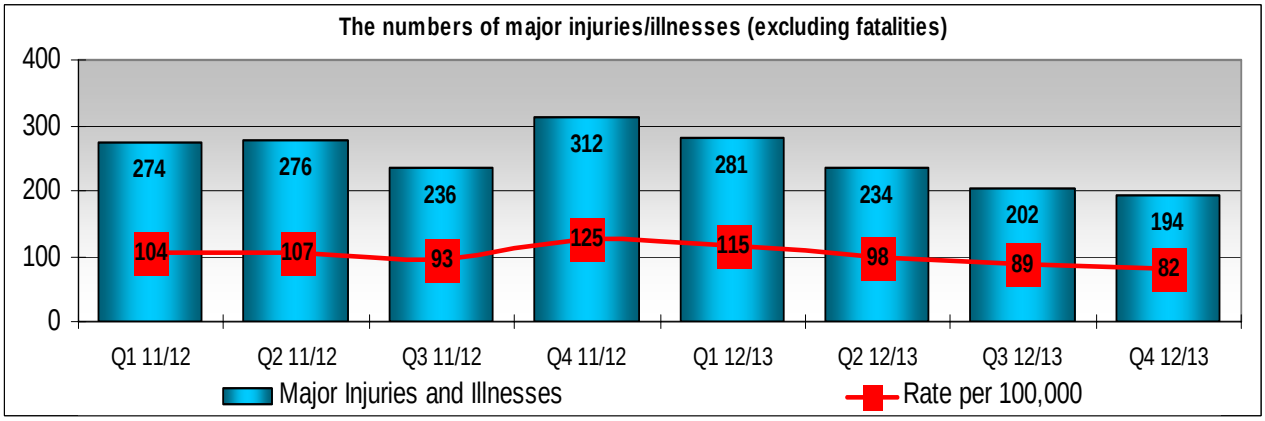


Source: DSEA & DASA

Core numbers (in blue) include all on duty safety-related fatalities and all safety-related fatalities occurring on MOD property, or resulting from MOD activities. Excludes battlefield injuries (WIA) & off duty and non-safety related RTAs.

Crude rates (in red) for population at risk, which includes UK regular Armed Forces and MOD Civilians.

13. The numbers of major injuries / illnesses (excluding fatalities) are shown below.



Source: AINC, NSINC, AIRS, DINC, DIOINC, JFC/HOCS, IRIS, Trading funds

Core numbers (in blue) calculated as follows;

Excludes battlefield injuries (WIA), off-duty RTAs, Cadets and Others (visitors & contractors)

Includes Reservists, UK Regular Armed Forces and MOD Civilians
All TLBs & TFAs included.
Figures for 2012/13 are provisional and may change; the final figures will be published in October 2013 as Official Statistics.

Crude rates (in red) for population at risk which includes UK regular Armed Forces and MOD Civilians

14. There were 1,228 major injuries and illnesses reported during 2011/12 compared with 1,074 major injuries and illnesses reported during 2012/13[2]. This equates to a decrease in the number of major injuries and illnesses between 2011/12 and 2012/13 of 13%. The corresponding annual rate of major injuries and illnesses was 107 per 100,000 during 2011/12 compared to 98 per 100,000 during 2012/13[2]. This represents a 9% decrease.

PROGRESS ON PAN-DEPARTMENTAL ISSUES FROM LAST YEAR'S REPORT

15. Last year's report identified the following key pan-Departmental safety issues:

a. SQEP

b. Dangerous Substances and Explosive Atmosphere Regulations (DSEAR).

c. Shortcomings in safety cases

d. Division of responsibility between TLBs and DIO

e. Deteriorating infrastructure

16. All remain live issues this year and are covered below.

CURRENT PAN-DEPARTMENTAL ISSUES

Issues carried over from 2011 report

SQEP

17. SQEP remains the top Departmental safety concern. All TLBs except HOCS report shortages of safety SQEP. MAA and DSEA regulators have also expressed concern about the position in individual domains. Some progress has, however, been made. All TLBs have provided evidence that they have recognised the issue and have made progress in producing a baseline for their SQEP requirements. This is essential given the scale of change initiatives that are ongoing, a solid baseline being vital in order to assess the effect of change on safety. The progress that TLBs are making in rolling out Duty Holder arrangements will help this process. As Duty Holders develop their understanding of what the role entails and the subject matter expertise and assurance they will require, the requirements for SQEP will become steadily clearer.

18. But while producing a baseline and defining requirements are vital steps, they do not in themselves redress the shortfalls, which will require further concerted management action. At the same time as TLBs are improving their understanding of their SQEP requirements, their ability to meet their requirements is challenged by reductions in headcount.

[2] Figures for 2012/13 are provisional and may change; the final figures will be published in October 2013 as Official Statistics.

19. DE&S, which was identified as a particular concern last year, reports that a number of steps have been taken to address the issue and that signs of recovery are beginning to emerge. CDM has engaged with the Defence Board on this matter. He has identified some 1,420 posts as safety-critical and set a target that no more than 50 are to be vacant at any time[3]. Against this target, there are currently 95 vacant safety-critical posts. There therefore remains some way to go to stabilize this key workforce element, and DE&S is targeting its recruitment, manpower planning and exploring incentives to address the matter. **Direction of travel since last year's report: improved.**

Infrastructure and Division of Responsibilities

20. Last year's report stated "The division of responsibilities between the DIO and TLBs has been identified by most TLBs as a key concern. If we expect Duty Holders to be responsible for risk to life, it is a fundamental requirement that they should receive assurance from the DIO that infrastructure made available to them is safe, fit for purpose and compliant with regulation. The mechanism for identifying this has not yet been identified". The majority of TLBs have again identified this as a concern. Nevertheless, good progress has been made. The DIO has produced a framework for the future relationship, roles and responsibilities between the TLB user, the DIO and industry partners. This includes provision of assurance that infrastructure is compliant with regulation on safety and environmental protection. TLBs have confirmed that they are content with the arrangements described, but will want to keep progress under review. **Direction of travel: improved**.

DSEAR

21. Substantial progress has been made on DSEAR since the previous report. 90% of establishments with a DSEAR hazard have now received a Stage 1 risk assessment, which determines whether a site requires a full Risk Assessment and Hazardous Area Classification (Stage 2). 290 establishments have been identified as potentially requiring a Stage 2 risk assessment, of which 21% have been completed. The Department remains on track to have completed all risk assessments and any necessary remedial works, which will represent full compliance with DSEAR, by the target date of end Q3 2014/15. **Direction of travel: improved.**

Safety Cases

22. For high consequence activities, safety cases set out the risk assessment and justify that the activity is safe to conduct. Historically in Defence, they have been owned by the organisation supplying equipment – DE&S – rather than the organisation using it – e.g. the Front Line Command. There has in the past been a lack of attention to the requirement for safety cases to be fit for purpose and useable. One of the benefits of the introduction of Duty Holder arrangements is that ownership of safety cases will transfer from DE&S to the TLB conducting the activity. This should drive major improvements in the quality and usability of safety cases, but this will only happen if TLBs make ownership of safety cases meaningful and robustly hold DE&S to account for their quality, and if DE&S have the resources to respond. **Direction of travel: improved, given improvements in governance.**

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3. Note from CDM to SofS: DE&S Safety-Critical Posts, CDM/02/04/02/02 dated 7 Mar 13 refers.

New issues

Return of Dangerous Goods from Afghanistan

23. The Movement and Transport Safety Regulator has identified concerns about compliance with M&T regulations, in particular, the transport of Dangerous Goods (DG). Two examples have been identified recently in which DG have been returned from Afghanistan unsafely, resulting in risk to air crew, movements personnel and the general public. Investigations into these incidents have identified a lack of clarity about responsibilities in theatre for ensuring that cargo, including DG are correctly identified, packed and labelled and documented. This needs to be resolved in order to avoid future incidents. D DSEA is conducting work with JFC and Service Commands to clearly establish responsibility and accountability. The Regulator will undertake audits, including inspections of returning containers, to obtain evidence in order to provide assurance of compliance.

Change of status for DE&S

24. There is no evidence that potential GOCO status for DE&S currently poses a safety risk. However, the magnitude of the proposed change is huge, and the potential effect on safety and EP, and the nature of the relationships between the parties supplying equipment, the parties accepting it, the parties using it and the regulators will need very careful examination. There are formal statutory and internal regulatory requirements for how the assessment should be carried out in the nuclear field, and the Department will expect similar rigour to be applied to all other domains also. However, the roles and responsibilities in the proposed new construct have not yet been defined.

25. In addition to the potential effect on safety delivery, GOCO status for DE&S could have a major effect on the Department's ability to continue to undertake internal regulation. The DSEA relies heavily on interchange of staff with DE&S in order to develop skills and experience in both military and civilian staff, and as a source of supply for civilian staff. Unless a formal mechanism is put in place to preserve this interchange, the DSEA's principal source of supply of SQEP civilian regulatory staff will be removed, and the DSEA could quickly become unsustainable.

INDIVIDUAL TLB and TFA PERFORMANCE ASSESSMENTS

NAVY COMMAND

Executive Summary

26. The introduction of a Duty Holder framework represents a major change to the management of safety and environmental protection for Navy Command and this was completed during the reporting period: all eight Operating Duty Holders (ODHs) now have management arrangements in place in accordance with their Letters of Authority, although the implementation of these is at different stages of maturity. The changes in the senior management structure have been accommodated in the Duty Holder framework by the appointment of Fleet Commander as the Senior Manager and COSHQ to manage the day to day responsibilities on his behalf. Co-ordination across the Duty Holder (DH) framework is now provided by the 1*-led DH Co-ordination Group (DCOG). In support of this the Accident Investigation Advisory Panel has been introduced to ensure timely and appropriate advice is provided to ODHs in the event of a serious accident with the aim of expediting and exploiting learning from experience. The elements of the DH framework are fully explained in a revised and industry bench-marked Navy Command Safety and Environment Management System, BRd 9147.

27. Momentum is being maintained in the enabling phase of the Navy Safety Improvement Programme (NSIP) in preparation for transition to a steady state of an enduring safety culture. There has been substantial progress in a number of workstreams that have either reached or are nearing completion including: The development of the Navy Lessons and Incident Management System (NLIMS) in collaboration with the Army to provide an end to end lessons and incident management system; a study into improving the culture of reporting and learning supported by 3 key training and education workstreams and the development of tools and processes to assist in identifying the causes of accidents and incidents. However, the challenge remains of how all these areas will be co-ordinated and corralled beyond the conclusion of the NSIP in October 2013 and this is the focus of the core team's effort.

28. The mandated assessment of Navy Command performance against DP12 targets safety and environmental protection targets has provided evidence that:

a. The majority of ODH areas have achieved the required maturity level 4 of the MOD Safety Maturity Model (SMM), representing an improvement on last year, and where this has not been achieved, costed plans exist within the NSIP to achieve level 4;

b. There were no work-related fatalities and all significant incidents were reported in accordance with MOD policy (JSP 815);

c. The number of Major Injuries reported increased significantly and failed to meet the required target. There is no single readily identifiable factor for this increase. Other reporting data indicates that under-reporting persists but this is being addressed by two NSIP workstreams: The development and introduction of NLIMS and the cultural reporting study;

d. There were no significant environmental incidents and the Fuel and Gas Safety Regulator reported that Navy Command is the only TLB to have reported fully all fuel spills.

29. There were three significant events during the year that stimulated areas for improvement: The Rule 43 report and narrative verdict from the Coroner's Inquest in November into the tragic death of Lt WOODHOUSE was addressed by a full and frank review into six fatal or near fatal

falls from height since 2007. The Fall From Height Review has identified several areas for improvement that are being addressed largely through the NSIP. The fall from height accident in HMS ILLUSTRIOUS was addressed by a comprehensive Service Inquiry and its findings have been managed through the Surface Ships ODH area. Lastly, the Health and Safety Executive's (HSE) Crown Improvement Notices served on YEOVILTON for its use of the LPG-fuelled Hot Fire Training Rig are being addressed through a definitive and independent safety assessment. The aim is to restore the facility to full use in the near future and provide the HSE with the justification for the continued use of facilities at RNAS CULDROSE.

30. A number of safety and environmental protection risks, focussed mainly in the surface ship area, have been identified through the effective processes implemented by the Surface Ship ODH Working Group. Mitigation plans are all in place to manage these areas.

Risks/Concerns

31. In summary the key risks are:

a. SQEP shortages in both surface ship and submarine ODH areas. The submarine risk is being mitigated through the use of retention initiatives, a training and education programme, workforce planning by Director Submarines, as Chief Engineer (RN) and the development of the submarine Centre of Specialisation. For Surface Ships, a gapping and churn study is underway and improvements in SQEP concession management is being achieved by the transfer to Force Generating Authorities to provide a greater clarity and holistic understanding to allow better future management.

b. Failure to learn effectively from accidents and incidents in SM ODH. The NSIP NLIMS initiative is the principal mitigation of this risk.

c. Failure to maintain material state (condition and serviceability) in submarines is being mitigated by:

(1) An increased focus by the In-service Submarines Design Authority on older submarines:

(2) Scoping the Vanguard Class LIFEX:

(3) Management of ASTUTE issues by the ODH in direct consultation with DE&S:

(4) Consideration of additional resource to allow V Class to remain operable through an extended life and:

(5) Improvements in Control of Work planning.

d. Fall from height on Surface Ships is being addressed through a Working At Height Multi Disciplinary Team looking at training, equipment and control procedures.

e. Diving safety management in both Surface Ship and FOST ODH areas. The options for mitigating this risk are currently under consideration.

f. Failure to manage across organisational interfaces for Surface Ships is being addressed under a specific NSIP workstream with the aim of identifying more effective co-ordination of activities.

g. Immature safety culture in Surface Ships is part of a wider concern. A number of NSIP training and education workstreams are addressing this and specifically the recently introduced 2 day training package for CO/XO Designates is generating tangible improvements.

h. Seaboat operations have the potential for loss of life. Operating procedures have been reviewed and improved, new Coxswain training is in place and capability improvements are being addressed.

i. Removal of DIO's Site Estate Team Leaders may compromise the ability of COs of shore-based establishments to manage estate-related H&S risks and Head of RNIO has been requested to provide an assessment of the real impact of this risk.

j. Inadequate safety cases for small boats has led FOST to forward a prioritised list to DE&S of where small boat safety cases are absent and as an interim a 2* exemption has been put in place to allow continued use of these craft.

Achievements and Successes

32. There has been considerable change in the S&EP management arrangements during 2012, with notable improvements in the following areas:

a. Duty Holding. The implementation and development of the three-tier Duty Holder framework has been significant. The key elements of this have been:

i. The appointment of ODHs for eight areas of activity through the issue of Letters of Authority by 1SL/CNS;

ii. Following the changes in the senior management structure, Fleet Commander was appointed by 1SL/CNS as the "Senior Manager" to provide oversight of the maturity of the Duty Holder framework and for COSHQ to manage this oversight on a day to day basis;

iii. The establishment of ODH Working Groups (ODHWGs) chaired at OF5 in support of each ODH. These have all met at least once during the reporting period and many have achieved a challenging tempo of implementation and assurance;

iv. The establishment and regular meeting of a 1*-chaired Duty Holder Co-ordination Group (DCOG) to provide the overarching co-ordination and oversight required by COSHQ on behalf of Fleet Commander;

v. The creation of an Accident Investigation Advisory Panel comprising Navy Command legal advice, Service Police and ODH representation, supplemented by specific subject matter expertise (e.g. CESO(RN) for safety issues and statutory enforcement engagement). Its primary purpose is to provide advice to ODHs in the event of a serious accident on the need to convene a Service Inquiry or other type of investigation in order to expedite understanding and learning. This panel has met on several occasions, most notably following the HMS ILLUSTRIOUS fall from height accident and has significant beneficial effect.

b. Safety and Environment Management System Navy Command's Safety and Environment Management System (NCSEMS, BRd 9147) has been fully reviewed and re-issued as BRd 9147 in order to reflect organisational change and the implementation of the Duty Holding framework. This review was benchmarked against the BBC's SEMS, as an exemplar of best practice, and is compliant with the requirements of the British Standard for safety management systems, OHSAS 18001. The areas of improvement in the revised NCSEMS include:

i. A revised 1SL Organisation and Arrangements Statement as required by MOD Policy, which describes the ODH framework and 1SL's objectives;

ii. More comprehensive guidance on safety risk management and implementation of MOD policy and statutory requirement;

iii. Guidance on competence-based training requirements for non specialists at all levels in the command chain;

iv. Improved guidance on accident reporting and investigation;

v. Guidance on the purpose and use of 1SL's Generic Safety Argument;

vi. Creation of a second volume specifically to describe the organisation and arrangements for each ODH. These are still at an early stage of development and as the ODH management processes mature, these will be reflected in revisions.

c. Navy Safety Improvement Programme Over the reporting period the NSIP has made significant progress across the 3 major work streams. It is anticipated that the NSIP will have set the conditions for success going forward and that the framework to support development of the appropriate safety culture will be in place by October 2013. The core team is focussing on the end of the NSIP enabling phase and the transition to a steady state, possibly through the creation of the Navy Safety Centre to provide the necessary momentum to achieve and sustain the desired end state of an enduring safety culture. The introduction of a full time (albeit temporary) Programme Manager has provided the necessary drive to enable the essential enabling phase. The following work streams are developing or have reached completion:

i The Navy Lessons and Incident Management System (NLIMS) is being developed in collaboration with the Army. It provides an application and associated processes for end to end lessons and incident management, set within the DH framework and will have wide utility across the Naval Service. Development and design of the application is at an advanced stage and is on track to go live at the end of May 13.

ii In support of this and to assist the Naval Service to develop as a learning organisation, the NSIP core team is also working in partnership with Baines Simmons to identify how to improve the incident reporting culture.

iii. The training and education work stream is on track to deliver significant change in this area. Three projects aim to optimise safety and risk training across all ranks, rates and disciplines in the Naval Service.

iv. The Institute of Naval Medicine produced a Human Factors guide to assist in the understanding at ship and unit level of the contribution to accidents and near misses.

v. Advice and a guide on accident investigation was produced and distributed as an adjunct to the Human Factors guide.

vi. A management system was developed and rolled out to all ODHs for managing the outcomes from Immediate Ships Investigations and Unit Inquiries.

vii. A Generic 1SL Safety Argument was developed and promulgated in BRd 9147.

viii. An audit programme of Duty Holder's maturity against promulgated O&As was initiated.

Crown Censures, Notices and Other Regulatory Interventions

33. There have been 2 occasions of Crown Enforcement during the reporting period:

a. A Crown Prohibition Notice on was served on the CO of HMS SOMERSET for the use of an inadequate fire detection system during a refit. Strictly however, because the ship was not directly under the CO's control it required the intervention of DE&S to allow the prohibition to be lifted within 72 hours.

b. Two Crown Improvement notices against CO YEOVILTON (COVL) for the LPG-fuelled Hot Fire Training Rig used for aircraft handler fire fighter training were issued in September 2011. However, HSE allowed these to lapse because the facility was removed from use by COVL pending resolution of HSE's concerns. In the absence of a safety case and following comprehensive discussions with HSE, an external consultancy was engaged in December 2012 to undertake a comprehensive risk assessment to demonstrate that the risks from use of the HFTR are As Low As Reasonably Practicable (ALARP). This assessment is complete and currently the subject of ongoing discussions with HSE. The aim is to restore the facility to full use in the near future and provide the HSE with the justification for the continued use of facilities at RNAS CULDROSE.

34. Importantly, no Crown Censures were issued against Navy Command during the reporting period.

35. Coroner's Inquests In November 2012, a Coroner's Inquest was held into the death of Lt Joshua WOODHOUSE from a fall onboard HMS OCEAN in August 2010. The Coroner returned a narrative verdict after directing the jury to consider ten points of relevance. As a result he made a Rule 43 report inviting Navy Command to consider the Inquest's verdict. In response, Navy Command instigated an immediate review of the circumstances of this accident and other similar incidents that had occurred since 2007 in order to identify the areas for improvement. These incidents included the death of a contractor onboard RFA FORT VICTORIA in 2009 and three falls resulting in major injuries in HMS ILLUSTRIOUS (2007 and 2012) and at CTC LYMPSTONE in 2010. This review made a number of recommendations that have been endorsed and actions put in place, principally through the Navy Safety Improvement Programme (NSIP). Another benefit of the review was that it also verified that the NSIP was relevant and accurate in its formulation.

Regulators' Comments

36. **DG MAA** notes that, whilst not wishing to undermine Navy Command's robust Air Safety Management System and maturing Air Safety culture across the TLB, the MAA did not assess the Aircraft Operating Authority (AOA), as fully compliant at its last audit per se. The statement that "The MAA conducted and [sic] audit of NCHQ AOA Oct 11, assessing the AOA as fully compliant" is therefore incorrect. Of the 5 Operating Duty Holders in the Aviation domain, Navy Command were awarded the longest revisit time, the only ODH to be assessed with a Green[4] Colour Code, as having no significant weaknesses.

37. The **Defence Nuclear Safety Regulator** welcomes the initiatives to monitor and address the NSQEP issues which, if maintained and resourced have the potential to alleviate the problem in the longer term. However, DNSR stresses that a short/medium term issue persists at a critical time in both nuclear programmes when many decisions affecting future nuclear safety are being made. There is a continuing need to manage the safe operation of Ageing Plant and Infrastructure given delays to bringing replacements into service which has potential to be exacerbated by funding constraints. Early recognition of the probable need to extend plant lifetimes leading to appropriate timely operating and maintenance actions is essential. Further, there are some life-limiting features that cannot be mitigated through life extension programmes such that Navy Command will be running with an increased risk of submarine withdrawal from service as a result of ageing plant.

38. The **Maritime Safety Regulator** states that a substantial volume of evidence has been presented. Overall this shows that a good safety culture is evolving to place Navy Command firmly on the path to achieve its safety maturity level, particularly if the human resources for a Naval Safety Centre are secured. The Naval Safety Improvement Programme (NSIP) is generating resourced plans to deliver level 4 maturity. However, the NSIP will come to an end in October 2013 and plans to establish a Navy Safety Centre to succeed it have not yet been approved.

39. There have been failures in diving safety assurance processes within Navy Command. The DSEA has censured units six times this year (2 x Prohibition Notices and 4 Improvement Notices). Furthermore, there is an absence of diving safety assurance by all 3 military services for Adventurous Training (AT) or for diving conducted as a resettlement activity.

40. The DSEA is currently providing diving assurance to NCHQ but this is counter to the principles of ODH/ Regulator separation. However, a joint study will consider options on establishing the optimum assurance/ regulation balance and is hoped will have wider application.

41. The **Land Systems Safety Regulator** cannot confirm the TLB assessment of performance against DP12 targets due to limited engagement this year. Indications are that Navy Command (NC) is not at Level 4 for land systems across the Command. 3 Cdo Bde has reported that, except for Goal 5, they are not at Level 4 for any aspect of the maturity model, and other ODH areas that are likely to operate land systems have not provided an assessment. However, the Regulator is aware that land systems safety is being addressed by the Land Combat Service Support Branch in NC. This has been achieved by implementing a 2* ODH framework with supporting safety working groups across the Command. LSSR intends to audit NC in FY13/14 to establish the scope of land systems being used, Duty Holder arrangements and S&EP arrangements.

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4. IAW MAA RN/02/11 (D Ops Gp) AL1 – MAA AUDIT AND INSPECTION FOLLOW UP PROCESS. Green Colour Code - "No significant weaknesses identified. There is evidence that the ASMS is effective and that the Air Safety risk management, control and governance framework is adequate and effective in respect of the achievement of Air Safety objectives. Air Safety risks that threaten the success of objectives are being managed adequately and effectively."

42. The **Movement & Transport Safety Regulator** is not in a position to judge whether NC's assessment of performance against the DP12 targets for the domain is correct; it will be better placed to take a view following planned audits and inspections of M&T activity across the Command in the coming year. There is evidence of improved performance in the transport of Dangerous Goods (DG) in 3 Cdo Bde and it is pleasing to note the desire to improve 'Near Miss' reporting in 2013. Otherwise, however, there is a shortage of evidence, and the only specific mention of M&T activity in the NC Report is with regard to drink driving fatalities in 3 Cdo Bde, and motor transport inspections of the Maritime Reserve (MR).

43. The **Fuel and Gas Safety Regulator** broadly agrees with the TLB's assessment of performance for the domain. The TLB has improved on the previous period, addressing shortfalls in maintenance documentation, the training of Fuel & Lubricants (F&L) Managers, and investing in infrastructure to address non-compliance. Remaining challenges include filling mandatory posts with competent staff (F&L Managers) and the appropriate certification of operators.

TLB's Response

44. Navy Command offers the following responses:

a. **Diving Safety.** NC is conducting a gap analysis of the NC diving assurance process, including those issues identified by the Maritime Safety Regulator. This work is due for completion in Jul 2013 when recommendations will be considered to ensure that a suitable and sufficient process for NC diving assurance is in place.

b. **Future Audits.** NC welcomes both the Land Systems Safety and Movement Regulators' and Transport Safety Regulators' proposed audits of NC in FY 13/14. Following their audits it is hoped that improvements in safety performance will be confirmed together with affirmation of NC's own assessment of performance.

c. **Fuel and Gas Safety.** The Fuel and Gas Safety Regulators' affirmation of NC's assessment of performance and improvement is acknowledged and work continues on addressing the remaining challenges.

ARMY COMMAND

Executive Summary

45. This report reflects the amount of ongoing change in the safety area, the problems with DASA statistical coverage, and breaches of legislation as discussed. Overall CESO(A) assesses that there are no systemic failings and those highlighted from 2007 in the Cadet Kaylee McIntosh Crown Censure have been addressed. Our extant safety management system works and is well understood and applied by the chain of command, and risks are being managed.

46. The Army Duty Holder construct achieved Initial Operating Capability on 30 Apr 13 with the promulgation of an Op Order to Operating Duty Holders (ODH) outlining their responsibilities and commissioning detailed work to bring the scheme to fruition. Work is now concentrated on identifying Risk to Life (RtL) activities across all ODH areas, drafting terms of authority and designating Delivery Duty Holders (DDH). It is hoped that Full Operating Capability will be achieved by 31 Mar 14.

47. The Army has continued to make considerable progress in all aspects of Air safety over the last year. Air Safety Management Plans and associated reporting structures have now put in

place by all Army Air safety Duty Holders, and the most recent MAA audit of JHC (Commander JHC is ODH for all Army aviation, including unmanned systems) shows a continuing trend of positive embedding of a safety culture. The MAA specifically noted that:

> '*it had met with positive engagement and compelling evidence of strong proactive leadership with sincere personal commitment at all levels. JHC Air Safety assurance was found to be good and there were clear indications that the direction of travel remained positive. The enthusiasm for engaging with Service Inquiry recommendations provided evidence of the appetite for ongoing improvement at ODH and DDH levels and it was reported that the 'El Centro' Chinook accident (ZA671) had had a 'galvanising effect'. JHC has previously found it difficult to track all SI recommendations, but successful recruitment of additional Air safety staff has ensured an improving situation. It was apparent that the overall Air Safety culture is sound, with a positive atmosphere encouraging improvement*'.

48. The Army has made very substantial progress in respect of the governance of Army Unmanned Air Systems (UAS). Following the MAA SI into the crash of a Hermes 450 aircraft in Oct 11, the Army has filled 3 key new posts in JHC HQ to create a 'Senior Operator' function which sits outside the direct operating chain of command of 1st Artillery Brigade and GOC Theatre Troops, in order to provide independent technical oversight and governance of professional standards and procedures. This new team, which includes an SO1 officer deliberately recruited from the RAF, has helped the RA refashion its training model to create a UAS aircrew cadre which has been trained to MAA compliant standards. This revised training needs analysis has been conducted under the ongoing pressures of operations in Afghanistan, and is influencing the delivery (and timing) of the WATCHKEEPER programme.

Risks/Concerns

49. Army DH and MOD attention remains focused on four principal Air Safety risks: Low Visibility Landing (LVL), dust landings; wire strike during low level flying; mid-air collision in congested airspace; and the lack of a buoyancy aid for embarked Apache AH. The Army TLB has been active to secure funding to address each of these risks. While Ministers and the Defence Board will be sighted on separate detailed reporting from DCDS MilCap, the summary position is that £62.6m was allocated in PR12 and an additional £100m in ABC13 to progress the measures to the point where investment decisions can be made, albeit noting that further funding is likely to be required totalling c. £155m over the next 3 years. The totality of the RW Safety programme now represents 25 separate platform projects of which 10 have approved business cases, 14 are planned to go through approval by Dec 13 with one still under consideration by the relevant DH. Funding has not constrained the progress of any safety modifications to date. Resources are sufficient to roll out the required modifications for collision avoidance, wire strike protection and AH flotation, but more AP activity is needed to bottom out a full solution for LVL, which requires a more platform-specific solution. The Defence Board has recently approved additional AP funding for the latter, which has incidentally served to underpin the Army's current ALARP arguments in respect of LVL. There has been very good collaboration between all Army Air Safety Duty Holders, other Senior Duty Holders, the MAA and with the Centre. The result has been strong collective support for the Army's Air Safety Programme, and substantial traction and progress in the equipment programme.

50. A key shortcoming across Air Safety DH chains has been the shortage of SQEP to fill key appointments, and the Army is no different in this regard. After a slow start caused in the main by the recent changes to terms of service, 12 FTRS posts have now been filled and these are now contributing improvement in MAA regulatory compliance. However, all 8 FTRS posts remain gapped in the area of Continuing Airworthiness Management Organisation (CAMO) with

responsibilities currently being met by the ‘double hatting’ of J4 staff which does not allow for the full focus necessary to meet the entirety of MAA CAMO requirements. Army Command continue to work at the recruiting issue, and remain in dialogue with the MAA on progress.

51. Army Command has a concern that there appears to be no formalised agreement between the DIO and other TLBs that sets out their obligations to us. Such an agreement would be welcome as it would define what a CO/HoE could expect when discharging his/her duty of care responsibilities. This deficiency requires attention in the forthcoming year.

52. DSEAR compliance became critical when the Fuels Safety Advisory Team changed to the independent Fuel and Gas Safety Regulator (FGSR) within the DSEA. As the licensing authority they have the power to close down POL points that held Class 1 fuels under DSEAR Regs. The Army had 36 such sites which were under threat of closure with obvious operational ramifications. As a consequence, CESO(A) engaged AMEC under the terms of their support contract to carry out the DSEAR Risk Assessment and Hazardous Area Zoning tasks at these sites. CESO (A) went out to the command, and by means of a hazardous substance checklist, gathered returns from over 200 units and sub-units (regular and TA) to quantify the remaining DSEAR risk. During April 13 the 'model' RA framework will be developed and then rolled out via regional training sessions to give USEAs and supporting SO2 SHEs the appropriate level of theory, practice and competence to use the model RA. This, in conjunction with the site team, as above, allows a RA specific to their site(s) to be undertaken.

53. The production of both internal ((CESO(A) produced) and external (DASA produced) statistics have been problematic, due to manning issues at DASA and the Army Incident Notification Cell (AINC). This issue means that such statistics cannot be taken in full confidence and lack ratification by DASA. However, the statistics presented have been scrutinised as far as is reasonably possible and the trends reflected in them are accurate. The manning issues in AINC have been addressed and recruiting is well under way.

54. A disconnect exists between safety and Occupational Health (OH) within the Army. In most private sector companies these are combined to produce a holistic approach to safety and wellbeing. This disconnect became evident specifically to civilian employees, where DSEA-CPA do not own the OH Contract (now a HR led) and with the loss of the OH Functional Safety Board. One such example is the requirement of a pneumococcal vaccination for welders, as identified in the NHS Green Book. The undertaking of vaccination provision for Military personnel was instigated within weeks of the issue being raised whereas, the civilian element has taken over 11 months to resolve, as the ATOS contract could not meet the requirement. To meet our duty of care CESO(A) requested that DSEA review the situation, as doing nothing was unacceptable. A DIN has now been released informing civilian personnel about the vaccination, how to obtain it, and claim reimbursement of personal payment. Concerns regarding OH for civilian staff still exist principally surrounding the ATOS contract that is due to end. Negotiations are underway for a cross-government contract. For safety and OH provisions to be recognised safety personnel need to be involved in these negotiations and a statement of requirements should be generated. This should not just be a HR lead.

55. The provision of SQEP[5] to cover the range of responsibilities placed on Capability Directorates – which incorporate Army Competent Advisors & Inspectorate (ACA&I) - will need to be monitored. This is particularly important during redundancy programmes as competent advice is required to inform the chain of command and to support the Duty Holder (DH) construct.

[5] Suitably Qualified and Experienced Personnel.

56. Ammunition and pyrotechnics, (live and spent), entering the civilian waste stream remains a high risk (otherwise known as Free From Explosives - FFE). There has been a modest reduction in the amounts intercepted by the DIO(DTE) on the training estate, principally due to CESO(A)'s campaign. There is evidence of widespread inconsistency in standards of 'admin in the field' at unit level. There must be greater engagement and accountability both at sub unit and unit command level to tackle this. A FFE incident occurred in Ballykinler, where a civilian store keeper was seriously injured whilst processing the return of practice grenades (40mm HEDP) which had been certified FFE. The Chief Ammunition Technical Officer has reported that 2012 has seen a rise in FFE from 291 in 2011 to 326 in 2012. However, these are figures from across Defence; it is not possible to break out between Services, as one of the characteristics of FFE violations is that they often cannot be traced. Grenades and detonators have been found in UK depots from Op HERRICK. To deal with these issues, CESO(A) has undertaken to conduct a campaign that will include a communications package, briefings at Command Groups, and was raised at the Army Assurance Working Group.

57. Control of Noise at Work Regulations - D Cbt has highlighted that failing to introduce Enhanced Hearing Protection early enough in training may result in the inability to continue training on 60mm, 81mm & Heavy Machine Gun. D Infra has highlighted that some Army Band Practice Rooms are not fully compliant with legislation, resulting in some Bands being exposed to excessive noise whilst practicing.

58. Carriage of Dangerous Goods - MTSR has highlighted that the Army has a very poor record of compliance with the standards. This is mainly perceived to be 'poor supervision', where we have qualified personnel, but are not using them correctly.

59. Control of Vibration at Work - D Cbt and CTG are currently reviewing AFV noise and vibration to understand the totality of the issue. It may take some time for the full extent of the problem to become apparent.

60. Environmental Noise - JHC have highlighted that some aviation stations have not conducted noise assessments, even though aircraft types and numbers have changed.

61. Overseas Training Establishments (OTEs) - A lack of clarity in the Army's overall ambition for conducting training in OTEs has led to a lack of support in a number of areas including the provision of SQEP vehicle maintenance inspectors. A partial reason for this is the failure of APC Glasgow to identify those SQEP personnel required, exacerbated by the low priority manning applied to the request for an individual and a reluctance of personnel to take up such overseas posts. The Army Inspectorate conducted a review of OTEs (completed Mar 13), and presented to CESO(A) which makes a number of recommendations that now need to be agreed and actioned.

62. Forthcoming Legislation. During this reporting period, the HSE Fee For Intervention (FFI) has been identified as possibly having a significant impact on Army/MOD resources. It would seem that DSEA resource limitations prevent thorough scrutiny of emerging legislation that might have an impact on the Army. This has necessitated our own scrutiny which is both time consuming and resource intensive.

Achievements/Success

63. The virtual Centre for Army Lessons and Safety (CALS) and associated LE Lessons Process (LELP) has shown to be a clear success, especially in forging a stronger understanding of the interconnection between operational and non operational lessons.

64. Following on from the success of the CESO(A) campaign on crush injures (Heavy Metal) CESO(A) has run a Campaign to curb the illegal disposal of ammunition in waste. The principal component was the short DVD '*Don't Gamble with Ammo'* which graphically spelt out the effects of incorrect disposal of munitions. The DVD has been publicised widely through Soldier, ArmyNet, BFBS, Garrison Radio, the AFF as well as the Army Safety Magazine and the MOD Intranet. The Joint Service DIN to support the campaign and DVD was the first to incorporate a QR (Quick Response) Code in an attempt to engage and connect with the i-phone generation.

65. Part 3 Safety Cases. In the previous annual report concerns were raised regarding this area. This is being addressed with the intention that Capability Directorates become co-signatories on the Part 3 of the safety case, thereby acknowledging that the residual hazards and their corresponding risks have been identified, and appropriate controls developed. There is, thus, greater user awareness of the safe envelope within which equipment must be operated.

Crown Censures, Notices and Other Regulatory Interventions

66. **Environmental Incidents**. There were 23 incidents reported, a (28% reduction on previous year) with the majority of spills involving a loss of diesel. All were 'cleared' up within a satisfactory response time, either by the Unit and/or the environmental spills contractor. No trends have been identified as the incidents involved different MOD vehicles areas and contractors.

67. **Crown Censure (CC)**. The MOD was censured on 25 Jan 13 over safety failings that led to the death of a 14-year-old Cadet Kaylee McIntosh. An HSE investigation found a number of serious failings by the individual in charge, compounded by systemic organisational failings by the Army. General Sir Nick Parker attended the Crown Censure meeting and accepted the findings on behalf of the MOD, formally acknowledging there were health and safety failings.

68. **St George's Barracks, North Luffenham (21 Aug 12)**. The barrier system around the perimeter of the go-kart track was deemed inadequate in minimising risks to health and safety. It did not comply with the guidance for go-kart circuits, therefore a Crown Improvement Notice was issued. This was lifted on 11 Dec 12.

69. **Radiation Protection.** During the period Jan 12-Jan 13 Dstl Environmental Sciences Dept carried out 221 Radiation Protection Advisory Visits to Army units. From these results 'Substantial Assurance' has been achieved. The RPA Radiation Protection Reports show 64% of Army units achieved a grading of Very Good or Good. 30% of units achieved a grading of Satisfactory, with only 6% of units described as Poor or in Need of Attention. These are subject to 'follow up' action instigated by CESO(A). Annual Radiation Returns, listing unit holdings, were received from 95% of the 1168 Army units that hold Radioactive material. CESO(A) concludes that there were no significant radiation incidents.

70. **Fire Safety - Hanger 66 Silver Stars, Duke of Gloucester Barracks, South Cerney**. This facility was utilised by the MOD as a staging centre for Operations and also as a base for the Silver Stars parachute club, which includes members of the public. The DFRMO inspection revealed serious fire safety deficiencies including; no fire alarm system, no emergency lighting system, breaching of fire compartmentation and a lack of fire safety signage. These deficiencies were judged to be so serious that a restriction was put in place to prohibit access by members of the public until such time as the facility is brought up to a 'suitable and sufficient' fire safety standard. Access was also restricted to MOD personnel unless required to rectify the shortfalls and non-compliances identified. A Prohibition Notice (PN) was issued on 30 May 12. DFRMO have advised that, following infrastructure spend and sign off by the Project Fire Officer, the Regional Fire Safety Manager will revisit the facility with the intention of lifting the restrictions imposed.

71. **Fire Safety - Building 308 (Room 24) Wattisham (30 Jan 13)**. A DFRMO inspection found that someone had tampered with protective fire safety devices, automatic fire alarm and fire door self-closers. All of these contravened fire safety preventative measures. This not only caused an outbreak of fire but also placed personnel at unacceptable risk from fire. An Enforcement Notice (EN) was issued. The issues have now been rectified and the EN was withdrawn 26 Feb 13.

72. **Fuels and Gases**. During the year Army HQ had 89 Units assessed by the DSEA Fuels and Gases Safety Regulator. This resulted in 5 Improvement Notices (IN) and 2 PNs. Of these, one PN remains extant against the Princess Royal Barracks, Deepcut Mechanical Transport Fuelling Installation (MTFI). The installation is still deemed unsafe as the required rectification has not taken place. Until this is completed the PN will remain in place.

Regulators' Comments

73. **DG MAA** states that, encouragingly, the Army Command report has addressed last year's concerns that the report was light on Air Safety (AS) matters. Developments in embedding a positive AS culture, RPAS (Remotely Piloted Air System) governance, SI recommendation tracking and mitigations to principal AS risks are all positive steps.

74. The **Defence Maritime Safety Regulator** states that there is limited evidence of maritime activities within Army Command, no doubt due to the Command's complexity and the need for brevity. DMR supports AC's concerns with whole-body vibration in Army watermanship and diving. The evidence gained during the DMR Annual Report suggests that Army Command is generating resourced plans to deliver level 4 maturity, but is not yet there.

75. DMR notes the shortcomings in assurance for Army diving. DMR's Diving Standards Team (Army) provides the only high-level assurance that Army diving activity is safe. Moreover, there is an absence of diving safety assurance by all 3 Services for Adventurous Training (AT) or for diving conducted as a resettlement activity.

76. The **Land Systems Safety Regulator** broadly agrees with the TLB's assessment. It welcomes a recent instruction that ownership of Safety Cases will be transferred from DE&S to Capability Directors and supports Army Command's proposal that it act as lead user for land systems across all TLBs. The TLB has mature processes in place for incident reporting, investigation and sharing lessons. Learning could be improved further if LAIT and SEFIT recommendations were also recorded on the AINC database. This would allow them to be tracked and closed out and lessons identified for capture on DLIMS in order to be shared across TLBs.

77. The **Movement & Transport Safety Regulator** has conducted audits for carriage of Dangerous Goods and identified that only 13% of establishments audited were compliant. This is recognised in Army Command's self-assessment. There are still some issues to be resolved regarding incident reporting for this domain and there needs to be greater clarity in the approach to pan-TLB DH coordination of M&T activity to ensure its safe conduct. The Regulator will work with Army Command to address areas of concern. It is encouraging to note an improvement in driver licensing control in the DELTA following the issue of an Improvement Notice in Mar 13. It has since been lifted.

78. The **Fuel and Gas Safety Regulator** agrees with the TLB's assessment of performance for the domain. The TLB has improved on the previous period. Remaining challenges include filling mandatory posts with competent staff (F&L Managers); the appropriate certification of operators; electrical system testing; the provision of design data for and maintenance of Oil Water

Interceptors; the compliance of Road Tanker Delivery Stands and of Vehicle Filling Areas; the provision of adequate site Fire Plans and Pollution Control Equipment; and inspection of Deployable Fuel Handling Equipment (Kenya).

TLB's Response

79. Army Command offers the following responses:

a. **DLSR – FGSR Issued Prohibition Notice (PN) (Para 68)** The MTFI is awaiting the results of fuel testing for contamination before it can be re-opened. The result is expected imminently.

b. **Land Systems Safety Regulator** - CESO(A) has briefed the DLSR on the Land Environment Lessons process which was not previously understood. There is a lack of knowledge of where recommendations from investigations/inquires are recorded and tracked through either ALEIMS (within the AINC database) or through DLIMS as a developed lesson. The main concern raised by the Regulator was that lessons obtained from recommendations made by both LAIT and SEFIT are currently not captured on either system but are tracked individually by the investigating body themselves. Therefore, although we do not currently have a complete process, they do now accept that there is a good system in place for sharing of lessons

c. **Fuel and Gas Safety Regulator** Comments on the remaining challenges identified;

i. Filling mandatory posts with competent staff (F&L Managers) - The F&L managers' Course for ground fuels at DPS has been oversubscribed, despite the number of places meeting the stated SOTR. Anecdotally this has been caused by higher that expected staff churn in affected units attributed to VERS and redundancy. We have been very active in assisting units gain priority for course loading. As of the last quarterly response to the FGSR High Hazard Register on 13 May, only **one Army unit** has an outstanding observation against this issue.

ii. Appropriate certification of operators - Certificates of Competence for operators of F&L sites are initiated by F&L Managers and then authorised by that Manager or the Authorised Person (AP) Petroleum for the site. This issue was related to the preceding one. **Only one site** has an outstanding observation against this issue.

iii. Electrical system testing - This forms part of the DIO annual works programme. As of the last quarterly response to the FGSR High Hazard register only one site has an electrical test outstanding.

iv. Provision of design data for and maintenance of Oil/Water interceptors - This is the responsibility of DIO and their industry partners. Communications have in a few instances been poor, resulting in design information being unavailable to the unit. Where design information has been missing it has taken time to replace it. D&G on roles and responsibilities in respect of the management of MTFI has been issued. As of the last quarterly report only 4 observations are outstanding.

v. Compliance of Road Tanker Delivery Stands - This is a recurring observation for ageing infrastructure. We have been working closely with DIO to ensure that processes are in place at unit & bde level to prioritise works effectively. This has

produced some positive early results. The majority of sites where observations have been made have now had corrective work completed, or programmed in-year.

vi. Vehicle Filling Areas - As above.

vii. Adequate Fire plans & Pollution Control equipment - D&G has been issued to remind units of requirements with regard to fire plans, precautions and of the proper provision of PCE. The latter is readily available through the supply chain.

viii. Inspection of Deployable Fuel Handling Equipment (Kenya) - This observation is based on a report by an Army Inspector over 12 months ago. In response, the DFHE site to which it refers was decommissioned and removed. The method of provision of aviation fuel at BATUK has been reviewed and DFHE is no longer used. Fuel is provided using Tactical Aircraft Re-fuellers.

AIR COMMAND

Executive Summary

80. Though AIR has tragically suffered 9 fatalities during the last 15-month reporting period, there remains no significant increase in either fatalities or major injuries over the mandated rolling 12-month period. Specific details are as follows:

a. **Fatalities:** 9 (3 x Mid-Air Collision (MAC), 4 x Road Traffic Collisions (RTCs) Off-duty (including one pedestrian) and 2 x Adventurous Training (AT)).

b. **Major Injuries**: 62 RIDDOR Reportable.

81. In line with the requirement to comment only for fatalities, the three MAC fatalities are subject to an on-going MAA-led Service Inquiry (SI). The risk of MAC remains my highest Air Safety risk. To that end, I am pleased that good progress is being made to introduce CWS[6] across the GR4 fleet as soon as practicable, whilst other mitigation measures are being pursued across other aircraft fleets[7]. The recommendations from a study into additional measures to mitigate MAC were incorporated into a MAC Campaign Plan that is being actively managed by the Inspectorate of Flight Safety. As part of this Campaign Plan, Regional Airspace User Working Groups have been instigated throughout the UK in order to provide a forum for airspace users and those affected by our operations to discuss areas of conflict and concern in order to address issues and hotspots before serious problems occur. A number of these inaugural meetings have now taken place to great effect. Furthermore, IFS is actively engaged with the CAA, the British GA Association, British Gliding Association and NATS through various committees and working groups in order to engender a greater understanding of operating procedures adopted by the various aviation communities. Moreover, given that AIR has suffered 4 RTC fatalities during the reporting period, all of which were off duty, I have, nevertheless, directed plans be put in place for a more targeted Road Safety Awareness campaign, including consideration of additional driver awareness training for our highest risk personnel (namely, young airman). Finally, an SI has been convened for the two recent AT fatalities.

6. Collision Warning System
7. For example, the Traffic Alerting System has been successfully embodied on Grob Tutor.

S&EP Goals

82. Over the last 2 years, there has been substantial progress made by AIR in the delivery of Air Safety through the adoption of a DH construct within a maturing Air Safety Management System. In line with Departmental direction, I recognise that all areas of safety across the Command must be managed, coordinated and governed to drive safety improvements. Accordingly, AIR adopted the 'Total Safety' construct over a year ago, which includes Air Safety and Functional Safety,[8] with the implementation of new assurance and governance arrangements to complement those established already for Air Safety.

83. In light of the progress made to date, AIR's performance against the mandated S&EP Goals is in summary:

a. **Goal 1: Learning.** AIR continues to mature and develop as a learning organisation. Overall, it has an appropriate learning culture to report and investigate accidents and incidents and the appropriate mechanisms to share and learn lessons identified. However, I am aware that more could be done, particularly in this period of manpower reduction, and, as such, I have already commissioned a 1*-led review of our Air Safety Management System to identify and drive forward any necessary changes to improve our ability to learn across both Air and Functional Safety areas. We should also look to establish routine access to reports on pertinent assurance activity for units outwith the AIR TLB from which I discharge some of my SDH responsibilities within the Air Safety domain (RAF Benson, RAF Odiham and the Permanent Joint Operating Bases are key areas of interest).

b. **Goal 2: Leadership & Culture.** AIR's pursuance of 'Total Safety' is being matured and achieved through the drive and commitment of its leadership and adoption of the DH-construct. Significantly, DHs are holding stakeholders to account through new assurance and governance arrangements, whilst providing strong leadership across the organisation to manage hazards and risks and drive safety improvements. Encouragingly, there has also been an increase in the level of safety reporting. Nevertheless, whilst this provides a positive endorsement of a maturing reporting culture, the balance is biased toward incident reporting and AIR has further work to do to achieve the generative culture to which it aspires. Moreover, AIR has fully recognised that a Just Culture is pivotal to the success of its Safety Management System and the need to ensure that all accidents and incidents have been fully investigated and understood to minimise inappropriate blame and hindsight bias.

c. **Goal 3: Competence.** AIR fully recognises the need to ensure that it identifies its S&EP posts across Air and Functional Safety arenas and to ensure that they are filled by SQEP, as appropriate. Significant progress has been made in defining the S&EP posts and their competences/training requirements, particularly within the Air Safety domain, in-line with MAA regulation and policy, whilst key S&EP posts across Functional Safety domains are already identified in higher-level policy. Individual post-holder mapping against these requirements has been, or is currently being, undertaken, whilst DHs are managing identified shortfalls in Qualifications and Experience, through training or other mitigation activity, such as mentoring or increased supervision. In most areas, AIR has a robust and mature audit and assurance process to assess and assure that individuals are competent personnel to fulfil their Safety roles. Notwithstanding this, the identification of individuals whom are suitably SQEP, with the Experience element current proving to be the greatest area of concern, remains a challenge, and is an area that will continue to receive my particular attention.

8. Functional Safety encompasses all areas of non-Air Safety.

d. **Goal 4: Hazards & Risks.** AIR has a robust risk and hazard management ethos, in which personnel have a clear understanding of how risks and issues are understood, managed and elevated, when necessary. AIR's risk management process allows risk to be exposed to the correct level, and for action to be taken where necessary to ensure that it remains both tolerable and ALARP. Defence assurance activity ensures the effectiveness of the process and identifies corrective action when necessary. In line with AIR's developing safety and reporting cultures, hazard and risk identification is reinforced through appropriate staff training, promotional material and demonstrable leadership at all levels.

e. **Goal 5: Legislation & MOD Regulations.** Across the Safety arena, AIR has a good understanding of the statutory and Defence regulation with which it must comply. Moreover, in line with its maturing Air and Functional Safety Management Systems, it has a maturing assurance regime to monitor the extent of that compliance. Overall, compliance with applicable legislation has been assessed across Air and Functional Safety areas, with plans in place and/or implementation on-going to secure compliance against areas of non-compliance, in line with Departmental timescales to achieve maturity level 4 by Q4 FY 13/14. Specifically, such areas include compliance with DSEAR across Air Units, being led by the DIO, and the mapping of individuals to competence sets across some Air and Functional Safety arenas. In addition, AIR has also satisfactorily concluded all extant prohibition notices.

Risks/Concerns

84. MAC. AIR's top Air Safety risk continues to be mid-air collision (MAC), with details of mitigation activity separately provided.

85. SQEP. AIR has highlighted that insufficient qualified and experienced personnel in key safety posts will continue to present a key risk to safety across its safety management systems. It has made significant progress in defining the S&EP posts and their competences/training requirements, particularly within the Air Safety domain, in-line with MAA regulation and policy. Individual post-holder mapping against these requirements has been, or is currently being, undertaken, whilst DHs are managing identified shortfalls in Qualifications and Experience, through training or other mitigation activity, such as mentoring or increased supervision.

86. RTC. AIR has suffered 4 RTC fatalities during the reporting period, all of which were off-duty. RTCs are consistently the major cause of death for AIR personnel and present the highest fatality risk outside of flying, hostile action and natural causes. Not surprisingly, the cost to the Command of these losses, both from a tragic personal perspective and from the loss of invaluable intellectual capital and experience, is high. AIR continues to pro-actively promote and encourage Road Safety campaigns, focusing on the hazards and risks associated with driving and recognising those Units that have done most to support Road Safety activity, through the annual Rose Bowl award. In addition, it is now developing plans to target the most at-risk groups at Unit level, whilst continuing to support Defence-wide campaigns.

87. Safety of AIR Personnel and Deployed Ordnance, Munitions and Explosives from Coalition Partners. The risk to deployed AIR personnel and Ordnance Munitions and Explosives (OME) from Coalition Partners that work to different safety standards has been included as a safety, operational and reputational risk to AIR. The need for action to mitigate that risk has been raised previously by AIR to PJHQ and, subsequently, to NATO, where responsibility for managing the explosives safety risk between nations resides. To address that risk, NATO has implemented formal arrangements to manage explosive safety hazards and risks between partner nations in Out of Area Operations, and is working on new generic policy with nations for issue towards the

end of this year. In the meantime, AIR will continue to provide explosives safety assurance and advice to the JFC/PJHQ DH chain for those areas of the deployed environment in which it currently licenses on JFC/PJHQ's behalf. Those arrangements are currently being formalised between AIR and JFC through a CSA.

88. DIO Performance. Following the formation of the DIO, AIR has raised an aggregated safety, operational and reputational risk should the DIO not deliver its output in a number of areas, including compliance with DSEAR and Project Aquatrine. AIR awaits clarification from the DIO regarding its future engagement and assurance mechanisms with the TLB.

89. DE&S GOCO. Lastly, although not yet a risk, AIR shares the Pan-TLB concern regarding the management of issues that would be presented should DE&S change status to a GOCO[9].

Achievements/Successes

90. It has been a period of consolidation and reflection for AIR and we have made good progress on safety governance matters in the past year, though there is still more to do. Indeed, it was pleasing to note that the 2012 DIA Report on Total Safety identified that "despite the variety of ways in which stations were covering safety management, it was clear that Stn Cdrs were very aware of the risks, issues and hazards affecting their locality and that these were being managed locally or escalated through the governance arrangements established as required". It was noted also that "Stns were actively promoting Air and non-Air Safety" through a variety of mechanisms.

91. Over the last 2 years, there has been substantial progress made in the delivery of Air Safety by the development of effective governance arrangements within a maturing Air Safety Management System. Notwithstanding this welcome advancement, there remains more to be done to refine several areas of Safety activity across Air Command (AIR) to enable the Senior Duty Holder (SDH) to comply with the MOD Safety Sub-Strategy. As such, the organizational lay-down and responsibilities for Functional Safety[10] assurance and governance within HQ AIR, to complement those of Air Safety, have been set and established during 2012/13 following endorsement by the Command Delivery Gp in Dec 11[11]. Together, Air Safety governance and Functional Safety governance form a 'Total Safety' construct for AIR.

92. As a result, significant progress has been made throughout 2012 with the establishment of the Functional Safety Governance Board within the HQ to: Coordinate the disparate areas of Functional Safety within AIR thereby achieving coherency of approach and, eventually, convergence of 'good practice' policy; govern effective assurance activity on behalf of the SDH, and provide a reporting and management service to ODH - the same ODHs for Air Safety; provide an 'intelligent customer' role for internal and external reporting on Functional Safety within AIR.

93. To support the implementation of the 'Total Safety' construct, we have developed Safety Management Teams or Stn Safety Coordination Cells to support DDHs in managing proactively the safety management system on their Units. Encouragingly, there has been an increase in the level of safety reporting, reflecting a positive endorsement of a maturing reporting culture.

[9] Government Owned Civilian Operated.
[10] Functional Safety encompasses all areas of non-Air Safety.

[11] 20111205-Total Safety Construct-U. Proposal for a 'Total Safety' Construct for Air Command.

Crown Censures, Notices and Other Regulatory Interventions

Enforcement Action

94. **External.** There were 2 External Enforcement Actions during the reporting period:

a. **HSE Crown Improvement Notice**. The HSE issued a Crown Improvement Notice on 20 Mar 12 against RAF Leuchars following a case of allergic dermatitis, which resulted from exposure to epoxy resins. The Stn managed the issue and drew up an action plan that was agreed with the HSE. The actions have been completed and the HSE has closed the issue.

b. **Environmental Spill**. HMS Sultan (DCEME[12] - 22(Trg) Gp) received a Certificate of Caution from Southern Water on 20 Feb 12, for a release of diesel which caused a pumping station to cease pumping during the period 20 Feb – 13 Mar 12. HMS Sultan conducted a thorough investigation and have since taken rectification action to the satisfaction of Southern Water.

95. **Defence**. One Prohibition Notice was issued to RAF Halton by FGSR during the period due to non-corrected Regulatory (A1) and Health & Safety related (A2) high priority faults identified during inspection. This was subsequently closed upon rectification of these faults by the DIO. Moreover, an Improvement Notice was issued against RAF Halton Aero Club, due to the lack of suitable Risk Assessments, and a lack of a suitably qualified Fuels & Lubricants Manager. RAF Halton Aero Club was provided with 12 months to rectify this fault and has acted to ensure that an individual completed an F&L Managers course in Jan 13, and that suitable Risk Assessments were completed. In the interim, the Fuels Instructional staffs based at RAF Halton (part of the RAF Supply Movements Trg Wg) have assumed supervisory responsibilities of the F&L Manager to mitigate risk. Finally, a Prohibition Notice was issued against the Mechanical Transport Fuelling Installation, HQ DSEME (Bordon), Prince Philip Barracks, on 18 Feb 13. This notice has since been closed by the FGSR following the successful completion of works that facilitated the change of fuel grade from petrol to diesel.

Regulators' Comments

96. **DG MAA** notes that as last year significant SQEP shortages remain a concern, particularly with respect to personnel experience levels. It is encouraging to note that Air Command's top risks, Mid Air Collision and Air Safety SQEP are receiving appropriate command attention.

97. Air Command's concern with the deterioration of infrastructure under the responsibility of DIO is also noted.

98. The **Land Systems Safety Regulator** agrees with the TLB's assessment of performance against DP12 targets. An LSSR audit concluded that the 'Total Safety'[13] construct and its supporting governance arrangements were in their infancy for land systems and not fully embedded at HQ level in Air Cmd. Further work is still required to fully implement 'Total Safety' and to ensure that governance arrangements for 'Functional Safety' are matured and aligned with that for Air Safety. Air Cmd has acknowledged the need to make improvements to Duty Holder arrangements; accident and incident reporting; internal audit and assurance reporting; and vehicle inspectors' competence in line with the recently issued LSSR audit and annual regulator's reports. Air Cmd has stated that the required improvements will be reflected in a Functional Safety Management Plan.

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12. Defence College of Electro-Mechanical Engineering.

[13] Includes Air and Functional Safety. Functional Safety covers: SHE; ordnance, munitions and explosives; land systems; fuel & gas; and movement and transport.

99. The **Movement & Transport Safety Regulator** is not in a position to judge whether Air Cmd's assessment of performance against the DP12 targets for the domain is correct; it will be better placed to take a view following planned audits and inspections of M&T activity across the Command in the coming year. The employment of a dedicated DGSA and a robust assurance programme has proved successful. Air Cmd maintains a healthy attitude to road safety. There are still some issues to be resolved regarding incident reporting for this domain and there needs to be greater clarity in the approach to pan-TLB DH coordination of M&T activity to ensure its safe conduct.

100. The **Fuel and Gas Safety Regulator** agrees with the TLB's assessment of performance for the domain. The TLB has improved dramatically on the previous period, with the resourcing of the Fuel Role Office and the establishment of the Fuels Training Working Group as notable successes. Remaining challenges include: delivering compliance with DSEAR; the maintenance and testing of fuel infrastructure; the compliance of Road Tanker Delivery Stands; quality assurance of Liquid Oxygen and Aviators' Breathing Oxygen sourced overseas; and US Visiting Forces' compliance with UK legislation.

101. **DSEA EP is aware that** RAF Leeming received a warning letter from the Environment Agency (EA) in January 2012. The warning letter relates to the aircraft dismantling activity for F3 Tornado undertaken at RAF Leeming by BAe Systems under the direction of the DE&S Project Team; the activity falls under the Environmental Permitting Regulations 2010 and should be controlled by an Environmental Permit.

TLB's Response

102. Air Command offers the following responses to the Regulators' comments:

a. **DG MAA**. Air Command welcomes the comments of DG MAA and acknowledges that further work will continue on addressing the remaining challenges and risks.

b. **Land Systems Safety Regulator**. The Land Systems Safety Regulators' affirmation of Air Command's self-assessment of performance is acknowledged. Air Command recognises that the Safety Management System for land systems requires further work and maturing, with plans already in place to deliver improvements across all areas identified. Issuing of the Air Command Functional Safety and Environmental Management System policy document will mature further the 'Total Safety' construct across the organisation.

c. **Movement & Transport Safety Regulator**. Air Command acknowledges the comments of the Movement and Transport Safety Regulator and welcomes the proposed audits and inspections during FY13/14. It remains committed to addressing the challenges within the Movement and Transport Safety Management System.

d. **Fuel and Gas Safety Regulator**. The Fuel and Gas Safety Regulators' acknowledgment of the improvements made on the previous period is welcomed. Air Command recognises that work continues on addressing the remaining challenges.

e. **DSEA EP**. Air Command acknowledges the observation made by DSEA EP regarding the issue of a warning letter from the Environment Agency to RAF Leeming. As a result, an action plan has already been agreed with stakeholders, which will see DE&S, as the responsible TLB for resolving the issue, ensure that the necessary Environmental Permit is in place for the work conducted by BAeS

JOINT FORCES COMMAND (JFC)

Executive Summary

103. There have been two work-related, non-combat, fatal injuries. The fatalities have been reported to the Defence Board. Other significant incidents have been reported in accordance with JSP815 and other functional JSPs.

104. As the TLB has only been in existence for 12 months it is not possible to comment on whether there has been a statistically significant trends or change in the numbers or rates of fatal of major injuries.

105. The absence of a single MOD accident database and a gapped post in the CESO JFC office has prevented the synthesis of historical data for the new TLB. 2012/13 will now be used as a baseline for future performance reporting.

Fatal and Major Injuries.

106. There were two work related fatalities during the reporting period. Both involved Marines on training exercises. Both were investigated by the Land Accident Investigation Team (LAIT) and one continues to be subject to a Health and Safety Executive (HSE) investigation. Lessons identified in the LAIT reports are being implemented.

107. There were a total of 185 major injuries, 163 of which occurred on Operations.

Risks/Concerns

108. HLBs have reported a wide range of risks, many of which are site-specific, rather than TLB-wide. The most common risks reported were:

a. Lack of maintenance presenting a risk of infrastructure failure/injury from sub-standard infrastructure.

b. Lack of clarity over infrastructure roles and responsibilities (i.e. what the Maintenance Management Organisation will do/not do versus what Head of Establishment will do/not do) presenting risk that infrastructure-related risks will not be managed.

c. Work pressures presenting a risk of Occupational Stress.

d. Gaps in SHEP posts and/or non-availability of SHEP training leading to a lack of Suitably Qualified & Experienced Personnel presenting a risk of non-compliance and/or risks not being managed.

e. Continued non-compliance with DSEAR was only reported by one HLB, suggesting that the TLB is in a better position that it was at launch.

109. All of these risks relate to statutory non-compliance and therefore present risks of enforcement action/civil claims.

Future Concerns

110. Policy on Duty Holder constructs for functional areas, other than aviation, are not clearly codified; JFC has raised this with the Chair of the DESC for discussion in 2013.

111. Duty Holder Facing roles and responsibilities for JFC Aerodrome Operators and the resourcing of a TLB Air Safety Management System; JFC is currently working to ensure that proportionate Duty Holder Facing arrangements are in place.

112. Over inspection/audit due to multiple Regulators/Duty Holders all seeking assurance on SHEP topics; JFC is mapping out who gathers what assurance on Risk to Life activities as part of the Duty Holder construct implementation. As this is a pan-Defence issue it is considered that there should be a MOD-wide project to map out the assurance 'industry' and to establish a more streamlined process to gather assurance data once and use it many times.

113. Future Defence Fire and Rescue provision in the Permanent Joint Operating Bases and Operations; JFC is in discussion with the Defence Fire and Rescue Project to ensure that the unique circumstances in the PJOBs are taken into consideration.

114. Future Infrastructure maintenance post DIO Enhanced Operating Model; JFC sites are concerned that reductions in competent DIO staff will impose additional contract management duties on Heads of Establishment. Details of specific proposals for future ways of working are awaited.

115. Civil Service Learning SHEP training courses will not adequately replace those currently available via the Defence Learning Portal. JFC have found it difficult to find a forum at which to raise this concern.

Achievements/Successes

116. The TLB's Safety, Health and Environmental Management System has been developed and is now in place. A positive SHEP culture has been led from the top; the Command Board has discussed SHEP performance on three occasions. The TLB Duty Holder Construct was endorsed by the Command Board and is now in place across the TLB. A number of JFC sites have had their environmental protection work recognised through external award schemes.

Organisational Change

117. JFC continues to evolve and an organisational change risk assessment was carried out during the year. The model of early engagement used in the run up to Initial Operating Capability has proven to be useful in embedding additional business units into the TLB's SHEP community.

Crown Censures, Notices and Other Regulatory Interventions

118. There have been three letters from the HSE:

a. One to the Defence Academy Shrivenham for a technical breach relating to suitable & sufficient assessments & contingency planning involving ionising radiation;

b. One to DDS also for a technical breach relating to suitable & sufficient assessments involving WRULD and HAVS;

c. One to MOD A Block following the HSE's investigation following a fatality during an exercise.

Indicating that Fee for Intervention procedures will apply. However, at the time of writing no invoices have been received.

119. No formal enforcement action has been taken by any external regulator during the reporting period.

120. Two DSEA Defence regulators have issued improvement notices against JFC sites. The FGSR issued 3 INs:

a. To BFSAI over the condition of electrical equipment within the fuel infrastructure pump houses at the Petroleum Supply Depot.

b. To Hereford Garrison (Stirling Lines) relating to inadequate DSEAR drawings.

c. To RAF Wyton (Pathfinder Flying Club) for non-compliance with DSEAR.

121. Also, an IN was issued to BFC by the MACR team relating to unsatisfactory arrangements for practicing the emergency plans at Episkopi.

122. One prohibition notice was placed on a Fuels installation for having an inadequate interceptor at RM Poole. Work is being carried out to address the Improvement Notices and the Prohibition Notice was addressed within days of issue.

123. No significant issues were raised against JFC in the reports.

Regulators' Comments

124. **DG MAA** states that, as with last year report's, Air Safety does not attract a high profile under the new structure in JFC's report recognising the crucial Duty Holder facing role that they fulfil. Despite MAA analysis of Air Safety risks to life across the UK Defence Air Environment highlighting Mid-Air Collision as a significant concern and the only common Aviation Operating Duty Holder top level risk to life. Airprox occurrences confirm that this remains a significant risk in Theatre with unmanned systems involved in 40% of the reported events. Whilst Airprox in the UK are comprehensively investigated by the UK Airprox Board, this is not the case in Theatre, with very few occurrences being followed up by an on-site investigation. Although after the reporting period this was specifically addressed during the MAA Theatre audit in May 13. Of note, this significant Risk to Life is not included in the 'Significant Risks' section of JFC's main report or Annex B of that report.

125. The **Land Systems Safety Regulator** broadly agrees with the TLB's assessment of performance against DP12 targets and planned audits of DSF and the Surgeon General in the coming year will provide evidence to confirm the maturity levels claimed for land systems. In particular, the audits will examine the application of equipment safety cases owned by Duty Holder facing SMEs (D Caps) and Project Team Leaders. The TLB has only been in existence for 12 months and has introduced a new incident reporting system. Although there is evidence that lessons are shared, the TLB recognises that the lessons process still needs to be formalised and, albeit a little early to realise, they need to analyse trends and address areas of weakness. Improvements in these areas will be needed to achieve a maturity of Level 4.

126. The **Movement & Transport Safety Regulator** is not in a position to judge whether JFC's assessment of performance against the DP12 targets for the domain is correct; it will be better placed to take a view following planned audits and inspections of M&T activity across the Command in the coming year. Some areas of JFC have shown significant improvement in the management and reporting of M&T, although 'Near Miss' reporting still remains a concern, in particular when the movement is multi-modal and tri-service. The suggestion of a single Defence accident reporting tool is noted, although IMPACT and HSIS are the single mechanisms for doing

so for road traffic and DG incidents respectively. There are still some issues to be resolved regarding incident reporting for this domain and there needs to be greater clarity in the approach to pan-TLB DH coordination of M&T activity to ensure its safe conduct.

127. The **Fuel and Gas Safety Regulator** broadly agrees with the TLB's assessment of performance for the domain. The TLB has improved dramatically on the previous period, with the establishment of an effective fuel safety management system in non-operational areas and of additional fuel management posts within BFSAI being seen as notable successes. Remaining challenges include: quality assurance of UAV refuelling on HERRICK; the management of LPG cylinders on HERRICK; and compliance with DSEAR.

TLB's Response

128. JFC agree that Aviation Safety did not attract a high profile in the JFC report, the reason being that JFC is not an aviation Duty Holder and their DH facing role is but one of many. There is reference to the work JFC are doing on Aerodrome Operators and the remedial work on the non-compliant runway at Akrotiri. Whilst the Airprox risk is being realised in Theatre, it is not a JFC Risk to Life and they do not have the levers to control the activity. JFC have a role to play and are very open to working with the Duty Holders to work out a solution.

DE&S

Executive Summary

129. CDM personally places paramount importance on maintaining a safe and secure workplace for people, and on ensuring that the services and equipment delivered by DE&S are safe.

130. At the time of the last Assurance Report, CDM emphasized the challenge that DE&S faced with regard to the availability of SQEP. It is therefore no surprise that this has been the focus of TLB-wide attention over the last year and many significant and tangible steps have been taken to provide the necessary resource to address the issue. CDM is encouraged by the initial signs of recovery that are beginning to emerge as a result.

131. DE&S has also now implemented the DH construct across the organization. This has clarified individual roles and responsibilities and DE&S is now moving forward in terms of establishing and embedding an appropriate safety and environmental culture.

132. For the fifth year in a row there have been no fatal accidents directly attributable to the performance of materiel procured or supported by DE&S and there has been a 22% reduction in the rate of serious and major accidents to DE&S personnel.[14] DE&S's maturity level against the goals in the MOD Safety Sub-Strategy has improved from Level 2 in 2011 to Level 3 or 4. Where we are not yet at Level 4, resourced plans are in place to achieve this by March 2014. This assessment has been largely endorsed by independent external audit.

133. Although significant progress has clearly been made, CDM is acutely aware that DE&S continues to face a significant challenge and that the DE&S Board must guard against complacency. In particular, CDM expects to see significant progress made in the coming year with respect to the recruitment of the necessary SQEP; a requirement that he has firmly emphasized to the DE&S Board.

[14] Against a 10% reduction in staff numbers.

134. For now, CDM commends to the DESC this DE&S Annual Safety & Environmental Protection Assurance Report for 2012/13 as detailing the activity undertaken to provide assurance of the TLB's compliance with current Safety & Environmental legislation and MOD Policy. DE&S's vision is '***DE&S: Delivery focused; Safety driven'***, and CDM expects this to underpin all that the TLB does.

SQEP

135. The shortage of SQEP is a significant issue within DE&S and was identified in the 2011 S&EP Assurance Report as one of the principal safety risks within the TLB.

136. The DE&S 3-star Safety Board is taking active measures to address the issue, and the message and aspiration on SQEP is that:

DE&S uses the appropriate level of SQEP for the business that it is in.

137. Making this a reality across the business is a challenge for DE&S, and CDM and the Safety Board have therefore taken an active interest in this area.

138. CDM has undertaken a deep dive into the issue and in order to ensure a common approach of what constitutes a 'safety post' has identified posts as either Safety-Critical or Safety-Enabling. Safety-Critical posts are defined as those that are formally delegated the authority by letter to make safety critical decisions and have responsibilities for the delivery of equipment or services, or DE&S DHs in line with S&EP Policy Leaflet 05/2012. Safety-Enabling posts are those that manage process and activity upon which safe outputs depend.

139. As part of the Interim Structure element of the Materiel Strategy, DE&S has identified Safety-Critical and Safety-Enabling posts and has mapped them onto HRMS in order to track vacancies and to target recruitment to these posts. In recognition of the importance of addressing the SQEP issue, CDM has taken robust action to manage these positions by setting a target of no more than 50 Safety Critical posts, out of a potential population of some 1,420 posts (representing 3.6% of the potential population), gapped at any time.

140. A survey was undertaken to identify all posts designated as either Safety-Critical or Safety-Enabling, and as of February 2013 there were 6.8% Safety-Critical posts (down from 7.5% in October 2012) and 13.0% Safety-Enabling posts vacant. DE&S is engaged actively in developing manpower strategies to manage these posts to ensure that it can meet the target for gapped posts now and in the future, including the potential use of Recruitment & Retention Awards. This remains an ongoing challenge for the DE&S and being managed by its 3-star Safety Board.

Duty Holders

141. DE&S has established and endorsed the requirement and identification of DHs via S&EP Policy Leaflet 05/2012 (originally dated 2 February 2012). Specific responsibilities are placed on all named DHs (Senior, Intermediate and Delivery). These responsibilities, together with the list of DHs, are detailed in the Leaflet.

142. The duties placed on DE&S DHs have been in place for over a year. Good practice requires that the DE&S Safety Board ensures on behalf of CDM and the DE&S Board that:

a. The DHs identified are aware of their responsibilities;

b. Letters of Delegation (LoDs) have been formally issued, accepted and include the requirements of the DH Policy Leaflet; and

c. Where LoDs have not been accepted/issued that alternative arrangements are in place.

It is confirmed that these matters are in hand or completed.

Crown Censures, Notices and Other Regulatory Interventions

143. **Crown Prohibition Notices**. There have been no Crown Prohibition Notices served on DE&S during this period. However, Notices served on other parts of MOD interfaced with the activities of DE&S:

a. A Prohibition Notice was served on Babcock Marine regarding the inadequate/ineffective fire alarm system installed on HMS Somerset whilst undergoing a refit at Devonport. Similarly, a Crown Prohibition Notice was served on the CO of HMS SOMERSET prohibiting all work activities involving the Ship's Company. The Prohibition Notices were lifted 2 days later following installation of new system.

b. Scottish Environmental Protection Agency (SEPA) Final Warning Letter with regard to fuel (diesel) spillage at DM Glen Douglas to DIO.

c. Serco Marine Services were issued with a Warning Letter from the Environment Agency following a spillage from Fuel Barge 1512 at Devonport.

Defence Regulators

144. **Fuel and Gas**. DE&S has had 19 x Units assessed in 2012. It has received 2 x Improvement Notices and one Prohibition Notice. Of these, one Improvement Notice remains in force. The Regulator has noted that the shortage of SQEP reported in last year's report, which related specifically to Fuels and Lubricants (F&L) Managers, has been resolved, and that assurance in this area has improved:

a A Petroleum Licensing Improvement Notice was issued by DSEA on the MT POL Point at Devonport on 22 July 2011. The notice was valid for 12 months. On return (July 2012) the notice was further extended by 3 months. During this period the Regulator was content that the issues had been addressed and lifted the Notice.

b. During 2012, the Defence Fuels and Gases Regulator issued a Prohibition Notice that was followed by an Improvement Notice when specific requirements had not been met for the Class-1 fuel installation at the Bustard Flying Club (BFC) at MOD Boscombe Down, which was allocated to DE&S by the Regulator. The BFC is a formal encroachment at Boscombe Down and is subject to an Encroachment Agreement regarding the Occupation of Premises by the BFC (Version 1.3 issued October 2010, refers). This agreement is between the TEST Project Team and the BFC, and signed by the TEST Team Leader (TL) and BFC Chairman respectively. On behalf of DE&S, the TEST TL is the Head of Establishment (HoE) for MOD Boscombe Down, which mirrors the general arrangements at other LTPA MOD Sites.

MACR Improvement Notices

145. At the start of 2012 there were 4 MACR Improvement Notices in force on DE&S sites:

a. LS West Moors.

b. DM Crombie.

c. DM Glen Douglas.

d. DM Longtown.

146. During the year work has been undertaken to remedy the deficiencies identified, resulting in the Improvement Notices for DM Crombie and DM Longtown subsequently being lifted. The status of the remaining 2 Improvement Notices is as follows:

a. LS West Moors – The Environmental Risk Assessment has been completed and submitted to the MACR Competent Authority for their endorsement.

b. DM Glen Douglas – The spillage plan has been updated, but awaits sign-off by HoE.

Diving Improvement Notice

147. An improvement notice was issued by Superintendant Diving in December 2011 to Hd In-Service Submarine relating to lack of accreditation for training associated with the NATO Submarine Rescue System. Subsequent work to meet the criteria outlined in the notice led to it being rescinded in March 2013.

Regulators' Comments

148. **DG MAA** states that, similar to last year's report the significant SQEP shortages are the primary risk. Although, it is encouraging to see that DE&S believe there are initial signs of recovery beginning to emerge on this issue. This will need to be continuously monitored, especially in the context of the Materiel Strategy. MAA concerns about DE&S SQEP shortages and other ongoing enforcement action indicates that a maturity score of 4 for Goal 5 Legislation & MOD regulations in the Aviation Domain may be overly optimistic.

149. The section on Internal Regulators focuses on Fuel & Gas and does not cover the activity of the MAA. There is no mention of the recently published SI into Fuel Contamination in Mount Pleasant Complex, Falkland Islands which was convened because it could have potentially led to a catastrophic aviation fuel contamination accident. There are several recommendations on the Director Logistic Commodity Services and Director Joint Supply Chain that ought to merit mention.

150. The **Defence Nuclear Safety Regulator** recognises and welcomes the initiatives to monitor and address the NSQEP issues which, if maintained and resourced, have the potential to alleviate the problem in the longer term. However, DNSR stresses that a short/medium term issue persists at a critical time in both nuclear programmes when many decisions affecting future nuclear safety are being made. The focus on filling safety critical posts in DE&S will not necessarily ensure that the "future impact" aspect of nuclear safety related decisions will be adequately resourced; the priority will be, quite rightly, posts with an immediate safety impact (safety critical rather than safety enabling).

151. There is a continuing need to manage the safe operation of Ageing Plant and Infrastructure given ageing submarines and delays to bringing replacement plant into service which has potential to be exacerbated by funding constraints. Early recognition of the probable need to extend plant lifetimes leading to appropriate timely operating and maintenance actions is essential. Further, there are some life-limiting features that cannot be mitigated through life extension programmes such that Navy Com will be running with an increased risk of submarine withdrawal from service as a result of ageing plant.

152. There has been an improvement in the presentation of ALARP cases for in-service justifications for continued operation. DNSR's principal concern with safety cases is the time lag between the development of designs for new plant and facilities and the supporting safety and technical justifications. Retrospective justification of pre-existing decisions remains in some areas e.g. Valiant Jetty at HMNB Clyde. There is a history of proceeding with detail design and procurement at project risk which does not reflect good practice.

153. The statutory **Office of Nuclear Regulation (ONR)** regulates those elements of the defence nuclear programme which are not exempt from statute. It has commented that the defence programme is experiencing an exceptionally busy period and coping with new build of infrastructure, facilities and submarines, ageing infrastructure, facility upgrades, ongoing demand on a reduced fleet of ageing submarines and the challenge of bringing new submarines into service. All this is at a time of significant pressures on resources. Against this backdrop, it is ONR's judgement that all the facilities on the Nuclear Licensed Defence Sites meet the safety standards required for the nuclear industry and that the Licensees/DHs are generally meeting their duty to reduce risks so far as is reasonably practicable. Notwithstanding this, each facility has a number of shortcomings that the Licensees/DHs need to and are addressing. Throughout the nuclear industry there is a shortage of nuclear experienced and qualified people. This has led to difficulties in recruitment and shortages in key areas such as safety case authors. This coupled with a high workload and an ageing demographic has led to significant pressures on experienced staff or less experienced staff being used to try and meet this shortfall. This lack of resilience increases the risk of programme delays; safety has not been compromised. ONR finally states that due to the concerns discussed above with resources and suitably qualified and experienced people, a significant number of key safety justifications have been delayed or have not met expectations so that further information has been required. This has produced significant delays to a number of projects which have had knock on effects; the most significant being the continued operation of ageing plant beyond its previously justified operational life and the requirement of further work to justify the life extension.

154. The **Land Systems Safety Regulator** broadly agrees with the TLB's assessment of performance against DP12 targets. There is clear evidence of effective processes being in place for the management of risk. However, an LSSR audit of Safety Cases found evidence that the ALARP principle is not fully understood and applied. Lessons are shared inside and outside the TLB and elevated to the DE&S Safety Board. A lack of SQEP in investigation and root cause analysis and an under reporting of serious events from some domains has been reported by the TLB. A score of Level 3 in both cases may be more appropriate, which concurs with the independent assessment conducted by WS Atkins.

155. The **Ordnance Munitions and Explosives Safety Regulator** points out that no mention of an Improvement Notice for DM Kineton regarding safe separation distances. Furthermore, there are assurance gaps which have been identified with the in-Service and Urgent Operational Requirement inventory, where the Ordnance Safety Review Panel process has not been applied or applied late, and issues with risk assessments.

156. The **Movement & Transport Safety Regulator** is not in a position to judge whether DE&S's assessment of performance against the DP12 targets for the domain is correct; it will be better placed to take a view following planned audits and inspections of M&T activity across the TLB in the coming year. In spite of prompting no DDH has been appointed to support pan DE&S freight transport and rail operating activities. MTSR notes the lack of SQEP in particular for rail movement and transport of Dangerous Goods. MTSR will work closely with DE&S to seek improvements in the areas of concern.

157. The **Fuel and Gas Safety Regulator** agrees with the TLB's assessment of performance in the domain. The TLB has improved on the previous period, with improved training of F&L Managers; improved competence for gas cylinder handling at Logistic Commodities & Services (LCS) Donnington and Bicester; the prompt response to gas equipment safety concerns; and the re-establishment of the Montreal Protocol Task Force Working Group for controlled gases being notable successes. Remaining challenges include the appropriate certification of operators; the provision of design data for and the maintenance of Oil Water Interceptors; and the appropriate storage of medical gases.

158. The **Defence Maritime Regulator** notes that not all elements of the Maritime Safety Development Programme are yet on contract and the current levels of senior management attention will need to continue. The Level 3 assessment of Maritime is supported.

159. DMR has no evidence of QS&EP Group development of all the training courses necessary to underpin Safety-Critical roles, beyond basic awareness and certainly not in expert or senior roles. The DMR Annual Report identifies areas of SQEP shortfalls. DMR has no evidence of accident investigation training or LFE outside of OHS.

160. The QS&EP and OC focal points are working hard with Platform DHs and share an appetite to change the safety culture in DE&S, with the caveat that as with the FLC, it will not occur overnight.

TLB's Response

161. DE&S notes that for the most part the Regulators are in agreement with the DE&S assessments of maturity against the 5 goals, and is pleased to have taken the unique step of having its assessment independently verified by an external organization. In addition, DE&S is pleased with the acknowledgement that a substantial amount of work has been undertaken to raise the overall maturity of the organization since the last Annual S&EP Assurance report. Indeed, DE&S is continuing to develop its processes, train its people and implement the changes necessary to ensure that the organisation continues to develop and achieve Maturity Level 4 by March 2014.

162. DE&S's responses to the specific comments made by individual regulatory areas are as follows:

DG MAA

163. DE&S acknowledge the comments made on SQEP, and are addressing this matter as a high priority, as described above. On the issue of the Falkland Islands report, DE&S now have reviewed it in detail and appointed D LCS to lead on coordinating the response from across this TLB to the recommendations made. To date, a number of them already have been completed, and work continues to work together with the MAA to resolve those outstanding.

DNSR

164. The concerns expressed by the DNSR are recognised already as key risks and issues, and are being managed at the highest levels across the UK's Submarine Enterprise. The recent agreement to convene regular interface meetings between the Submarine Enterprise Safety Director's Forum and DNSR/ONR should provide further additional opportunities through which these matters can be discussed in an open and transparent manner, and will of course be addressed formally in the next annual assurance report.

LSSR

165. DE&S has identified weaknesses in the application of ALARP principles and recently has undertaken a significant amount of work in developing a simplified and robust process. This has been endorsed by the DE&S Safety Board and currently is being communicated across all areas of responsibility as a mandated method.

OME

166. The Improvement Notice on DM Kineton was omitted mistakenly from the report, but D Wpns has identified the issues and has a plan in place to ensure that the requirement to meet OME separation distances within explosives storage facilities meets the minimum requirement; this matter has a planned completion date of February 2014.

167. Regarding the issue of assurance gaps, D Wpns' staff are driving hard to resolve the issue of non-compliance by:

a. Reinforcing the policy in all OME procuring teams;

b. Obtaining the resource to staff the independent reviews (a large number of panel members left to join the regulator hence the WOC is looking at how to resource this requirement);

c. Communicating and re-enforcing the policy with non-WOC, OME-producing Project/Prog Teams;

d. Development of a Safety Case Tool driving teams to utilize the OSRP members; and

e. Establishing a new CSOME database that will meet the requirements of the Project/Prog Teams and management for the monitoring of CSOMEs.

The Regulator was kept fully informed of these activities, and there will be continued engagement until the issues are resolved.

MTSR

168. It is noted that the Regulator is unable to confirm the maturity classification due to a lack of audit facility to verify DE&S activities. DE&S will continue to work closely with the Regulator to provide the necessary assurance.

FGSR

169. DE&S notes the agreement of the Regulator with the DE&S maturity assessment, and the acknowledgement that DE&S has improved its maturity level since the previous Annual S&EP Assurance Report. Work continues to address the challenges surrounding the certification of F&L

Managers and the provision of design data and maintenance of Oil Water Interceptors, which is an acknowledged MOD-wide issue under the control of the Project Aquatrine provider to deliver. The issue of medical gas storage is a recent task and DE&S is developing plans to progress this matter.

DMR

170. Up-skilling members of the acquisition safety community remains a top priority for the QSEP Group. Much work already has been undertaken and the major building blocks are now in place. Primarily, the Role Profiles that DE&S introduced in 2011 to identify how staff in a range of safety roles can demonstrate their safety competence are adopted widely, and the suite of system-safety courses to satisfy the training element has been rolled out. Together, these meet the needs of the vast majority of DE&S staff, enabling them to claim competence for their roles. It is worth noting that few Safety-Critical staff require Practitioner or Expert levels of safety competence; indeed, in most cases, this subject matter expertise is provided by the Safety-Enablers.

171. Attention has now turned to activities that will address the requirements of the other members of DE&S, namely the most senior members of staff (including DHs) and those who require Expert levels of safety competence. Action is in hand to introduce an end-of-course examination, which will see successful candidates achieving associate membership of a professional body, the IIRSM (International Institute of Risk and Safety Managers). Work on the development of a DH/Executive module has now been taken on from DE&S by the DSEA. Once this is in place, DE&S will have in place a comprehensive upskilling package to meet the requirements of every member of staff with safety management responsibilities.

DIO

Executive Summary

Overview of Performance against DP12 HS&EP Targets

172. Target 1:

a. Minimise work-related fatalities, injuries, ill-health and effects on the environment.

b. No statistically significant increase in fatalities over a rolling 12 month period.

c. Reduction of [accident incidence] rate of major injuries from previous year

d. Reduction in number of significant environmental incidents.

Incident Rates	2011		2012-13		Achieved
	Total	AIR[15]	Total	AIR	
Staff fatalities	0	0	0	0	YES
Industry Partners fatalities	0	0	0	0	YES
Staff Major Injuries [16]	2	50.0	2	57.1	NO
Industry Partner Major Injuries	11	85.5	14	84.7	Yes
Significant Environmental Incidents			4		NO

Table 1

[15] Accident Incidence Rate (AIR) = N° of events / N° of employees x 100000

[16] Accident Incident Rates for 2011 used an estimated 4000 employees in the 12 month calendar period due to anticipated transformation fluctuations. AIR for this reporting period of 14 months (Mar statistics not yet available) uses an estimated 3000 employees to take into account realised moves and VERS.

173. Targets 2-6 MOD Safety and EP Sub-Strategy Goals and Maturity Model: Attain Level 4 by Mar 14. Table 2 below shows aggregated self-assessment scores to date.

Goal	**2011**	**Jan 12-Mar 13**	**Mar 14**
1. A Learning Organisation	2	2	
2. Leadership and Culture	2	2	
3. Competence	2	2	
4. Hazards and Risks	3	2	
5. Compliance – Legislation/MOD Regulations	3	3	

Table 2

174. DIO remain committed to attaining level 4 on the maturity matrix by Mar 2014. The main risks to achieving this are: ongoing organisational change programmes. The new structures and processes designed through transformation will significantly strengthen the arrangements currently in place and will move the Maturity Model scoring upwards towards the target of level 4.

Risks/Concerns

175. Key issues or risks to DIO delivery or SHEP responsibilities are:

a. DIO Transformation and SHEP Governance. Responsibility for the delivery of estate infrastructure and Soft has been transferred to DIO with widespread misunderstanding of the impact this has on user/DIO Duty Holder and SHEP responsibilities. The DIO/DBR Joint Study and CESO Working Group are being used to discuss issues, clarify roles and responsibilities and agree demarcations and interface management. The Joint Study also recommended a single governance authority within MOD for Infrastructure S&EP Domain which will be established under the EOM.

b. Dangerous Substances and Explosive Atmospheres Regulations (DSEAR). Statutory non-compliance. The Defence Infrastructure Board (DIB) considered the original DSEAR Working Group paper in Oct 12 but subsequently received an alternative argument on how to meet DSEAR compliance from Land Forces (LF). The DIB considered revised proposals in Nov 12 and decided that there would be a period of review to assess whether the LF proposal is suitable and sufficient, and if not, that LF would adopt the generic approach. An updated DSEAR paper is due to be submitted to the DIB in May 13.

c. Suitably Qualified and Experienced Personnel (SQEP). EOM post mapping outcomes have the potential to impact on DIO's SQEP in the infrastructure safety domain. A significant number of posts were gapped during 2012 due to difficulty in recruitment. The need to give priority to transition and support to Next Generation Estates Contracts (NGEC) and other EOM activities has had an impact on DIO assurance and other "business as usual" activity. However, revised business processes brought about by DIO transition should enable the remaining SQEP to be more effectively employed. The DIO CESO Team will continue to monitor the situation through the transition process and highlight risks through the Duty Holder Construct for DIO.

d. Electrical Power Safety Compliance. Peer Review[17] was undertaken to confirm the extent of findings across the estate[18]. The Peer Review Report upheld the main findings of the DBR Report (relating to defence infrastructure issues only) and furthermore identified

[17] Peer Review Report on DBR Assessment Report titled 'Electrical power Safety Resilience and Availability Across MOD' dated 26 May 11.

[18] Scope limited to Regional Prime Contracts, DCRE airfields, DTE, DE USF and PFI Corsham (600 Troop facility).

common shortfalls across all inspected delivery areas, in particular serious deficiencies at five establishments were reported.

(1) DIO Professional and Technical Services (PTS) have prepared a Project Plan comprising of six Work Streams to address the Recommendations contained in the Peer Review Report. A Business Case was prepared and additional resources were obtained in Nov 12 to commence the Work Streams. A plan and programme is currently being developed for these workstreams and will work will commence when resources become available.

e. DIO Explosive Storage and Licensing. MOD CIE has raised concern over the potential impact of future partnering arrangements that could move DIO to a position where sufficient (and direct) 'control' of activities is not maintained by MOD resulting in DIO and licensed training areas being regulated by HSE and not MOD. The legal implications of this, and the potential change to "non-MOD" status of DIO, are currently being assessed and a paper is being prepared to help inform Strategic Business Partner decisions. Inspector Explosives (Army) will continue to undertake the licensing role under formal appointment in the shorter term.

f. Pollution Prevention (ground water contamination from infrastructure). The legacy of underinvestment in buried fuel pipelines and district heating systems has manifested itself in leaking systems and the fracturing of corroded pipes. A Fuel Infrastructure Risk Mitigation (FIRM) Strategy has been produced focusing on those sites where failure is assessed as having the greatest impact on the surrounding environment.

Achievements/Success

176. Much work has been done through Transformation and in particular the Transformation Workstream to prepare the organisation for the Enhanced Operating Model (EOM). This has included Change Impact assessments for each area of the business and subsequent mitigation planning.

177. The first Defence wide Defence Infrastructure Programme (DIP) should now start to see investment being prioritised across the estate in line with statutory and mandatory requirements. This should strengthen DIO's performance in this area.

178. Development and HSE endorsement of MOD Exemplar Gas Safety Case and associated Gas Safety Management Plans securing, for the first time, MOD compliance with Gas Safety Management Regulations and managing the potential for HSE intervention and enforcement action.

179. Strengthened relations with DSEA and TLB stakeholders in the taking forward of the DBR/DIO Joint Study into management of future SHEP arrangements and its inherent SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis to identify best way forward and inform those considering operating model.

180. EOM Safety Management Organisation formed which will provide improved functional direction and career structure, creating a high performing H&S Community to support DIO into the future

181. DIO's Maintenance Management Organisations accident statistics are well below the HSE benchmarks

Crown Censures, Notices and Other Regulatory Interventions

182. There have been no enforcement notices or action served against DIO or its contractors by external or Defence regulators.

Regulators' Comments

183. **DG MAA** states that, disappointingly, the report makes no mention of aviation or of the DIO's role as an Aviation Duty Holder-facing organization[19]. The section on DIO engagement with MOD Regulators does not mention the MAA. Air Cmd also list DIO performance as one of their top risks, citing the lack of clarity regarding organizational change within DIO that has led to a lack of confidence in DIO performance. The recently published SI into Fuel Contamination in Mount Pleasant Complex, Falkland Islands made a specific recommendation on CE DIO that may have merited a mention in the report. JFC have also expressed concern about the lack of maintenance of infrastructure and lack of clarity over infrastructure and related responsibilities with particular concerns about the PJOBS.

184. The **Defence Maritime Regulator** notes that some DMR intervention has been required due to failure to manage diving contractors within project Aquatrine, in contravention of the Diving at Work Regulations. Some of these issues are touched on in the Annual Report.

185. The **Movement & Transport Safety Regulator** agrees with the TLB assessment of performance for the domain and notes the significant level of change that has been on-going, resulting in DIO taking on a considerable amount of new MTSR issues. It is noted that the TLB has improved its reporting procedures compared to the previous period, although a number of non-compliances and near misses remain un-reported.

186. The **Fuel and Gas Safety Regulator** agrees with the TLB's assessment of performance for the domain. The TLB has improved on the previous period, with the development of the FIRM strategy; the establishment of the DSEAR Programme Executive Group; and the performance criteria built into the PPP contract for Project VANGUARD being notable successes. Remaining challenges include the provision of design data for and the maintenance of Oil Water Interceptors, and the provision of adequate site fire plans.

187. **DSEA EP** notes that a Final Warning Letter was received in Aug 2012 from SEPA to DIO relating to a fuel spill at Glen Douglas which occurred in Jan 2012; the same incident is referred to in the DE&S report. The incident is noted in the Annex of DIO's report only. Furthermore, last year's assurance report from DIO had pollution risk from the fuel infrastructure as a significant risk. While DIO have started to instigate their Fuel Infrastructure Risk Mitigation (FIRM) Strategy, this has only progressed to a qualitative Risk Assessment, with no quantitative work having been undertaken to date; the risk, therefore, is still valid.

TLB's Response

188. **DGMAA –** DIO would welcome any approach from the MAA to discuss the Duty Holder Facing Role although it is noted that Duty Holder Facing issues were not prominent in any of the TLB returns. With reference to the SI into Fuel Contamination in Mount Pleasant Complex, DIO advise that at the time of preparing their Report, the SI report had not been widely circulated and was not known to the team preparing the DIO Report. DIO confirm that having now sighted the recommendation in the SI Report (serial No 25), DIO will instigate the necessary actions to ensure that both DIO and our Industry partners are aware of the issues raised and will cooperate

19. MAA Regulatory Publications, RA 1020(4) Responsibilities of DH-Facing Organizations.

with the Fuel Installation Operators in the identification and mitigation of risk and attend meetings as required. With reference to statements from Air Command and JFC relating to Roles & Responsibilities, DIO has been putting in considerable resources along with the TLB CESOs and their staffs to develop guidance to Hds of Establishments on their R&Rs (10 draft leaflets have been produced covering a areas of concern identified by the CESO community). However there is still work to be done before all SHEP interface issues have been covered. In addition a series of "roadshows" is currently doing the rounds which aims to provide advice at local level to units etc on how services will be delivered by DIO and its Industry Partners.

189. **Defence Maritime Regulator –** DIO manage the Aquatrine PFI under a 25 year contract with 3 separate Service Providers (known as Packages A, B and C) to deliver Water and Waste Water Services to the majority of the GB MOD estate. The incident referred to by DMR was caused by a third party that the Package A provider had allowed on site to look at some pipes but with instructions not to dive. The incident was investigated, a report provided, and liaison undertaken with the necessary authorities at site. Since the incident the Package A provider has produced a policy for employing any diving contractors, which has been shared with the Diving Regulator with positive feedback received. The other two Package Providers, whilst not employing or contracting divers on a regular basis, have been informed of the requirement to obtain the appropriate authorities' permits before undertaking any diving activity. It has also been made clear that they must adhere to the HSE Approved Code of Practices for diving and JSP 375, leaflet 29 which covers MOD's Diving Safety Policy. Implementation and adherence to this policy will be monitored by DIO SHEP Assurance team.

190. **Fuels and Gases Safety Regulator –** Oil Water Interceptors (OWIs) on sites that fall within the scope of the Aquatrine PFI contract are the responsibility of the appropriate Aquatrine Service Provider (ASPs). The ASPs are responsible for the operation and maintenance of these assets in accordance with PPG3 (April 2006) the Environment Agency's Pollution Prevention Guidelines. DIO recognises that establishments require a copy of the maintenance and inspection records, as well as capacity information to support the Fuels Gas and Safety Regulator's inspections. The ASPs will provide information regarding OWI maintenance, inspection and capacity when required. The establishment Authorities Local Representative (ALR) will, once they are aware that the regulatory inspection is due, request this information from the ASP to ensure that this information is available to the regulator at the time of inspection. However, in some instances MOD did not hold or pass this information to the ASP at the time the contract was let and therefore it is unlikely that the ASP will have this information, unless they have replaced the OWI. Where an establishment wishes to pursue a survey in order to meet regulatory requirements or are considering replacing the OWI to increase the capacity, they have been advised to speak to the Aquatrine PFI Commercial Team.

191. **DSEA EP -** A Project Manager has been appointed to take forward the FIRM strategy and a programme of work developed to implement the strategy. The implementation plan has three Phases; each comprising two Stages. Stage 1 of each of the Phases is the project enabling stage which, once complete, will enable the work to be handed over to the appropriate operational area to take forward as business as usual. Because the FIRM strategy will take time to implement, the Estate Management (EM) community are working on an in-year upgrade programme to tackle known issues. This programme sits alongside the FIRM strategy and is being managed directly by the EM community. Subject to the provision of funding it is anticipated that this programme will continue in parallel with the FIRM Strategy through to 14/15. At this point the FIRM strategy will have matured and will have developed a risk assessed and prioritised Fuels Infrastructure work programme for implementation. The EM Upgrade Programme is delivering an in-year programme of work to address issues relating to Active Fuels Infrastructure. For example, RPC Central, Scotland and East are progressing works on 40 establishments with an in-year spend forecast of

£2.192M, and RPC South East is delivering £.0478M of fuel infrastructure work across 15 establishments funded from their PBF and other injects.

HEAD OFFICE AND CORPORATE SERVICES

Executive Summary

192. The Head Office and Corporate Services Top Level Budget (HO&CS TLB) was formed on 1 April 2013 following the disestablishment of the CTLB. Most HO&CS TLB staff are located at office sites across the UK including the strategic Head Office in MOD Main Building; thus the focus is primarily on Occupational Health & Safety and Environmental Protection. Only the MDPGA can be deemed as truly operational and this is reflected in the type and nature of the risks and concerns highlighted. Whilst PINDAR represents a potentially hazardous environment, due to the safety measures and controls which are in place, the overall level of risk is deemed to be low. There have been no Regulatory Interventions to report over the period.

193. There have been no work-related, non-combat fatalities during the period. There have been nine major injuries reported, six occurring within the MDPGA, two within DBS and one in PINDAR. The MDPGA has reduced the number of RIDDOR major injuries by 57% (reducing from 14 in the last 12 month reporting period, to 6 in this current 15 month period). Despite relatively low accident rates, efforts continue to reduce the level further. Work continues to ensure that all staff report near misses and minor injuries to enable accurate statistics to be constructed and, more importantly, remedial action can be considered to mitigate any future risk or to identify trends. Through the HO&CS SHEP Links meeting, work has started with JFC CESO to enable HO&CS TLB accident and incident data to benchmark against the rest of the Department, OGDs and nationally which will enable the TLB to undertake a meaningful comparison against another similar organisation. We have also introduced a manual system of collecting accident data for onwards transmission to DASA now that the Incident Reporting Information System (IRIS) has been withdrawn, which is more cumbersome than an automated system particularly with reducing resources.

Risks/Concerns

194. HO&CS TLB safety risks were mostly site-specific but four were common:

a. Occupational Stress: An increased level of demand placed on fewer staff could cause stress related sickness absence leading to an impact on core outputs. Occupational Stress has been on the increase due to organisational changes and staff reductions through VERS. MDPGA in particular highlighted this as a risk, listing increased sick absence caused through stress and anxiety.

b. Lack of Suitably Qualified and Experienced Personnel: Lack of access to competent and skilled assistance to manage SHEP risks and tasks together with access to appropriate training is a concern. SPVA have lost 2 staff due to VERS, although recruitment of suitable replacements has commenced. The impact on SHEP posts on the transfer of MGS to DIO is still to be worked through.

c. Lack of clarity over the split in roles and responsibilities between the Maintenance Management Organisation/DIO and the Heads of Establishment (HOE) which presents a risk that these risks will not be addressed. As well as Dir Res HO&CF, as HOE for MOD Main Building, engaging with DIO to resolve this issue, DIO have been reviewing this subject and are under DESC remit to issue guidance.

d. Operational Deployment: Staff placed in operational situations are exposed to increased risk of accidents, injuries or illness. This risk applies to both military and civilian staff alike. While staff are suitably briefed and pre-deployment training undertaken, including the provision of appropriate safety measures and equipment, an element of residual risk remains. Though reported by DMC, this risk also applies to other areas of the TLB.

195. HO&CS TLB future concerns include:

a. The need to ensure the new Head Office Induction programme includes site specific fire awareness training which is not provided by the Civil Service generic course now on offer.

b. The need to ensure that SHEP SQEP posts transferred to DIO as part of the wider transfer of MGS from MDPGA to DIO does not adversely affect the ability of MDP to continue to deliver SHEP effectively.

c. The need to ensure risks and hazards arising from the closure of the Old War Office Building and the relocation of HO&CS staff and Lodger Units into Main Building as part of the London Rationalisation Project (LRP), are monitored.

Achievements/Successes

196. Our ability to undertake SHEP training was severely hampered during part of the reporting period when a number of H&S courses hosted on the Defence Learning Portal (DLP) were removed due to licensing issues. Despite assurance that these courses were being provided through the Civil Service Learning Portal, there were a range of technical issues which meant it was not always possible to access them. The intervention of HR-D enabled new licences to be purchased and further disruption avoided. However, the courses are generic and further steps are being taken to provide more site specific fire training.

197. The annual audit programme previously undertaken by CTLB (CESO), was put on hold until both HO&CS and JFC TLBs achieved full operating capacity. The CTLB CESO team transferred to JFC and a Customer Service Agreement (CSA) was drawn up to continue provision of a CESO service to HO&CS TLB. The normal level of annual SHEP audits will resume in 2013; in the meantime during the period JFC CESO undertook 3 revisits to HO&CS TLB business units which raised no significant concerns.

198. Work has taken place to identify statutory duty holders at HO&CS TLB sites including London Head Office, for Asbestos and Legionella in order to provide assurance that these sites are statutory compliant and also to identify duty holders for 3rd Party Contractors. There has been a degree of confusion over roles and responsibilities between DIO and Head of Establishments, especially where a PFI is in place such as in Main Building, and Dir Res HO&CF as HOE for Main Building has sought clarity with DIO. In addition to these statutory duties, now that the Department has decided, in the light of the recommendations of the Haddon-Cave Nimrod Review, to identify Duty Holders for areas where there are hazardous activities, as the HO&CS TLB Holder, DG T&CS has been appointed as the SDH and has appointed the Chief Constable MDP and DG Sec Pol & Ops as ODHs for the activities that are conducted within their areas. They have in turn appointed DDHs at unit commander or Head of Establishment level as appropriate, including Head DCMC in respect of the hazardous activities carried out within the DCMC.

199. Fin Mil Cap's role as a Duty Holder-facing organisation throughout the period of the report in approving equipment cases with safety implications was well understood. Following

disaggregation, the management and assurance of Air Safety risks became the remit of the Front Line Commands (FLCs) through their own Duty Holder construct. Despite the change in his role with this devolution of financial responsibility, DCDS (Mil Cap) remains committed to satisfying his responsibilities to the environmental Duty Holders and his direction and guidance is clearly set out in the latest, Apr 13, Mil Cap Air Safety Management Plan (available if required) . Both the MAA and the relevant FLCs were intimately involved with the development of the Plan which addresses the RA1020 defined requirements for Duty Holder-facing organisations in a robust and auditable manner.

Crown Censures, Notices and Other Regulatory Interventions

200. None reported.

Regulators' Comments

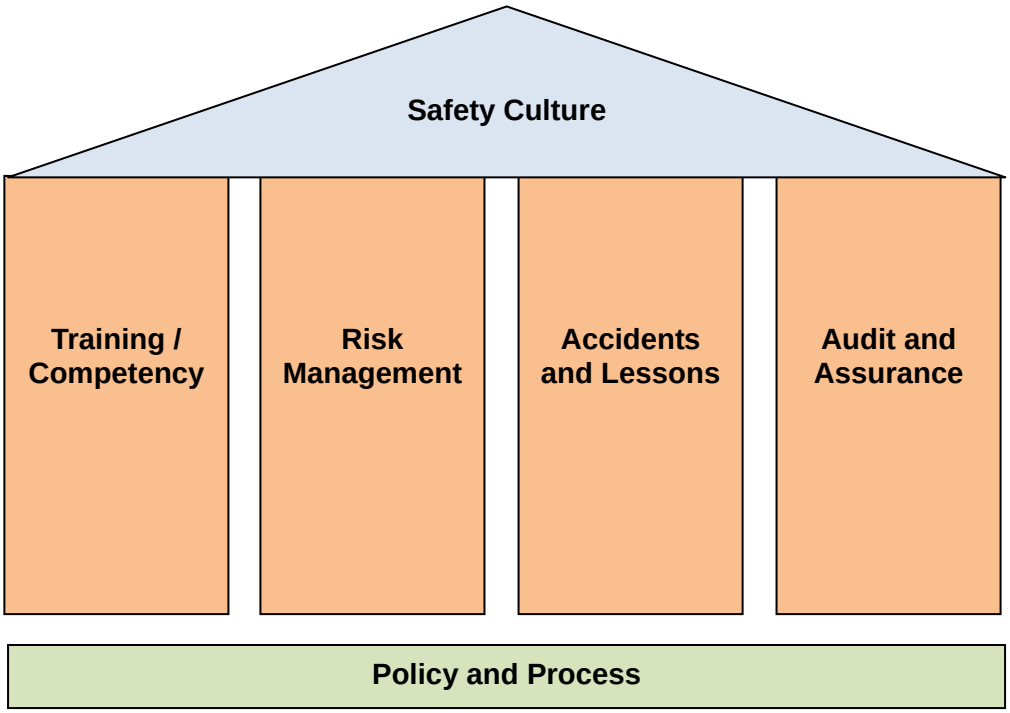
201. The **Fuel and Gas Safety Regulator** broadly agrees with the TLB's assessment of performance for the domain. Remaining challenges include: the appropriate certification of operators; the compliance of Road Tanker Delivery Stands and of Vehicle Filling Areas; and the provision of design data for and the maintenance of Oil Water Interceptors.

DSTL

Executive Summary

202. To align with revised reporting periods within MOD, this report is a summary on the progress of safety, health, environment and fire (SHEF) in Dstl over the 15 month period January 2012 to end March 2013. The report also sets the scene for future reports and objectives outlining the key themes for the future.

203. In last year's report we introduced a metaphor to help visualise the concept of our safety culture being supported by our safety management system, we called this our "SHEF House".



204. The focus over the past year has been to build on the six key elements that go to build a robust SHEF house, and to achieve the DP12 targets for safety and environmental protection detailed in the MOD Safety sub-strategy.

205. A review of the MOD maturity matrix, in relation to the MOD targets, was undertaken twice during the reporting period to ascertain our progress towards the five maturity goals. These reviews were undertaken by a team involving each of the Safety Committee Chairs (Microbiological, Chemical, Explosives, Radiological, Trials and Environmental), representatives from Governance and Planning (G&P), representatives from the Operations Directorate (two Departments managers and one Group Leader), and the Dstl Principal Environmental Safety Officer.

206. The conclusion of the January/February 2013 review was that Dstl is able to report that we have achieved Level 4 on the MOD maturity matrix for four of the five goals, and Level 3 against the remaining goal. This is against an MOD target to "*achieve Level 4 maturity (or resourced plans to achieve) by March 2013*", and to "*achieve Level 4 by March 2014*". In short, Dstl has achieved the 2013 target and is well positioned to achieve the March 2014 target.

207. Dstl is also able to report that it has met the remaining MOD Safety target, in that we have had no statistically significant increase in major injures. We have a good culture of reporting incidents and our accident rates are very low, with our reportable accident level of 0.06 per 100,000 hours worked. For further details, see Dstl's Annual Report at http://www.dstl.gov.uk/downloads/Annual%20Report%20and%20Accounts%20201

208. Dstl confirm that it has completed Stage 1 DSEAR risk assessments for both Fort Halstead and Porton Down sites. Although Dstl do handle dangerous substances, existing risk assessments (eg MHSWR and COSHH) incorporate the DSEAR aspect as and when necessary. For a couple of areas/processes (eg the incinerator facility) Dstl have enlisted expert assistance (external DSEAR consultants) to provide advice, and have made improvements (mainly signage) as a result. Dstl believes it is compliant with the HSE DSEAR ACOP.

Risks/Concerns

209. There are no notable risks or concerns in Dstl.

Crown Censures, Notices and Other Regulatory Interventions

210. During June 2012 Dstl hosted a combined HSE/Defence Ordinance Safety Regulator (DOSR, DOSR are the MOD Regulator and sit with the Defence Safety and Environmental Authority) explosives audit at Porton Down. During the audit the MOD Regulator raised a number of concerns revolving around the design specification and use of an enclosure system, and a number of process issues with a small facility within the Dstl range. As a result of these concerns the MOD Regulator issued Dstl with a Formal Prohibition Notice (FPN) on the facility. Whilst no member of staff was placed in serious or imminent danger, Dstl accepted the FPN and has had two follow-up meetings with the Regulator. The FPN was lifted in November 2012 when the facility was taken out of use. Work will not commence until we have redesigned the facility and work flow; expected to be late 2013.

DEFENCE SUPPORT GROUP (DSG)

Executive Summary

211. DSG continues to be involved in the development of the Equipment Sustainability System (ESS) Regeneration Capability (RC) facility in Camp Bastion and we are now the Lead Support Provider. Another area of focus has been the newly acquired DSG site at Ashchurch, with all activities being reviewed to incorporate into the existing DSG Business System.

212. The Agency was subject to two surveillance visits by its third party certification body, Lloyds Register Quality Assurance. Significantly lower numbers of findings were identified in comparison with previous visits, with no major issues highlighted. Incident statistics for DSG continue to show a downward trend, in particular, a 27% decrease on RIDDOR reportable incidents, taking the new 'over 7 day' rule into account. However, the Major RIDDOR incidents have increased to 6, although unrelated, all were thoroughly investigated in line with DSG Defence processes with lessons learned and identified improvements shared across all business units.

213. There have been no significant environmental issues in the reporting period, all activities continue to be carried out within requirements of consents and permits in place and all have been renewed without issue. Where possible, waste is reused or recycled. Energy continues to be monitored to identify opportunities to reduce the carbon footprint, taking into account additional UOR workloads.

214. DSG satisfies requirements of DSEAR by compliance with JSP 375, Volume 2, Leaflet 56 Dangerous Substances and Explosive Atmospheres. DSG sites have been subject to surveys carried out to consider existing control measures, and identify any areas of concern where action would be required to ensure continued compliance with the regulations. All actions identified have been resolved. DSEAR is one of the elements considered when carrying out activity risks assessments involving dangerous substances or processes that have the potential to create an explosive atmosphere.

Crown Censures, Notices and Other Regulatory Interventions

215. There have been three HSE visits across the Agency during the reporting period. Two have been to investigate RIDDOR reports related to Hand-Arm-Vibration Syndrome, with the third relating to a major incident at DSG Donnington where an employee became trapped under a fork lift truck, and subsequently had their left arm amputated. The individual concerned returned to work after a few months of recuperation. As a result of the incident, a working group was set up with representation from Senior Management, SHEF personnel and Trade Unions. The working group reviewed all of DSG's arrangements on all sites where pedestrians and vehicles interface. Landlords were consulted where DSG is a tenant and robust Traffic Management Plans are in place, with pedestrian walkways being identified on all sites. The HSE investigated and found no management fault and no case to answer. There are no outstanding issues with any regulatory body.

Regulators' Comments

216. The **Land Systems Safety Regulator** cannot confirm the TLB assessment of performance against DP12 targets due to limited engagement this reporting year and a lack of detail in the DSG Report specific to land systems. There is a requirement for MOD to assure vehicle roadworthiness and compliance with DG vehicle legislation through Mandatory Equipment

Inspections (MEIs), ADR1[20] inspections and tanker leak proof testing. In these areas, which are mandated as Crown Servant-only tasks, DSG currently makes a significant contribution. With the potential sale of DSG[21] and the transfer of work to contractors, MOD will need to be fully cognisant of the associated risks, issues and constraints that will result from privatisation. LSSR is currently working with DfT to better understand this complex issue and is awaiting advice from their legal department in order to progress this work further. DSG is aware of this work and has been briefed on the potential implications to privatisation.

UK HYDROGRAPHIC OFFICE

217. The UK Hydrographic Office has completed an internal assurance report for this year. As the Hydrographic Office does not conduct hazardous activities, it is considered that formal Defence Regulatory comment is unnecessary.

[20] "ADR1" refers to the inspection of a DG vehicle for compliance with the relevant technical requirements of ADR. 'ADR' means the European Agreement concerning the International Carriage of Dangerous Goods by Road.

[21] There is currently work ongoing to look at the potential sale of DSG and the setting up of a New Contracting Arrangement (NCA). DSG currently conducts the majority of MEI and ADR1 inspections for MOD.

Annex A

Details of Safety-Related Fatalities

A summary of the 11 potentially work and safety-related fatalities during the period 01 Jan 2012 – 31 Mar 2013 is shown below;

a. **Army** – 15 Mar 2012 LBdr Rathbone - Fell through hangar roof, unspecified multiple injuries. Subject to civilian police investigation and ongoing Service Inquiry, Inquest date not known.

b. **Army** – 02 May 2012 Rgr Maguire – Gun shot wound (GSW) to forehead during live firing exercise on Castlemartin Range. Following the Coroner's verdict of Unlawful Killing, by an unnamed individual the Dyfed-Powys Police may decide to reopen their investigation into the death of Ranger Maguire. Until this decision is made, the HSE and RMP (SIB) investigations will be paused. The Coroner made no mention of raising a Rule 43, therefore we are currently not expecting one.

c. **Army** – 21 Jun 2012 Pte Lomas - Drowned whilst on Ex Diamond Wyvern Adventure-fell from capsized raft. LAIT investigation completed. Date of inquest not known.

d. **RAF X 3** – 03 Jul 2012 Sqn Ldr Bailey, Flt Lt Sanders & Flt Lt Poole - Aircraft accident - mid air collision between two Tornado GR4's - unspecified injury. Subject to Military Aviation Authority Service Inquiry.

e. **Navy** – 03 Oct 2012 Marine - Drowned when boat capsized on military training in North Devon. Subject to LAIT investigation.

f. **Navy** – 07 Oct 2012 Marine - Fall from cliff during training in North Wales, unspecified injury. Subject to Health and Safety Executive (HSE) and LAIT investigation.

g. **RAF X 2** – 14 Feb 2013 Sqn Ldr Than & Flt Lt Capps - Avalanche whilst on mountaineering expedition in the Chalamein Gap, Cairngorm Range, Scotland, unspecified injury. Subject to civilian police and Service Inquiry.

h. **Member of the public** – 25 Feb 2013 Mr Phillips – Fell during a RAF Search and Rescue attempt. Subject to civilian police investigation and Service Inquiry.