Ministry of Defence

DEFENCE ENVIRONMENT AND SAFETY BOARD

SAFETY, ENVIRONMENTAL PROTECTION AND SUSTAINABLE DEVELOPMENT ASSURANCE REPORT 2010

REPORT BY THE PROCESS OWNER

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SECTION 1

SAFETY AND ENVIRONMENTAL PROTECTION EXECUTIVE SUMMARY

ASSURANCE STATEMENT

1. The overall assessment of the management of safety in 2010 is:

LIMITED ASSURANCE.

2. It is clear that there has been little evidence of improvement since last year. However, current initiatives at corporate and TLB level have potential to improve the assurance rating. Whilst the Defence Board Standing Objective target of "Substantial Assurance" by 2012 remains achievable, the lack of real progress in 2010 and potential for further degradation from numerous change programmes, reported by all Functional Environmental and Safety Boards (FESBs), and DG Military Aviation Authority (MAA), remains a serious concern.

PERFORMANCE & COMPLIANCE

3. There has been an increase in safety-related fatalities from 2009 (from 7 to 15), though the causes are disparate with no common theme. Major injuries have reduced slightly, from 1164 to 1148.

4. There have been two Crown Censures (for incidents that occurred in previous years) and four Crown Improvement Notices in 2010, compared with zero in 2009. Details of significant failures in control are reported in the main report.

5. The Defence Internal Audit Baseline Review of the Safety Strategy goals provided another perspective of the performance of the TLBs and highlighted areas for improvement. Of particular concern to TLBs was uncertainty over responsibilities on the Defence estate which should be addressed by the creation of Defence Infrastructure Organisation.

KEY CONCERNS

6. The following cross-cutting issues have been derived from FESB and MAA assurance reports.

a. **Shortage of Suitably Qualified and Experienced Personnel (SQEP)**. Reported by all FESBs and MAA, this remains a serious risk to the effective delivery of elements of safety and environmental management. However, the extent of the shortfall has not been determined in many areas and until this work is complete, the relative importance (against the other concerns) of this generic concern cannot be fully identified.

b. **Effects of Change**. As further major change initiatives (eg formation of DIO, SDSR/Defence Reform Review (DRR)) reach the implementation phase, the risk of degradation in our safety and environmental management arrangements remains high. Providing well argued impact assessments as part of these initiatives is key to

mitigating this concern, and the recent DESB consideration of the PR11 Stage 3 options sets a good precedent.

c. **Learning from Incidents**. Whilst significant improvements have been made in linking the Army's Incident Notification Cell (AINC) with the Defence Lessons Identified management Systems (DLIMS), the implementation of an effective MOD-wide process for learning from our accidents and incidents remains some way away.

7. All these generic concerns were reported in the 2009 Report, but the further change programmes to which MOD has been and will be subjected over the next 12 months can only continue to focus attention on these concerns.

8. Details of specific concerns, such as Brownout and infrastructure issues, are detailed in the main report.

OPPORTUNITIES

9. Through the DRR, DBR will seek a clearer overall pan-Defence framework for the management of safety and EP risk, including the capacity to learn lessons from incidents

10. DESB will monitor the actions of TLBs to identify and retain the right numbers of SQEP, in both civilian and military manpower, to deliver their safety requirements.

SAFETY AND ENVIRONMENTAL PROTECTION FULL REPORT

RISK MANAGEMENT AND INTERNAL CONTROL SYSTEMS' OVERVIEW

1. The top level arrangements for controlling safety and environmental risks are set out in the Secretary of State's Safety, Environmental Protection and Sustainable Development Policy. TLBs and TFAs are responsible for their respective Safety and Sustainability Risk Management and Internal Control Systems. These are assured through a matrix of regulatory and assurance bodies including the recently established Military Aviation Authority (MAA). The detailed arrangements are set out in JSP815 'Defence Environment and Safety Management'.

2. We are required to comply: with all UK legislation, which in some areas contains exemptions for Defence; overseas with UK standards where reasonably practicable and, in addition, comply with relevant host nations' standards and where Defence can rely on exemptions or derogations from either domestic or international law, we comply with standards and management arrangements that are, so far as reasonably practicable, at least as good as those required by legislation.

3. All managers and commanders are required to promote and lead by example on safety, environmental and wider sustainable development matters as part of normal business, and create a culture where everyone understands and delivers their contribution to protecting people and the environment.

4. Targets are set and our safety, environmental protection and wider sustainable development performance is measured, monitored and reported and is consistent with and supports wider Government initiatives

PAN-DEFENCE COMPLIANCE ASSESSMENTS

5. Evidence from the individual FESBs' reports indicate that external and internal policies, standards and rules are, in the majority, being applied across Defence. There are concerns in some areas about specific compliance issues: these are covered in more detail in the body of this report.

THE SAFETY AND EP ASSURANCE STATEMENT

6. The aggregate assurance statement for Safety and Environmental Protection, based on the standard Defence Internal Audit Classifications at Annex A, is assessed as:

LIMITED ASSURANCE

and is the same as that given in last year's report. This is obtained by a collection of assessments from individual FESBs as follows (last year's assessments in brackets):

a. Defence Fuels and Gases Environment Safety Board (DFGESB) – **Limited Assurance (Limited Assurance).**

b. Defence Nuclear Environment and Safety Board (DNESB)– **Substantial Assurance (Substantial Assurance).**

c. Occupational Health, Safety and Environment Board (OHSEB)– **Substantial Assurance (Limited assurance)**.

d. Land Systems Environment and Safety Board (LSESB)– **Limited Assurance (Substantial Assurance)**.

e. Defence Ordnance Environment and Safety Board (DOESB)– **Substantial Assurance (Limited Assurance).**

f. Ship Environment and Safety Board (SESB) – **Limited Assurance (Limited Assurance)**.

g. Military Aviation Authority – **Limited Assurance.**

FESBs' CHAIRMAN'S AND DG MAA STATEMENTS AND MAIN RISKS/ISSUES

7. The main risks/issues raised in FESB and MAA reports are as follows:

DFGESB

8. The third annual report from the DF&GESB assesses the assurance level for Fuel and Gas safety in 2010 as **LIMITED ASSURANCE**. There has been good progress in the management of fuels, including the implementation of an evidence-based reporting system. However, some high-level risks remain. In particular, the majority of infrastructure at Oil and Fuel Depots is beyond its designated life and much falls below current legislative requirements in key areas. Although mitigated as far as possible, the principal areas of non-compliance are:

a. Hazard areas' drawings have been unavailable and risk assessments have not been completed.

b. Non-compliant secondary bunding and issues with primary containment pending the clarity of the Military requirement post SDSR and availability of capital project funding.

c. Environmental risk assessments have not yet been completed at some sites due to limited specialist resource but are now programmed

9. This year has seen a 40 % decrease in the number and size of spills reported. Whilst the Board has identified 'step-change' improvements in some areas, continuing funding allocation issues, a lack of positive ownership of key areas of compliance and inadequately trained personnel have prevented an improved level of assurance being attained overall. Significant improvement has been made in ensuring that the inadequate control measures noted in the last report have been addressed, particularly on operations and for the Permanent Joint Operating Bases (PJOBs). For the fuels environment however, the single greatest challenge remains the ageing MOD fuels infrastructure, which has suffered from a long-term, chronic lack of investment, and now continues to operate through a mix of stop-gap maintenance, careful risk management and reactive funding, mitigated as far as possible, by an improved reporting and assurance regime.

10. The main risks/issues are:

a. The condition of the fuels storage infrastructure

b. SQEP

c. Attaining legislative compliance, such as Dangerous Substances and Explosive Atmosphere Regulations (DSEAR), and Environmental Protection.

DNESB

11. The DNESB Chairman reports that an acceptable standard of nuclear and radiological safety and environmental protection has been maintained in the operation and delivery of the Defence nuclear programmes. Individually, none of the DNESB's 8 issues reflect an immediate safety or environmental concern; but together they represent a potential compromise to compliance or the demonstrability of compliance and, taken together, they present a risk that it will become increasingly difficult to maintain that the Defence nuclear programmes are being managed with due regard for the protection of the workforce, the public and the environment. The principal threats to safety in the Defence nuclear programmes in the medium term are the adequacy of resources, both money and staff complement, and the maintenance of a sustainable cadre of suitably competent staff (RN, MOD civilians and in industry partners). Confidence in making the **Substantial Assurance** judgement is reduced from 2009 due to the adverse trend in resources (which I expect will become yet more painful), further aggravated by constraints on regulatory capacity.

12. Duty Holders have maintained Continuous at Sea Deterrence (despite increasing pressures on manpower and some equipment fragility) and have safely delivered the required military capability from the Submarine Arm despite reduced platform availability; HMS ASTUTE has become the first new SSN in the fleet since 1991.

13. The main risks/issues are:

a. Lack of adequate resource to deliver the Defence nuclear programmes safely.

b. Measures already in hand may be insufficient to address the present and predicted shortage of Nuclear SQEP in the RN among MOD civilians and Defence contractors.

c. The frequency and significance of incidents remain too high as a result of poor control of work.

OHSEB

14. In last year's report (my first as OHSEB Chairman), I noted that there was a lack of robust evidence on which to reach a clear assurance judgement. On that basis, but noting the advice of several Board colleagues, I concluded that I could offer only a LIMITED ASSURANCE about the adequacy of safety management in the OHSEB area of responsibility. This year there has been a stronger focus on gathering and analysing

evidence. Although the results still leave scope for improvement, the underlying evidential picture is clearer than a year ago, and I feel I can, on balance and with some caveats, offer **SUBSTANTIAL ASSURANCE.**

15. This judgement is based on my conclusions that within the OHSEB sphere of responsibility:

a. There have been no significant failures of control;

b. There is evidence of inadequate management of low/medium (but not in my judgement high) category safety risks;

c. There are significant risks to future compliance, but again in a low/medium, rather than high category. Chief among these is clear evidence that more could be done to learn lessons from safety incidents that do arise. This will continue to be a priority for 2011.

16. My main reservations are that:

a. In reaching this judgement, it has been necessary to make assumptions about the precise purpose of this report. This is unsatisfactory and results mainly from a continuing lack of clarity (noted also in last year's report) about the role of the OHSEB, including in relation to other FESBs. This in turn, I believe, stems from a more fundamental lack of clarity in the current DESB framework, which I hope the current 'Haddon Cave Wider Aspects' will resolve.

b. Although the evidence-base is better than last year, there is still scope for improvement in both the underlying evidence and the analytical framework in which it needs to be assessed.

c. In common with other FESB Chairs and OHSEB colleagues, I am concerned that impending financial savings and manpower reductions across Defence may result to a lack of SQEP. I have not, however, elevated this to a major risk in view of assurances I have received from the DG HR&CS and Head of Defence Reform Unit.

LSESB

17. The LSESB is able to give **Limited Assurance** on the effectiveness of Land systems S&EP management, a downgrade from Substantial Assurance which was reported in 2009. This reduction is mainly due to the End-to-End (E2E) assurance process enabling the Board to have better understanding of the issues faced by TLBs and the actions needed to resolve them. The Haddon-Cave 'wider aspects' review has also identified improvements that can be made to Land systems S&EP policy and processes. Together these developments have led to a more accurate assessment, although it should be noted that the LSESB have made huge strides in the past 12 months; our processes are far better and our understanding is much deeper and these are what have led to a change in assurance. The drop in assurance is not considered to be significant and LSESB and TLB actions are now in place to improve matters in order that Substantial Assurance can be regained next year.

18. The most significant issue affecting the Land domain is lack of SQEP in posts that have Safety & Environmental Protection responsibilities and stakeholder engagement.

DOESB

19. The 2009 assessment of the assurance level for Defence ordnance, munitions and explosives (OME) was LIMITED – the key concerns reported were: the condition of the explosives estate; the safety of deployed munitions; and the DOESB assurance reporting system. However, significant progress has been made in all of these areas over the last 12 months which has raised the level of assurance to **SUBSTANTIAL.** Project HADRIAN is addressing the provision of compliant storage, and an Enhancement Option has been included in PR11 to refurbish Explosive Stores Houses at Longtown to ensure that we have sufficient capacity to cope with the predicted stockpile to 2014. Following the 3rd party Audit of OME safety management in Afghanistan (which was completed in Jun 10) we now have a clear appreciation of the risks and issues, an Action Plan to drive corrective action, and we understand where our efforts over the coming year need to be focussed. The DOESB E2E assurance process has also been over-hauled and the TLB assurance reports are now presented in a common format, underpinned by evidence, and thus provide a greater degree of confidence.

20. Looking forward, the primary concern remains the Condition of the Explosive Estate. Of note, the Department's requirements for ammunition storage are currently being reviewed in the light of SDSR and the results of this review will undoubtedly influence the level of risk. There is also a risk to UK Forces deployed air operations involving munitions at Kandahar, where Coalition partners work to different safety standards. The lack of a common Coalition standard places UK assets at risk from other nations' activities but the NATO Logistic Committee has been tasked to improve current arrangements. Concerns over the ability to maintain SQEP have been a recurring theme in reports to the DOESB during 2010. However, the scale of the problem needs to be quantified during 2011.

21. For 2010 **LIMITED ASSURANCE** has been given for the MOD's Major Accident Control Regulations (MACR) Safety Case, primarily as a number of establishments do not meet the requirements of National Legislation and there are establishments with longstanding Improvement Notices. Action is in hand with TLBs through the MACR Competent Authorities to address the issues and the overall position is improving though not enough to raise the assurance level to Substantive this year.

22. The main risks/issues are:

a. Condition of the Explosives Estate.

b. Deployed Munitions.

c. Maintaining SQEP.

d. Limited Assurance for MACR.

SESB

23. The priority of safety has been elevated across the Maritime domain in 2010 as initiatives gain traction, and the implications of the Nimrod Review published in October

2009 unfold. With the environment of top level support this creates, the concerns about safety culture that I expressed in broad terms in my 2009 report are increasingly well understood and can now be better targeted.

24. The following issues will form the main focus of the SESB's attention in 2011:

a. Developing a safe datum for SQEP. The community lacks a datum against which to measure its level of SQEP, undermining its ability to define the impact of systematic shortcomings. This capability is critical if we are to manage safety under the stressful conditions that we can expect to endure in the wake of SDSR and which I have no doubt represent a real, and growing threat to maritime safety. The DESB asked for such a datum during 2010, but this has not been possible as we do not yet have a clear understanding of the many processes that underpin ship safety.

b. Completing the E2E Assurance process. I base my 'assurance statement' largely on Duty Holder reports. The SESB and its regulatory arm, the Naval Authority, has traditionally focused on ship design and providing robust independent assessment of Platform Duty Holders' work. Naval Authority regulation is in good shape for ships and submarines with procedures mature or maturing, Fleet engagement improving and coverage across MOD shipping increasing. However, the increasingly well established use of the "End-to-End Safety Argument" has rightly drawn attention to a range of other aspects, like crew competence, which are not treated with the same assurance rigour. Although Independent Safety Auditors exist, it is not clear that their attention is drawn systematically to these wider issues, neither are there other formalised assurance processes.

c. Furthermore, in the last ten years there have been a number of serious ship and submarine accidents and near accidents that have not attracted the attention of the SESB, caused by areas of ship safety management beyond engineering. While progress is being made, e.g. the introduction of the Port Maritime Safety Policy and Operating Authority Duty Holders, the SESB need to do more to make the domain effective in addressing the safety of MOD shipping in its entirety, as required by 2PUS's letter of delegation to me.

d. While the application of the End-to-End Safety Argument has brought some areas of concern into focus, it has also increased appreciation of the need to manage the accumulation of risk across lines of development. There is now clear evidence that cumulative risk is being managed in Naval Command HQ in the spirit of the Duty Holder role borne by the Operating Authority, albeit with an engineering bias. The clarity this gives to the status of the Fleet is very welcome, and it is strongly recommended that the approach is extended to other platform operators and to non-engineering lines of development.

e. Improving Learning from Experience. Learning from experience has received significant attention through the year, particularly from within Navy Command, but the evidence is still limited that there has been an improvement in the quality and consistency of actions throughout the learning chain. In view of diminishing resources, the SESB will watch progress closely, and look for evidence that roles and responsibilities are being discharged to deliver effective prioritisation decisions.

f. Safety culture. The Navy Safety Improvement Plan is firmly focussed on improving safety culture; it will be of central importance to addressing the issues in 2011 and it is very strongly supported by all members of the SESB.

25. Overall Assurance Assessment. If we were in steady state conditions, I would have confidence that we have turned the corner and are improving against the limited assurance given in the last two years. However, we face a period of unprecedented pressure through programme change, manpower reduction and increasing scarcity of skills. I judge that our improvement is not sufficiently complete or robust to give a stronger level of assurance that safety is under control, and I believe that a statement of **LIMITED ASSURANCE** continues to be appropriate.

26. The main risks/issues are:

a. The need to develop a safe datum for SQEP.

b. The need to improve the levels of assurance against the End-to-End Safety Argument.

c. The need to improve our ability to learn from experience.

d. The need to improve safety culture.

MAA

27. The MAA is in the midst of establishing itself as a regulatory organization, driving regulatory and behavioural change and implementing an Air Safety Assurance strategy. DG MAA will be presenting a comprehensive, independent Annual Report to 2nd PUS at the end of Mar that will detail progress this far. In the interim, DG MAA's provisional assurance assessment is Limited Assurance across an obviously broad and complex area of Defence activity which, it must be remembered, is being subjected to such a degree of intrusive, end-to-end baselining for the first time.

28. Reviews of 10 Hels and Air Spt in-service platform Safety Cases (SC) have confirmed Haddon-Cave suspicions beyond Nimrod and exposed a number of recurring themes:

a. There are weaknesses in SC arguments, including gaps in supporting evidence, outsourcing of thinking to contractors and safety arguments not being updated on platform modification. There is also a lack of strategic guidance and regulation about SC argument constructs and focus.

b. There are variable standards of SC Reports, some missing detail, others with un-actioned recommendations and a lack of mandatory independent assessor involvement.

c. There is an apparent lack of a common ALARP strategy.

d. Many Project Teams (PTs) are struggling to recruit suitably qualified & experienced safety managers and safety engineers and are relying heavily on contractor support to fill gaps.

e. There exists confusion between extant regulatory documentation and guidance material which is exacerbated by unclear lines of responsibility between PTs, Operating Centres and former regulator(s).

29. Some areas of good practice were highlighted during the reviews, but a significant amount of work is required to bring SCs to the required standard. PTs have developed action plans which have been reviewed and approved by the relevant Operating Centres Directors and Duty Holders (DHs). The MAA will closely monitor progress with SCs through the PT Audit Team during routine audits and anomalies in extant regulations are being addressed under MAA Workstream 3 – Re-write of the Military Aviation Document Set that is due to complete Phase 1 by the end of May 11.

30. MAA Audit teams have conducted 9 PT audits since Apr 10 and have noted the following trends: airworthiness or safety standards not included in contracts, airworthiness delegation unclear, no independent safety assessor, incomplete ALARP justifications and poor traceability of SC evidence. From 1 Jan 11, the audit frequency is increasing to an 18 month cycle (previously 3 years), based upon a 'rich picture' approach, with audit visits prioritised according to risk and targeted audit questions being the culminating activity of surveillance of routine reporting and meetings. A significant positive step has been the formation of the internal DE&S Airworthiness Team to champion improvements in response to the challenges raised by the Nimrod Review and early MAA assurance findings. The MAA has also made available to PTs a tool designed to assist them in determining the airworthiness skills and competencies required to support delivery of their outputs. An Air Safety 'Pathfinder' Assurance Visit (audit) of JHC was carried out between 29 Nov-3 Dec 10 by an MAA team previously qualified to British Standards Institution auditing standards. Initial findings, based on necessarily limited sampling of this large operational command, indicate that JHC is largely compliant with extant regulation and MAA Regulatory Instructions (RIs) and that an appropriate safety culture is developing in the Command. Nevertheless, there are a number of areas that require further attention, in particular management of risk. A formal report has been issued, including Corrective Action Requirements, and follow-up activity will be discussed in detail with JHC.

31. Establishing the Aviation DH construct, which will underpin the safe delivery of Defence aviation , has been at the forefront of MAA change activity since May. Regulations pertaining to DH roles and responsibilities have been promulgated and the DH framework went 'live' on 01 Jan 11. Comprehensive guidance on Risk Management to support DHs will be published imminently and Assurance principles guidance has been issued to complement a comprehensive DH audit schedule that has recently commenced and will develop over the coming year. In parallel with this sizeable task, the MAA continues to conduct airworthiness assessments and surveillance of contractors through the Design and Maintenance Organisation approvals schemes. Audit activity by the MAA has highlighted areas for improvement, but the response from the regulated community has been overwhelmingly positive and engaged. In a significant initiative, PR11 is the first MOD planning round to be subjected to independent scrutiny of proposed measures and their potential impact on Safety. A small MB-based MAA Policy and Plans team has engaged closely with the PR11 process over recent months and initial observations were briefed to the DESB on 12 Jan. Whilst it is too early in the process to comment definitively on any risks introduced or exacerbated by the ongoing planning round, this is a very positive step and should ensure that in the weeks ahead the DB and Ministers are able to make better informed decisions in the Air Safety context.

32. DG MAA's provisional assessment of strategic risks to Air Safety is:

a. Brownout – dust obscuration during helicopter landings. A significant risk in Op HERRICK that is causing accidents. It is questionable if mitigating this risk is being accorded sufficient priority across all DLODs.

b. Mid-air Collision – a risk during both routine flying operations and on Op HERRICK. Incremental mitigation of this chronic risk, which has a high 'societal concern' factor, has suffered protracted delays over successive PRs since the 1998 SDR. A 'Delete Tornado Collision Warning System' Option is being run in PR11 which would prejudice the Dept's ability to declare this risk ALARP.

c. Manpower Reductions – Maintaining SQEP. A process by which the Dept's implementation of SDSR/PR11 manpower reductions (mil and civ) is informed by an understanding of what technical and supervisory skills and competencies must be retained, and where, to underpin Air Safety is not yet evident.

d. Helicopter Collision with Wires and Obstructions – carried forward from the 2009 MARSB Strategic Risk register. No significant progress towards a costed programme to mitigate the risk of RW wire strikes. Four reports of wire strikes/near-misses in 2010.

e. Aggregated Indirect Risk – the compound effect of SDSR/PR11 manpower, activity and force structure changes. The potential for the effects of a raft of individual SDSR/PR11 measures to aggregate and pose known unknown risks is high. Creating a 'resources reserve' to draw upon when required to mitigate this generic risk should be considered.

SIGNIFICANT FAILURES IN CONTROL

33. Accident and Incident statistics are at Annex B. Crown Censures are at Annex C. The following examples of significant failures in control, together with action taken, are extracted from individual FESB reports.

a. Issue. Safety incidents involving gas cylinders continue to occur whilst the responsibility for gas infrastructure is still to be fully defined. Gas cylinders have been incorrectly and dangerously loaded in ISO containers when returned from operations. These ISO containers have also been poorly labelled or had no markings at all and no accompanying dangerous goods paperwork. Such incidents put the safety of the transporting vessel and the personnel involved in the loading/unload of these containers at risk.

b. Action. Investigation, remedial action and training are being undertaken by the appropriate TLBs. A structured *transportable* gas Safety Case is being developed, and in the interim DFG has started to implement safety checks.

c. Issue. In Kirknewton airfield, an estimated 1,000 litres of fuel was discovered in the drainage system from old, forgotten, underground storage tanks on site.

d. Action. Tanks removed.

e. Issue. Six establishments failed to demonstrate compliance with MACR, resulting in the issue of Improvement Notices.

f. Action. A DFG review with Environment Agency/Scottish Environmental Protection Agency to clarify the bunding requirements and classification of a partially buried tank is ongoing. The environmental aspects of the UK OFD non-compliances are also being addressed with the Environmental Science Group, but this is unlikely to be complete before 2012. All bar 1 of these Improvement Notices were issued in 2007 and establishments continue to operate at risk outside of the MOD Major Accident hazard safety case.

g. Issue. Two SSNs extended their operations whilst having a disabled primary safety system on a nuclear safety implicated pressure system.

h. Action. DNSR issued a Safety Improvement Notice requiring improvements to be made to avoid a recurrence. Efficiently led action led to the Notice being withdrawn 3 months later.

i. Issue. A previous DE improvement initiative to establish a common approach to improving asbestos management on the MOD estate was agreed with TLB Customer Estate Organisation, Chief Environmental and Safety Officer and DE industry partners. The Coherence model "process for management of asbestos" was rolled out by DE Operations across most Regional Prime Contractor (RPC) areas. MOD is since reported to be legally compliant on most RPC-managed sites across the UK against the requirements of Control of Asbestos Regulations 2006. This did not however, prevent DE from receiving a Crown Censure with the charge accepted and a Contractor being prosecuted during this report period.

j. Action. A lessons learned report is to be developed by DE and shared across MOD.

k. Issue. Audits indicate that implementation of guidance and Asbestos Management Plans (AMP) remain an issue. Although DE is Policy Owner here, the lack of clarity on single accountable governance authority has made it difficult to get areas outside of DE-managed areas to provide robust assurance. This remains a concern, as there is a lack of evidence that implementation of AMPs is prevalent across the Defence estate.

l. Action. The previous guidance - DE Practitioner Guide 02/07 Management of Asbestos Containing Materials on the Defence Estate - is under priority review to reflect changes.

m. Issue. Crown Censure proceedings brought against the Royal Hospital School due to an accident involving a pupil falling from the School's climbing wall.

n. Action. Although largely accepted by the school, the cause was contested. This response was rejected by the HSE Regional Director and the matter was passed to the HSE Operations Director, who is prepared to accept a compromise largely in line with the school’s original letter of acceptance but adding some points.

This should retain the assertion that the admitted failings did not cause the accident and minimises the causation issue as an unfruitful sticking point.

o. Issue. Civilian contractors handling, accessing and controlling military explosives on MOD establishments, including not making applications to relevant authorities in a timely manner; being taken over by other companies (rendering existing licences, certificates and authorities void) and being given exemptions by Police when such exemptions are not valid. Explosive Regulator staffs have taken appropriate action to deny any unauthorised access to military explosives.

p. Action. Chairman DOESB has directed the Chief Inspector of Explosives (MOD) to liaise with the individual Inspectors to establish the extent of the problem, and report by the end of February 11, including proposed solutions.

q. Issue. The grounding of HMS ASTUTE off Skye on 22 Oct 2010.

r. Action. The Naval Authority Regulations have been updated with requirements for managing certification in the event of an incident, taking into account the lessons learnt.

CAPABILITY OR CAPACITY ISSUES

34. Resources and People. All FESBs and the MAA cite the lack of SQEP as a core threat to Defence business. The problem consists of 4 main issues:

a. A directly related safety post (e.g. a regulatory post) being vacant.

b. A safety-related post (e.g. a safety post in a project team) being vacant.

c. All other posts that have a safety-related condition to them (e.g. a project manager, maintenance worker, designer) being vacant.

d. Any of the above posts that do not have a suitably qualified and experienced person filling them.

35. Noting that some domains have scoped the SQEP issue, the Dept needs to assess the overall situation. Therefore, the TLBs should carry out the following:

a. Establish the number of safety-related posts (sub-paras a and b) in each area.

b. Ensure that correct competences have been included in those safety-related posts.

c. Determine the shortfall of personnel filling those posts.

d. Determine the reasons for not being able to train personnel in the posts to be competent.

e. Establish the costs needed to address the above 4 actions.

36. Incident Reporting and Learning. There are continuing concerns by a number of FESBs about the ability to report incidents and accidents in a simple, coherent and integrated manner, as well as providing a pan-Defence lessons-learned system. This capability is essential to the delivery of elements of the Safety Strategy. Work underway in Land Command, linking incidents with lessons identified, is already providing real improvements in this area for the Land Environment. Its wider application across the Department is being considered.

FUTURE ISSUES

37. DIO. The formation of the DIO is likely to have a significant effect on safety and EP roles and responsibilities, particularly at site and establishment level. Placing the responsibility for both hard and soft facilities management into the DIO has the potential to clarify current uncertainties over responsibilities of Heads of Establishment and Commanding Officers. The major concern remains insufficient early engagement and consultation with TLBs to ensure clarity over the future relationship between themselves and DIO. There are also concerns over the 60% planned cuts when DIO form up.

38. DRR. Undertake early intervention in the DRR to ensure that, as skills and capacity is lost, it does not compromise the Department's safety management arrangements with the attendant reputational, operational and financial impacts.

39. Haddon-Cave Wider Aspects Work The DESB has agreed that some of the issues raised in the Haddon-Cave report have implications for the wider MOD. These issues have been translated into seven workstrands, which SSD&C are coordinating.

40. Chief among these workstrands is an examination of the current regulatory regimes in place in the department. The examination to date has identified that many of the existing internal frameworks do not meet the recommendations of the Haddon-Cave report (principally that regulators should be independent). These findings have been agreed by the DESB. Subsequently SSD&C has been tasked with scoping options for a possible Independent Safety Organisation (ISO). This work is currently focused on establishing the remit of an ISO with a view, if agreed, to producing a costed organizational option by May 2011. It is hoped that the ISO, if created, as the single safety regulator in the MOD (bar aviation), will have a positive impact on the assurance of Departmental safety standards. It will also be closely involved in the production of future annual assurance reports.

41. Safety Cases. SSD&C is also examining the existing requirements for safety cases. A set of principles has been discussed extensively with stakeholders. These principles would ensure that the safety case included all aspects of a high hazard activity (e.g. not just the equipment, but also the crewing, training and conditions in which the activity takes place). These principles should be agreed by mid 2011.

42. Health and Safety Duty Holders. SSD&C is also undertaking work with regards to health and safety Duty Holders. TLBs are currently being asked to identify those individuals who are responsible for personnel undertaking activities (with the exception of aviation which is being dealt with by the MAA). These individuals will be then formally appointed as Duty Holders and will be held to account for the health and safety of personnel under their management. The Duty Holder concept has been accepted, in

principle, by TLBs who are currently working through the practicalities of implementing this framework in their organisation. This will have the effect of moving the focus of safety from equipment to the activity being undertaken.

43. SDSR/Defence Reform. The Strategic Defence and Security Review did not, formally, assess the major implications for the safety of the department and there has been insufficient time to properly assess the impact of the SDSR options taken before decisions were made. Therefore the full impact of these decisions might not be known for a number of years. That said, the major issues raised by the Front Line Commands regarding wider PR11 options were discussed at a DESB in January 2011, although timescales prevented a full assessment.

44. It is unclear what impact the Defence Reform Review will have on safety. However the need to reduce costs and the severe reduction in personnel numbers will undoubtedly place a severe strain on safety systems. The department must ensure that mitigation plans are in place to maintain the appropriate standards. SSD&C is in close discussions with the Reform Review team as to how any outcome will impact on some of the wider aspects work and Defence safety as a whole.

ACTIONS TO ADDRESS CONTROL ISSUES FROM PREVIOUS SICS

45. Resource Constraints. In 2009, the pressures resulting from resource constraints were reported by FSB Chairmen to be their greatest concern. Examples were the DNESB, which reported concerns over the adequacy of resource available to deliver and regulate the Defence nuclear programmes safely, and the DOESB, which reported the condition of the MOD explosives estate, and the safety of deployed OME, particularly in Afghanistan.

a. Update. This issue has been discussed under the *'CAPABILITY OR CAPACITY ISSUES'* section of this paper. With specific reference to the deployed OME in Afghanistan, since last year, a 3rd party audit of OME safety management in Afghanistan concluded that the biggest risk to UK forces is at Kandahar Airfield (KAF), in particular where Coalition air operations work to different safety standards and the lack of a common Coalition standard, which is placing UK assets at risk from other nations' activities. Chairman DOESB has pressed the HQ NATO and JFC Brunssum Logistics Committee and Regional Command (S&W) for support/action in improving current arrangements. CIE(MOD) is also engaged with US, CAN and AUS counterparts, who are pressing at senior level within their respective Defence Departments. In order to further expose and mitigate the in-theatre, risks, Chairman DOESB has directed DCIE (MOD) to develop an annual 3rd Party Audit Programme for in-theatre OME safety management is anticipated that the next audit will be conducted in October 2011.

46. Brownout. The MARSB reported that management of one of their greatest concerns, Brownout, is reliant on funding for environmental training and on procurement of specialist low visibility and landing assistance equipment.

a. Update. The MAA have not reported on any significant improvement in this area.

47. Legislation and Regulation. An inability to meet the requirements of legislation and internal regulation due to resource constraints, accompanied at times by a lack of visibility of forthcoming legislation was reported by the SESB, the DFGESB, and the DOSEB.

a. Update. The issue of SQEP has been discussed earlier in this paper. With respect to accessing emerging legislation, this issue features in the DFGESB and SESB reports, with the former concerned that high-level risks remain non-compliant with the latest legislation. However, a number of initiatives have been put in place to address this but still need to be evaluated.

48. Shortages of Suitably Qualified and Experienced Personnel. Five of the FSBs reported shortages of SQEP – being both those who are qualified to give safety advice, and those with sufficient experience in order to discharge their safety responsibilities. Delivering safety is done through teamwork and although there is evidence that safety posts are being gapped it must be remembered that managing risk, not accidents, is what is required (ie doing the job safely); there is concern that bad decisions have been taken which could manifest themselves in the future, in some cases possibly not for many years to come. As SQEP forms a key part of our safety system, these deficiencies pose a significant risk and all areas need to ensure that plans include building capacity for the future.

a. Update. The issue of SQEP has been discussed earlier in this paper.

49. The Cumulative Effects of Change. The SESB expressed concern about the potential cumulative effect of small uncontrolled changes to equipment and less than effective change management, document control and materiel state management on the validity of future risk decisions. The DOSB also includes similar concerns in its report.

a. Update. Although this subject has not been raised this reporting year, it would be unwise to think that it is not a fundamental issue. The rate of change, along with the manpower, experience and materiel changes that this year and the next few will bring are likely to produce an effect that is greater than the sum of the individual parts. While it will be almost impossible to quantify the costs of such, intellectual intuition points to it being significant. This has been further discussed under *'Future Issues'.*

50. Management of Change in the Planning Round Process. The MARSB identified the significance of visibility of safety measures in the Planning Round process and the importance of decisions being informed by safety advice. The introduction of a CAP safety management process, introduced for PR10 and which includes an effective audit trail for decisions, has the potential to address this concern and should be properly in place for PR11. Concerns over visibility of the impact of SQEP shortages remain, as well as savings options to ban recruitment in some technical areas and to cut training at the Defence Academy, and are being assessed by the HR Leaders Steering Group.

a. Update. DESB recently undertook its first PR-focussed meeting to address this issue.

51. More general improvements in specific areas include:

a. The DF&GESB implemented a level 2 policy to direct the operation of a fuels safety management system: a new Fuel Safety Management Plan (FSMP) was introduced in Sep 10. The new system moves away from providing fuel safety through licensing inspection by DFG personnel, to a structured safety management system which supports an evidence-based argument. TLBs now undertake annual Fuel Safety Assurance Assessments (FSAAs), bolstered by 3 yearly external regulatory checks by DFG personnel.

b. DNSEB reports that a dedicated Career Management Team for nuclear MOD civilian SQEP has been established, while the use of Safety Performance Indicators has been progressively embedded in the arrangements of Defence licensees and naval base authorisees.

c. The Attitude Behaviour Campaign (ABC) is an ongoing campaign to underpin S&EP within D&ES. It has a corporate element that addresses the S&EP issues that affect all staff within DE&S and an Operating Centre element to facilitate ABC activities specific to each Operating Centre.

d. The Army Identified Lesson Management System (AILEMS) was established in June 10, enabling learning of lessons across the Land Command. The system merges both the AINC and PS2 (A) databases, links to the Defence Lessons Identified Management System (DLIMS) and allows for the allocation, tracking and management of lessons.

e. The Navy Safety Improvement Plan (NSIP) was put to the Navy Board for endorsement on 15 Dec. The aim of the NSIP is to put in place robust and appropriate arrangements to facilitate an enduring, Navy Board-led, cultural shift for managing safety risk at all levels.

f. In order to improve End-to-End (E2E) operational safety assurance Chief of Joint Operations (CJO) has established a SO1 safety post in PJHQ and a SO2 safety post under HQ JFSp (A) in Theatre.

ANNEX A TO
SECTION 1 OF THE DESB REPORT
DATED 3 FEB 2011

DIA Assurance Classifications (Updated October 2010)

Full Assurance	System of internal control established and found to be operating effectively.

Substantial Assurance	System of internal control established and found to be working effectively with some minor weakness.

Limited Assurance	System of internal control operating effectively except for some areas where **significant weaknesses** have been identified.

No Assurance	System of internal control poorly developed or non-existent, or major levels of non-compliance identified.

ANNEX B TO
SECTION 1 OF THE DESB REPORT
DATED 3 FEB 2011

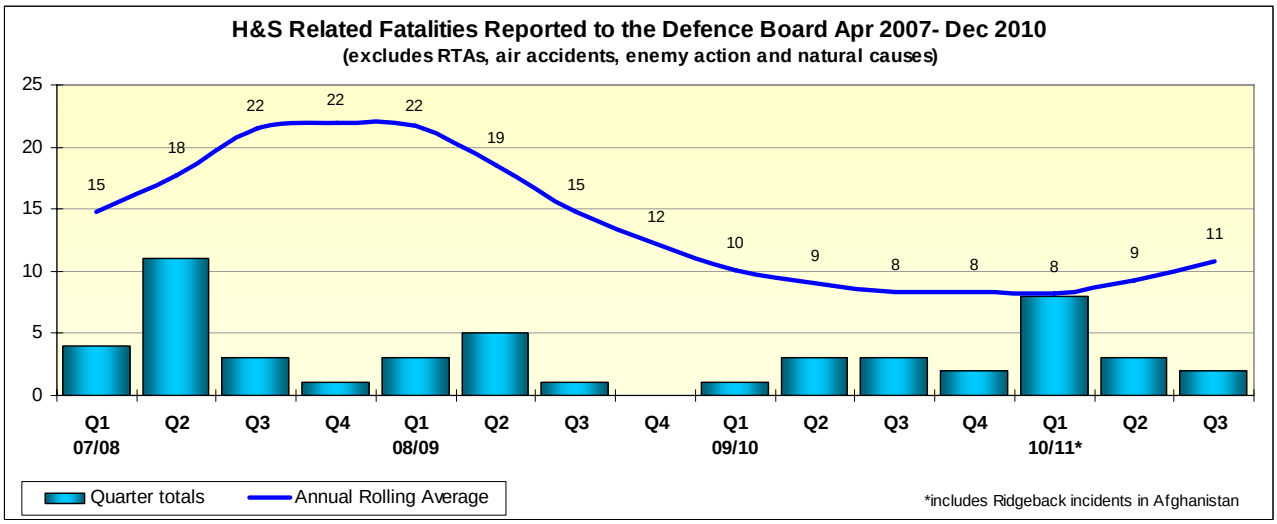
FATALITY AND MAJOR INJURY STATISTICS

1. In 2010, there were 10 on-duty Road Traffic Accidents, which are reported in the LSESB Report at Enclosure 4. There were 15 fatalities and 1148 major injuries[1] due to incidents which were safety related. This compares with 7 (although only 6 were reported at the time due to late reporting) fatalities and 1164 major injuries in 2009. Whilst the fatality numbers have gone up, there are no obvious common themes, though the Defence Board have expressed concern over the crushing incidents, and have requested further information on fatalities from this cause over the past 8-10 years. The fatalities were:

- five fatalities in 2 ridgeback incidents – Operational, Afghanistan (considered in the context of RTAs in the 2010 LSESB report)
- two adventure training
- two falls from height – one on HMS Ocean and one on training ship Royalist which was under control of the Marine Society and Sea Cadets Association, (both considered in the 2010 SESB report)
- one motor-boat accident – Decompression from Operations, Cyprus,
- one on a special forces training exercise,
- one play fighting,
- one crush under a Jackal – Operational, Afghanistan
- one crush from Sangar wall collapse – Operational, Afghanistan
- one crush between vehicle and workshop wall.

2. Major injuries increased significantly in the early part of 2010 (possibly due to accidents caused by the inclement weather), but have reduced over the rest of the year, showing a very slight overall decrease from 2009. Figures 1 and 2 show trends in fatalities and major injuries for the whole of MOD over the past 4 years.

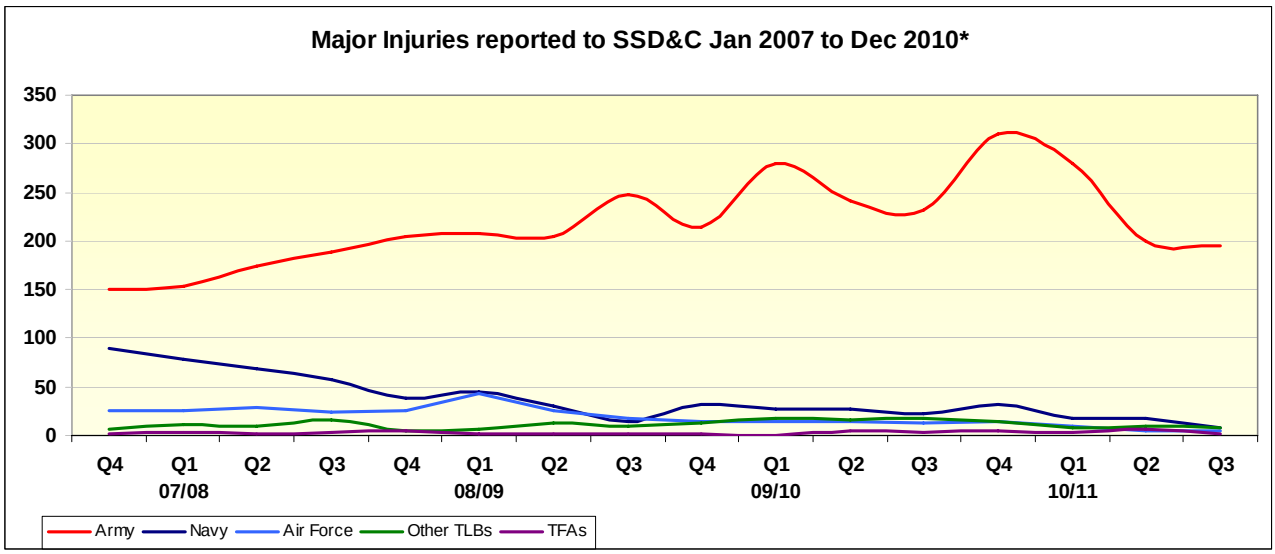
Figure 1



[1] As defined in the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations

ANNEX B TO
SECTION 1 OF THE DESB REPORT
DATED 3 FEB 2011

Figure 2



ANNEX C TO
SECTION 1 OF THE DESB REPORT
DATED 3 FEB 2011

CROWN CENSURES, IMPROVEMENT NOTICES, PROHIBITIONS, ENFORCEMENT NOTICES 2010

1. The following includes regulatory action by HSE during 2010. Details of Internal Regulator enforcement action are included in individual FSB reports.

Crown Censures[2]

2. There have been two Crown Censures hearings during 2010 relating to incidents which occurred in previous years. The first related to management of asbestos at DSDA Bicester. TLBs and TFAs consider that the wider issues related to asbestos management have been adequately addressed. The second is still being discussed, relating to a cadet who fell from a climbing wall at the Royal Hospital School, damaging her back.

Crown Prohibitions[3]

3. No Crown Prohibition Notices were served on the MOD in 2010.

Crown Improvement Notices[4]

4. Four Crown Improvement Notices have been issued:

- Crown Improvement Notice served in Jul 10 on DE Deputy Head Ops N Central relating to buried LPG pipe work. Remedial action is underway to meet the HSE deadline for resolution by 31 Jan 11. The wider risk for MOD remains the potential for contamination by fuel spills and leakage from infrastructure associated with fuel distribution and district heating systems on the estate;

- Two Crown Improvements Notices served on 1710 Naval Air Squadron relating to Hand Arm Vibration. Specifically there was a failure to conduct a suitable and sufficient risk assessment and reduce exposure to Hand-Arm Vibration to ALARP when using vibrating hand tools to repair and maintain aircraft. Immediate action was taken by the unit to address and close out these shortcomings;

- A Crown Improvement Notice regarding a Working at Height issue at DSG Bovington. The notice requires DSG to have in place a process for identifying and adequately controlling working at height activities both present and future at DSG Bovington. Though a risk assessment had been carried out for the activities, this was deemed to be inadequate on risk identification and control. DSG has set up a group to put in place adequate risk assessment processes, following guidance from JSP 375 Leaflet 7.

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[2] An administrative procedure, whereby HSE may summon a Crown employer to be censured for a breach of the Health and Safety at Work Act, or a subordinate regulation, which, but for Crown Immunity, would have led to prosecution with a realistic prospect of a conviction.
[3] Served by HSE when it is assessed that an activity will give rise to the risk of serious injury.
[4] Served by HSE when it is assessed that relevant statutory provisions are being contravened.

SECTION 2

SUSTAINABLE DEVELOPMENT & ENVIRONMENTAL PROTECTION ANNUAL ASSURANCE REPORT 2010

EXECUTIVE SUMMARY

Overall Assurance Statement

1. In broad terms, the majority of sustainability targets have been met, albeit with some acknowledged areas of non-compliance, for example, the Department is not fully compliant with Government Buying Standards. Emerging DIA audit findings indicate that PUS' instruction on considering SD in Departmental decision making is not being followed which may prejudice achievement of future targets and benefits. Furthermore, whilst there is general compliance with environmental legislation across the majority of MOD's activities there have been several warning letters issued by environmental regulators over incidents of non-compliance. This has further highlighted that there are limitations to data gathering and incident reporting processes which limit the confidence of the policy owners to accurately quantify the environmental risk that the MOD is carrying. There has been good performance generally against government sustainability targets. The overall assessment of compliance with environmental legislation as well as government targets and policy is **LIMITED.**

2. Of the TLBs, Trading Funds, Key SD Policy Owners and Functional Environment Safety Boards, only Dstl offered **FULL** assurance, with the others offering **SUBSTANTIAL** or **LIMITED** as set out below:

SUBSTANTIAL	LIMITED
Sustainable Estates & Non-operational Energy	Corporate Environmental Protection
Business Admin Travel	Sustainable Procurement & Operational Energy
Land Forces	Sustainable ICT
Naval Command	Defence Fuels & Gases (DFGESB)
Dstl	Ship Environment Safety Board
Air Command	DE&S
Central TLB	CJO
Defence Estates	

Performance and Compliance

3. All of the main Sustainable Operations on the Government Estate (SOGE) targets (which cover issues such carbon emissions, water consumption and waste) have been met, in several cases ahead of schedule. Carbon dioxide emissions have been reduced by 19.4 %, water consumption has fallen by 27.7%, car use for business has fallen by 15.6% and recycling is at 53%. This suggests that across MOD sustainable behaviours are improving. In energy and water MOD's performance has driven overall Government performance. A copy of the MOD performance against SD targets 2009/10 is included at **Annex A**.

4. In April 2010 the Prime Minister announced that this was to be the “greenest government ever” and that all departments should reduce their carbon emissions by 10% in twelve months. For the MOD this applies to the civil office estate which comprises 23 sites who have made significant efforts, and it is assessed that the MOD is broadly on track to achieve the target. The main caveats to this statement are that some of the data is based on estimates and the cold weather could limit MOD’s future performance.

5. Progress on Sustainable Procurement has accelerated during 2010/11 and the Department is now on track to achieve the current target of Level 3 against the Sustainable Procurement Flexible Framework by December 2012. However, there are still areas where significant improvement is required, for example, on mandatory Government Buying Standards where DIA have undertaken a consultancy study which confirmed that the Department is not fully compliant. We have now established more robust monitoring arrangements and agreed priority categories for action. Work is currently focused on ensuring new contracts meet the relevant standards, although even recently £40M of clothing contracts have recently been let which are not compliant and this remains a significant risk area.

6. Whilst Environmental Management System (EMS) coverage and quality across the MOD estate is good and continues to improve, there are still 19% (of sites identified as requiring one) without an EMS in place, which runs counter to MOD policy. There is a risk that some sites may not be effectively managing their environmental risks and subsequently be more vulnerable to environmental incidents and regulatory action. Having a good quality, integrated and well maintained EMS based on ISO 14001 standards can help manage and mitigate environmental risks and ensure compliance.

7. There are three known incidents of non-compliance with environmental protection legislation this year which have resulted in official warning letters from the regulator. These are due to failures in control and have led to costs of at least £250,000 (further detail is provided below in the main report). There are examples of good practise in most TLBs with good levels of compliance in many areas, but there are material concerns in some areas, for example many sites that require an EMS still lack one, or uncertainties around the management and assurance responsibilities for F-Gases and Ozone Depleting Substances.

Risks and Issues That Could Affect Future Compliance

8. The main risks identified by TLBs and Key SD Policy Owners are:

a. **Limitations to data quality and coverage** limits the confidence of performance assessments and hinders the ability to quantify environmental risk and take appropriate mitigation action across the estate. Whilst MOD’s performance against government sustainability targets has been good, in some cases the data quality covers only 70% of MOD activity (e.g. waste management). Furthermore, very few environmental incidents are being reported to the policy owner via IRIS or other means. In some areas there is a reliance on estimated data for in-year management e.g. the Prime Minister’s challenge to reduce carbon emissions by 10%.

b. **Inadequately resourced fuels infrastructure** leading to more non-compliances, in particular pollution events. The DFGESB states that for the fuels

environment the single greatest challenge remains the ageing MOD fuels infrastructure, which has suffered from a long-term, chronic lack of investment, and now continues to operate through a mix of stop-gap maintenance, careful risk management and reactive funding, mitigated, as far as possible, by an improved reporting and assurance regime. The continuing lack of investment in the estate, it's infrastructure and equipment, also means that the MOD can no longer demonstrate best practice in compliance with the Pollution Prevention Guidelines or our own directives. Most of the MOD UK coastal bulk fuel depots have ongoing substandard secondary containment (bunding) concerns. In such circumstances there is risk of a spill and the MOD must either accept the lack of compliance and associated risks (legislative and reputational); or accept that the closure of facilities and associated loss of operational capability is inevitable. On a more positive note, the Tier 2 Emergency Pollution Response Services (EPRS) contract has been successfully extended to provide cover for the PJOBs. The remaining gaps in the MOD's overseas Tier 2 pollution response capability are under review by the appropriate TLBs.

c. The **failure of ships to comply with marine environmental legislation** could limit operational capability, as ships could be refused entry to port in some countries, or may not be able to use all of their capabilities e.g. active sonar.

d. **Failure to address SD in the procurement process**. There is little evidence of SD being included in Initial Gate and Main Gate decision making processes, which will reduce the sustainability of MOD's investments and limit sustainability performance in the future. Furthermore it will expose MOD to increased future costs, for example in running equipment that is not fuel efficient. There is also little evidence at present of sustainability being included in Contracts Bulletin adverts and Invitations To Tender. Guidance on including sustainable development in capability planning has recently been published on the Acquisition Operating Framework, which should help to improve the sustainability of equipment in the longer term. Work is also in hand exploring options for a standard form of words, which could be included in ITTs in the short term..

e. **Resource**. Across the MOD there are concerns about vacant posts, shortage of SQEP (both at present and with future staff cuts), financial constraints limiting the ability to improve compliance, in particular the loss of external support to Land Forces. All of these combine to reduce the capacity of the MOD to deliver against even basic compliance requirements and could severely impact on the ability of MOD to deliver against government sustainability targets. The evidence of risk from underinvestment in the management of fuels infrastructure demonstrates that with time this will present the MOD with increasing non-compliance. The shortage of SQEP is likely to reduce the accuracy of practitioner guidance which ensures compliance

f. Insufficient clarity over roles and responsibilities leading to confused or inadequate action in managing environmental protection. This makes it harder to identify control risks/issues, e.g. the role of sites with regards pollution management, or the management of F-Gases and ozone depleting substances. DE&S has also identified the need to clarify roles and responsibilities for SD across the TLB. There is also a lack of clarity surrounding ensuring the protection of the marine environment and providing assurance that such protection is happening.

g. OME in non-hazardous waste streams. Land Command raised the serious issue of hazardous waste ending up in non-hazardous waste streams in particular OME which may lead to an incident that causes injury or loss of life, damage to infrastructure, censure, costs and damaged reputation.

h. Future government targets. The proposed government target to reduce carbon emissions by 25% by 2014/15 compared to a 2009/10 baseline will not be deliverable by the MOD, and the Secretary of State has responded to Cabinet colleagues stating as much. This and other targets may be at further risk if as the Armed Forces return from long-term deployments.

i. Structural change in the MOD. Formation of the Defence infrastructure organisation, an independent safety organisation and the implementation of the Grimstone review all present opportunities for the improved management and delivery of SD in MOD, but equally carry the risk, not least with the 60% reduction in staff from the DIO, that skills and capacity will be lost and increase the risk of non-compliance, with the attendant reputational, operational and financial impacts on the department. There are also changes expected in the Land Forces regional command structures.

Actions for 2011

9. The key actions required to improve performance on SD during 2011 are:

a. Improve data and incident reporting processes and behaviours in order to improve data quality and enable better understanding and management of the risk that the MOD is carrying, recognising that data in some areas e.g. waste, will not be improved significantly before the next generation of infrastructure contacts are let.

b. Clarify roles and responsibilities for all aspects of sustainable development and environmental protection as part of the structural changes in the MOD, including the roles, responsibilities and resources for protection of the marine environment. The development of the Defence Infrastructure Organisation, the independent safety organisation and changes to Land Forces all present opportunities for clarifications to be made, particularly the roles of Heads of Establishment, Regional Prime Contractors and the DIO. A key part of this action will be to identify how resourcing risks can best be mitigated for the MOD as a whole

c. Mainstream sustainable development in Defence business, in particular:

i. Include SD in Defence-wide strategies, decision making processes and policies and associated projects, such as built and rural estate infrastructure, acquisition of military equipment (including training and operations), ICT systems, and other supporting Defence policies and strategies such as finance, civilian workforce etc;

ii. Increased focus on SD in the delivery organisations of Defence including the Royal Navy, RAF and Army;

iii. By increasing the coverage and performance of environmental management systems both on sites and for capability (using Project Oriented Environmental Management Systems);

iv. Increase the consideration of sustainability in Initial Gate and Main Gate decision making processes, and increase compliance with Government Buying Standards.

d. Continue to track and influence emerging environmental legislation at the EU, UN and national levels to protect MOD's position, and ensure robust arrangements are put in place to ensure compliance within the MOD.

e. Manage the interface between MOD and the regulators as both the MOD and they undergo significant change following the Spending Review.

SUSTAINABLE DEVELOPMENT & ENVIRONMENTAL PROTECTION
ANNUAL ASSURANCE REPORT 2010

FULL REPORT

RISK MANAGEMENT AND INTERNAL CONTROL SYSTEMS

1. The MOD must comply with the Secretary of State's Policy Statement which directs compliance with environmental legislation and government sustainability targets. 2nd PUS is the Process Owner for Safety, Sustainable Development (SD) and Environmental Protection (EP), and chairs the Defence Environment & Safety Board (DESB) which oversees the management of SD and EP issues and ensuring MOD compliance with the Policy Statement.

2. 2nd PUS has issued delegations to the Key SD Policy Owners (KSDPOs) for policy-setting and ensuring delivery in specific areas of SD and the Chairs of Functional Safety & Environment Boards who are responsible for EP that is specific to their functional area (see Table 1). To support the mainstreaming of SD in the business of the TLBs and Trading Funds (TFs) there are SD Champions with Terms of Reference set by 2nd PUS.

Table 1 – The SD and EP delegations in MOD

Delegation	SD & EP Policy Area	Strategy/Policy/Guidance
2nd PUS	SD & EP in MOD	JSP 815
DBR	Corporate EP (environmental legislation that covers most parts of MOD)	JSP 418
CE DE	Sustainable estate and "non-operational" energy (i.e. energy on the estate)	JSP 362
DES CCP	Sustainable procurement and "operational" energy (i.e. energy for military equipment)	Sustainable Procurement Strategy Acquisition Operating Framework
CIO	Sustainable Information and Communications Technology (ICT)	Draft Sustainable ICT Policy
DG HRCS	Sustainable business administrative travel (i.e. travelling to meetings)	Sustainable Travel Policy
Functional Safety & Environment Board Chairs	Environmental protection legislation that is specific to the functional area	Numerous JSPs and other documents

3. The TLBs/TFs are responsible for delivering against this policy, usually through the Chief Environment & Safety Officers (CESOs) or their equivalents in the TFs. The CESO's conduct SHEF audits in order to identify risks and provide assurance that their TLBs are complying with the policy and, therefore, with legislation. Supplementary audits are also conducted by Defence Internal Audit or DSAS. The KSDPOs gather performance and assurance information from the TLBs/TFs to monitor delivery against government targets, compliance with legislation and to identify risks of non-compliance. The performance and assurance information is assimilated by the Safety, Sustainable Development & Continuity (SSDC) team to provide other government departments (OGDs) with overall MOD

performance data against government sustainability targets, and to generate the SD Assurance report, which forms part of the DESB Annual Assurance Report.

ASSESSMENT OF COMPLIANCE DURING 2010

4. In broad terms, the majority of sustainability targets have been met, albeit with some acknowledged areas of non-compliance, for example, a DIA consultancy study has confirmed the Department is not fully compliant with mandatory Government Buying Standards. Furthermore, whilst there is general compliance with environmental legislation across the majority of MOD's activities there have been three warning letters issued by environmental regulators over incidents of non-compliance. The overall assessment of compliance with environmental legislation as well as government targets and policy is LIMITED.

Government Sustainability Targets

5. All of the main Sustainable Operations on the Government Estate (SOGE) targets (which cover issues such carbon emissions, water consumption and waste) have been met, in several cases ahead of schedule. In energy and water MOD's performance has driven overall Government performance.

6. Work on sustainable procurement has accelerated during 2010 and the Department is now on track to achieve the current target of an average Level 3 against the Sustainable Procurement (SP) Flexible Framework by December 2012 (Defence Estates achieved this target in 2009).

7. On mandatory Government Buying Standards, DIA have undertaken a consultancy study which confirmed that the Department is not fully compliant. We have now established more robust monitoring arrangements and agreed priority categories for action. Work is currently focused on ensuring new contracts meet the relevant standards, although this remains a significant risk area. For example, £40M of clothing contracts have recently been let which are not compliant.

8. In April 2010 the Prime Minister announced that the new coalition would be the "greenest government ever" and that all departments should reduce their carbon emissions by 10% in twelve months. For the MOD this applies to the civil office estate comprising 23 sites which collectively emitted 62,799 tonnes of carbon dioxide in 2009/10, giving a target of 56,519 tonnes of carbon dioxide for the PM's challenge. For the period May-November 2010, the MOD has emitted 30,029 tonnes of carbon dioxide, which is 53% of the target, suggesting that the MOD is broadly on track. The main caveats, however, are that this does include estimated data and the cold weather could limit MOD's performance. As such, there remains a residual risk that the Department will fail to meet the target and robust action will be required to drive performance between now and May 11.

Corporate EP

9. The overall assessment for Corporate Environmental Protection (EP) is LIMITED assurance. In general the MOD has not been found to be in breach across the majority of the policy areas covered under Corporate EP, but there are three known incidents of non-compliance this year which have resulted in official warning letters from the regulator

(further detail is provided below in the discussion on significant control failures). There are examples of good practise in most TLBs with good levels of compliance in many areas, but there are material concerns in some areas, for example many sites that require an EMS still lack one, or uncertainties around the management and assurance responsibilities for F-Gases and Ozone Depleting Substances.

10. The main risks in the Corporate EP area have been identified as being:

a. *Inadequately resourced management of infrastructure leading to more non-compliances, in particular pollution events*. The key risk remains the potential risk of contamination by fuel spills and leakage from aged infrastructure associated with fuel distribution and district heating systems on the estate.

b. *Insufficient clarity over roles and responsibilities leading to confused or inadequate action in managing environmental protection*. This makes it harder to identify control risks/issues, e.g. the role of sites and DE/DE&S with regards pollution management or the management of F-Gases and ozone depleting substances.

c. *Poor data quality limiting the confidence of performance assessments and hindering the ability to manage environmental risk.* Whilst MOD's performance against government sustainability targets has been good, in some cases the data quality covers only 70% of MOD activity (e.g. waste management). Furthermore, very few environmental incidents are being reported to the policy owner via IRIS or other means.

d. *Failure to fully implement Environmental Management Systems (EMS) across the MOD estate.* Whilst Environmental Management System (EMS) coverage and quality across the MOD estate is good and continues to improve, there are still 19% (of sites identified as requiring an EMS) without an EMS in place, which runs counter to MOD policy. There is a risk that some sites may not be effectively managing their environmental risks and subsequently be more vulnerable to environmental incidents and regulatory action. Having a good quality, integrated and well maintained EMS based on ISO 14001 standards can help manage and mitigate environmental risks and ensure compliance.

Sustainable Estate and 'Non-Operational' Energy

11. The overall assurance offered for the sustainable management of the estate is SUBSTANTIAL. An SD audit of sites, across the TLBs, to validate the policy owner report is underway (14 out of 22 sites completed). All sites audited to date have received substantial assurance. Across most of the sustainable estate policy areas, MOD has full assurance. For non-operational energy, sustainable estate procurement and communities and social impacts there is substantial and limited assurance respectively, with actions underway to address existing and future issues/risks for all the policy areas from changing government targets, changes to estate management infrastructure, and available resources to develop and implement energy programmes.

12. Future developments and issues relate to organisational change for managing MOD's estate and resource restrictions to implement strategies and programmes against the sustainable estate policy areas, and changes to the targets under the new greener

government agenda. Work is being undertaken to consider the implications and requirements to address this as the new infrastructure organisation is developed.

13. Progress across all the policy areas has been good over the past year, with particular successes meeting targets for Sites of Special Scientific Interest and water. Substantial risks and uncertainty currently exist for maintaining and continuing progress remain over targets, resourcing and organisational change.

Sustainable Procurement and Operational Energy

14. The overall assurance offered for sustainable procurement and operational energy is LIMITED. The Defence Strategy for Acquisition Reform, published in February 2010, committed the Department to embracing sustainable development principles at all stages of the acquisition process, and this was further reinforced by publication of a separate MOD SP Strategy in March. The Department is making good progress against the specific actions and commitments contained in both documents. The SP Programme Board has also endorsed proposals to develop an Operational Energy Management Strategy and this is now gaining momentum, with the Air Force Board having recently agreed proposals aimed at reducing the Royal Air Force's reliance on fossil based-fuels in the long term. The Royal Navy is also making good progress, including implementing a programme to fit transom flaps, which can improve fuel efficiency by 10%, and regular hull cleaning, which can reduce fuel consumption by up to 20%.

15. Despite this there remain a number of major risk areas, most notably failure adequately to address sustainable development prior to Initial and Main Gate approval, continuing failure in some areas to comply with mandatory Government Buying Standards, and insufficient priority being given to sustainability in the research programme. It is for this reason that the overall assessment is "Limited Assurance". However, action is in hand to address these risks, which should see improvements over the next 12 months.

16. The previous Government set a target for all central Government Departments to reach an average of Level 3 against the SP Flexible Framework by December 2012. Within the MOD work required to achieve this target is managed through a SP Programme endorsed and monitored by the SP Programme Board.

17. During 2010 good progress has been made against the Programme, including: conducting a Training Needs Analysis to define the MOD's long term SP training requirement; publication of guidance on the Acquisition Operating Framework; continued engagement with Industry through the joint MOD/Industry SP Working Group, participation in the Carbon Disclosure Project's Public Procurement Programme (as part of a cross-Government collaborative initiative), and most recently at the Shrivenham 5 Defence Acquisition Conference sponsored by DCDS(Cap); and starting work to understand the MOD's vulnerability to long term risks around the supply of scarce natural resources such as rare earth elements.

Sustainable Information and Communications Technology

18. LIMITED assurance is offered for Sustainable ICT policy. Work on sustainable Information and Communications Technology (ICT) has continued during 2010 to ensure that MOD continues to meet HMG Green ICT Targets in addition to MOD's own targets. The Sustainable ICT Task Force was launched in March 2010 to enable the CIO, as

Sustainable ICT Policy Owner, to deliver on the HMG Green ICT agenda, to engage with stakeholders, to develop policy and provide guidance on best practice for the Department.

19. ICT programmes and services are expected to adhere to MODIS and the Defence ICT Strategy principles, of which Sustainability is one. Compliance is monitored through the MOD's Approval Process. CIO has incorporated the sustainability ethos into the acquisition lifecycle and supports the use of ICT as an enabler to reduce resource consumption, by replacing highly resource-intensive business processes and activities with effective use of ICT. CIO is currently reviewing potential for suitable metrics to measure and verify achievement of progress for sustainability for ICT. Progress towards achieving these benefits will be reported regularly to the relevant governance bodies to allow adjustment and reinforce compliance.

Sustainable Business Administrative Travel

20. For the period April-August FY 10/11 compared to the same period in the previous year, the number of air travel journeys was reduced by 20%. Similarly, the number of rail journeys was reduced by 2.3%. The government target on administrative road vehicle carbon dioxide emissions was delivered ahead of schedule. By March 2010 MOD achieved a 15.6% reduction in carbon dioxide emissions against the target of 15% by 2010/11 against a 2005/06 baseline. This was due to new low emissions vehicles in the white fleet and less travel being undertaken. Similarly, the government target for new car fleet average carbon dioxide emissions was also delivered ahead of schedule. The MOD's white fleet contractor has progressively upgraded the fleet with smaller cars and low emission cars to deliver a fleet average of 124g of carbon dioxide per kilometre against a target of 130g or less by 2010/11

21. It should be noted that, whilst the outcomes are beneficial to sustainable development, this progress has been driven by cost-saving measures rather than sustainability initiatives. The lack of a single owner of all the various travel issues means levers do not readily exist to drive further improvements in MOD's sustainable travel performance. So despite the compliance being very good, the absence of clear governance mechanisms or resource to drive the agenda means that only an assurance level of SUBSTANTIAL can be offered.

Functional Safety & Environment Boards (FESBs)

22. The majority of the FESBs did not raise any risks or issues relating to environmental matters in their reports to the DESB, however, the Defence Fuels & Gases Environment Safety Board (DFGESB) and Ship Environment Safety Board (SESB), both of which offer LIMITED assurance, make some points that impact on the assurance of environmental protection in MOD which are discussed in more detail below.

Defence Fuels & Gases Environment Safety Board (DFGESB)

23. The DFGESB states that for the fuels environment the single greatest challenge remains the ageing MOD fuels infrastructure, which has suffered from a long-term, chronic lack of investment, and now continues to operate through a mix of stop-gap maintenance, careful risk management and reactive funding, mitigated, as far as possible, by an improved reporting and assurance regime. The continuing lack of investment in the estate, its infrastructure and equipment, also means that the MOD can no longer demonstrate

best practice in compliance with the Pollution Prevention Guidelines or our own directives[5]. Most of the MOD UK coastal bulk fuel depots have ongoing substandard secondary containment (bunding) concerns. In such circumstances there is risk of a spill and the MOD must either accept the lack of compliance and associated risks (legislative and reputational); or accept that the closure of facilities and associated loss of operational capability is inevitable. On a more positive note, the Tier 2 Emergency Pollution Response Services (EPRS) contract has been successfully extended to provide cover for the PJOBs. The remaining gaps[6] in the MOD's overseas Tier 2 pollution response capability are under review by the appropriate TLBs.

24. The DFGESB also identifies Suitably Qualified and Experienced Personnel (SQEP) as an issue. Poor operator awareness through ineffective training, leading to a negligent failure to adhere to mandated procedures remains a significant concern across the MOD. TLBs now have improved visibility and understanding of the requirements for SQEP, not just for unit trained fuel management and EP personnel, but also throughout the chain of command. In some areas this requires a cultural change in the resource management of HQ Staff, alongside improved internal communication and visibility. Interestingly on the PJOBs the issue for SQEP is that they are trained on more sophisticated equipment than is actually in use. A much better understanding of the SQEP requirement is being achieved, but the main focus remains on addressing the identified shortfalls at unit level.

25. A further concern of DFGESB is contracted maintenance and operation. Fragmentation of responsibilities, tightening of financial constraints, contracting out of services, and poor risk awareness of service, civilian and contracted staff has increased the aggregated risk of a significant environmental incident. The adoption of risk based maintenance contracts, such as that for oil water interceptors (OWIs) managed under Project AQUATRINE, passes the operational responsibility and risk to the contractor, however a rising trend of inadequate contractor maintenance increases the reputational (and possibly legislative) risk to the MOD, with Heads of Establishment unable to intervene directly. Further investigation with all parties to such contracts, with a view to improved contractor service, is ongoing.

Ship Environment Safety Board (SESB)

26. The SESB reports that maritime environmental legislation tracking has been incoherent and ad hoc due to reduced resources in MOD Centre. There is currently no 'one stop' facility to provide information about maritime legislation, or allow MOD to influence its development. The SESB identifies as a major risk the failure to comply with maritime safety or environmental legislation. The following paragraphs highlight environmental issues that concern the SESB, who are managing action to address these issues.

27. From the end of 2010, MOD Single Hull Tankers (SHT) will no longer be certified by the MCA for compliance with MARPOL regulations, or kept in class with Lloyds Register. There is potential for ships to be refused entry to ports, limiting global operations and impacting our reputation. Note: until the management of environmental aspects is more rigorous, the Naval Authority is only able to certify ships for environmental aspects so far as they are coincident with safety.

[5] JSP 498 (Major Accident Control Regulations), JSP 317 (The Safety Regulations for the Storage and Handling of Fuels and Lubricants) and JSP 319 (The Safety Regulations for the Storage, Handling and Use of Gases)
[6] BF Germany, BATUS, BATUK, BATSUB, Nepal, Brunei, and Op HERRICK.

28. The original design of the LSD(A) exhaust system has created environmental hazards in terms of noise and future pollution risk. This could result in an exclusion of the ship from some littoral waters due to the visibility of carbon particles in the water from the exhaust gas.

29. Queen Elizabeth Class (QEC) aircraft carriers and T45 ships 3-6 will not be compliant with MARPOL Regulation 12A[7]. There is potential for local port states to refuse entry of ships which do not meet the requirements of the Regulation and an impact on reputation.

30. There is a risk that MOD ships may not be able to comply fully with the requirements of the IMO Convention for Ballast Water Management due to funding issues and the scheduled refit periods of ships. Ships with water compensated fuel tanks are unable to comply. There is potential for local port states to refuse entry of ships which do not meet the requirements of the Regulation or their own local rules.

31. The EU Marine Strategy Framework Directive (MSFD) Good Environmental Status (GES) requirements, transposed in the UK by the Marine Strategy Regulations may cause RN vessels to be restricted from operating in "quiet" designated waters as we are required to be "as good as" legislation.

32. Defra are proposing a change to their guidance on the Habitats Directive, using the definition of the term "deliberate act" to mean "accepting the foreseeable results of an action". This would mean that MOD would no longer be protected by claiming any harm caused was the unintended result of an otherwise legal action. For example – using active sonar to locate a hostile submarine, knowing there are cetaceans in close proximity which may be harmed as a result.

33. RFA DARKDALE was sunk in 1941 in the waters of the remote South Atlantic Island of St Helena and has been assessed as a Cat A Environmental risk. The vessel has been leaking oil slowly since the time of sinking. A larger release of oil occurred in March 2010 following a period of bad weather and heavy seas and further large releases of oil may occur with bad weather. This carries a considerable reputation risk as St Helena's economy is reliant on tourism and fishing, both of which may be impacted by continued release of oil.

Mainstreaming of SD into the TLBs/TFs – Reports From the SD Champions

34. The TLB/TF SD Champions have provided a frank assessment of the sustainability performance of each of their areas, highlighting examples of good practise as well as areas for improvement (a summary of the reports can be found at Annex B). The overall assessment for the mainstreaming of SD into the TLB/TFs is SUBSTANTIAL although they all acknowledge that there are areas for improvement. This will in large part be addressed through the SD Strategy and Action Plan due to be published in early 2011 (alongside other departmental sub-strategies).

[7] Requiring double hull protection of fuel oil tanks, or meeting the accidental oil outflow performance standard on any ship with an aggregate fuel capacity of 600m3 or above.

Assurance Statement

35. The overall assurance statement for SD (including EP) is **LIMITED**. Whilst there are systems in place for managing SD and EP in MOD, and performance against government targets is generally good, there are several instances of non-compliance with legislation and government policy. Furthermore, those systems that are in place suffer from examples of unclear division of responsibilities for managing environmental protection in some areas such as the management of ozone depleting substances or F-gases. There are also concerns over the quality of information which limits the confidence that the MOD can have in performance against government targets, in particular for the management of waste. A further information concern is that there is not a comprehensive picture of the warning letters that the MOD receives from the regulators, with such events not being fully reported to the policy owner or recorded on a central information system such as IRIS.

Significant Control Failures

36. There have been at three warning letters issued by the regulators to the MOD due to failures in control at,Wattisham, Kirknewton and Yeovilton. Furthermore, there has been a failure of the department to comply with mandatory Government Buying Standards

37. Environment Agency warning letter issued to Wattisham. The warning letter to the Commanding Officer of Wattisham Station was for an offence under Section 85 of the Water Resources Act 1991, the offence being pollution of a tributary of Somersham Watercourse with fire fighting foam. The fire suppressant system in one of the hangars went off (due to a fault) and 6 Apaches were wholly or partially covered in foam. They had to be extracted from the hangar and washed down. Foam got into the site surface water drainage system and thence into the River Gipping upstream of one of the take off points for Ipswich's water and, as a precaution, the EA shut off this source. The helicopters had to be washed down as a matter of urgency to stop any corrosion damage to the air frame or avionics. Foam generated in the hangar is designed to drain to 1,000 cubic meter capacity underground containment tanks which should be empty. However they were three-quarters full of water from an unknown source. There will be a cost associated with investigating and rectifying the system fault which is causing water to enter the underground containment tanks from sources other than the hanger. This may be considerable. There was a failure in control for the decontamination process and also the maintenance of the containment tanks. Whilst not resulting in a warning letter, there was also a separate leak of approximately 1,400 litres of diesel from an underground pipe at Wattisham.

38. Scottish Environment Protection Agency (SEPA) warning notice issued on Kirknewton Airfield. Following oil being identified in a stream adjacent to the airfield in July 2010 the source was identified as being an underground oil storage tank. In full consultation with DE, SEPA issued an Enforcement Notice to the Commandant Air Cadet Organisation (HoE). Pollution containment measures were already in place on site following an initial incident in March 2010 where SEPA observed oil entering the stream. However, severe weather in the region had impacted the effectiveness of these measures. Following the initial incident a SEPA ecological survey indicated that the watercourse had been 'severely' impacted by the oil pollution for a distance of 1km. The source of the oil pollution was considered to relate to historic airfield operations including a redundant underground furnace fuel oil tank (UST). DE have completed the removal of two USTs, an investigation of fuel and drainage infrastructure and drainage related remedial measures.

These measures have substantially addressed the requirements of the Enforcement Notice to the satisfaction of SEPA. However, further action is required in March 2011, when an ecological survey of the Burn will be completed to assess the requirements, if any, for remedial measures to be undertaken within the Burn. Both Defence Estates and Air Command have incurred significant costs and expended significant resources in completing the above, with committed costs to date amounting to approximately £180,000. There was a failure in control regarding the maintenance of the oil storage tank.

39. Environment Agency warning notice for RNAS Yeovilton. The letter was issued following a spillage of fuel during a transfer between BFI 5 and a road tanker. When the incident occurred the road tanker was parked on a porous surface which was deemed not suitable for the BFI, fuel seeped through the surface and contaminated the ground beneath and subsequently entered the groundwater. Work is being under taken in the FY which involved the removal of the contamination, replacement of the hard standing and oily water interceptor. The EA are being kept appraised of the progress of this work. Costs to date amount to £250,000. There was a failure in the refuelling process.

40. In addition to the incidents that generated warning letters there was also a contamination incident at Lulworth Camp due to a leaking fuel pipe; the EA were informed of this incident but no enforcement action was taken.

41. One of the failures in the process highlighted by these three warning letters is that the policy owner is not being made aware of these issues until the annual assurance process is undertaken. This indicates that whilst there is a dynamic response to managing incidents at the site level, through direct engagement with the regulators, the policy and management chains responsible for environmental protection in MOD are not fully involved in managing such incidents, or taking management action as required. Furthermore, there is a concern that the lack of a reporting process means that there could be further warning notices issued to the MOD about which the policy owner is unaware.

42. On mandatory Government Buying Standards, DIA have undertaken a consultancy study which confirmed that the Department is not compliant. We have now established more robust monitoring arrangements and agreed priority categories for action. Work is currently focused on ensuring new contracts meet the relevant standards, although this remains a significant risk area. For example, £40M of clothing contracts have recently been let which are not compliant.

Capability or Capacity Issues That Could Affect Future Compliance

43. Structural change in the MOD. Formation of the Defence infrastructure organisation, an independent safety organisation and implementation of the Grimstone Review all present opportunities that the management and delivery of SD in MOD will be improved, but equally carries the risk, not least with the 60% reduction in staff from the DIO, that skills and capacity will be lost and increase the risk of non-compliance. There are also changes expected in the Land Forces regional command structures.

44. Failure to address SD in the procurement process. There is little evidence of SD being included in Initial Gate and Main Gate decision making processes, which will reduce the sustainability of MOD's investment decisions and limit sustainability performance in the future. How this can be included in the assurance process is being investigated. There is also little evidence at present of sustainability being included in Contracts Bulletin adverts

and Invitations To Tender. In the longer term this should be rectified by the inclusion of sustainability in capability and system requirements. However, in the short term work is underway to explore the feasibility of including standard wording in adverts and Invitations To Tender, inviting suppliers to propose options for reducing energy consumption and reliance on scarce natural resources.

45. Resource. Across the MOD there are concerns about vacant posts, shortage of SQEP (both at present and with future staff cuts), financial constraints limiting the ability to improve compliance, in particular the loss of external support to Land Forces. All of these combine to reduce the capacity of the MOD to deliver against even basic compliance requirements and could severely impact on the ability of MOD to deliver against government sustainability targets. The evidence of risk from underinvestment in the management of fuels infrastructure demonstrates that with time this will present the MOD with increasing non-compliance. The shortage of SQEP is likely to reduce the accuracy of practitioner guidance which ensures compliance.

46. Inadequately managed infrastructure leading to more non-compliances, in particular pollution events. The key risk remains the potential risk of contamination by fuel spills and leakage from aged infrastructure associated with fuel distribution and district heating systems on the estate.

47. Insufficient clarity over roles and responsibilities leading to confused or inadequate action in managing environmental protection. This makes it harder to identify control risks/issues, e.g. the role of sites and DE/DE&S with regards pollution management or the management of F-Gases and ozone depleting substances. DE&S has also identified the need to clarify roles and responsibilities for SD across the TLB.

48. Poor data quality limits the confidence of performance assessments and hinders the ability to manage environmental risk. Whilst MOD's performance against government sustainability targets has been good, in some cases the data quality covers only 70% of MOD activity (e.g. waste management). Furthermore, very few environmental incidents are being reported to the policy owner via IRIS or other means. In some areas there is a reliance on estimated data for in-year management e.g. Project 10.

49. The failure of ships to comply with marine environmental legislation could limit operational capability, as ships could be refused entry to port in some countries, or may not be able to use all of their capabilities e.g. active sonar.

50. Future government targets. The proposed government target to reduce carbon emissions by 25% by 2014/15 compared to a 2009/10 baseline will not be deliverable by the MOD, and the Secretary of State has respond stating as much. Additionally, Defra, DECC and the Cabinet Office are currently developing proposals for new SP targets to meet the coalition Government's sustainability priorities. Officials have been closely engaged in this work. Assuming the current proposals are endorsed we expect an increased focus on compliance with Government Buying Standards, and understanding and reducing greenhouse gas emissions, water consumption and waste from the supply chain. This broadly aligns with DE&S' existing work programme, although the increased emphasis on water usage and waste in the supply chain will result in increased work for both the Department and its key suppliers. Targets may be at further risk if as the Armed Forces return from long-term deployments and so increase UK-based consumption.

51. OME in non-hazardous waste streams. Land Command raised the serious issue of hazardous waste ending up in non-hazardous waste streams in particular OME which may lead to an incident that causes injury or loss of life, damage to infrastructure, censure, costs and damaged reputation.

Future Issues

52. European Union and United Nations legislation. New or amended EP legislation that may impact Defence activities in the future, including the review of the European Mercury Strategy and a UN Legally Binding Instrument, recasts of the EU directives covering Restriction of Hazardous Substances (RoHS), Waste Electrical, Electronic Equipment (WEEE) and Registration, Evaluation, Authorisation and restriction of Chemicals (REACh). MOD officials will also need to negotiate with colleagues in other Government Departments on the transposition of EU Directives in to UK legislation and new pieces of UK legislation e.g. Marine Strategy Framework Directive (MSFD), Revised Waste Framework Directive and the revision of the Controlled Waste Regulations for England and Wales and the continued implementation of the Environmental Permitting Regulations.

53. Devolved Administration legislation. The Devolved Administrations are increasingly drafting their own EP legislation and EP orientated National Strategies e.g. Marine (Scotland) Act 2010 and National Waste Strategies which have or will impact Defence activities. Individual EP legislation from the Devolved Administrations is likely to increase in the future and MOD will need to continue to track and influence up to four different EP regimes within the UK further to EU Directives.

54. There is a risk that the current level of performance against SD targets will worsen with the return of troops from Germany. The current SD performance of the UKSC estate is very high due to the higher legislative requirements. There is a risk that the returning troops will be billeted in infrastructure that does not provide the facilities to perform as well. This risk needs to be explored and mitigation strategies developed.

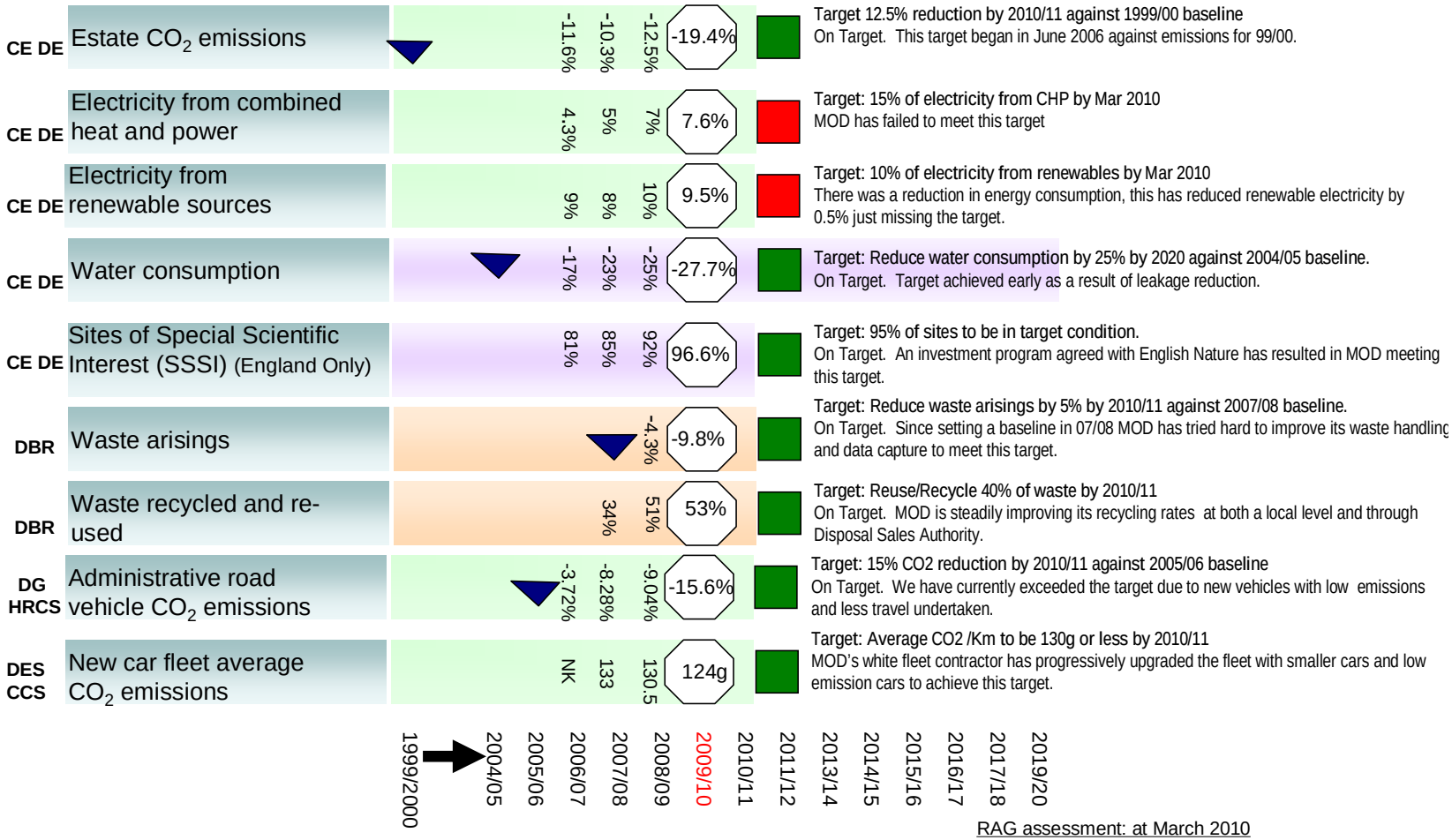
Actions in Hand to Address Significant Control Issues Mentioned in Previous SICs

55. No SD or EP issues were mentioned in previous Statements of Internal Control.

ANNEX A TO
SECTION 2 OF THE DESB REPORT
DATED 3 FEB 2011

Performance against 2009/10 SD Targets

2009/10 Performance – Sustainable Operations on the Government Estate Targets



Update compiled by SSDC

Sustainable Procurement Performance 2009/10

Flexible Framework: Target: To be at an average of at least level 3 that includes at least a level 3 for 'measurement and results' by end of 2012 and at level 5 for all areas by end of March 2015

Theme	07/08	08/09	09/10	10/11 Forecast
People	2	1	1	1
Policy, Strategy & Communications	1	1	3	3
Procurement Process	1	1	1	2
Engaging Suppliers	2	2	2	3
Measurement & Results	1	1	1	2

Amber assessment reflects position at end 09/10. Despite slow progress between 07/08 and 09/10 (mainly due to resource constraints) work has now accelerated and the Department is on track to achieve the new target of an average Level 3 against the Framework by end 2012.

Compliance with mandatory Government Buying Standards (GBS) - formerly "Quick Wins" - for New Contracts and Existing contracts	Although not currently compliant the Dept has now agreed priority areas for action against GBS and is making steady progress. Work is currently focused on ensuring new contracts meet the the relevant standards.
Engagement with key suppliers on SD, the sustainable operations targets and Sustainable Procurement Action Plan (SPAP) commitments	Good engagement. All key suppliers have signed a voluntary SP charter with MOD and are actively engaging with the Dept on SD issues, including good participation in the Carbon Disclosure Project.
Percentage of staff with procurement responsibilities have sustainable operations targets and or SPAP in their personal objectives?	Was less than 5% at end 2009/10 but instructions issued directing staff to include SP in personal objectives for the 2010/11 reporting year.
Permanent Secretaries to have SOGE targets and SPAP commitments in their personal performance objectives	Achieved.
Current SD Action Plan to set out the actions being taken to make sure procurement practice helps achieve the sustainable operations targets	Achieved. The current SDAP includes targets for publishing the SP Strategy and ensuring teams assess sustainability impacts.

Update compiled by Sustainable Procurement Team

ANNEX A TO
SECTION 2 OF THE DESB REPORT
DATED 3 FEB 2011

Progress against Govt Sustainable ICT Goals / Quickwins

- **20 Govt Sustainable ICT Goals / Quickwins**
  - *61% In Progress / Complete*
  - *13% Planned*
  - *26% Not Agreed / Under Review*
- *Currently drafting Policy to support / drive the Sustainable ICT Agenda (Due Dec 2010)*

Key
1 or G In Progress / Complete
2 or A Planned
3 or R Not Agreed / Under Review

Government Sustainable ICT Goals / Quickwins	Comments	Status	RAG
1. Remove active screensavers	Requires CIO to sponsor a formal change request on DII	2	
2. Switch monitors to standby after 5 minutes of inactivity	Requires CIO to sponsor a formal change request on DII	3	
3. Shut down PCs after office hours and weekends	Standard Sy Ops state this	1	
4. Enable active power management on desktops		3	
5. Ensure re-use of user devices and printers that are no longer required but still serviceable	Equipment disposed of through DSA	1	
6. Specify low-power consumption CPUs and high-efficiency Power Supply Units	Part of product selection	1	
7. Set defaults for more sustainable printing including duplex and grey scale		1	
8. Optimise use of power-saving standby modes on all printers	Already implemented but times could be more aggressive.	1	
9. Undertake a printer consolidation and rationalisation exercise	Atlas preparing a proposal on managed print services	1	
10. Device consolidation CIOs to achieve 1 to 1 (PC or laptop) ratio per staff member	Single device is standard policy. Use KVM switch for multi-domains.	1	
11a. Implement storage virtualisation & capacity management	To be considered under DII Optimisation programme	3	
11b. Convert existing physical servers to “virtual servers” and consolidate	Project initiated with 9:1 target on existing servers.	1	
11d. When designing & provisioning new services, create "virtual servers"	DII Release 2b (Blenheim) targeted at virtualised platform only.	1	
11e. Use of intelligent storage, which supports off-lining/powering down	Additional storage tiering being introduced. Tech refresh needed.	3	
12. CIOs must become endorsers of the EC Data Centre Code of Conduct	DII adopting Code of Conduct standards where possible	2	
13. CIOs must become endorsers of the EC Broadband Codes of Conduct	Unsure, not yet assessed	2	
14. Reduce cooling in each server room or data centre	Requires further investigation	3	
15. Decommission redundant servers and data disks in the centres	Servers regularly audited and actively monitored	1	
16. Data centre audit to establish energy efficiency level for each data room/centre		1	
17. Extending the life of your ICT equipment to five years	Inc 3a increased PC's from 3 to 4 yrs, Servers & Networks at 5yrs	1	
18. CIOs should use brown unbleached paper at all times		3	
19. CIOs and estate teams to actively investigate renewable energy sources		1	
20. Undertake an application audit to identify duplicate, and unused applications currently running		1	

Update compiled by Sustainable ICT Team

ANNEX B TO
SECTION 2 OF THE DESB REPORT
DATED 3 FEB 2011

Summaries of TLB/TF SD Champions Reports

Defence Equipment & Support

1. The overall assurance offered for SD in DE&S is LIMITED. Work has continued during 2010 to improve management of Sustainable Development (SD) across DE&S, including publication of strategic SD Guidance and the creation of a DE&S SD intranet site. SD risks are actively recorded and managed as part of the TLB's wider risk management process. However, identification of environmental risks could be improved, and work to develop a DE&S SD Action Plan has stalled pending recruitment of a new Programme Manager and publication of the new Government's SD targets. With the new targets expected to be announced by shortly we are now aiming to achieve approval of a high level plan by April 2011.

2. A DIA consultancy study conducted during 2010 concluded DE&S energy data is accurate; although the introduction of the 10% carbon reduction target has exposed some weaknesses - in particular the reliance on estimated data for in-year management. Despite implementing £0.7M of energy efficiency measures there is still some residual risk around achievement of the new 10% carbon reduction target. DIA also concluded further work needs to be undertaken to improve the accuracy and coverage of waste data. However, progress on this has been limited by resource constraints, including vacancies at both site and TLB level. Further work is also required to clarify roles and responsibilities for SD across the TLB, and this will need to take account of emerging plans for the creation of the new Defence Infrastructure Organisation.

Central TLB

3. Assurance against CTLB compliance with Sustainable Development policy is assessed as being SUBSTANTIAL. This assurance rating is based on the evidence provided in updating the CTLB SD Action Plan in October of this year (CTLB SDAP was originally developed in April 2009 and identified TLB leads for each of 22 SD workstreams). The main achievement in 2010 was the CTLB's accreditation to the Carbon Trust Standard, confirming that a robust carbon management system is in place and that it has achieved an absolute reduction in energy consumption/carbon emissions. However performance against specific SD targets has been mixed, with energy reduction and waste reduction broadly on track to meet targets, but recycling currently below target. However, the absence of weight data on waste arisings prevents high confidence being placed on these achievements.

4. On Project 10 - the in-year target to reduce energy consumption across the Office Estate by 10% - the CTLB's contribution to the departmental target will largely depend on the success of efforts in Main Building and other London sites (due to closure rather than specific action) as at other CTLB sites within the scope of this exercise, energy use by departmental IT systems is preventing significant reduction for operational reasons.

5. For the longer term future, there are resource challenges in achieving the required standards for Climate Change Assessment (i.e. by implementing the CIRAM methodology) and biodiversity (i.e. by improving SSSI sites). The proposed SDiG targets (if agreed) are likely to be unachievable for CTLB without significant estate rationalisation and/or 'spend

to save' investment on the residual infrastructure. It is not yet clear how the transfer of sites into the new Defence Infrastructure Organisation (DIO) will impact on CTLB's future SD strategy. However, the current proposal to reduce DIO estate-related SHEF staff by 60% poses a risk to the delivery of these ambitious targets.

Land Forces

6. SD policy compliance within LF is assessed as SUBSTANTIAL. Work is progressing to fill these gaps. Whilst not all sites have fully implemented Environmental Management System Army Sites (EMSAS) work is progressing well to reach the target, although it should be noted that the current operational tempo and skills fade has a continuing detrimental affect.

7. The challenges facing LF as a result of the SDSR, the restructuring of LF regional command structures and the loss of external support, mean that extensive work will be needed to ensure that the current level of SD policy assurance is maintained and improved. Progress to develop the LF SD Strategy has been hampered due to conflicting priorities caused by uncertainty surrounding the SDSR work, the loss of external assistance (impacting on energy and waste advisor provision) and the urgency to find a replacement through Project Daedalus, lack of a MOD overarching strategy and the suspension of the new SDiG targets. It is planned to complete the development of the Strategy by Apr 11.

8. Project Daedalus has been established to investigate alternative options for provisioning the replacement of the Divisional Waste and Energy advisors currently provided through external assistance. The loss of the advisors is having a detrimental affect on compliance and assurance and data collection in these areas making a speedy solution critical.

9. Land Command raised the serious issue of hazardous waste ending up in Non Hazardous waste streams in particular OME which may lead to an incident that causes injury or loss of life, damage to infrastructure, censure, costs and damaged reputation.

Navy Command

10. The 2010 DSAS audit of Safety and Environmental Protection within Navy Command provided an overall SUBSTANTIAL Assurance

11. Navy Command continues to remain ahead of all targets on reducing energy usage and CO_2 production. Waste management continues to be problematic because of the need to make contract amendments for service providers at a time of uncertainty in re-letting contracts against a backdrop of constrained resources and uncertainty with Defence infrastructural change. The biggest uncertainty and potential risk is the impact on the TLB's continued performance against EP aspects of SD following the transfer of responsibility and staff to the proposed DIO.

Permanent Joint Headquarters

12. There is LIMITED assurance that CJO TLB will fulfil its Sustainable Operations on the Government Estate (SOGE) objectives and targets. The key factors that limit CJO's ability to achieve the targets are: limited resources to implement key Sustainable Development (SD) measures; ageing infrastructure on the Permanent Joint Operations Bases (PJOBs); lack of local waste recycling facilities in PJOBs. Despite these constraints, CJO have made some progress in different areas of SD, including: embedding SD principles and practices into our policies and management; production and publication of a 4-year SD Action Plan; reduction in carbon emissions from our estate and business travel; implementation of good housekeeping energy efficiency programme; investigation of renewable energy opportunities on our overseas estate to reduce the demand for fossil fuels; climate change risk assessment of our 'critical sites' to mitigate against climate change

Air Command

13. Based on the CESO(RAF) programmed audit of RAF stations, external assurance agency results (MACR CA, DSTL, EA, HSE etc), and a significant reduction in carbon emissions, the overall level of assurance achieved throughout the AIR area of responsibility is currently assessed as SUBSTANTIAL. Good progress has been made in all areas of energy management. The Environmental Management System is now in operation across all stations and mandated requirements are being delivered to a satisfactory standard. Continued engagement with the Carbon Trust has resulted in a partnership initiative at RAF Valley and MOD St Athan to introduce a Biomass Heat Accelerator programme, the results of which will deliver an emissions benefit to the TLB.

14. The RAF continues to make significant improvements in this key area of Departmental business, demonstrating real intent to underpin operational output with sustainable initiatives while changing behaviour in the process. This was formally recognised by the selection of the RAF as the MOD Energy Award Winners (2010) for excellence in management of energy efficiency across the MOD estate. However, there is a concern that lack of investment and planned maintenance will jeopardise this progress with the planned DIO centralisation, owing to reduced control (over works budgets for energy incentives) and a perceived reduction in local engagement. As such, clarity on responsibilities, a coherent communication strategy and visibility of data at all levels will be required to promote good practice and ensure genuine participation across the MoD. If not, the excellent progress we report today could be at serious risk.

Defence Estates

15. Sustainability is fully embedded throughout the majority of Defence Estates business, and so a SUBSTANTIAL assurance is offered.

Met Office

16. Overall the Met Office offers a FULL assurance for SD. Met Office corporate risk management arrangements were given Full assurance by their Internal Audit Function. There are no significant issues or risks to report. In March DSAS conducted an audit

review of the Met Office's Safety, Security, Business Continuity & Environmental Protection arrangements. The report highlighted examples of good practice and strong management systems across all areas. The Met Office has maintained its ISO14001 certification demonstrating improvements in environmental management system and showing compliance with legislation and other requirements. The Met Office is working towards the Wildlife Trusts Biodiversity Benchmark. The Met Office has entered the Business in the Community (BITC) Corporate Responsibility index, the leading benchmark of responsible business. In 2009/10 the Met Office achieved a Silver award in recognition of its CR activities.

Dstl

17. The overall assessment of Dstl performance on sustainability is SUBSTANTIAL. The adoption of a process light management system has resulted in a clearly defined business and risk management approach. Furthermore, there is a third-party verified, certificated environmental management system, in accordance with the requirements of ISO 14001, at two of Dstl's three core sites. As an ISO 14001 certificated organisation, Dstl is subject to third-party verification through six monthly surveillance. This ensures compliance with the standard as well as demonstrating that Dstl is meeting regulatory and other requirements and delivering continual improvement.

18. Dstl is also subject to external inspection and audit by its regulators – the Environment Agency, the Health and Safety Executive and DOSG (including the MLSC). During this reporting period, Dstl has demonstrated continual improvement with many examples of organisational good practice being reported. Audits conducted by the DIA have also reported favourably, particularly in relation to the SHEF Function. Dstl has made good progress in meeting its sustainability objectives in the past year and the organisation already exceeds Government targets in many areas, particularly waste and energy management.

Defence Support Group

19. The Defence Support Group did not offer an assurance statement, and their report identified no warning notices from the regulators.

UK Hydrographic Office

20. No report was received.

ANNEX C TO
SECTION 2 OF THE DESB REPORT
DATED 3 FEB 2011

CORPORATE EP ASSURANCE REPORT 2010

Summary

1. The overall assessment for Corporate Environmental Protection (EP) is **LIMITED** assurance. In general the MOD has not been found to be in breach across the majority of the policy areas covered under Corporate EP, but there are three known incidents of non-compliance this year which have resulted in official warning letters from the regulator. There are examples of good practise in most TLBs with good levels of compliance in many areas, but there are material concerns in some areas, for example many sites that require an EMS still lack one, or uncertainties around the management and assurance responsibilities for F-Gases and Ozone Depleting Substances.

2. The main non-compliances significant failures of control have been:

a. Environment Agency warning letter issued to Wattisham for the discharge of water contaminated with fire fighting foam into a watercourse. **There was a failure in control for the decontamination process and also the maintenance of the containment tanks;**

b. Scottish Environment Protection Agency warning notice issued on Kirknewton Airfield, following oil leaking from an underground oil storage tank and polluting a stream. **There was a failure in control regarding the maintenance of the oil storage tank;**

c. EA Warning Letter issued to RNAS Yeovilton for the contamination of groundwater following a spill incident during refuelling. **There was a failure in the refuelling process**

3. In addition to the incidents that generated warning letters there was also a contamination incident at Lulworth Camp due to a leaking fuel pipe; the EA were informed of this incident but no enforcement action was taken.

4. The main risks in the Corporate EP area have been identified as being:

a. ***Inadequately resourced management of infrastructure leading to more non-compliances, in particular pollution events***. The key risk remains the potential risk of contamination by fuel spills and leakage from aged infrastructure associated with fuel distribution and district heating systems on the estate.

b. Insufficient clarity over roles and responsibilities leading to confused or inadequate action in managing environmental protection. This makes it harder to identify control risks/issues, e.g. the role of sites and DE/DE&S with regards pollution management or the management of F-Gases and ozone depleting substances. There is also a concern about the lack of clarity over the roles, responsibilities and resourcing of protection of the marine environment as SSDC is considered to the lead for many marine policy areas but is not resourced to deliver this.

c. ***Poor data quality limits the confidence of performance assessments and hinders the ability to manage environmental risk.*** Whilst MOD's performance against government sustainability targets has been good, in some cases the data quality covers only 70% of MOD activity (e.g. waste management). Furthermore, very few environmental incidents are being reported to the policy owner via IRIS or other means.

d. ***Failure to fully implement Environmental Management Systems (EMS) across the MOD estate:*** Whilst Environmental Management System (EMS) coverage and quality across the MOD estate is good and continues to improve, there are still 19% (of sites identified as requiring an EMS) without an EMS in place, which runs counter to MOD policy.

There is a risk that some sites may not be effectively managing their environmental risks and subsequently be more vulnerable to environmental incidents and regulatory action. Having a good quality, integrated and well maintained EMS based on ISO 14001 standards can help manage and mitigate environmental risks and ensure compliance.

5. In addition, Land Command raised the serious issue of hazardous waste ending up in Non Hazardous waste streams in particular OME which may lead to an incident that causes injury or loss of life, damage to infrastructure, censure, costs and damaged reputation.

Scope of Assurance Report

6. Corporate Environmental Protection covers those aspects of environmental protection that apply to more than one part of the department and so are coordinated from the Centre. The subject areas are:

a. Environmental management systems (EMS)

b. Controlled waste

c. Environmental protection overseas

d. Pollution prevention and control (PPC)

e. Statutory nuisance and noise pollution

f. Hazardous substances and restricted materials

g. Radiation protection

h. Ozone depleting substances and greenhouse gases

i. Protection of the marine environment (coordination role only)

Overview of risk management and internal control systems

7. Corporate Environmental Protection (EP) policy is contained within JSP 418, which has recently undergone a considerable update. All sites, MOD staff and contractors are required to follow and abide by MOD policy contained in this manual which is aimed at achieving compliance with legislation and the environmental aspects of the Secretary of State's policy statement on Safety, Health, Environmental Protection and Sustainable Development. Non-compliance with any of these could impinge on our operational capability or have financial and/or reputational consequences

8. Assurance at site level is undertaken predominantly through routine TLB Safety, Health and Environment (SHE) audits (JSP 375, volume 4). The Safety, Sustainable Development and Continuity (SSD&C) division use Defence Internal Audit (DIA) to undertake themed audits across the whole of the MOD. During 2009 DIA undertook an audit on EMS implementation across the MOD estate.

9. External regulation is undertaken mainly by the Environment Agency (EA) (England and Wales), the Scottish Environmental Protection Agency (SEPA) or the Northern Ireland Environment Agency (NIEA). For Hazardous Substances legislation such as REACh the regulator is the Health and Safety Executive (HSE). The MOD has Memorandums of Understanding (MoUs) with both the EA and HSE and is in the process of putting an MOU in place with SEPA. The Marine Management Organisation and Marine Scotland are the regulators for the marine environment.

10. The main risks that have been identified are:

a. ***Inadequately resourced management of infrastructure leading to more non-compliances, in particular pollution events***. The key risk remains the potential risk of contamination by fuel spills and leakage from aged infrastructure associated with fuel distribution and district heating systems on the estate.

b. Insufficient clarity over roles and responsibilities leading to confused or inadequate action in managing environmental protection. This makes it harder to identify control risks/issues, e.g. the role of sites and DE/DE&S with regards pollution management or the management of F-Gases and ozone depleting substances

c. ***Poor data quality limits the confidence of performance assessments and hinders the ability to manage environmental risk.*** Whilst MOD's performance against government sustainability targets has been good, in some cases the data quality covers only 70% of MOD activity (e.g. waste management). Furthermore, very few environmental incidents are being reported to the policy owner via IRIS or other means.

d. ***Failure to fully implement Environmental Management Systems (EMS) across the MOD estate.*** Whilst Environmental Management System (EMS) coverage and quality across the MOD estate is good and continues to improve, there are still 19% (of sites identified as requiring an EMS) without an EMS in place, which runs counter to MOD policy. There is a risk that some sites may not be effectively managing their environmental risks and subsequently be more vulnerable to environmental incidents and regulatory action. Having a good quality, integrated and well maintained EMS based on ISO 14001 standards can help manage and mitigate environmental risks and ensure compliance.

Overall Assessment of Compliance

11. The overall assessment of compliance is **SUBSTANTIAL**. In general the MOD has not been found to be in breach across the majority of the policy areas covered under Corporate EP, but there are three known incidents of non-compliance this year which have resulted in official warning letters from the regulator (further information is provided below in the discussion of significant failures of control).

Overall Assurance Statement

12. There are examples of good practise in most TLBs with good levels of compliance in many areas, but there are material concerns in some areas, for example many sites that require an EMS still lack one, or uncertainties around the management and assurance responsibilities for F-Gases and Ozone Depleting Substances. For this reason no more than a **LIMITED** assurance can be offered.

Significant Failures in Control

13. Environment Agency warning letter issued to Wattisham. The warning letter to the Commanding Officer of Wattisham Station was for an offence under Section 85 of the Water Resources Act 1991, the offence being pollution of a tributary of Somersham Watercourse with fire fighting foam. The fire suppressant system in one of the hangars went off (due to a fault) and 6 Apaches were wholly or partially covered in foam. They had to be extracted from the hangar and washed down. Foam got into the site surface water drainage system and thence into the River Gipping upstream of one of the take off points for Ipswich's water and, as a precaution, the EA shut off this source. The helicopters had to be washed down as a matter of urgency to stop any corrosion damage to the air frame or avionics. Foam generated in the hangar is designed to drain to 1,000 cubic meter capacity underground containment tanks which should be empty. However they were three-quarters full of water from an unknown source. There will be a cost associated with

investigating and rectifying the system fault which is causing water to enter the underground containment tanks from sources other than the hanger. This may be considerable. **There was a failure in control for the decontamination process and also the maintenance of the containment tanks.** Whilst not resulting in a warning letter, there was also a separate leak of approximately 1,400 litres of diesel from an underground pipe at Wattisham.

14. Scottish Environment Protection Agency (SEPA) warning notice issued on Kirknewton Airfield. Following oil being identified in a stream adjacent to the airfield in July 2010 the source was identified as being an underground oil storage tank. In full consultation with DE, SEPA issued an Enforcement Notice to the Commandant Air Cadet Organisation (HoE). Pollution containment measures were already in place on site following an initial incident in March 2010 where SEPA observed oil entering the stream. However, severe weather in the region had impacted the effectiveness of these measures. Following the initial incident a SEPA ecological survey indicated that the watercourse had been 'severely' impacted by the oil pollution for a distance of 1km. The source of the oil pollution was considered to relate to historic airfield operations including a redundant underground furnace fuel oil tank (UST). DE have completed the removal of two USTs, an investigation of fuel and drainage infrastructure and drainage related remedial measures. These measures have substantially addressed the requirements of the Enforcement Notice to the satisfaction of SEPA. However, further action is required in March 2011, when an ecological survey of the Burn will be completed to assess the requirements, if any, for remedial measures to be undertaken within the Burn. Both Defence Estates and Air Command have incurred significant costs and expended significant resources in completing the above, with committed costs to date amounting to approximately £180,000. **There was a failure in control regarding the maintenance of the oil storage tank.**

15. Environment Agency warning notice for RNAS Yeovilton.. The letter was issued following a spillage of fuel during a transfer between BFI 5 and a road tanker. When the incident occurred the road tanker was parked on a porous surface which was deemed not suitable for the BFI, fuel seeped through the surface and contaminated the ground beneath and subsequently entered the groundwater. Work is being under taken in the FY which involved the removal of the contamination, replacement of the hard standing and oily water interceptor. The EA are being kept appraised of the progress of this work. Committed costs to date amount to £250,000. **There was a failure in the refuelling process**

16. Lulworth Camp: . During an investigation into increased fuel oil consumption a leaking fuel pipe was discovered. The volume of contaminated material that was removed was in excess of the threshold for notification to the authorities and the EA was advised. On advice from the EA, consultants engaged to establish whether or not there was any further pollution. To date all results from core samples have proved negative, a formal report is expected at the end of January 2011. The faulty pipe was replaced. **There was a failure in control regarding maintenance of the fuel pipes.**

17. Sites are responsible for implementing their own control mechanisms. Other than the three incidents resulting in warning letters from the regulator there has been no information provided which suggests any significant failures in control at site level. However, one of the failures in the process highlighted by these incidents and the associated warning letters are not being reported on IRIS or drawn to the attention of the policy owner until the annual assurance process is undertaken. This indicates that whilst there is a dynamic response to managing incidents at the site level, the policy owner is not informed, leading to poor overall data quality and limiting the ability to form a clear view of the risk being carried by the department.

Capability or Capacity issues that could impact compliance

Governance

18. There is a lack of clarity and understanding of the role of the Head of Establishment, Regional Prime Contractors and DE/Aquatrine with regards managing site infrastructure, which reduces confidence that spills will be properly managed now and in the future.

19. There are still a number of areas in which there is a lack of clarity over who is responsible for policy and assurance, particularly where ownership is not clearly defined. This is particularly evident in relation to the management of F-Gases and Ozone Depleting Substances management where TLBs look to DE (estates) and DE&S (equipment) to provide assurance on management of these gases, yet DE believe assurance is the responsibility of the lead occupying unit. Although this lack of clarity has yet to result in any obvious incidents, there is a risk that minor failures are not being appropriately accounted.

20. As the organisational change under PR11 and Defence Reform takes effect, it will be necessary to ensure that governance for Corporate EP resides with the appropriate organisations as otherwise EP risks and incidents will not be managed properly and will impact on operations, costs and reputation for the MOD.

Management documents and systems

21. All JSP 418 leaflets except Radiation Protection have been updated within the last 18 months. There have been problems identified however within the Hazardous Substances and Restricted Materials leaflet which reduce confidence regarding the MODs legislative compliance in this policy area. This leaflet is due for review early in 2011.

22. The lack of EMS across all sites that are required to have one increases the risk of non-compliance across the MOD and reduces the likelihood of performing well against wider sustainability targets.

Legislative tracking

23. Legislative tracking is important to ensure incoming legislation will not impinge on the MODs operational capability. At present legislative tracking is done through two main tools. SSD&C are heavily reliant on DEFNET (Environmental Defence Experts working group) for early warnings on EU level Directives and Regulations. Tracking through DEFNET has mitigated the risks of new legislation from Europe affecting Defence capability.

24. Legislative tracking at the UK level poses difficulties; devolution now requires legislative horizon scanning to be conducted across four different countries which is resource intensive, and also puts limited resources under strain as the MOD also has to often liaise and negotiate on four different fronts. There is a risk that the MOD could miss important pieces of environmental legislation that could impact on our operational capability, particularly in designing equipment and conducting training exercises. We are confident that the requirements of all UK wide, English and Welsh legislation derived from EU regulations are reflected in MOD guidance. We are not confident that legislation from the Devolved Administrations (particularly Northern Ireland), which is not related to EU requirements, is fully reflected in MOD guidance.

25. There has been a long-standing requirement for a legislative tracking database which would help SMEs to note upcoming legislation (not existing legislation) and any impacts on their areas. Resource constraints in SSD&C have not allowed the development of this database.

Reporting & data

26. At present there is no consistency in the reporting of environmental incidents or near misses, TLBs should use IRIS however evidence shows that not all TLBs are. There is potential to improve IRIS to better capture environmental incidents and there is work underway with stakeholders to scope out the requirements and ensure funding is allocated appropriately. However at present there is a risk that the MOD does not have a holistic view of incidents across the estate which impairs our ability to identify regularly minor incidents, which could be prevented from becoming major incidents.

Skills and training

27. Many of the Functional Safety & Environment Boards highlight shortage of Suitably Qualified and Experienced Personnel (SQEP) as being a significant risk for their areas. Specialist training in Environmental Protection, some courses of which are IEMA accredited, is available from the Specialist Training School at RAF Halton. Funding has come under threat in the past, and the School recently saw its budget cut slightly with the loss of two posts. There is a risk that STS funding may come under scrutiny again with further cuts required.

Engagement with the regulators

28. The MOD's relationship with external regulators varies with many examples of good engagement and also areas in which engagement could improve. At present the MOD has an MOU in place with the Environment Agency and is in the process of developing an MOU with SEPA. There is currently no engagement with the Northern Ireland Environment Agency at the strategic level, which means the MOD could be at increased risk of being non-compliant with environmental legislation in Northern Ireland.

Resources

29. There is currently not enough evidence to indicate to what level resource issues pose a risk within the Corporate EP policy area. While some TLBs indicated that gapped posts and lack of SQEP personnel posed a risk particularly in EMS auditing this was not MOD wide. However within the current climate of government spending cuts and with the prospect of related reductions in MOD personnel, there is a risk that if not managed appropriately reductions in resources could impact on the MODs ability to be legislatively compliant. This could result in increases in fines, warning letters or even Crown Censures as well as damaging our reputation and relationship with the UK/EU community.

Infrastructure

30. The Defence Fuels and Gases Environment and Safety Board 2010 report cites the ageing infrastructure is a key risk. The long standing underinvestment in the maintenance of buried fuel pipelines and district heating systems is beginning to manifest itself in leaking systems and fractures to corroded pipes. Leakage often results in contamination of land and pollution of controlled waters including rivers and groundwater aquifers resulting in a breach of statutory legislation.

Future Issues

31. It is not yet clear how Defence Reform and the transfer of SHEF to the Defence Infrastructure Organisation, with the related reduction in staff numbers, will affect Corporate EP policy setting, delivery and assurance, or whether this will impact on defence business.

32. While there are currently no identified pieces of legislation which could impact on the MODs operational capability, there is incoming legislation which benefits from Defence exemptions and

derogations which will require internal regulation to ensure compliance with the SoS policy statement.

33. The potential Environment Agency Wales would add a 5th external regulator within the Corporate EP policy area. There is a risk that due to already stretched resources the MOD would struggle to develop an effective relationship with Environment Agency Wales.

ANALYSIS BY POLICY AREA

Environmental Management Systems - **LIMITED**

34. MOD policy requires all sites to be covered by an EMS; coverage as of March 2010 81% of MOD sites had an EMS in place. There were only 11 sites (out of those identified as requiring one) that hadn't started the process of implementing an EMS.

35. EMS's have been introduced across the majority of MOD sites although the level of implementation and maturity varies. EMSs are regularly reviewed as part of site SHE audits. A number of sites have their EMS accredited to ISO 14001 standard and one TLB (DE&S) has put aside funding to have their TLB Corporate EMS accredited to ISO 14001.

36. Key Risk: Lack of resources and suitably qualified personnel which is having an impact on:

37. Sites' ability to properly identify risks and develop robust Environmental Aspects Registers, which means that the department will be increasingly likely to experience failures of control;

38. Our ability to carry out detailed audits and so gather the evidence necessary to provide assurance that systems and processes are in place and are adequate.

39. EP on the Overseas Estate – **LIMITED**

40. Although Germany is given an assurance level of Full, the rest of the overseas estate as currently reported ranges from Limited to Substantial and in particular the MODs Permanent Joint Overseas Bases (PJOBs) have been given Limited assurance. Work is being undertaken across the PJOBs to address some weaknesses such as training and awareness and DE have recently implemented a first draft EMS in Kenya.

41. The DFGESB report highlights that there are considerable weaknesses overseas which increase the risk of pollution events from spills. The majority of overseas sites have lower fuel spill control measures in place due to the practicalities of providing effective pollution prevention equipment, fire fighting measures and clear up contracts, although the operational impact of losing these facilities could be more significant. Pollution Control Equipment (PCE) which is available is not well maintained, not necessarily compatible or appropriate and its deployment is not always understood as potential operators lack both training and competence in its use.

42. There have been 17 spills (4,570 litres) reported on the PJOB estate in 2010, compared to 27 spills (52,675 litres) in 2009, representing a 90 % decrease. There were no significant spills on the PJOB estate in the current reporting year. 23, 618 litres of F34 aviation fuel leaked from an unserviceable sight glass on an aviation fuel storage tank in Brunei. The resulting fuel loss migrated through the faulty bund resulting in a further 16,832 litres of contaminated fuel/ water mixture being recovered from the OWI and drainage system. Furthermore a considerable amount of top soil was excavated as part of the remediation programme.

Fluorinated Greenhouse Gases – **LIMITED**

43. The evidence shows that responsibility for F-Gas management generally lies with a contractor at the site level, usually provided through either an RPC or PFI, which in turn are generally managed by Defence Estates. There is an expectation by some TLBs that assurance for F-Gas management on the estate would be provided by DE as the organisation responsible for managing the estate and therefore ensuring compliance. This same expectation was reiterated for DE&S with regard F-Gas management in equipment. DE however state that while they maintain the equipment the lead occupying unit is responsible for reporting.

44. The lack of clarity regarding responsibilities for reporting FGas management and assurance for the purpose of this report has resulted in only a Limited assurance level being given, despite the majority of returns giving substantial. This does not mean that FGases are not being managed correctly and undergoing appropriate audit and assurance, but it indicates a significant gap in the MOD's process for properly managing F-Gases and providing assurance.

45. Key Risk: Contractual arrangements involving RPCs and Private Partners do not allow easy access to records and data to allow assurance to be gained on processes and procedures. Whilst the primary impact of a failure is damage to the environment, this could lead indirectly to reputational and/or financial impacts for MOD.

Hazardous Substances and Restricted Materials – **LIMITED**

46. Processes and procedures are in place to support management of Hazardous and Restricted materials in line with MOD policy. Processes are also in place to meet the requirements of the REACh regulations and a tool called HAZMAT has been developed to assist in Hazardous Materials management.

47. There is currently no audit process in place to assure Defence Equipment is compliant with MOD policy and legislation pertaining to hazardous substances and restricted materials or the robustness/appropriateness of processes and procedures. While there have been no major incidents there is some evidence that current MOD Policy and subsequent processes and procedures may not be fully adequate to provide assurance of compliance. A review of MOD policy is due to take place early 2011.

48. Key Risk: Processes and procedures although in place may not be appropriate to provide assurance that banned or restricted substances are either not being used in Defence equipment or are being used appropriately i.e. in line with legislation or MOD Policy. Without this assurance there is a risk the MOD may be vulnerable to regulatory action and subsequent fines and reputational damage.

Pollution Prevention & Control – **LIMITED**

49. There is generally a high level of confidence across the MOD with regards sites processes and procedures for mitigating against and managing pollution risks. Emergency Spill response plans are reported as being in place and where required environmental permits have been acquired. Several TLBs also confirmed that that pollution risks are captured and managed as part of the site's EMS. The DF&GFES report also noted that significant improvement had been made in ensuring that the inadequate control measures noted in the 2009 have been addressed, particularly on operations and for the PJOBs.

50. There have been a number of spills, predominantly fuel, during 2010. The 2010 DFGESB report raises a number of issues and risks associated with fuels and gases management in particular the MOD can no longer guarantee compliance with Pollution Prevention guidelines or legislation due to the continued lack of investment across the MOD estate, infrastructure and equipment. Land Forces have identified that some 50% of units are failing to properly complete the Unit Spill Response Plan as Mandated in JSP 317.

51. The following establishments have failed to demonstrate compliance with MACR (e.g. for breach of statute) which has resulted in the issue of Improvement Notices: OFD Thankes, OFD Loch Striven, OFD Singapore, OFD Gosport, NPD Loch Ewe, NPD Campbeltown, and Mount Pleasant Complex (MPC) BFSAI, These sites are all working to remedial Action Plans. A DFG review with EA/SEPA to clarify the bunding requirements and classification of partially buried tank is ongoing. The environmental aspects of the UK OFD non-compliances are also being addressed with the Environmental Science Group, but this is unlikely to be complete before 2012. With the exception of MPC these Improvement Notices were issued in 2007 and establishments continue to operate at risk outside of the MOD Major Accident hazard safety case.

52. Key Risk: The aged infrastructure and equipment could result in more leaks and spills resulting in expensive clean up operations and enforcement action from regulators.

53. Key Risk: The lack of clarity regarding Roles and Responsibilities between Head of Establishments, ASP, DFG and DE on sites leads to uncertainty as to who is responsible for what actions in the event of a leak or spill, which could lead expensive clean up operations and enforcement action from regulators.

Protection of the Marine Environment – **LIMITED**

54. Marine spill plans generally appear to form part of site EMS's and are managed well with only one area reporting a minor spill during 2010. TLB reports were generally positive with no real risks identified. However, there is a concern about the lack of clarity over the roles, responsibilities and resourcing of protection of the marine environment as SSDC is considered to the lead for many marine policy areas but is not resourced to deliver this.

Ozone Depleting Substances – **LIMITED**

55. Critical uses (as allowed for by derogations in law) for Halons are reported through SSD&C to DEFRA, in line with reporting requirements. As with F-Gases there is an expectation by some TLBs that assurance for ODS management on the estate would be provided by DE as the organisation responsible for managing the estate and therefore ensuring compliance. This same expectation was reiterated for DE&S with regard F-Gas management in equipment.

56. The lack of clarity regarding responsibilities for reporting ODS management and assurance for the purpose of this report has resulted in only a Limited assurance level being given, despite the majority of returns giving substantial. This does not mean that ODS are not being managed correctly and undergoing appropriate audit and assurance; but to indicate a significant gap in the MODs assurance process that requires resolution.

Radiation Protection – **SUBSTANTIAL**

57. DSTL are the MOD regulator in this area and undertake periodic audits of sites that hold radioactive material. Following a series of regulatory failures DSTL undertook a 100% review of assets held and radiation sources. This resulted in some issues being identified and addressed and training being provided to key staff.

Statutory Nuisance including Environmental Noise – **SUBSTANTIAL**

58. All TLBs assured Statutory Nuisance management as either Full or Substantial. There were no reports of non-compliance or public complaints and sites appear to have good processes and procedures in place to mitigate and manage any potential nuisance activities. A majority of TLBs also reported that most sites had complaint handling procedures in place. A couple of TLBs indicated that data on Statutory Nuisance assurance was limited but no problems had been reported.

Controlled Waste – **LIMITED**

59. Most TLBs assured controlled waste as either Substantial or Full, these TLBs reported that processes and procedures were in place to ensure legislative compliance, CTLB have mandated the requirement to have a waste manager.

60. Land Command raised the serious issue of hazardous waste ending up in Non Hazardous waste streams in particular OME which may lead to an incident that causes injury or loss of life, damage to infrastructure, censure, costs and damaged reputation.

Waste minimisation projects may be hampered by residual contract issues, which may impact our ability to improve recycling in line with government targets, either by not allowing for recycling to happen, or not allowing the information to be gathered that allows recycling to be reported potentially damaging the MODs reputation.