



Ministry of Defence

DEFENCE ENVIRONMENT AND SAFETY BOARD

SAFETY, ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

REPORT 2009

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STATEMENT OF ASSURANCE FOR SAFETY, ENVIRONMENTAL PROTECTION AND SUSTAINABLE DEVELOPMENT

1. This is 2PUS' annual report, as the Process Owner for Safety, Environmental Protection and Sustainable Development. It covers compliance on these areas across the Department and is the Defence Environment and Safety Board's annual assurance report to the Defence Operating Board and the Defence Audit Committee covering the year 2009.

2. Functional Safety Boards are the principal bodies for co-ordinating and providing safety and environmental assurance to the DESB, using inputs from TLBs amongst other sources. They operate in widely differing operational environments/regimes; some have clear standards derived from civil regulation (such as aviation and the nuclear industry) whilst others derive their assurance largely from internal standards. For Sustainable Development, including wider Environmental Protection, assurance is collated from a variety of sources for 2PUS by the Safety, Sustainable Development and Continuity Division, covering the key SD policy areas. Further influences on this reporting period have been the Formby Study and the Haddon-Cave report.

3. There is increasing awareness of safety at senior levels, and real efforts are being made to improve the way in which we learn from experience. An improved assurance process shows that more needs to be done. Key themes that have emerged from 2009 are:

- a. The pressure that resource constraints are placing on safety and the need to ensure that decisions with safety implications are taken at the right level.
- b. A continuing shortage of personnel, both those with the necessary safety qualifications and those with sufficient experience to discharge their safety responsibilities.
- c. Concern over the cumulative effects of change, in particular personnel moves resulting in a dilution of available experience and competence.

4. Next year, the Planning Round and SDR will both be challenging. We recognise this will test safety management, sharpening the need for careful, evidence-based prioritisation in the way safety decisions are taken across MOD and putting additional strain on what is already in some areas a very thin safety base.

5. Although both the Land Systems Safety and Defence Nuclear Environment and Safety Boards report Substantial assurance, and the MOD Aviation and Regulatory Safety Board does not give an overall assessment due to changes associated with the setting up of the Military Aviation Authority, remaining contributors report Limited Assurance. Assurance given by the Defence Ordnance Safety Board this year is down from Substantial in 2008 to Limited this year. On balance, as last year, the DESB reports:

LIMITED ASSURANCE

against the management of Safety, Health, Environmental Protection and Sustainable Development in 2009.

CHAIRMAN'S SUMMARIES OF FUNCTIONAL SAFETY BOARD REPORTS

6. Assurance ratings given in this report are in accordance with DIA Classifications (shown at Annex A).

Defence Land Systems Safety Board – SUBSTANTIAL ASSURANCE

7. Through the combination of assurance activities, and in accordance with Defence Internal Audit guidelines, the LSSB Chairman is confident that Substantial Assurance can be provided for Safety and Environmental Protection (S&EP) within the Land domain. During this period, significant work was undertaken to address Road Traffic Accident and workplace transport accidents; improve the lessons learned process; and, improve the safe use of equipment on operations. However, failure to implement either the controls identified in the LSSB Issues Register or audit findings may adversely affect the achievement of the Board's and TLB's objectives and put S&EP management systems at further risk.

8. During 2009 an End to End Assurance framework for Land Systems was implemented and, for the first time, assurance reports were received from all TLBs represented on the LSSB. These reports and those from reporting committees and audit have established areas for improvement across TLB boundaries in the areas of: manning and training; accident/incident reporting; Operational Dispensations; and, Safety Cases. These findings will be addressed by either the implementation phase of the LSSB Business Process Review (BPR) - which sought to improve the responsiveness in processing Operational Dispensations, incident reporting and lessons management - or the LSSB audit programme for 2010.

Defence Ordnance Safety Board – LIMITED ASSURANCE

9. Chairman DOSB reports that the condition of the explosives estate remains a primary concern for the Board, with the potential for significant vulnerability. The consequences of an explosive incident could have a significant impact on capability, and the potential off-site (public domain) consequences could have serious implications for the Department. In the 2008 DESB report, it was agreed that, as a matter of priority, work would be undertaken to prioritise specific actions in this area. Although still a priority, the requirement is moving and the Ordnance community are currently re-baselining this, including defining future Ordnance Munitions and Explosive (OME) storage and outload requirements, ahead of 2014 when current licensing will expire for some facilities. Risk against compliance with MOD Regulations is increasing and, if agreed, a higher level of risk (including aggregated risks) may have to be accepted on resource grounds.

10. Whilst the Chairman reports improvements in assurance arrangements, the DOSB maintains an overall sense of unease on the safety of deployed OME; this is supported by a significant number of accidents and incidents on Op HERRICK. The 3rd party audit of OME safety in Afghanistan (planned for early 2010) will help to provide a better overall picture of the current situation

and highlight areas where improvements need to be made, particularly in the context of Forward Operating Bases and coalition explosives safety.

11. Conscious that the DOSB membership is drawn from a wide range of stakeholders, the Chairman is keen to ensure that the assurance provided to the DESB reflects the full picture of OME safety management across the Department. He has already identified a number of areas where reporting might be improved, and the implementation of End-to-End Assurance in the coming months will further enhance the situation.

Defence Nuclear Environment and Safety Board – SUBSTANTIAL ASSURANCE

12. 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. None of the DNESB's issues reflect an immediate safety or environmental concern but, 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 key areas of concern for the medium term are the sufficiency of resources, both money and staff complement, and the maintenance of a suitable cadre of suitably competent staff (RN, MOD civilians and industry partners).

13. Duty Holders have maintained Continuous at Sea Deterrence (despite the incident with HMS VANGUARD) and have safely delivered the required (albeit reduced) military capability from the Submarine Arm. ASTUTE has been safely commissioned and the Nuclear Weapon Approving and Design Authorities have been accredited by the regulator.

Ship Environment and Safety Board – LIMITED ASSURANCE

14. The Chairman's main concerns set out below represent a combination of formally recorded risks and a range of underlying issues being actively managed in the maritime domain:

- a. The problems of retaining sufficient levels of SQEP, including the need for wider awareness of safety issues and weaknesses in departmental-level planning to address the problem. This undermines our ability to make good decisions that could impact on the safety and environmental performance of our equipment, with consequent impact on costs, project timescales and reputation.
- b. Concerns remain over Safety Culture, in particular the need for a Just Culture that supports an effective Learning From Experience system and allows time for reporting and investigating accidents, incidents and near misses. Without a culture where leadership actions and priorities demonstrate commitment to safety, an atmosphere of trust exists, people feel free to raise safety issues as a matter of course, and it is clear to everyone what behaviour is acceptable, we will not be

able to learn lessons from our mistakes and manage change safely and effectively. To address this, NCHQ and DE&S are looking at the governance surrounding reporting systems and reporting chains in order to reduce any fragmentation and resultant confusion.

c. The lack of understanding across the organisation of Risk Aggregation and risk management in general, especially cumulative risk and risks at interfaces. This issue hampers our ability to assess and manage the impact of multiple changes across the various lines of development.

d. The increasing challenges of legislation, in particular the growing body of environmental legislation. Not only could non-compliance imply that we may cause harm to personnel or the environment, but it has the potential to place avoidable limitations on our operational capability. The Single Hulled Tankers are a case in point.

15. The Chairman is also concerned that the risks and general concerns reported this year are very similar to those reported last year. While progress has been made in a number of areas during 2009, the same underlying problems appear to remain. The maritime domain does not appear to be resourced, particularly in terms of SQEP, to do much more than maintain the *status quo* and as a result cannot make significant improvements quickly. For this key reason, the overall assurance opinion provided by the SESB is Limited Assurance.

MOD Aviation Regulatory and Safety Board

16. The headline 3-year rolling average accident rate across all aircraft types has increased slightly during this reporting period and of concern is the increased number of training, testing and air experience flight accidents. The top risks are those of Brownout¹ and the risk of a loss of visibility of safety measures during the Planning Round (PR) process, although it is acknowledged that, in future, improved procedures in the PR will give greater visibility to TLBs. This has been a busy year organisationally, and has seen change in the MOD Airworthiness and Flight Test Regulator's (MAFTR) structure and the formation of the Directorate of Airspace and Air Traffic Management (DAATM). In parallel, the MARSB's focus has been on the continuous improvement of the MARSB End to End assurance process. Implementing the recommendations from the Haddon-Cave Report is likely to bring about further reorganisation of the MARSB area of responsibility next year.

17. Work has commenced to provide a collective 'virtual' Military Aviation Authority (MAA) assurance to the MARSB; these are process improvements and, principally, will involve changes in leadership, organisation and structure.

¹ Brownout is the term applied to the recirculation of loose sand and dust in the downwash from helicopters during takeoff and landing.

Until this work is complete, the overall statements by the three individual pillars are as follows:

- a. Directorate of Aviation Regulation and Safety (DARS). Audits show that levels of assurance between TLBs continues to vary: RN is assessed as **Substantial** Assurance; Air Command is assessed as **Limited** Assurance; the JHC audit has been delayed whilst their Safety Management Manual is written.
- b. DAATM. Using extant processes, the assessment for Air Traffic Management is **Limited** Assurance across Defence but **Full** Assurance for RAF.
- c. MAFTR. Within this remit the following assurance statements are made: Military Flight Test Regulator (MFTR) is assessed as at **Full** Assurance; Design Approved Organisation Scheme (DAOS) / Maintenance Approved Organisation Scheme (MAOS) is assessed as at **Substantial** Assurance; Airworthiness Organisation Approval Process (AOAP) – an immature process that is being developed and applied in stages – is assessed as at **Limited** Assurance; and, Acquisition Safety and Environmental Management System (ASEMS) audits of DE&S have provided **Substantial** Assurance.

Defence Fuels and Gases Safety Board – LIMITED ASSURANCE

18. The second annual report from the DFGSB continues to assess the assurance rating for Fuel and Gas safety in 2009 as Limited Assurance. There have been improvements in gathering Fuel and Gas Safety Assurances since last year, with PJHQ, HQ Land, HQ Air and DE&S all submitting statements agreeing Limited Assurance. However, the Board could not certify that MOD fuels infrastructure was compliant and that adequate measures to deal with fuel spills, particularly in the more remote Permanent Joint Operating Bases (PJOBS), were in place and effective in use. Although the financial resources required for improvements at PJOBS are still required, training and oversight of their use has been addressed.

19. The root cause of there being no improvement is lack of recognition of the risk and application of appropriate mitigation measures as evidenced by the number of uncontrolled spills. The lack of financial resource makes complying with the Dangerous Substances and Explosives Atmospheres Regulations and the latest environmental regulations for Fuels and Gases more difficult.

Occupational Health and Safety Board – LIMITED ASSURANCE

20. Although there are short comings in the evidence-base, what there is suggests improved levels of safety awareness are being achieved through TLB initiatives and effort is now being directed at improving incident / near miss reporting. As well as improving stakeholder engagement with and reports into IRIS, putting in place processes for learning from lessons remains a high

priority for action for the OHSB, acknowledging that impetus for improvement is coming at the same time from other functional areas. Of the five concerns reported in 2008, three (noise induced hearing loss on operations, implementation of the 4Cs² policy, and effective leadership and commitment to safety) are now considered by the Board to be adequately managed. The other two concerns reported in 2008 (the need for process improvement in sharing and learning lessons, and asbestos management) remain a concern for 2009. Two additional concerns (resource constraints exacerbated by organisational change, and a continuing lack of SQEP) have been identified by Board members as worthy of mention in the 2009 report. Overall and noting concerns about evidence, the overall assessment remains as Limited Assurance for the management of occupational health and safety.

21. In parallel with pursuing the four unresolved concerns, there is scope in the coming year for the OHSB to strengthen and clarify its role and improve the assurance it provides. The priorities will be: to establish a clearer framework of what the OHSB exists to examine, in particular its coverage of Occupational Health issues (eg assurance of medical equipment on operations); what questions it needs to pose; what its priorities are and why; what hard evidence it needs to gather for assurance purposes; how this will be tested and collated; and, how its role relates to that of other FSBs.

Sustainable Development and Environment Protection – LIMITED ASSURANCE

22. There is no FSB equivalent for Sustainable Development (SD) or corporate Environmental Protection (EP) so this report is comprised of information provided by TLB SD Champions and Key SD Policy Owners. The Sustainable Estates area is delivering well, albeit further work is required to increase resilience to the future impacts of climate change. Progress is also being made on Sustainable Procurement (SP), particularly in Defence Estates, although delays in resolving funding problems mean the Department was unable to meet the Government's December 2009 target against the Sustainable Procurement Flexible Framework. In all areas a key risk to ensuring compliance and delivering our requirements is financial pressure. If we do not react appropriately to emerging legislation we could restrict future operational capability. A draft action plan for Business Administrative Travel has been developed but delivery has been hampered by the lack of an overall travel process owner.

23. Good progress has been made in 2009 to improve waste data, with a baseline being agreed with the Office of Government Commerce (OGC) for the first time. There remains, however, considerable room for improvement in SD/EP data quality and coverage as, without this, there can only be limited confidence in the performance. There has been limited progress in implementing Green Information & Communications Technology in the MOD and this will require attention in 21010.

² Specifically in relation to contractors: Control, Coordinate, Communicate, Cooperate.

PROGRESS MADE AGAINST 2008 CONCERNS

24. The priorities identified in last year's report were included in the DESB Action Plan. Underpinning the proposed Defence Board Strategic Objectives³, it is intended that the DESB's Action Plan will become part of the Department's Safety Strategy. To facilitate this, the format has been aligned with templates agreed for the Strategy for Defence and a copy of the re-formatted Delivery Plan is at Annex B. This incorporates progress reports on the previous DESB Action Plan. The Safety Strategy is discussed further at para 42 below.

25. Priorities for 2009. Updates on the following issues, which were added to the DESB Action Plan as priorities for 2009:

a. Further to embed and resource SQEP within people programmes. There has been progress in some areas but, overall, the picture has not improved. This issue is covered under cross cutting concerns at paras 31 and 33 below and at serial 6 of the Delivery Plan at Annex B.

b. To improve the way in which we learn from accidents incidents. A lack of effective, coordinated processes to ensure that safety-related lessons, including those from operations and training, are learned and put into practice is being addressed by all TLBs. Further work is required to ensure lessons, where appropriate, are shared across Defence. The issue remains high on the priorities in the Safety Strategy Delivery Plan.

26. Specific actions. An update on work to prioritise in 2009 specific actions in the following broad areas:

a. The availability of equipment for training. Concerns remain over this issue which is covered under cross cutting issues at para 30 below.

b. The need for infrastructure to meet statutory safety requirements. Concerns remain over progress on this issue which is covered under cross cutting issues at para 30 below.

27. Waste data quality. The waste baseline has been agreed with the Sustainable Development Commission (SDC), which is a significant step forward, but further work is still required on the overall SD/EP data management process.

28. Completed actions. Most of the serials in the Action Plan are now being addressed and managed as normal business, with outstanding actions shown within Annex B. Actions completed during 2009 are:

³ The Defence Board Strategic Objective (DBSO) for Safety is: Improving Safety Management and Performance.

a. Implementation of actions in the DE&S Safety Improvement Plan (SIP). A significant achievement of the SIP has been to maintain Safety high in the MOD consciousness, extending to the rest of the Department what SIWG reported as the DE&S healthy “corporate unease”. 2PUS has endorsed the SIP Follow-on Plan which has three main work streams:

- Supporting front line effectiveness through intelligent safety management.
- Promoting dynamic and competent decision making throughout the life cycle.
- Continuing to guard against corporate complacency by seeking out weakness.

The scope of the SIP, and consequently the follow on actions it recommends, was limited to product safety. CDM’s Board decided that, in addition to product safety, it requires DE&S to pursue campaigns which together will “embed a culture of continuous improvement ... in safety⁴”, encompassing safety and environmental protection in both products and workplaces.

b. Road Safety – Wearing of Seatbelts. Following the DB meeting on 14 May 09, the DESB WG were directed to produce a short note, outlining the detail of a Coroner’s letter and the subsequent Min AF response, asking the Defence Road Safety Committee (DRSC) to disseminate through their Master Drivers, etc to unit level the importance of wearing seatbelts. The DRSC undertook this as part of their ongoing road safety campaign work and consequently the DESB WG were able to provide details of actions taken encouraging the wearing of seatbelts which assisted the Defence Inquest Unit in their drafting of a follow up reply from Min AF to the Coroner. Subsequently, revisions to Defence Motor Transport Policy have included clarification on drivers’ responsibilities with regard to the wearing of seatbelts in vehicles.

OUTLINE OF MAJOR 2009 CONCERNS

29. FSBs report their concerns as issues and risks, commenting, where appropriate on residual risk. Although the DESB note that work undertaken under the Haddon-Cave Review will help with a number of these issues, the most significant (as agreed by the DESB Working Group of FSB and TLB reps⁵) cross cutting concerns are discussed below, followed by other specific yet significant areas of concern.

⁴ DE&S Strategic Objective 5.

⁵ And by the DESB at their 25 Feb 10 meeting.

Cross Cutting Concerns

30. Resource constraints. At their meeting in September 2009, the DESB discussed the risk to the delivery of Safety and SD posed by resource constraints. Subsequent to that meeting, 2PUS issued a note⁶ emphasising the need to adhere to extant policies and procedures notwithstanding resource pressures and the need to include a clear articulation of the safety related risk. This year, separately, and with a compounding effect, the pressures resulting from resource constraints are reported by FSB Chairmen to be their greatest concern. Whilst every effort is being made not to compromise safety, resources in safety terms are in some places spread very thinly and even diminishing. Examples, all of which have the potential to impact on operational capability, are:

- a. The DNESB report concerns over the adequacy of resource available to deliver and regulate the defence nuclear programmes safely. Resource, in this context, is primarily the number of funded posts in internal MOD organisations (including the regulator), but it also applies to the level of contract funding that delivers safe operations or designs and in issues such as the holding of safety related spares.
- b. The DOSB report two concerns with the potential, if realised, to have a significant impact on operational capability:
 - As their primary concern, the condition of the MOD explosives estate. Work is on-going to clearly define the future OME storage and outload requirements and then make sure that sufficient resources are allocated to ensure that compliant facilities are developed to meet these requirements. Longer term estate planning has been dogged by financial restrictions and an increasingly ageing asset base that was not constructed to current standards. The operating issues currently being experienced at the lowest levels will begin to extend to strategic level where the explosive estate more widely will become progressively more difficult to maintain in compliance with Statutory and MOD mandatory requirements. This risk has the potential for significant vulnerability.
 - An overall sense of unease on the safety of deployed OME, particularly in Afghanistan.
- c. Availability of equipment for training, particularly for UORs, was identified as a concern by the LSSB last year. Although improving, this still remains an issue which is being addressed by Project MOTA⁷, the aim of which is to review the way in which the UOR training fleet is managed in order to maximise its availability.

⁶ D/VCDS&2PUS5/1/10 dated 23 Oct 09.

⁷ Maximise Operational Training fleet Availability.

d. The MARSB report 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.

e. 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 DFGSB, and the DOSB.

31. Shortages of Suitably Qualified and Experienced Personnel. Five of the FSBs report 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.

32. 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.

33. 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.

Specific Concerns

34. Sustainable Development and Environmental Protection. SSD&C report a number of concerns for SD and EP:

a. The governance arrangements for SD/EP Process Ownership need to be improved through issuing formal delegations to the Key SD Policy Owners, and to FSBs, with regards to their responsibilities for SD/EP, and a forum should be established, subsidiary to the DESB, to support the governance of SD/EP.

- b. There is in some areas limited data quality, coverage and collection to support SD/EP reporting and provide assurance.

PERFORMANCE DATA TO SUPPORT ASSURANCE

35. The overall assessment from the performance data is that it does not show a markedly improving picture. Although there were fewer health and safety related fatalities for 2009 than in 2008, air accidents resulted in an increase in fatalities and accidents trends are not improving. The environmental side is little better: DFG report that the amount of fuel lost through reported spillages has increased 620% on last year; and, three HSE/EA/SEPA Investigations are pending variously for RNAS Yeovilton, HMNB Clyde and the Falkland Islands which could lead to Crown Censures on fuel installations. DFG are of the opinion that, although the number of spills is broadly the same as last year, they have taken longer to detect then shut off and mixed contracts often lead to less clarity on ownership and responsibility to take action, leading to slower responses.

36. Fatalities and Accident rates.

a. Fatalities⁸. Fatality statistics up to the end of 2009, including for RTAs, already reported separately and directly to the Defence Board, are shown at Annex C. Excluding RTAs and fatalities from Aviation accidents, there were 6 health and safety related fatalities in 2009, compared to 8 the previous year.

b. Major Injuries⁹. 1164 major injuries⁹ were reported in 2009, compared to 1146 the previous year. OHSB Board members consider the increase in major injuries to be due to better reporting rather than an actual increase in accidents. There is an improved awareness of the need to report incidents, particularly amongst Service personnel, and the reporting process itself has been simplified by the introduction of Incident Notification Cell call centres. It is our assessment that the increased reporting is a reflection of an improving safety culture, and there is an expectation that the true incident rate will reduce in future years.

c. Air Accidents. The MARSB report a slight increase in the headline 3-year rolling average accident rate across all aircraft types, including 3 aircraft accidents that resulted in 8 fatalities (as opposed to 2 fatalities in the previous reporting period) and reflecting a considerable increase in accidents that did not involve fatalities. Of the 14 accidents in 2009, 40% occurred in operational theatres but of concern is the increased number of training, testing and air experience flight accidents. The majority of accidents occurring in the reporting

⁸ To be included as a performance indicator for the Safety DBSO.

⁹ As defined in the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations.

period are still subject to Service or Police inquiries, so no conclusions as to their causes can yet be drawn.

37. Near Misses

a. Near Miss Reporting⁸. In this, the first full year for which reporting has been mandated onto IRIS, 1043 near misses were reported on IRIS for 2009. Reporting levels across TLBs vary and it is not yet possible to draw out conclusions or trends. Improving reporting near misses is a Departmental priority for 2010.

b. AIRPROX Reports. AIRPROX incidents were included in the MARSB report for the first time last year. Whilst the overall trend for the past 10 years remains downward, adjusted figures show an increase for 2009 over the 2 previous years. Whilst there appears to be no specific causal trends, either in aircraft type or type of incident, the increase in reported AIRPROX incidents could be considered to be due to a number of factors. D DARS has been directed to review the principles by which military aircraft operate in uncontrolled airspace and to recommend any changes required. AIRPROX figures for operational theatres are still immature but further work will be undertaken by the MAA during 2010.

c. Dangerous Occurrences. In this, the first full year for which reporting has been mandated onto IRIS, 16 Dangerous Occurrences⁵ were reported on IRIS for 2009. However, it is not yet possible to draw out conclusions or trends. In depth analysis of the data is planned for 2010.

38. Enforcement. There were no Crown Censures in 2009. Details of Improvement Notices, Prohibitions, Enforcement Notices and Internal Regulator Action are given at Annex D.

39. Pollution Incidents. Details of pollution incidents are given at Annex D.

ASSURANCE SUMMARY

Important Influences during 2009

40. The Formby Study. This study into operational safety, conducted during early Summer 2009, recognised that, broadly, appropriate safety structures were in place and that further good work was going on in the area of cultural change in particular, with top boards looking routinely at safety. The report suggested further changes, building on good practice, such as learning lessons more systematically, keeping better audit trails for safety decisions, and introducing greater external challenge in area such as the FSBs. On 22 Jul 09 the findings were reported to the Defence Ministerial Committee, which asked the DESB to examine the proposed improvements in the context of work already in hand to improve safety. As a result, the practicalities of developing a stronger more coherent pan-Defence process for learning

safety-related lessons from operational and training experience, developing a common and managed process across the Capability area for recording and referring safety decisions, and consideration of including a standardised risk assessment process as part of the military estimate were added to the existing DSB Action Plan.

41. Haddon-Cave Report. Prior to publication of the Nimrod Review report on 27 Oct, PUS directed that 2PUS chair a Nimrod Review Analysis Sub Group (NRASG) to frame the Department's advice to Ministers. In practice, however, a broader approach was needed as the Review findings went much further than anticipated, with a greater emphasis on the safety issues which are likely to have pan-Defence applicability (although not examined/assessed by Haddon-Cave beyond the Air domain) and with additional comment on the Departmental culture and wider organisational structure, including the financial planning mechanism. At the DESB meeting of 8 Dec 09, 2PUS tasked Hd SSDC to undertake a scoping study to examine additional areas of work arising from the Nimrod Review. Six have been identified initially: the interface with industry, safety cases, personnel, safety culture, independent regulation, and responsibilities and accountability. [The study report was presented at the DESB meeting on 25 Feb 10.]

Process Strategies

42. Safety Strategy. The overall aim of the Safety Strategy, which is a sub-strategy of the Strategy for Defence, is to improve safety performance; it will provide a single source of strategic direction and an overarching framework for safety. The DESB's role is to provide critical review and assurance upwards, as before, to the DAC, the DOB and the DB. The DESB Action Plan has been absorbed into the Safety Strategy Delivery Plan, which sets out how the strategy will be delivered over the first 4-5 years, and which contains further objectives and targets in line with the HSE Strategy. Further consideration of the Safety Strategy will be the subject of a separate submission to the DESB in 2010.

43. SD. There is already an SD Strategy in existence; performance against this strategy is reported in the SD Annual Report.

Assurance

44. Inputs to this report cover the activities of FSB and their sub committees, covering the TLBs (including their assurance functions), and draw upon FSB plans and risk/issues registers. Concerns at Trading Fund Agencies are covered only by exception. Levels of assurance reported for 2009 by the Chairmen of FSBs are largely unchanged on the previous year, with the exception of the DOSB which assesses the level of assurance as lower than for 2008.

45. The lack of improvement in the levels of assurance given does not reflect a lack of work throughout the year, there is increasing awareness of safety at senior levels and real efforts are being made to improve the way in

which we learn from experience. The assurance process itself seems to be improving and it is perhaps unsurprising that the greater visibility of issues that this is exposing is combining with resource pressures, only to raise more concerns.

46. Performance data too suggests a picture that is not improving. The downward trend in Road Traffic Accidents, with much credit being given to road safety campaigns, is not matched by a rise in fatalities associated with air accidents and continued upward trends in accident and incident reporting. Environmental performance, whilst very positive in the area of SD, has worsened with increased amounts of fuel being spilled and some infrastructure concerns close to having an impact on operational outputs. It remains as important as ever that safety culture needs to improve across the Department, accompanied by investment in our safety enablers for the long term, both in terms of people and infrastructure.

47. Cross cutting concerns reported for 2009 are:

- a. The pressure that resource constraints are placing on safety.
- b. A continuing shortage of personnel, both those with the necessary safety qualifications and those with sufficient experience to discharge their safety responsibilities of SQEP.
- c. The cumulative effects of change.
- d. Management of change in the Planning Round process.

48. The evidence provided by FSBs clearly indicates that, overall, there are causes for concern surrounding safety across most of the Department, and that, as a consequence, the overall assurance assessment has not improved. Cross cutting concerns in some cases reflect a compounding of issues which need recognition as part of a bigger picture and targeted actions, suitably prioritised, by Duty Holders to address them. On balance, the DESB reports:

LIMITED ASSURANCE

against the management of Safety, Environmental Protection and Sustainable Development in 2009.

PRIORITIES FOR 2010

49. The DESB agreed that:

- a. The DESB Action Plan should be integrated into the MOD Safety Strategy and its associated Delivery Plan, to provide a single source of strategic direction and increased visibility of improvements going forward;

- b. Within the Strategy, the DESB agreed that their priorities for 2010 would be taking forward the Haddon-Cave work, which should address all of the major cross cutting issues in this report; and,
- c. Improvements were required in Sustainable Development / Environmental Protection governance arrangements and in the quality, coverage and collection of data to support the overall SD/EP reporting process.

DEFENCE INTERNAL AUDIT ASSURANCE CLASSIFICATIONS

Defence Internal Audit (DIA) audit opinions¹ are:

Full Assurance

There is evidence that the risk management, control and governance framework is adequate and effective in respect of the achievement of objectives. Risks that threaten the success of objectives are being managed adequately and effectively.

Substantial Assurance

The system in place is basically sound, but there are identified weaknesses in the risk management, control and governance framework. There are unmanaged or inadequately managed medium or low category risks which may adversely affect the achievement of objectives.

Limited Assurance

There are identified weaknesses in the risk management and governance framework. There are unmanaged or inadequately managed high category risks that threaten the achievement of objectives.

No Assurance

There is evidence that there is not a reliable framework of risk management, control and governance to support the efficient and effective achievement of objectives. Control is generally weak leaving high exposure to the risk of error or abuse.

¹ Defence Internal Audit Brochure dated 19 Jun 06.

Proposed MOD Safety Strategy Delivery Plan

The Delivery Plan sets out how the Strategy will be delivered over the first 4-5 years. The overall objective for this period is, over and above delivering safety as part of normal business, to implement the priorities, based on critical review by the DESB, summarised in the table below.

Priority	Objective (those in bold are included in one or more TLB Annexes to DP10)	Actions to meet objective	Targets	Level of Cost (Low/Medium/High) ¹	Key Benefits and/or Progress
1	Lead and manage Safety more robustly and accountably, and deliver continuous improvements.	TLBs produce documented and effective safety management systems, demonstrably owned and reviewed by TLB Holders	End 2010	Low	Provides the system framework, within which the desired culture and behaviours need to be embedded.
2	Improve how we learn from accidents and incidents, communicate good practice, and undertake accident investigation.	TLBs have documented processes, linked to a wider MOD process.	End 2010	Medium	Reduction in lost time injuries. Contribute to DP objectives to reduce fatalities and major injuries.

¹ Low = <£0.5M; Medium = £0.5M - £5M; High = >£5M

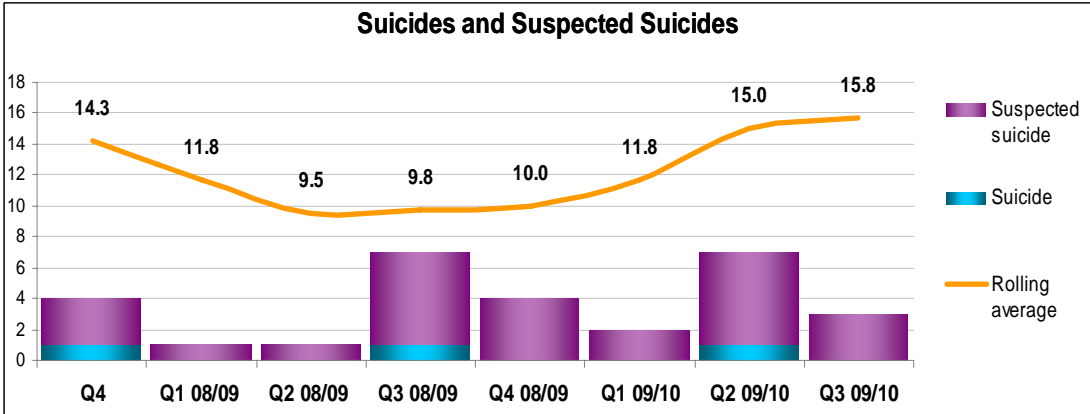
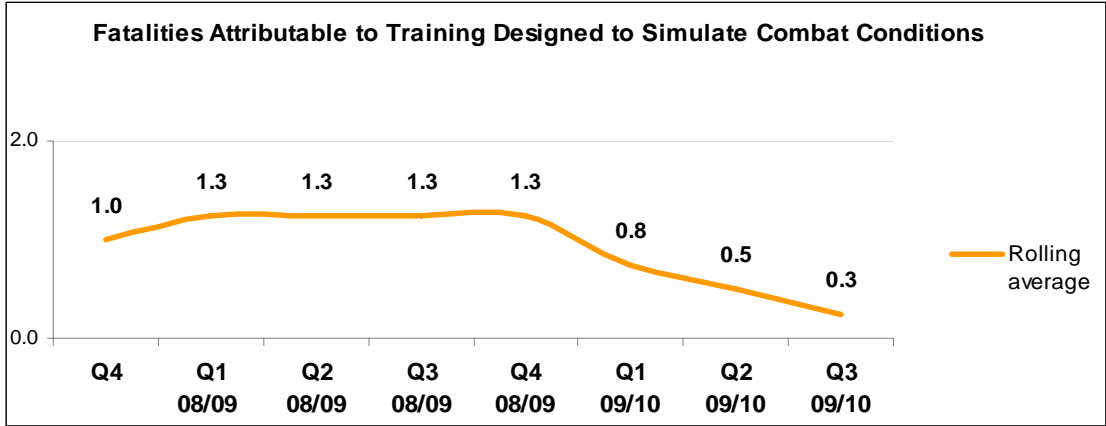
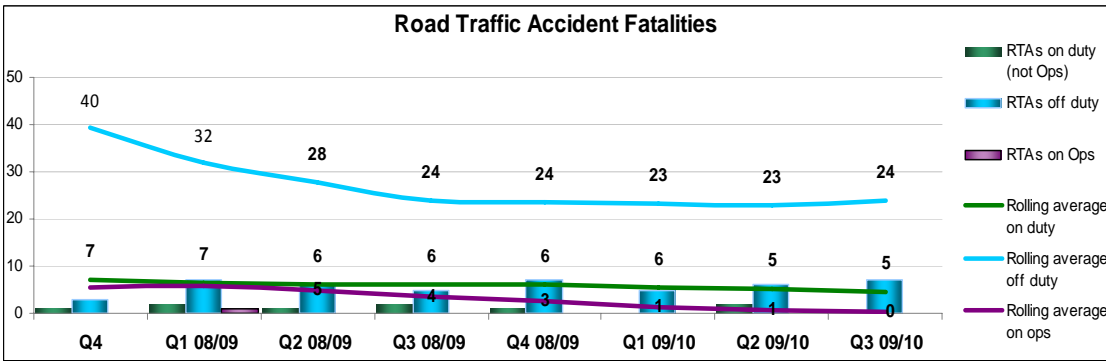
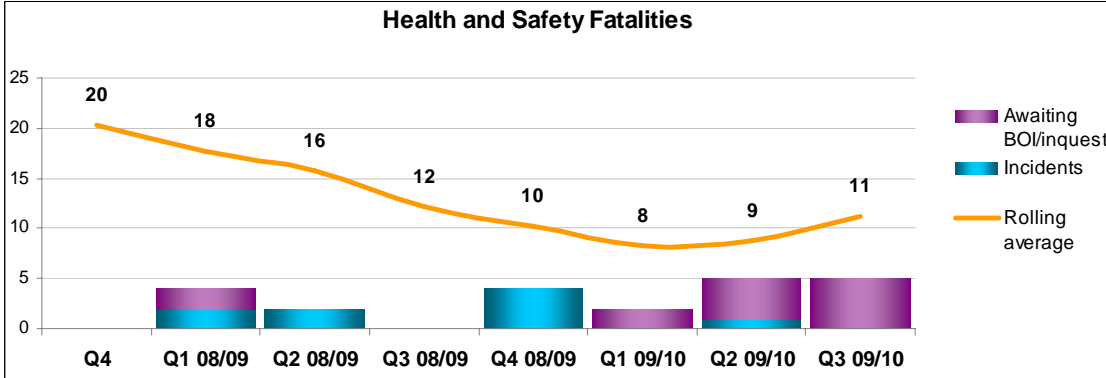
Priority	Objective (those in bold are included in one or more TLB Annexes to DP10)	Actions to meet objective	Targets	Level of Cost (Low/Medium/High) ¹	Key Benefits and/or Progress
3	Developing a stronger, more coherent pan-Defence process for learning safety related lessons from operational and training experience.	(i) Revision of JSP375 Leaflet 14 on Accident Reporting and Investigation (ii) SSDC to produce strategy for learning to be included in JSP815	Jun 2010 Sep 2010	Low Low	Accident & Investigation Working Group reviewed existing practices in order to make recommendations for improvements to policy Draft DIN on the proposed changes to JSP 815 Chap 2 (Accident Reporting and Investigation) produced for comment.
4	Developing a common and managed process across the Capability area for recording and referring safety decisions.	To be addressed as part of the Haddon Cave – Wider Aspects Scoping Study, specifically the Responsibilities and Accountabilities workstream.	Mar 2011	Low	2PUS wrote to DESB members following the Sep DESB meeting. Further correspondence has taken place on risk referral within the Air Domain (D/VCDS&2PUS/5/1/10 dated 11 Feb 10).
5	Improve management and control of major hazards (“avoiding catastrophes”)	DOSG to fund and undertake a Comparative Gap Analysis between the Control of Major Accident Hazards Regulations (from which MOD has a disapplication), and MOD’s internal counterpart - Major Accident Control Regulations.	Report by May 10	Low	On the recommendation of the DESB Independent Advisor, a number of suitable contractors have now been identified to undertake the MACR/COMAH Benchmarking activity. The tender process will take place in early 2010.
6	Further to embed and resource Suitably Qualified and Experienced Persons (SQEP) within people programmes	(i) TLBs to undertake detailed analysis of extent of Suitably Qualified and Experienced People shortfall and costs to provide solutions. (ii) TLBs & Personnel Branches implement necessary changes (iii) FSBs report progress in their domains in their DESB inputs	Jul 2010 Ongoing Annual Reports	Low Medium Low	It is recognised that in some areas there have been improvements – in NSQEP and with the Army recruiting Safety Advisers. AFPRB recommended (Apr 09) moving Nuclear Propulsion Pay to continuous payment for Lt Cdr Marine Eng Submariners. NSQEP Career Management Team launched 5 Oct 09

Priority	Objective (those in bold are included in one or more TLB Annexes to DP10)	Actions to meet objective	Targets	Level of Cost (Low/Medium/High) ¹	Key Benefits and/or Progress
7	The need to reduce the risks to safety by the provision of adequate equipment for training and operations.	(i) TLBs to scope resource implications of providing necessary equipment and provide options for solution (ii) FSBs to report, where relevant, progress in reducing this risk	Sep 2010 Annual Reports	Low Low	The Formby Study identified that work was already in hand to address key UOR training equipment shortages. MARSB report to DESB in Jan 10 reports, as their greatest concern, that a general shortage of aircraft to allow sufficient aircrew training and pre-deployment preparation is still perceived to be having an impact on flight safety.
8	The need for infrastructure and estate across MOD (particularly for Explosives and Fuels) to meet statutory requirements.	(i) DESB (in Feb 09) required prioritisation of action needed (ii) TLBs provide details of the extent of the shortfall and costs to upgrade to meet statutory requirements. (iii) FSBs to report progress, where relevant.	Feb 2010 End 2010 Annual Reports	Low Low Low	From discussions at the DOSB, it is clear that immediate effort and resource is required to improve inspection reporting arrangements and address the poor condition of buildings due to lack of maintenance. Work is on-going to clearly define the future Ordnance Munitions and Explosive (OME) storage and outload requirements and then make sure that sufficient resources are allocated to ensure that compliant facilities are developed to meet these requirements.
9	Develop a framework for performance measurement.	Framework to be agreed by FSBs (through DESB WG) and included in JSP815	Jul 2010	Low	Draft paper on KPIs produced for DESB WG in Jul 09. Some FSBs are already developing relevant KPIs for their own domains. Account to be taken of the Strategic Performance Management System.
10	More robust governance and assurance of Occupational Health	OHSB to take forward	End 2010	Low	SG raised as issue at Dec DESB meeting. Immediate concerns addressed, but wider assurance of OH will be taken forward by OHSB.
11	Haddon-Cave implementation: wider aspects	(i) Scoping Study Paper complete (ii) Implementation of scoping study workstreams (iii) Wider Aspects Steering Group reports to DESB	Mar 10 Variable ² DESB meetings	Low Low Low	

² Workstreams have individual targets specified in the Haddon-Cave Wider Aspects Scoping Study Implementation Plan, and in the Airworthiness Steering Group Plan

Priority	Objective (those in bold are included in one or more TLB Annexes to DP10)	Actions to meet objective	Targets	Level of Cost (Low/Medium/High) ¹	Key Benefits and/or Progress
12	Haddon-Cave implementation: MAA and associated recommendations	(i) The Airworthiness Steering Group (ASG) will steer the development of 10 workstreams. (ii) ASG will meet every 3 months and report to the DESB.	Variable DESB meetings	Low Low	The ASG will be the authority for declaring that each of the airworthiness recommendations has been successfully delivered. The ASG will be chaired by DGMAA. It will coordinate the activity of the work streams it steers with those steered by the WASG
13	Greater workforce engagement	Trades Unions consulted over major strategic and policy issues. SSDC to involve TUs in corporate issues, TLBs involve in specific issues.	Ongoing	Low	Improved buy-in from staff, which should lead to improved safety culture. TU rep (Joint Chair of the Joint Health and Safety Committee) now on OHSB
14	More demonstrable external scrutiny	(i) SSDC to lead on benchmarking with external industry/OGDs etc. (ii) HSE secondment/engagement (iii) FSBs to report external scrutiny action in their own domains	Ongoing Mar 2010 Annual Reports	Low Low Low	Presentational benefits from independent analysis of MOD systems and their implementation. New independent adviser to DESB.

FATALITY AND MAJOR INJURY STATISTICS



**CROWN CENSURES, IMPROVEMENT NOTICES, PROHIBITIONS,
ENFORCEMENT NOTICES AND POLLUTION INCIDENTS – 2009**

Crown Censures¹

1. There were no Crown Censures in 2009.

Crown Improvement Notices²

2. No Crown Improvement Notices were issued in 2009:

Crown Prohibitions³

3. No Crown Prohibition Notices were served on the MOD in 2009.

Enforcement Notices⁴

4. No Enforcement Notices were issued on the MOD by the Environment Agency in 2009.

Internal Regulator Enforcement Action

5. The DNESB reports that one Safety Improvement Notice, issued by DNSR in respect of the air transport of highly enriched uranium loads, remains outstanding from 2006. This would be cleared as part of the process next time such air transport is required, but will remain outstanding until that time as the requirement is not currently foreseen.
6. Major Accident Control Regulations (MACR) Improvement Notices⁵:
 - a. The DOSB report that a number of MACR explosive establishments are working under Action Plans, and seven have yet to be certified to meet the requirements of JSP 498.
 - b. DFG report that five establishments have failed to demonstrate compliance with MACR which has resulted in the issue of Improvement

¹ 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.

² Served by HSE when it is assessed that relevant statutory provisions are being contravened.

³ Served by HSE when it is assessed that an activity will give rise to the risk of serious injury.

⁴ The purpose of enforcement is to: ensure that duty holders take action to deal immediately with risks; promote and achieve sustained compliance with the law; ensure that duty holders who breach health and safety requirements, and directors or managers who fail in their responsibilities, are held to account.

⁵ MACR Improvement Notices are comparable to HSE Improvement Notices but issued by appropriate MOD internal regulators and monitored by the MACR Competent Authority Support Group.

Notices. This is no improvement because four of these sites were working under Action Plans last year. All those sites affected are now working to remedial Action Plans.

7. DFRMO issued an Improvement Notices on DE's Dep Hd Estates Manager South West relating to failure to maintain fire alarm system. DE report that this was due to be closed out end Dec 09.
8. DFG issued four Prohibition Notices during 2009, the same number as for 2008.

Pollution Incidents⁶

9. The DFGSB report that 224,580 litres were reported spilled by SPILLREP in 2009. This represents a 620% increase on spillages reported in 2008 (36,241 litres).
9. Tier 2 SPILLREPS. A total of 176 Tier 2 spills were recorded in 2009. This compares to 226 spillages in 2008 (22% reduction).
10. Significant Spills on Operations. There were no spills reported on operations in the current reporting year, compared to 19,100 litres in Afghanistan and Iraq in 2008.
11. Significant Spills on MOD Estate. 42 spills occurred on the MOD Estate (not including the PJOBS) in 2009 compared to 30 (Ops and PJOBS not included) in 2008. The quantities spilled were 164,270 litres and 10,761 litres respectively; resulting in a 1,525% increase in spilled product. Significant spills on the mod Estate are as follows:
 - a. 100000 litres spilled at HMNB Clyde / Garelochhead in July 09 resulting in a formal inquiry. A Major Accident under MACR JSP 498.
 - b. 7000 litres spilled at RNAS Yeovilton in Dec 2008 and 8000 litres spilled at RAF Lyneham in Jan 09. These spills resulted in an Area Warning Notice issued by the EA to DE Ops South and the RPC management (Debut).
 - c. 6000 litres spilled at Senoko (Singapore fuel depot) on 2 occasions. (Result of collapsed underground pipelines).
 - d. 24000 litres spilled at RAF Brize Norton. Occurred during the commissioning of the airfield hydrant system.
12. Significant Spills within the PJOBS. A total of 52675 litres were spilt on the PJOB Estate in the current reporting year. Details as follows:
 - a. Ascension. 2 spills occurred on Ascension resulting in 1,100 litres lost in 2009 (1,000 litres were lost when the cross base pipeline lost integrity).

⁶ **JSP 317 Definitions:**

TIER 1: Where the clean up is entirely within the unit's capability.

TIER 2: The clean up requires assistance from another Service unit, or from an external organisation.

TIER 3: A Catastrophic Incident requiring major external assistance.

This compares to 3 spills in 2008 resulting in 110 litres spilled (1,000% increase from 2008). However 32,000 litres were successfully recovered from the damaged pipeline to date. Continued unservicability of the cross base pipeline may reduce operational effectiveness on aviation fuel supply to the airfield.

b. Falklands. A total of 51,125 litres was spilt on 19 occasions in 2009 compared to 4,860 litres on 5 occasions in 2008 (1000% increase). The most significant spill occurred in August 2009 when 42,000 litres of Sullage was released into Mare Harbour, which required the assistance of the Emergency Pollution Response Service Contractor from the UK.