MOD

Defence Equipment and Support

Acquisition Safety and Environmental Management System (ASEMS)

Project - Oriented Environmental Management System Manual (POEMS)

Release Version 2.2e

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Record of Revisions

Date	Version	Description of Revision
28 July 2004	ASEMS – Project-Oriented Environmental Management System Manual RELEASE V2.0e	Release Version 2.0e is the first operational release of the POEMS Manual. The release includes Manual Text and all Core Procedures (EMP01- EMP08).
May 2005	ASEMS – Project-Oriented Environmental Management System Manual RELEASE V2.1e	Release Version 2.1e is the second operational release of the POEMS Manual. The release includes Manual Text and all Core Procedures (EMP01- EMP08) and Support Procedures (SSP01-SSP03). Chapter 8 Assurance and Audit Procedures, including AAP01-AAP04, is included at DRAFT status. The update includes changes to reflect organisational restructuring (AESO changed to ASESG, and references to CESO(DLO) removed), clarification of vocabulary, and cosmetic changes such as typo corrections, formatting and paragraph numbering.
Sep 2005	POEMS Chapter 8 + 9	Chapter 8 Assurance and Audit Procedures, including AAP01-AAP04, is raised to full issue v2.1e/s. Chapter 9 Glossary updated to reflect changes in Chapter 8.
Jan 2006		Revision sheet revised.
November 2007	ASEMS Project Oriented Environmental Management System Manual RELEASE V2.2e	Release Version 2.2e is the third operational release of the POEMS manual. The release includes Manual Text and all Core Procedures (EMP01 – EMP08), Support Procedures (SSP01 – SSP03) and Assurance and Audit Procedures (AAP01 – AAP04). The Core Procedures EMP03 and EMP04 have been transposed, to reflect actual practice more closely (ie Impact Priority Evaluation prior to EIA Planning). The update includes changes to reflect organisational restructuring (DLO and DPA changed to DE&S) and various minor changes such as typo corrections and formatting.

1. Introduction

1.0.1 There is increasing scrutiny on all government procurement, including that undertaken by the MOD. One aspect of this concerns environmental issues, which are progressively receiving more attention. This is only likely to further increase with time and the application of broader requirements of sustainable procurement. It is important that MOD can demonstrate that it has put in place appropriate management controls and procedures as part of the acquisition process, to identify and manage its potential environmental impacts, and any related risks, throughout the lifetime of defence projects.

1.0.2 Project risk, and hence risk to operational effectiveness, resulting from environmental issues can be manifest in many different ways, including:

- Cost inflation at all life cycle stages including disposal;
- Delays to projects and in-service dates;
- Legal penalties from breaching regulations;
- Clean-up, remediation or compensation costs;
- Reputation damage;
- Environmental impairment;
- Restrictions upon training or peacetime operations.

1.0.3 Therefore, MOD has decided to implement a Project Oriented Environmental Management System (POEMS) for acquisition projects. The POEMS covers the work of all Integrated Project Teams (IPTs) and is designed to comply with Government policy whilst meeting many stakeholders' expectations. In essence, through POEMS, IPTs will identify the significant potential environmental impacts and risks associated with equipment systems and services acquisition projects and demonstrate either elimination or management and continuous improvement of these throughout the life cycle of the project.

1.0.4 The principal business benefits arising from implementing the POEMS will be:

- Cost benefits through eliminating the need for reworks and delays caused by late identification of significant environmental issues;
- Reduction of risks to MOD of large and unplanned costs relating to necessary restoration of land to its pre-accident/incident state;
- Reduction of project risk resulting from environmental issues;
- Demonstration to internal and external stakeholders that MOD's safety and environmental policy is being achieved in the acquisition process in a structured and formal way;

- The identification of any environmental benefits arising from the project;
- Assisting with meeting the requirements of the Freedom of Information Act and the Environmental Information Regulations.

1.0.5 Many IPTs are well advanced in the process of identifying and managing environmental impacts associated with projects. However, the introduction of a MOD wide POEMS and its associated environmental assessment methodologies should improve the consistency in application of environmental management across all IPTs and acquisition projects.

1.0.6 The purpose of this document is to explain the contents and operation of the environmental management element of the MOD's Acquisition Safety and Environmental Management System (ASEMS). This element is known as the Project-Oriented Environmental Management System (POEMS).

1.0.7 This document describes the environmental management processes and procedures to be employed during a project's life cycle within the DE&S or by contractors or consortia working for them. It will enable DE&S project teams to develop and operate at the project level, Environmental Management Systems that are appropriate for discharging their delegated responsibilities and satisfying the requirements defined in legislation, Departmental policy and domain-specific policy set by MOD's Functional Safety Boards (FSBs).

1.0.8 The POEMS stresses the importance of identifying and consulting with stakeholders and Subject Matter Experts (SMEs) so that project teams can discharge their delegated responsibilities. Environmental management can only be achieved and sustained through co-ordinated effort by authorities with responsibilities for operation, maintenance and training, as well as design, manufacture and upkeep.

1.1 Application

1.1.1 The procedures and processes contained in the POEMS, apply to, and are to be followed by, all those to whom Chief Defence Materiel has delegated authority to for the management of environmental issues in the equipment and services procured and managed by the DE&S.

1.2 Relationship to MOD Policy and Domain Requirements

1.2.1 These procedures have been designed to provide those with delegated authority for environmental management issues with a mechanism by which they may discharge those responsibilities.

1.2.2 At the Departmental level, MOD policy and requirements can be found in The Secretary of State's Safety, Health and Environmental Protection Statement[1].

1.2.3 MOD specific policy and requirements for the management of the environment in relation to the equipment and services MOD procures, supports and operates can

[1] Policy Statement in Safety, Health and Environmental Protection in the MOD (December 2006)

be found in Joint Service Publications (JSP) 418. Domain specific policy and requirements for the management of environment in relation to the equipment and services MOD procures, supports and operates can be found in a series of Joint Service Publications (JSP) published by the MOD Functional Safety Boards:

Safety Health Environment and Fire Board (SHEFB), publish JSP 375 MOD Health and Safety Handbook and JSP 418 MOD Sustainable Development and Environmental Management Handbook.

Defence Aviation Safety Board (DASB), publishes JSP 553 series covering aviation safety.

Ship Safety Board (SSB) publishes JSP 430 MOD Ship Safety Management.

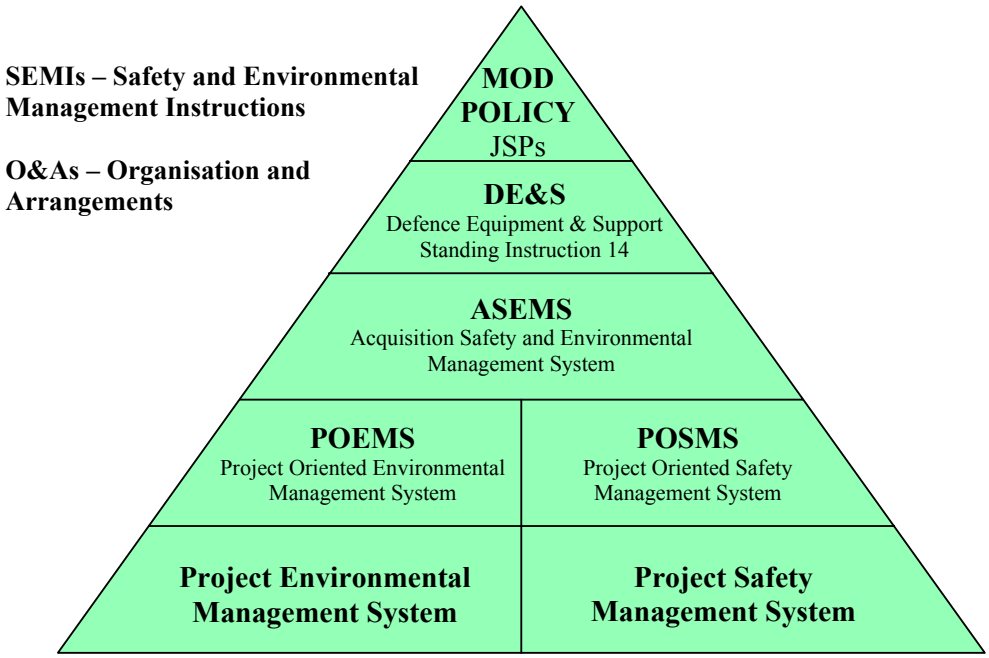
Land Systems Safety Board (LSSB), publishes JSP 454 MOD System Safety and Environmental Assurance for Land Systems.

Defence Ordnance Safety Board (DOSB), publishes JSP 520 UK MOD's Ordnance, Munitions And Explosives Safety Management System.

Defence Nuclear Safety Board (DNSB), publishes JSP 518 Regulation of Naval Nuclear Propulsion Programme and JSP 538 Regulation of the Nuclear Weapon Programme.

The relationship between JSPs, the document and the Manuals, is shown in Figure 1.1 below:

Figure 1.1: Relationship between MOD Environment and Safety Documentation



1.3 Document Contents and Structure

1.3.1 This document is organised into the following main sections:

Section	Title
1.	Introduction
2.	Description of the POEMS
3.	POEMS Management and Responsibilities
4.	How To Do It
5.	POEMS Process Maps
6.	Core Procedures
7.	Support Procedures
8.	Assurance and Audit Procedures
9.	Glossary and Abbreviations

1.4 Document History

1.4.1 This Release Version 2.2e is the third release of the Manual Text and Core Procedures, and second release of the Support Procedures and Assurance and Audit (A&A) Procedures. It is designed for use by IPTs in equipment and services acquisition projects.

1.4.2 Future development of the Manual and its content will result in the issue of updated versions. Document, quality and version control of the Manual will be managed by Acquisition Safety and Environmental Group (ASEG). It is important that readers of the Manual and Procedures verify that they are accessing the current 'approved for use' version.

1.4.3 Readers should note that Version 2.2e relates to the POEMS and Version 2.2s relates to the POSMS. Whilst the current version numbers for the POSMS and POEMS are the same it should be expected that over time different version issues may be undertaken. Version number realignment between the POEMS and POSMS will be undertaken only at major version re-issues.

1.4.4 This document, the POEMS Manual, is a Controlled Document within the POEMS. It has been developed in consultation with major MOD stakeholders.

2 Description of the POEMS

2.1 Overview

2.1.1 The POEMS is designed to assist with the management of the environmental performance and environmental liabilities of equipment and services throughout the acquisition process. It will assist IPTs and others, such as contractors, suppliers and advisors to:

- Identify adverse environmental impacts;
- Apply appropriate mitigation measures to reduce adverse environmental impacts to tolerable levels;
- Identify and manage any residual impacts; and
- Enhance potentially positive environmental impacts of acquisition projects.

2.1.2 The POEMS is based on a series of procedures which together create a conventional 'Plan-Do-Check-Act' approach to the management of environmental impacts.

2.2 POEMS Scope

2.2.1 The scope of the POEMS is limited to the work of IPTs in acquisition projects for equipment and services. The POEMS does not seek to directly manage operational use of equipment as this is the responsibility of the relevant service and is outside of the responsibility of IPTs. However, the output of the POEMS should assist the operational community in managing the environmental impacts arising from equipment use, and any operational mitigation determined by the IPT should be implemented.

2.2.2 The scope excludes procurements made outside the Defence Equipment & Support and its Agencies. The POEMS applies to all stages of the equipment or service life cycle, including any development or trials.

2.2.3 The POEMS is intended to deal with the potential environmental impacts of equipment irrespective of location, as most equipment has the potential to be deployed and used in many locations, although it can be used to deal with site or location specific assessments if necessary. The Customer, or other stakeholders can request the IPT to carry out additional site specific assessments. If such assessments are agreed the agreement should also cover how the assessment tasks will be resourced. However, if the IPT has not specifically been requested to carry out such assessments, these will be assumed to be the responsibility of other equipment system stakeholders, such as Defence Estates, although these may use data and information supplied by the IPT. An exception to this general principle is where the acquisition project is to include testing and trials as part of the Assessment or

Demonstration Stages or where this will have a significant and direct impact upon the Defence Estate (ie procurement of land or construction or modification of accommodation or facilities).

2.2.4 The main elements of the POEMS have been developed for a conventional development project employing CADMID. However, there are minor variations on how the POEMS is applied depending on the procurement strategy adopted.

2.2.5 The POEMS is designed to encourage a proportional response to the size and complexity and environmental challenge of projects. It follows the rationale of CADMID and is aligned with existing health and safety management practices and procedures, where practicable. The assessment elements of the POEMS have also been developed to be consistent with current process and procedures operated elsewhere within MOD, and to recognise the particular challenges that exist in environmental management.

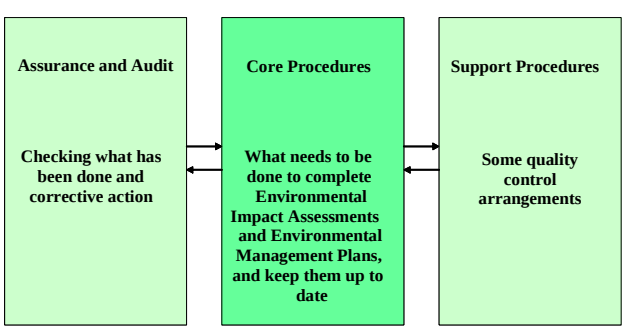
2.2.6 The POEMS procedures are designed to be applied to each acquisition project. Where projects involve the procurement of systems within systems, the IPT or contractors/suppliers/advisors employed on their behalf to manage the project, should apply the procedures to each system or group of systems as appropriate. This will enable environmental issues to be more clearly identified and managed. Where an IPT or contractor employed on their behalf, is managing multiple projects with a high degree of commonality between them it is possible to implement the POEMS at an IPT level rather than a project level.

2.3 POEMS Structure

2.3.1 The procedures contained within the POEMS fall conveniently into three blocks, these are:

- The Core Procedures;
- The Support Procedures;
- The Assurance and Audit Procedures.

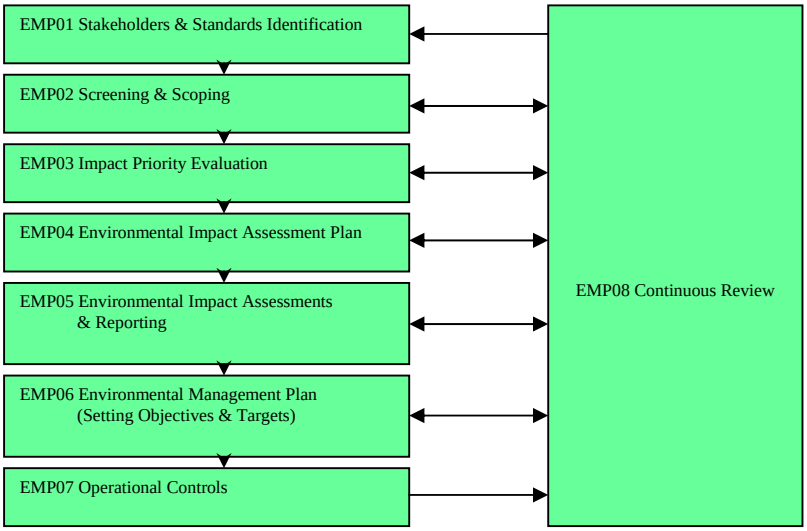
Figure 2.1 The three blocks of Procedures



2.3.2 The Core Procedures (see Figure 2.2 and Section 6) cover the main tasks and activities required by the POEMS and comprise eight separate procedures. In outline:

- Procedures EMP01, EMP02 and EMP03 broadly cover collection, collation and evaluation of relevant information;
- Procedures EMP04 and EMP05 deal with planning, undertaking and reporting environmental impact assessments;
- Procedures EMP06 and EMP07 cover the development of Environmental Management Plans;
- Procedure EMP08 covers review and continuous improvement of EMS outputs at specific trigger points.

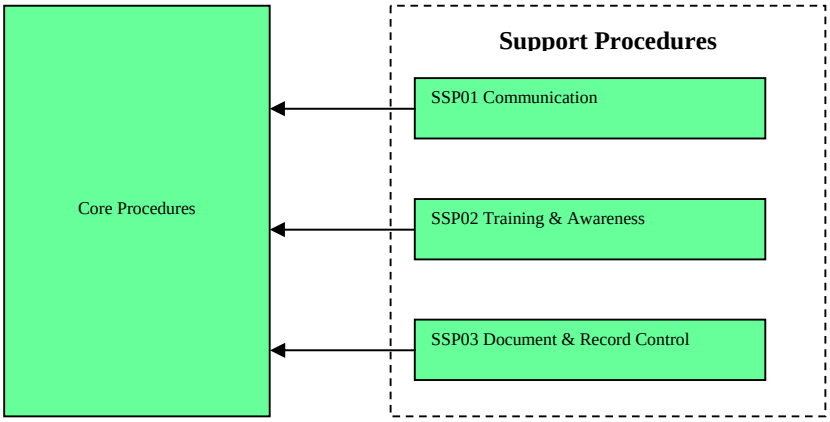
Figure 2.2 The Core Procedures



2.3.3 The Support Procedures (See Figure 2.3 and Section 7) apply management control to a number of basic project functions that are required by the POEMS and POSMS. The functions or activities dealt with by the support procedures are:

- Procedure SSP01 – Communications;
- Procedure SSP02 - Training and Awareness;
- Procedure SSP03 - Document and Record Control;

Figure 2.3 The Support Procedures



2.3.4 The Assurance and Audit Procedures (See Figure 2.4 and Section 8) apply an assurance regime, on the IPT's POEMS and POSMS activities and outputs. The functions or activities dealt with by the assurance and audit procedures are:

- Procedure AAP01 - System Audit;
- Procedure AAP02 - Management Review;
- Procedure AAP03 - Non-conformance and Corrective Action.
- Procedure AAP04 - Monitoring and Measurement

Figure 2.4 The Assurance and Audit Procedures

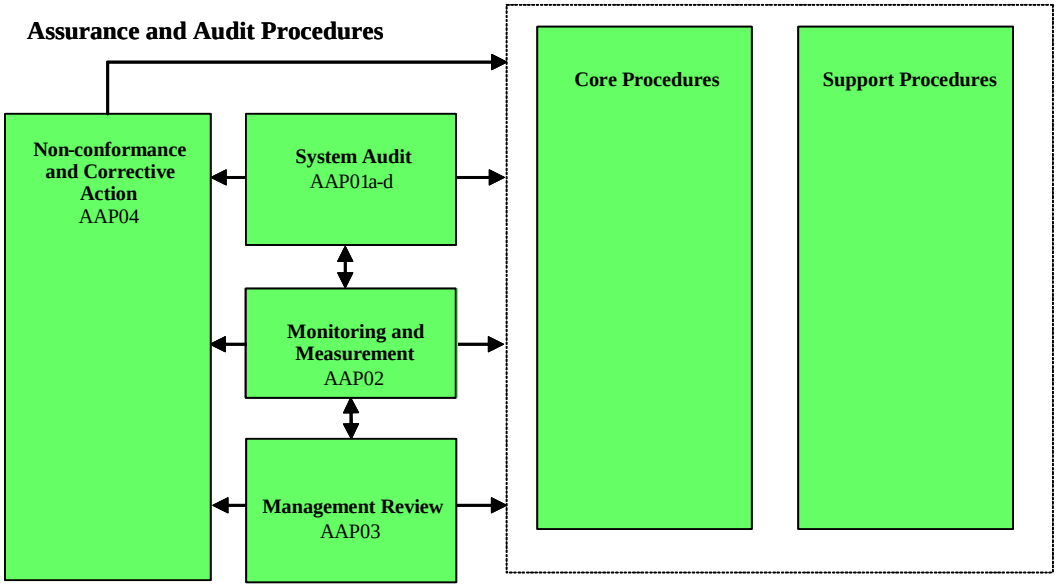
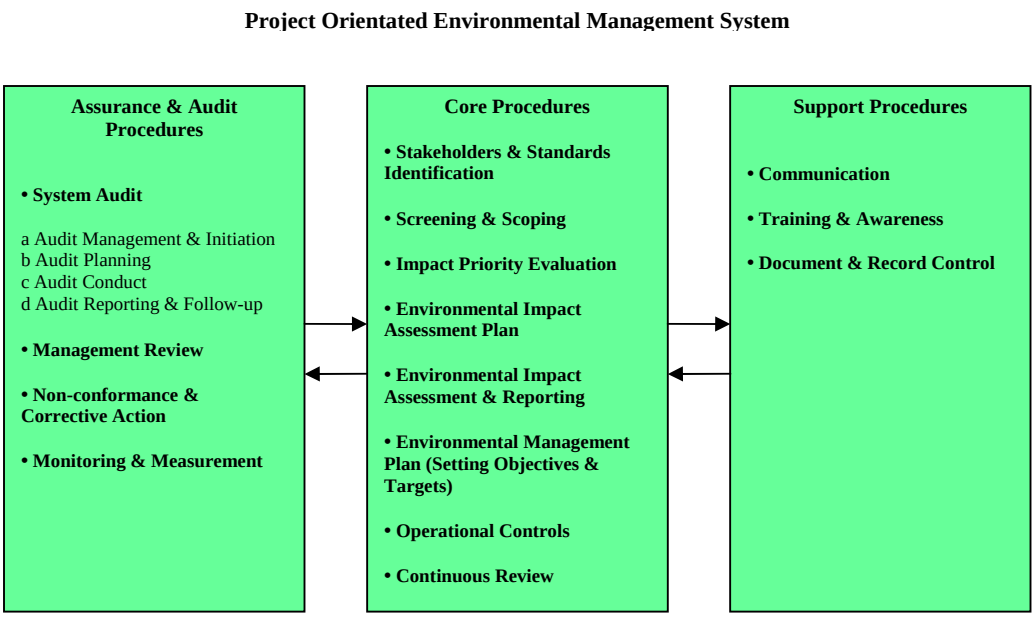


Figure 2.5 The Procedures



2.3.5 A summary of the responsibilities, timing, inputs and outputs associated with each core procedure is in Table 6.2, Section 6. SSPs in Table 7.1, Section 7, AAPs in Table 8.1, Section 8.

2.4 POEMS Alignment

2.4.1 POEMS implements the requirements of both the MOD EMS and the Acquisition Environmental Management Policy (D/DSES/120/7/6 and DPA/D/DOSG/D/3/7 (March 2004), which are binding on all IPTs. The implementation of the POEMS has now been mandated by the letter dated 8 July 2005 'Introduction of Joint DPA and DLO Business Process for Safety and Environmental Management' (DPA ref D/DCE/112/28 and DLO ref DCDL/PO/12/1 (229/04)) jointly issued by the Deputy Chief Executive of DPA and the Deputy Chief of Defence Logistics.

2.4.2 Any IPT wishing to adopt a solution other than POEMS must obtain the specific agreement of ASEG before any planning or implementation action is undertaken.

2.5 Similarities between the POSMS and POEMS

2.5.1 A number of the elements of the Project Oriented Safety Management System (POSMS) have equivalent or comparable elements in the POEMS. The main ones are shown in the table below.

Table 2.1 – Major similarities between POSMS and POEMS

POSMS Element	POEMS Element
Safety Committee	Environmental Committee
Hazard Identification and Analysis Risk and ALARP Evaluation Risk Estimation	Environmental Feature Matrix (un-scored) Environmental Feature Matrix (scored) Environmental Impact Assessment
Hazard Log	Environmental Feature Matrix
Safety Case	Environmental Case
Safety Case Reports	Output from POEMS Procedures
Safety Auditing	System and Equipment Performance Auditing

2.5.2 In recent years many IPTs have carried out safety and environmental tasks together. Sometimes environmental issues are considered as a sub-set of safety, and IPTs produce an Environmental and Safety Case. For instance, at the Concept stage the IPT leader may elect to establish a combined Safety and Environmental Committee. It may also be possible to carry out combined safety and environmental auditing although this is dependent on the competencies of the auditors. However, if the degree of environmental challenge presented by the project is clearly understood and acknowledged, it may be prudent to address the environment and safety issues in discrete forums to ensure that each is fully and properly addressed.

2.5.3 The degree of 'integration' between safety and environment should be determined and reviewed by the IPT, in consultation with its stakeholders. If a combined Environmental and Safety Case is prepared, the environmental documentation should take the form of a separate Annex in the Case to allow easy extraction of environmental data in the future. The key point is that safety and environmental management can and should be aligned where there are demonstrable benefits to the project.

2.6 ISO 14001

2.6.1 Table 2.3 shows the main requirements of the International System Standard for Environmental Management, ISO 14001, and where elements of the MOD POEMS cover these requirements.

Table 2.2 - Cross reference between ISO 14001:2004 requirements and MOD POEMS

ISO 14001 Requirements	POEMS Element
Environmental policy (Clause 4.2)	MOD Safety and Environment Policy (The Management of Safety, Health and Environmental Protection in the Ministry of Defence – A Policy Statement by the Secretary of State for Defence (December 2006))
Environmental aspects (Clause 4.3.1)	EMP02 - Screening and Scoping EMP03 - Impact Priority Evaluation EMP04 - Environmental Impact Assessment Plan EMP05 - Environmental Impact Assessment and Reporting
Legal and other requirements (Clause 4.3.2)	EMP01 - Stakeholders and Standards Identification JSP 418 (And other JSPs dealing with specific environmental requirements)
Objectives, targets and programme(s) (Clause 4.3.3)	EMP06 - Environmental Management Plan (Setting Objectives and Targets)
Resources, roles, responsibility and authority (Clause 4.4.1)	EMP01 - Stakeholders and Standards Identification
Competence, training and awareness (Clause 4.4.2)	SSP02 - Training and Awareness
Communication (Clause 4.4.3)	SSP01 - Communications
Documentation (Clause 4.4.4)	Environmental Case
Control of documents (Clause 4.4.5)	SSP03 - Document & Record Control EMP08 - Continuous Review
Operational control (Clause 4.4.6)	EMP07 - Operational Controls
Emergency preparedness and response (Clause 4.4.7)	EMP02 - Screening and Scoping EMP03 - Impact Priority Evaluation EMP04 - Environmental Impact Assessment Plan EMP05 - Environmental Impact Assessment and Reporting EMP07 - Operational Controls AAP02 - Monitoring and Measurement AAP04 - Non-conformance and Corrective Action
Monitoring and measurement (Clause 4.5.1)	AAP01 - System Audit AAP02 - Monitoring and Measurement
Evaluation of compliance (Clause 4.5.2)	AAP01 - System Audit AAP02 - Monitoring and Measurement
Nonconformity, corrective action and preventive action (Clause 4.5.3)	AAP04 - Non-conformance and Corrective Action
Control of records (Clause 4.5.4)	SSP03 - Document and Record Control
Internal audit (Clause 4.5.5)	AAP01 - System Audit AAP04 - Non-conformance and Corrective Action
Management review (Clause 4.6)	AAP03 - Management Review

3. POEMS Management and Responsibilities

3.0.1 The POEMS is designed to identify, assess and assist the management of environmental impacts throughout the life of equipment. Therefore, other parts of the MOD may need to contribute information into POEMS or utilise its output in order to fully discharge MOD wide policy commitments.

3.0.2 The following is a summary of the expected role of key MOD stakeholders.

3.1 The Directorate of Equipment Capability (Customer 1) and Customer 2

3.1.1 Customers 1 and 2 will need to inform the IPT within the User Requirement Document (URD) of any specific environmental considerations or performance requirements that they are aware of, or that the equipment or service must meet. (Note: this will eventually be achieved via delivery of an Integrated Policy Appraisal once this mechanism has been formally adopted as MOD Policy.) Customers 1 and 2 should identify what environmental information they already hold, and to enter into agreements with the organisation responsible for obtaining any location specific permits or authorisations, and related assessment for the use of the equipment. The IPT should check that this has happened as part of stakeholder identification.

3.2 IPT up to In-Service

3.2.1 The IPT will be required to complete, or manage the completion of, the POEMS procedures for the project. More detail on the work required in the completion of each procedure can be found later in this document and in the procedures themselves.

3.2.2 IPTs will be responsible for providing information gathered on potential environmental impacts associated with their projects to other parties. For example, to support location-specific environmental impact assessments or studies which may be required in addition to the assessments completed under the EMS. These may include Sustainability Appraisals, Statutory Environmental Assessments (EAs) and Development Control requirements, site based EMSs etc. Part of the role of the IPT will be to agree and document these responsibilities on a project by project basis. Records should be kept of information that has been provided, and to whom.

3.3 IPT after In-Service

3.3.1 During the in-service stage IPTs will be required to ensure that environmental information on the equipment or service, and any other information held within the EMS is kept up to date. The IPT must also ensure that the EMS outputs are appropriately reviewed and revised depending on experience and any change in circumstances surrounding the use and maintenance of the equipment or service. This may include revision of Environmental Impact Statements and the further development of disposal plans. The IPT will also be expected to cooperate with the user or operator of the equipment to assist with their own environmental appraisals and assessments.

3.3.2 If the design of the equipment or the scope of the service, the use of the equipment, or the environmental requirements change from that originally identified, the Environmental Impact Assessment must be reviewed (Procedure EMP08) and any resultant additional risks eliminated, reduced or controlled, for example, by updating operational controls. Some of the reasons why the EIA(s) may need updating include:

a. **Changes to the use of the equipment or service**. For example, changes to where (geographically) it is to be used or how it was to be used (which could include how it is to be used in combination with other systems).

b. **Changes in the specification of the equipment or service**. For example, situations where changes are made to the equipment, in terms of materials or components, when re-assessment of the environmental impacts and priority of those impacts would be required.

c. **Changes to environmental requirements or stakeholder concerns**. For example, changes to applicable environmental legislation or policy requirements or a shift in public opinion on an environmental issue.

3.3.3 The responsibility for completing, expanding or modifying the environmental evaluations, will vary from project to project and therefore responsibility cannot be completely specified in this document. However, in all cases the IPT Leader retains overall responsibility for the management and outcomes of the review and revision of assessments and related plans.

3.4 Other Parties In-Service and Disposal

3.4.1 During the in-service and disposal stages several organisations within MOD, such as the Services, Defence Estates, and the Army Training Estate may be requested to follow operational controls developed for the equipment or service. There may be specific operational procedures developed to mitigate environmental impacts, although in most instances environmental considerations will be integrated within procedures and documentation supporting the use, maintenance and subsequent disposal of the equipment or termination of the service. This allows local flexibility in implementing the required mitigation.

3.5 ASEG

3.5.1 ASEG holds overall responsibility for the management and maintenance of the POEMS.

3.5.2 In addition, ASEG will also be responsible for:

- Leading Management Reviews of the POEMS overall;
- Development of training and awareness activities to support the POEMS;
- Responding to members of the public (in agreement with DS&C) on matters of enquiry relating to Environmental Information Regulations and Freedom of Information Act;
- Providing specialist POEMS and related knowledge to IPTs in the Concept stage of CADMID. Providing general guidance to IPTs in meeting the requirements of the POEMS at other stages;
- Providing guidance for system auditing.

3.6 Functional Safety Management Officers/Defence Safety & Claims (Functional SMOs/DS&C)

3.6.1 DS&C has responsibility for the production and maintenance of the MOD Sustainability and Environmental Manual (JSP 418) which provides the main MOD reference source for POEMS and in particular, the Register of Environmental Standards (Procedure EMP01). SMOs will be ensuring that this information is correctly signposted in the JSPs they sponsor.

4. How To Do It

4.1 Through Life Environmental Management

4.1.1 The concept of whole life assessment and management underpins the POEMS. IPTs must ensure that appropriate consideration is given to the potential environmental impacts and other related concerns arising from activities at each life cycle stage, operational condition and equipment or service status (Procedure EMP02). Within the POEMS an impact is generally an effect that the equipment or service may have on the environment. A related concern includes legal compliance, MOD Policy requirements, or stakeholder interest, all of which need to be addressed and managed if risks to the project are to be avoided.

4.1.2 Through life environmental management is achieved by:

- Planning for the whole life cycle from the earliest steps;
- Considering environmental management to include the effects of 'Lines of Development' such as supporting systems, personnel, training and facilities;
- Consultation with stakeholders;
- Setting meaningful environmental objectives and targets;
- Appointing environmentally-competent contractors;
- Independent environmental assessment where appropriate.

4.1.3 Wherever possible, potential impacts and related concerns should be identified and assessed as early as practicable in the acquisition process. This is to ensure that there are no surprises later. It should also ensure that wherever possible, potentially adverse impacts are designed out of the equipment or service through related design decisions, or mitigated by management and control arrangements. For instance, if the equipment is a land vehicle, activities at different stages in the life cycle may include those outlined in Table 4.1 overleaf:

Table 4.1: Example conditions/status and activities associated with the stages of CADMID for a land vehicle

CADMID	Condition/Status	Activities
Concept	Project Planning/Normal	Capability (URD) and system (SRD) requirement
Assessment	Design/Normal	Design development and evaluation
Demonstration	Testing and trials/Normal	Testing and trials of vehicle
Demonstration	Testing and trials/Emergency Situation	Road traffic accident, fire or explosion
Manufacturing	Manufacturing/Normal	Manufacture of components, assembly, transport to location where system will be in-service
In-service	Operation/Normal	Transport of personnel and equipment, refuelling, noise and atmospheric emissions, training activities
In-service	Operation/Abnormal	Secondary use of vehicles
In-service	Operation/Emergency	Road traffic accident, fire or explosion
In-service	Routine Maintenance/Normal	Routine servicing and repair, waste components, oils etc
In-service	Deep repair and Modification/Abnormal	Replacement of worn or obsolete parts, modifications
Disposal	Sale/Normal	Selling on of redundant vehicles
Disposal	Scrap or Recycling/Normal	Transport to site for disposal, disposal/recycling of vehicle components

4.1.4 In outline, the POEMS causes IPTs to examine the project through the application of an **EIA** process and use the findings of the EIAs to determine relevant environmental objectives and targets and an Environmental Management Plan for the equipment or service.

4.1.5 In reality, it will be unlikely that all potential concerns and impacts are known at the outset of a project. In fact, until design freeze, it is entirely possible that major design changes could be made, leading to subsequent changes in potential environmental impacts. Periodic and planned review is therefore essential to ensure that the project EMS (based on the POEMS) and its findings remain relevant.

4.2 System of Systems

4.2.1 The POEMS has been designed to be applied at an 'equipment or service system' level and to all stages during the equipment's or service's life cycle. However, there are numerous situations where equipment or services are used in

combination, some of which may be legacy systems. There will also be situations where equipment or services are supplied to one or more platforms which will be systems in themselves. For instance, a naval ship may be equipped with an aircraft, which may have a weapons system, which may be fitted with detection and targeting systems, each of which is being managed as a distinct project. Environmental issues for all systems should be coordinated in the same way that operational requirements and constraints need to be coordinated. In particular, the interfacing and scope of relevant EIAs needs to ensure that issues are not missed or are assumed to be addressed elsewhere.

4.2.2 In the vast majority of cases the platform has primacy as is the case with safety management arrangements. Whatever the situation in practice, it is important to determine whether the project stands alone (highly unlikely) or is part of a 'system of systems'. In the latter case, it is important to ensure that all relevant IPTs are consulted in the stakeholder processes and that there are clear agreements on assessment and mitigation responsibilities. Because of the interaction of different equipment and services, it will also be important to ensure that other IPT stakeholders get early visibility of significant issues arising from an individual sub- or supra- system. If this is done it will be easier to make related design changes to accommodate environmental issues.

4.3 Aligning Safety and Environment

4.3.1 At the present time the degree of alignment between safety (through the POSMS) and environment (through the POEMS) is likely to be decided on a project by project basis and will be influenced by relevant personnel and their respective responsibilities. The IPT can also decide the degree and extent of this aligned or combined approach to be adopted depending on the complexity of the project and the issues that are likely to arise. Examples of possible alignment activities include conducting combined studies, setting up joint Safety and Environmental Committees, and combined Safety and Environmental Cases and Case Reports.

4.3.2 In situations where safety and environment are being considered separately it should be ensured that common issues are not overlooked and that the implications of safety measures on environmental performance (and vice versa) are fully considered through the project risk register.

4.3.3 For instance, if noise tests are to be undertaken it makes sense to ensure that the data collected will be suitable for both occupational and environmental exposure assessments. By the same token just because an occupational assessment for noise is being undertaken it should not be assumed, without checking, that the safety work will automatically cover environment as well.

4.3.4 Where occupational and environmental issues have different legislative or policy requirements or threshold limits, an IPT may decide to separate the management of environmental and safety issues.

4.3.5 It is also likely that common control or mitigation measures and strategies can be considered especially where the safety improvement solution involves control at

source. Where this proves impracticable or controls are developed separately, the IPT must be careful to ensure that the wider implications of solving a safety (or environmental) issue are considered. It might be entirely sensible and reasonable to deal with the occupational exposure risks of an accidental release in an enclosed space by rapid discharge to air thereby relying on removal and subsequent dispersion and dilution. However, this is likely to give rise to environmental impacts which have to be considered and evaluated.

4.3.6 It will assist IPTs to ensure that they have adequately considered any common issues by cross referencing the results of Hazard Identification under the POSMS and Environmental Features under POEMS.

4.4 What about Estates Issues?

4.4.1 As stated earlier, the scope of the POEMS is limited to acquisition projects for equipment and services. If the acquisition project involves developments to the estate or acquisition of new estate or estate based assets it will be appropriate for the IPT to determine how the 'estate' based issues will be dealt with. In practice there are three scenarios to consider:

- The project is wholly estates based;
- The project is equipment related only (for export or agreements where MOD acts on behalf of third parties);
- The project is both estates based and equipment or service based

4.4.2 If the project is wholly estates-based then the methodology outlined in the 'Sustainability Appraisal Handbook for the MOD Estate' should be followed and there should be no need to consider the POEMS, other than to ensure the correct interface with any other equipment which may be deployed.

4.4.3 In cases where the project involves both estates based and equipment or service based elements there may be a need for both methodologies to be used ie the Sustainability Appraisal Handbook methodology for the estates elements and the POEMS for the equipment and service based elements. In this case, Procedures EMP01 and EMP03 can be used to record this decision along with the project elements to be covered by each methodology. The same procedures should also be used to document details of those with responsibility for ensuring that the assessments are carried out.

4.5 Showing Conformance

4.5.1 The POEMS includes a number of procedures. Within each procedure there are defined objectives and outputs. The procedures also include guidance to facilitate the production of the required outputs. The prescriptive use of the guidance is not mandatory, providing the IPT demonstrates a case for an alternative procedure which provides equivalent actions, documentation and outcomes and which ASEG are satisfied achieves the same objectives. Therefore, four options exist when following the POEMS procedures to demonstrate conformance:

- Use the recommended guidance and tools contained within the procedure, including allowed variations and options, and document the outcomes.
- Use an equivalent process and tool-set generated elsewhere – document evidence of procedural equivalence along with the outcomes.
- Use a bespoke process and tool-set for the project – document how the bespoke procedure achieves the system/procedure objectives along with the outcomes.
- Where it is possible to omit a procedure, or part of a procedure, the basis for the decision must be documented (in the Environmental Case) before progressing to the next applicable step or procedure.

4.5.2 A version of the above list appears at the head of each procedure to remind readers of the means of demonstrating conformance.

4.5.3 Table 6.2 which can be found in Section 6 shows a summary of the responsibilities, timing, inputs and outputs associated with each core procedure.

4.6 Procurement Strategies

4.6.1 There are many procurement strategies employed by the MOD. In the majority of cases, where new or enhanced capability is being procured, the POEMS can be applied in its entirety. However, there are procedural differences in some situations, for example UORs, where it may not be possible to complete all the steps and procedures of the POEMS in the same time frame as acquiring the capability. In these cases potential environmental impacts should not be ignored and at least a screening and scoping study (EMP 02) must be undertaken. This may, in some cases, necessitate the user undertaking retrospective studies and mitigation strategies. There are also minor differences in how the POEMS should be applied to legacy systems, where the equipment is already in service or has reached design freeze, compared to conventional development projects.

4.7 Development

4.7.1 The POEMS has been developed on the basis of a conventional development acquisition project, whilst ensuring that the majority of likely variations and procurement strategies can be accommodated. As discussed in previous sections, the POEMS is also aligned with the main phases and stages of the CADMID cycle. Therefore, if an IPT is managing a conventional development project all procedures and processes in the POEMS should apply. Any variations that are required are likely to be a result of two factors. First, whether the IPT is using contractors or advisors to support their work, in which case it may be appropriate for the IPT to use these third parties to complete the relevant procedures. Second, whether the equipment or service (and its potential impact) is so straightforward as to warrant the various streamlining and simplification options available within the POEMS.

4.8 PPP/PFI

4.8.1 PPP/PFI projects should meet the same environmental standards as if they were developed solely by, and for, MOD. In these cases, it may be appropriate, once a decision has been made to proceed by way of a PPP/PFI solution, to contractually transfer the requirement for conformance with the POEMS to the PPP/PFI contractor, but not responsibility for environmental management. The IPT (and Environmental Committee) should then be able to review and approve the contractor's approach in relation to the POEMS objectives and outputs. The IPT Leader remains responsible for the quality of the information in the EIS and for compliance with all policy and legal requirements.

4.8.2 Supplementary Guidance for PPP/PFI Projects

Please refer to section 4.a (c) below for further information and guidance on PPP/PFI projects.

4.9 Collaborative Projects

4.9.1 International collaborative projects should also meet the same environmental standards as if they were developed solely by and for MOD. If it is likely that the procurement is to proceed by way of a collaborative solution, then the IPT must make it clear to the partner(s) that MOD will require conformance with the POEMS. The IPT should ensure that the POEMS' requirements are contractually transferred to the main or lead contractor and the specification of requirements in contractual clauses should accommodate this. The IPT (and Environmental Committee) should then be able to review and approve the partner's and contractor's approach to environmental management and its outputs (in relation to the POEMS objectives). The IPT Leader remains responsible for the quality of the information in the EIS, and for compliance with all policy and legal requirements.

4.9.2 Supplementary Guidance for Multinational Collaborative Projects

Please refer to section 4.a (b) below for further information and guidance on Multinational Collaborative Projects.

4.10 COTS, MOTS, and Modified COTS and MOTS

4.10.1 In these procurement options the basic design of the equipment or service will be stable. In many cases it is likely that the manufacturer or supplier will have undertaken, or have available, some form of assessments covering the main impacts of the equipment or service. In all cases the supplier should be required to demonstrate how the assessments (and hence design decisions already made) relate to the requirements of the POEMS, and hence show conformance with these requirements. If such assessments have not been undertaken the supplier should be required to make good any deficiency in the available information, including the likely effects of any modifications required, as part of acceptance into service. It should be noted that the IPT Leader remains responsible for the quality of the information in the EIS.

4.11 Urgent Operational Requirements (UOR)

4.11.1 Environmental management should apply to UORs as it does for any other type of project. However, it is recognised that it may not be possible or practical to apply the full procedural requirements of POEMS before UORs come into service. Nonetheless, the potential environmental impacts cannot merely be ignored in the early stages of the project.

4.11.2 The main principles under which the POEMS will be applied to UORs are:

1. Every effort must be made to conduct all the procedural elements of the POEMS;
2. Where it is proven to be impractical to apply a procedure or part of a procedure, the IPT must clearly document the reasons and seek the agreement of ASEG to the proposed alternative action;
3. The Environmental Committee should be used to validate judgements which may replace procedural outputs;
4. All reports included in the Environmental Case must indicate any limitations as a result of not being able to fully complete a procedure. In such cases, it is particularly important that these limitations are communicated to the user;
5. Procedure EMP08 (Continuous Review) must be used to show how the IPT intends to revisit the EMS outputs and the Environmental Case (typically within 12 months) in order to 'backfill' incomplete POEMS requirements.

4.11.3 In some cases this last principle may require little more than the collection and collation of data which may not have been available earlier. In other circumstances, especially for any equipment or service brought into service under an UOR and retained in-service, this could mean repeating significant elements in the procedures or parts of the POEMS. Alternatively, it may be possible to consider the equipment or service as a legacy system and deal with it as such. The IPT must consider the best approach on a project by project basis, which should be validated by the Environmental Committee.

4.12 Legacy Systems

4.12.1 Legacy systems include those systems where the design has already been accepted (design freeze) although the system may not yet be in service, and those systems which are already in service (mature) and where the potential environmental impacts have not been considered in a way which can be shown to be in conformance with the POEMS.

4.12.2 In the case of the former it will not be possible to influence the design of the equipment or service. Consequently the POEMS should be used to develop a project level EMS which concentrates on the in-service management of the equipment or service and the disposal or termination stage. Although the design will have been frozen the environmental impact assessment process should be no

less comprehensive or robust for the in-service and disposal stages than if it had been undertaken earlier in the CADMID cycle. This will ensure that all significant impacts have been identified along with appropriate control measures.

4.12.3 For the latter, where the equipment is already in-service, it is appropriate to consider the following issues when deciding the environmental assessment plan.

- The remaining length of time of the equipment's or service projected service life;
- Whether the legislation review has highlighted a need for mitigation that has not already been put in place;
- Future plans for major modifications and capability enhancements, and their timing;
- Historic evidence of actual environmental incidents and impacts;
- Any legal compliance problems to date or issues with regulators;
- Any stakeholder (particularly external to MOD) interest to date (for example Parliamentary Questions or enquiries regarding the equipment's environmental performance).

4.12.4 These are best considered as additional questions to be answered in the screening and scoping procedure (EMP02) for mature legacy systems. However, they are helpful questions to return to in subsequent procedures when considering mature legacy systems.

4.12.5 The key to dealing with legacy systems is to develop an environmental impact assessment plan which is proportional to both the risk of environmental impacts and the remaining life of the equipment or service.

NB It should be remembered that if a legacy system is to be given an extended life, as a result of a major system modification, then the modification programme itself could be considered as a new project.

4.12.6 As with new projects, the POEMS procedures should be used to identify relevant stakeholders, standards and potential environmental issues. Additional information should also be collated on the remaining life and future plans for the equipment or service, and environmental incidents and actual impacts from those systems in service.

4.12.7 In general, a system that is close to the end of its service life, and with a low environmental risk (based on historical performance) will only require planning and preparing for disposal.

4.12.8 For most legacy systems there will already be substantial system documentation such as operating procedures, maintenance procedures and training manuals. You may therefore identify a potential environmental impact which is already adequately controlled by an existing control measure. Reference to the existing control should be made in the Operational Control Index (Form EMP07/F/01).

4.12.9 Also common for all legacy systems is the creation (if one does not already exist) of a materials inventory as part of the environmental assessment process (EMPs 04 and 05) and Environmental Feature Matrix (EMP02) for the equipment or service. A cursory treatment of CAD stages within the EISS may still be important and useful in identifying issues relating to subsequent legislation applying retrospectively upon which, mitigation or management measures can be based.

4.12.10 Supplementary Guidance – Legacy Systems

Please refer to section 4.a (a) below for further information and guidance on Legacy Systems.

4.13 Precautionary Principle

4.13.1 At all times, within the POEMS, IPTs should be applying the precautionary principle to assessments, the evaluation of evidence, and decisions. In practice, this means that if there is an absence of information, or if the information available is inadequate, then the IPT (or its advisors) must base assessments on worst case assumptions and scenarios. These assessments will form the basis of subsequent actions and decisions until better or more complete data and information is available and the assessments can be revised or repeated accordingly. Exceptions to this general principle may include applying the POEMS in certain UORs or legacy systems situations where it may be allowable to proceed on some other basis, such as expert judgement, or a firm commitment to backfill data and assessments. This must be fully described and documented for the project, as this action may represent increased project and organisational risk. In such cases, it may be appropriate to also make an entry in the overall project risk register.

4.14 Benefits

4.14.1 Implementing the POEMS on acquisition projects should reduce environmental liabilities and assist with legal compliance issues. However, the POEMS should also assist IPTs to identify any environmentally beneficial or positive features and aspects of an acquisition project. For instance, if equipment or a service has significant energy demands, any energy efficiency measures that can be built into the system could repay themselves many times over, during the life of the project. There may also be features which can have both operational and environmental benefits. Again using the case of energy efficiency it may be possible to secure operational improvements such as greater range and achieve reduced emissions.

4.14.2 As a consequence, many of the POEMS procedures remind IPTs to consider both potentially adverse and beneficial impacts, and most of the supporting tools are designed to deal with either type of impact.

4.15 Environment Knowledge Base

4.15.1 It is important to capture and share experience and information from current projects to benefit both future projects and other current projects dealing with

similar issues. The capture of relevant environmental data, environmental impact assessments, and staff skills will be undertaken via the Assurance and Audit procedures. The management of this information, "the knowledge base", is co-ordinated by ASEG and can be found on the ASEMS pages in ASEG's area of the Defence Intranet. From a technical EMS stand point, the knowledge base sits outside the POEMS. The knowledge base will be created from information gathered as a result of following the Assurance and Audit procedures as well as information provided in the Environmental and Safety Cases for the acquired system.

4.a Supplementary Guidance Documents

4.a.1.1 Contained in this section are supplementary documents that are designed to provide guidance on establishing and maintaining some of the more technical aspects of POEMS/POSMS.

4.a.1.2 Supplementary Guidance Documents include:

(a) Legacy Systems

(b) Multinational Collaborative Projects

(c) PPP/PFI Projects

(a) Supplementary Guidance for Legacy Systems

This additional guidance is intended to provide advice on the application of POEMS and POSMS to projects that involve legacy systems.

(a.1) Lack of design data makes it difficult to develop safety and environmental cases for legacy systems.

Possible Issues:

- Original design information may not be available for legacy systems.
- Justifications for safety and environmental-related assumptions or decisions may not be available.
- Information on hazardous material used in the equipment may not be available.
- The software used in legacy systems may be of unknown pedigree.
- It may not be feasible or easy to implement safety and environmental-related design changes for equipment that is already in service.

Corresponding Advice:

- Use suitably qualified and experienced personnel to undertake a gap analysis and decide what additional information is required to comply with POEMS and POSMS, in particular to produce robust safety and environmental cases.

The gap analysis should take into account the life-cycle phases under consideration.

- The gap analysis will inform what further safety and environmental activities are to be undertaken. Retrospective documentation for past life-cycle phases will not be required. For remaining phases, the analysis should investigate whether full assessments are needed. Any decisions to streamline the assessment (and audit and assurance arrangements) should be agreed with key stakeholders and recorded.
- Where key information gaps appear, it may be necessary to undertake safety and environmental studies and analyses to verify that existing operations do not pose unacceptable levels of risk. Be aware that there may be a legal requirement to undertake some studies and analyses e.g. to determine hazardous materials that have been used in the equipment.
- In order to determine if such safety and environmental analyses will be worthwhile or useful, compare the potential benefits against the cost of undertaking the work.
- Make allowances for such studies and analyses when planning budgets and resources.
- It may be possible to use historical data in safety and environmental justifications. Seek expert advice on the extent to which reliance can be placed on historical data in the safety and environmental cases. In particular, assess whether the historical data is still relevant to the system's current usage and operational environment.
- For safety-related software issues refer to the guidance within Def Stan 00-55. For Software of Unknown Pedigree (SOUP), meeting Def Stan 00-55 evidence requirements can be very expensive. In order to determine if demonstrating Def Stan 00-55 compliance is useful or worthwhile compare the potential benefits (for example in terms of lives saved) against the cost of undertaking the work. Use expert advice where necessary.
- Document important decisions and supporting evidence to produce an audit trail record that will be useful for the future.
- Continue to log in-service incidents and look for trends. Consult with user organisations to identify if operational procedures are being carried out and if they are effective. Revisit the safety and environmental cases as necessary when in-service issues are identified.

(a.2) Proportional implementation of POEMS and POSMS for In-Service Changes:

- Mid-Life Updates/Modifications;
- Changes to the Operating Environment;

- Changes to the Legislative Environment.

Possible Issues:

Despite the potential lack of design data, POEMS and POSMS:

- Are to be implemented for all legacy equipment.
- Require safety and environmental cases to be revisited on a regular basis and specifically before:
  - A change in role, e.g. deployment to a different environment;
  - A change in the equipment;
  - Major investment decisions, including:
  - Mid-life update;
  - Decision to postpone Out of Service Date'
  - Repeat purchase of major equipment.
- Constituent components become obsolete;
- The introduction of major legislative changes.

Corresponding Advice:

- POEMS and POSMS allow for some flexibility of approach. With agreement from appropriate Systems Safety Groups, it is possible to tailor the manner in which POEMS and POSMS are implemented to suit the project under consideration. Gain such agreements with System Safety Groups and apply POEMS/POSMS in a proportional manner, taking into account the size and complexity of the project.
- Consider necessity for in-service safety and environmental assessments if there is only a short in-service period left. Use a screening exercise, a comparison of the potential benefits (for example in terms of lives saved) against the cost of undertaking the work, or refer to system's accident/incident history to justify the need for assessments, considering issues such as any change in usage patterns prior to the disposal phase. If assessments are not justified, record the reasons.
- Agree with relevant systems safety and environmental groups what further activities would constitute an acceptable level of compliance with POEMS/POSMS, taking into account the residual levels of risk associated with the equipment and its operations:
- For a mid-life update or a major modification it may be appropriate to revisit the whole safety case and environmental case;
- For smaller and simpler modifications, rather than developing a safety and environmental argument anew from first principles, it may be appropriate to

focus efforts on ensuring that the modification does not adversely affect the existing safety and environmental cases;

- Changes to operational usage should trigger a review of the safety and environmental cases. Include planning organisations such as Planning Joint Head Quarters (PJHQ) in the stakeholder engagement process. Ensure they understand their responsibilities and that they inform the IPT before any change of role is undertaken.
- There is scope to request dispensations in order to use equipment outside the safety case defined limitations. Ensure that the process for doing this is clear and that it is understood that this is not an exemption. Details on dispensation processes can be obtained through the relevant safety System Safety groups.
- Seek expert advice on what issues of standards/regulations to apply to the modification. Applying more recent versions of standards/regulations can either be beneficial or result in complications.
- Be aware that legislation that is not retrospectively enforced may apply to modified systems despite not being applicable to the system in its original form.
- For design initiated modifications, ensure that arrangements are in place for the designer to provide sufficient technical information to support the update of the safety and environmental cases.

(a.3) Keep the Safety and Environmental Legislation Registers Up to Date (SMP 01 and EMP 01)

Possible Issues:

- There may not be legislation registers or they may be out of date.
- Having up to date registers can de-risk the project significantly as understanding the legislative requirements can ensure relevant risks are identified and mitigated.
- IPTs may not have the skills to complete such a register.

Corresponding Advice:

- Identify if safety and environmental legislation registers:
  - Have already been developed for the project;
  - Are up to date;
  - Provide sufficient information to be useful in managing the project. The register should explain what the actual impact of the legislation on the project is, rather than just listing it.
- Secure sufficient budget and resources to develop and maintain the legislation registers.

- Safety and environmental policy offices, similar projects or the contractor can help in identifying a comprehensive list of applicable legislation.

(a.4) Dissemination of information (SMP 01, 03 and EMP 01).

Possible Issues:

- For legacy equipment there is potential to assume that all relevant safety and environmental stakeholders are involved, when this may not be the case.
- Most equipment interfaces with other systems and all equipment has users. If no relevant stakeholders are included from the teams responsible for these systems, there is a risk that the safety and/or environmental risks will be missed.
- Stakeholders may not recognise the importance of their role and may send unqualified people to represent them at meetings. Decisions may therefore be taken by unqualified personnel.
- Instructions may not be clearly disseminated to appropriate people.

Corresponding Advice:

- Be proactive in formally defining and agreeing stakeholders' responsibilities.
- Develop and maintain a formal stakeholder register. For cluster IPTs with numerous small legacy projects, an IPT level stakeholder register may suffice. Ensure that there is sufficient budget and resources to do so. Ensure that stakeholders understand the importance of the role they play in your project.
- Ensure that the planners such as PJHQ are identified as stakeholders and have been informed of their responsibilities.
- Ensure that that experienced users and maintainers are involved in hazard identification and analysis and in environmental risk and impact identification.
- Safety and environmental management plans should:
- Include the method of dissemination of information (the method may vary depending on the criticality of the safety and environmental information);
    - Communicate assumptions, boundaries and interfaces;
    - Emphasise the importance of communicating the safety and environmental information to the user;
    - State who receives the safety and environmental case, who holds it and who reviews it;
    - Ensure there is a feedback loop from the user to ensure they receive and act upon the information.

- Refer to the domain specific Joint Service Publications for additional information.
- Safety and Environmental evidence should be retained until after system disposal (either on hard or electronic copy). There may be legal requirements for the retention of some data, such as health monitoring records. See System Support Procedure 03 for more details.
- Information on any changes initiated by the IPT should be fed through to the end users, and visa versa.

(a.5) Safety and environmental meetings for legacy systems.

Possible Issues:

- Safety and environmental panel meetings are required through-life.

Corresponding Advice:

- Ensure that:
  - Stakeholder organisations send suitably qualified and experienced personnel to safety and environmental panel meetings;
  - Ensure military planners such as PJHQ and DEC organisations are aware of panels and attend if planning changes to the equipment;
  - Ensure emerging legislation is an agenda item;
  - Ensure the review of accident/incident occurrence data when available.
- Agree when to periodically review safety and environmental cases;
- Gain periodic assurance from user organisations that procedural mitigations are being implemented and are effective.

(a.6) Disposal.

Possible Issues:

- Developing a disposal plan should be considered as soon as possible in the project. Waiting until it is approaching out of service can incur unnecessary expense.
- The disposal plan should include how obsolescence is to be addressed.
- The IPT needs to be aware of its responsibilities for disposal.

Corresponding Advice:

- Obsolescence can be divided into 2 issues:
  - Obsolescence of main equipment. Produce a plan to show how obsolescence will be addressed.
  - Obsolescence of Spares. Safety and Environmental cases should address component and sub-system change due to obsolescence.

For both issues agree who is responsible for obsolescence management - the IPT or the Contractor.

- Disposal can be divided into 2 areas:
  - Through life disposal. Emergency procedures should be written to cover disposal of equipment lost through accidents, this should also be covered in the risk registers. The IPT needs to understand it's responsibilities for waste disposal (this should be identified in the legislation register). Routine disposal of consumables, items replaced by modifications and mid-life upgrades are also the responsibility of the IPT to dispose of in line with legislative requirements.
  - End of life disposal. Put a plan in place as soon as reasonably practical, identifying how to dispose of equipment and anticipated cost of disposal.
- If planning to sell equipment, the MOD must understand its legal obligations to provide safety and environmental statements and data for the equipment. The MOD may also have a duty of care as an equipment supplier. These obligations should be captured in the safety and environmental legislation registers.
- Ensure that safety and environmental cases are in place for the disposal process.

(b) Supplementary Guidance for Multinational Collaborative Projects

This additional guidance is intended to provide advice on the application of POEMS and POSMS to multi-national collaborative projects.

(b.1) Safety and environmental delegations and risk management may have some unique issues attached to them (Safety Management Procedure (SMP) 01 and Environmental Management Procedure (EMP) 01).

Possible Issues:

- The respective Letters of Delegation will be the same for Multi-National projects as any other project; however the IPTL may not have sufficient visibility of information to provide the same level of assurance to senior managers as would normally be expected.
- A multi-national board may accept safety and environmental risks that would be classified as intolerable in the UK regime.
- Although other nations may have good regulatory frameworks, their requirements and expectations may be different to those of the UK.
- The ALARP principle may be unknown or interpreted differently by other nations.

- Other nation's may define and classify hazards/risks in a different manner to the UK.
- Other nations' regulatory frameworks may lead to decisions based on different criteria.

Corresponding Advice:

- Identify up front the information required to produce robust safety and environmental cases. This includes the information necessary to comply with:
  - UK legislative and regulatory requirements;
  - MOD Policy and Certification requirements;
  - Civil or MOD Standards;
  - Safety and environmental targets;
  - Tolerability criteria; and
  - The defined risk management methodology.

Safety and environmental information requirements can also be derived from initial assessments of the capability or concept being developed.

- Where possible ensure safety and environmental information requirements are captured as deliverables in the contract:
  - Be as specific as possible about what information is required to support safety and environmental cases;
  - Be specific about the format of the required information;
  - Be specific about the benefits to the project through the provision of this information.
- Identify any lack of visibility of required information as soon as possible and consult with/inform appropriate policy and senior stakeholders. Develop and implement safety and environmental management programmes of work to address the resultant risks.
- Ensure that there is a clear audit trail for all decisions made, especially when they are at odds with UK policy.
- Do not always take data received at face value. Information provided should be checked and verified. IPT desk officers need:
  - To understand and be well informed about safety and environmental issues;
  - To be able to report on the quality of the delivered documents;
  - To understand how their decisions can have safety and environmental impacts; and,

- To understand when to seek expert advice.

- Explain the benefits and importance of the ALARP principle to partner nations. Assess differences in approach between UK and other nations' ALARP judgements. Request or provide further risk analyses, assessments and mitigations if required.
- Review the results of hazard identification activities and risk classification matrices against UK tolerability criteria. If necessary, ask for further hazards to be considered and provide further risk mitigation.
- IPT staff should be ready to make the case for the benefits of using the UK approach, where this is more rigorous.

(b.2) Variations in Stakeholder's Approaches to Safety and Environmental Management (SMP 03 and EMP 04).

Possible Issues:

- Partner nations may be happy to accept varying levels of risk and there may be a political dimension to decisions taken.
- Commercial and finance personnel may not fully appreciate the importance of safety and environmental issues.
- Equipment capability and military planning organisations may have a different perception of what is a tolerable level of risk than the IPT.

Corresponding Advice:

- To de-risk a project satisfactorily the IPT needs:
  - Desk officers with suitable qualifications and experience;
  - IPTL support and championing;
  - Sufficient resources set aside for safety and environmental activities;
  - To be able to explain the benefits of the UK's thorough approach to safety and environmental management to other nations;
  - A comprehensive audit trail and scrutiny of all information supplied and decisions made.
- Involve commercial and finance officers as key stakeholders. Ensure they understand the benefits of good safety and environmental management.
- Ensure that the audit regime for the contract is clear and concise, and gives access to the necessary information.

(b.3) There will be many complex interactions between stakeholders (SMP 01 and EMP 01).

Possible Issues:

- The IPT may find it difficult to identify international stakeholders. If they can be identified, there may still be difficulties obtaining the necessary information and input.
- There may be language barriers particularly with different user communities (in particular feedback occurrence/incident reports from other nations' operators and maintainers).
- International committees may take longer to reach decisions than single-nation IPTs.

Corresponding Advice:

- Be proactive in stakeholder management. Define stakeholders' roles and responsibilities up front. Ensure they understand these responsibilities and agree to take ownership.
- Consider the need for using a translator when required.
- Allow sufficient time in safety and environmental management plans and programmes of work to gain international agreement on issues.

(b.4) An up to date Legislation Register ensures key risks are identified (SMP 01 and EMP01).

Possible Issues:

- The International Project Office may opt to specify non-UK legislation in safety and environmental contractual requirements.
- Different nations and contractors may have different interpretations of legislation and what constitutes an acceptable means of compliance.
- The UK may use the equipment in a different manner to other nations and therefore the UK safety, environmental and certification requirements may not be fulfilled by the contract.
- Whilst other nations may specify robust regulatory requirements, discrepancies may exist in the extent to which they ensure compliance with these regulations.
- Other nation's legislation/policy requirements may not be as comprehensive as the UK. For example other nation's may not require:
  - Independent safety and environmental audits;
  - Assessment of contractor's competency;
  - Safety and environmental issues associated with disposal to be addressed during the procurement;

- The production of safety and environmental cases;
- The implementation of a Failure reporting and Corrective Action System (FRACAS).

- Overseas contractors may lack understanding of UK safety and environmental requirements.
- Variations may exist between nations on the extent of reliance on military exemptions from safety and environmental legislation.
- Whilst compliance with certain international health and safety and environmental legislation will mean that less hazardous materials are used in a system, such materials may be less functionally effective and therefore in turn lead to derived safety and environmental risks.

Corresponding Advice:

- Consult with the relevant System Safety Groups to identify key legislative requirements and work with other nations to influence their inclusion in the contract.
- Review non-UK legislation to judge its equivalence and check if it gives rise to unacceptable constraints or risks. Provide risk mitigation if needed. Seek expert advice where appropriate. The IPT should note that recommendations from independent bodies can add weight to the UK position and therefore sway the other partner nations and contractors.
- Set aside time and resources to agree a common interpretation of existing and emergent legislation and associated acceptable means of compliance both before contract award and through-out the project life cycle.
- If it is not possible to persuade the international collaborative project office to meet all of the UK's safety and environmental requirements, it may be necessary set aside time and resources to undertake extra UK-specific safety and environmental work, such as:

  - Independent safety audits;
  - Assessing the contractor's competency;
  - Ensuring that issues associated with disposal are addressed during the procurement;
  - Reviewing the impacts of differences between UK and non-UK legislative requirements;
  - Implementing of FRACAS;
  - Certification submissions.

- Implement a methodology to ensure that contractors inform the IPT when they change their design to meet emerging legislative requirements. When they do so consider the need to review the safety and environmental cases as required.

(b.5) The IPT may have little control over the technical and commercial aspects of the contract (SMP 10 and EMP 06).

Possible Issues:

- As multi-national contracts are negotiated by the international project office, the IPT may have limited opportunities to influence the contract.
- The IPT may have limited opportunities to influence the Terms and Conditions of the Contract and/or ensure they are flowed down to Sub-Contractors.
- It may not be possible to use standard MOD contract terms and DEFCONs in international contracts.
- The IPT may be required to use a company who does not have a good track record for Safety and Environmental work.
- As the contract communication chain may be complicated, the IPTL may not be certain he/she will obtain sufficient information to discharge his/her responsibilities.

Corresponding Advice:

- Ensure that commercial officers understand the importance of including clauses to enable the IPTL to carry out his/her delegated safety and environmental responsibilities. This should include a requirement to flow clauses down to all Sub-Contractors.
- Influence the international collaborative project office to give due consideration to safety and environmental management track record during bid assessments. Where this is not possible, mitigate the risk through continual oversight and competent and proactive review of the contractor's safety and environmental work.
- Identify up front the information required to produce robust safety and environmental cases. Where possible ensure these information requirements are captured as deliverables in the contract.
- Identify, assess and manage the risks due to the inability to obtain the specific data. Risks that present a significant business impact should also be escalated up the delegation line. Where directed to do so, request and document decisions from higher management.
- Keep a clear record of decisions, identify where they deviate from UK policy.

(b.6) Disposal (SMP 03, 13 and EMP 06, 07)

Possible Issues:

- There may be difficulties where the project spans the implementation of new disposal legislation.
- Lack of visibility of design information can lead to difficulties for the IPTL in:
  - Ensuring compliance with disposal requirements;
  - Discharging safety and environmental responsibilities if selling the equipment on to a third party.

Corresponding Advice:

- Produce a comprehensive disposal plan at an early stage of the project. Use and maintain it to ensure that any relevant issues are taken into account when negotiating the original contract.
- Assume that the UK will have to dispose of its equipment and ensure sufficient funds to do so are in place. These funds should also allow for changes in disposal legislation. To do so it will be necessary to:
  - Maintain safety and environmental legislation registers;
  - Update and maintain the disposal plan.
- If planning to sell equipment, the MOD must understand its legal obligations to provide safety and environmental statements and data for the equipment. The MOD may also have a duty of care as an equipment supplier. These obligations should be captured in the safety and environmental legislation registers.
- If selling the equipment onto provide clear limitations on how the equipment is to be used.

(c) Supplementary Guidance for Public Private Partnerships and Private Finance Initiative projects

Public Private Partnerships (PPPs) are partnerships that bring together, for mutual benefit, a public body and a private company in a long-term joint venture for the delivery of high quality public services. PPPs cover a wide range of different types of contractual and collaborative partnerships including Private Finance Initiative (PFI) projects. A PFI project is a project that involves the public sector contracting to purchase quality services with defined outputs, from the private sector on a long term (typically 25 years) basis, and including maintaining and constructing the necessary infrastructure so as to take advantage of the private sector management skills and incentives by having private finance at risk.

Potential differences in areas such as the balance of shared MOD/contractor safety and environmental responsibilities, contracting methods, information flow and the

use of civilian staff in the military environment requires the intelligent application of POSMS and POEMS to PPP and PFI Projects.

There are different types of PPP and PFI projects, each with the potential for different permutations of:

- MOD/Contractor equipment and facility ownership; and
- MOD/Contractor interaction in providing the service.

As such, it is not possible to apply a common prescriptive process to ensure the appropriate safety and environmental management of PPP and PFI projects. This additional guidance aims to provide advice in applying POSMS and POEMS to PFI and PPP Projects.

(c.1) Safety and Environmental Responsibilities May Hinder a Total 'Hands Off' Output Specification Approach (SMP 01 and EMP 01)

Possible Issues:

In many instances with PPP and PFI contracts, the IPTL will be aiming to contract for a service based upon an output specification and not define the way in which the Service Provider will achieve the outputs. Such an approach allows the Service Provider room for innovation and freedom in fulfilling the contract. However, there is potential that safety and environmental regulations can constrain this approach. Depending on the project circumstances, the IPTL is or can be:

- The representative of the organisation who instigated the work; and/or,
- An 'intelligent customer'.

As the IPTL will retain overall responsibility for safety and environmental performance, he/she will need to be sufficiently involved with, and informed of, the Service Provider's competence, procedures and practices to satisfy him/herself that all the safety and environmental issues associated with the project are being adequately addressed.

Corresponding Advice:

The IPTL is to establish as early as possible his/her safety and environmental management responsibilities and what actions are to be taken in order to discharge these responsibilities. It is recommended that:

- The IPTL consults with appropriate System Safety Groups, regulators, and legal advisors in order to establish:
  - The IPTL's safety and environmental management roles and responsibilities;
  - The extent to which the IPTL can transfer safety and environmental activities to the Service Provider. Whilst ownership of safety and environmental risks should be transferred to other parties best placed to address them (such as the Service Provider), overall responsibility will

still reside with the IPTL. Even if direct risk can be transferred, the consequent reputational risk from an incident will remain with the IPTL, and may be influenced by public perceptions of PPP/PFI projects and private sector priorities;

- If the risk owner has the correct skill set to hold any delegated authority;
- The extent of assurance activities that an IPTL has to undertake in order to discharge his/her responsibilities. Here, over and above meeting any legal requirements, the IPTL should consider a risk based approach where oversight and assurance activities focus on those aspects of the service provision that pose the greatest safety and environmental risks;

- The division of safety and environmental work, obligations and authority between the IPT and the contractor, on issues such as:
  - Holding and updating the safety and environmental case documentation;
  - Authority to make ALARP decisions for hazards of different risk levels;
  - Obligations under environmental Duty of Care legislation regarding waste;
  - Planning for and undertaking continual review of the effectiveness of operational controls.
- Decisions are formally recorded and reflected in the IPT Safety and Environmental Case Reports, Strategies and Plans.

(c.2) Interaction of Civilian and Military Equipment, Personnel, Procedures and Facilities will be complex (SMP 01 and EMP 01).

Possible Issues:

PPP/PFI Service Provision Contracts can involve:

- The interaction of civilian and military equipment, personnel, procedures and facilities;
- Contractor personnel undertaking activities that were once undertaken by MOD personnel;
- Activities that are undertaken under a mix of military and civil regulatory regimes.

Corresponding Advice:

- Define and document the detailed boundaries between civil and military operations and manage the interfaces between the two.
- Do not underestimate the effort and resources required to define the interfaces between the contractor and the MOD. The overarching interface

between the stakeholders is to be recorded in the project safety and environmental management systems.

- Potential safety and environmental risks may be reduced if interface issues can be addressed early in the project life, for example via Customer Supplier Agreements (CSAs), Service Level Agreements (SLAs) and Internal Business Agreements (IBAs).
- Engage early with Defence Estates (DE). Failure to do so may result in breach of environmental-related planning law.
- The hazard assessment process should give consideration to the safety risks that result from civilians working in a military environment.
- Ensure that the IPT and the contractor thoroughly understand all aspects of the service to be provided and the environment in which it is to be provided. Be wary of contractor over-optimism in taking on responsibilities that they are not able to discharge. Ownership of risks should be transferred to the organisation best-placed to address them; however, the IPTL will retain overall responsibility for safety and environmental performance.
- It is good practice to allow bidding contractors access to relevant MOD stakeholders to ensure that they have good understanding of what they are being asked to do. However, it is important that the IPT manages and controls the communication of information between the contractors and other MOD stakeholders. During a tender process, MOD must ensure that the same information is given to all potential bidders.
- Do not assume that MOD exemptions will apply to contractors undertaking activities. MOD exemptions apply only to MOD staff and organisations; they do not apply to contractors.
- The draft contractual requirements should be informed by safety and environmental assessments and reviewed by all appropriate stakeholders and against other stakeholder requirements as defined in the interface management documents to ensure coherency and consistency.
- At some point in the project life cycle, the immediate responsibility for managing the use of the equipment and services may transfer to the front line command chain of command. Include front line commands in an up-front stakeholder engagement process, and in particular ensure that they are involved in the hazard identification and analysis and in the environmental and risk assessment process to ensure that mitigations are actually achievable on the ground.
- Ensure that IPT and Contractor Safety and Environmental Management Systems agree and document how other line of command issues are to be addressed, such as:

- How civilians are to respond to orders from military personnel, especially if the order is to operate equipment outside the safety and environmental case limitations or if emergency procedures rely on execution of commands;
- How military personnel are to work under civilian instruction;
- Who has overall jurisdiction/liability/responsibility for the activities.

Note that legal health and safety obligations between the employee and the employer will continue to be applicable.

(c.3) The Contract Must Include Safety and Environmental Requirements to De-Risk the Project (SMP 10 and EMP 06).

Possible Issues:

- Some PPP/PFI and Provision of Service Contracts can extend over a lengthy period. Requisite standards of safety and environmental management have to be established and maintained.
- It is unlikely that necessary safety/environmental activities or information requirements omitted from the original contract will be undertaken or satisfied at no extra cost to the IPT.
- Variations to contract post-award can be disproportionately expensive. It is much better to plan ahead to ensure that the contract adequately covers all assessment, management and assurance obligations.
- The contractor may employ various levels of sub-contractor who may or may not conform to the prime contractor's required standards.

Corresponding Advice:

- Any potential contractor can be asked to demonstrate their performance in EMS and SMS by completing a Pre-Qualification Questionnaire (PQQ). It is also considered good practice to perform a PQQ for single source contracts.
- It is important that the IPT has clearly identified the Safety risks and Environmental impacts/risks at an early stage to ensure they understand the extent of management and assurance they will require from a potential contractor.
- Any contract should clearly stipulate exactly what is required but not how the contractor should produce it. The IPT may contract for the production of an EMS and SMS or simply the required components in order to produce their own. However, the contract may include provisions for the MOD to agree/endorse contractors' plans as to how particular activities are to be undertaken.
- ISO14001 is a recognised standard for environmental management of an organisation. However, it does not necessarily provide assurance that environmental risks are being well managed. Placing ISO14001

requirements on a contractor will not go as far as satisfying the IPT's obligations under POEMS. ISO14001 should not be used as a general requirement on contactors without suitable consideration of the implications, shortcomings and supplementary provisions necessary.

- For projects that involve new acquisitions made by the contractor, put in place a mechanism to ensure a consistent flow down of contractual and sub-contractual requirements such that they adequately and comprehensively reflect the IPT, contractor and sub-contractor safety and environmental obligations.
- The contract should include a requirement stipulating the level of safety performance to be achieved.
- Ensure that correct sub-contractual arrangements are set in place and in particular that appropriate safety and environmental contract clauses and requirements are flowed down to sub-contractors. Where possible encourage the prime contractor to use Def Stan 00-56 in sub-contracts.
- Ensure suitably qualified and experienced personnel review draft safety and environmental contract clauses.

(c.4) The Contract Must Include Safety and Environmental Requirements (continued) (SMP 10 and EMP 06).

Possible Issues:

- IPTL will have through-life safety and environmental responsibilities.

Corresponding Advice:

- Continual Review Arrangements: - it is recommended that the contract allows for review of the effectiveness of operational controls early after the contract is placed or in the service provision and, if necessary, the implementation of remedial changes. Revised safety and environmental assumptions or operational changes (like using equipment in a different operational theatre to that originally intended etc.) should trigger review of operational controls.
- To ensure the provision and transparency of contractors' processes, the IPT should consider including contract clauses to giving them the right to see any information (including inspection and audit of activities) deemed necessary to satisfy the IPTL that his/her safety and environmental responsibilities are being satisfied.
- The review mechanism defined in a contract depends largely on the nature of the project itself. MOD has mandatory safety and environmental reporting procedures. Requirements for safety and environmental committee meetings should ensure review of safety hazards and environmental impacts/risks.
- Ensure that the contract allows for IPT access to the contractor and sub-contractor facilities and records for audit purposes.

- Ensure that the contract comprehensively captures all necessary safety/environmental activities or information requirements, such as:
  - The safety and environmental activities to be undertaken by the contractor;
  - Information to be delivered in the correct format and in a timely manner to other stakeholders who have safety or environmental management and assurance responsibilities;
  - Access to contractor documents and facilities for audits and reviews.

5. POEMS Process Maps

5.1 Purpose

5.1.1 The following Process Maps are intended to show the environmental management activities that would typically be conducted during an MOD project that follows the CADMID cycle. The maps are a set of interconnected diagrams that permit readers to appreciate the necessary activities, their inter-relationships and links with other events during a project.

5.1.2 Activities are described briefly in "Activity Boxes" which are connected in series or parallel by link lines. Some of the activities are themselves processes involving several subsidiary activities and these may be shown on "Child" diagrams. The Process Maps are therefore hierarchical, with different numbers of levels in different areas. Where an Activity Box is supported by a procedure, clicking on the box will call up that procedure. However, not all Activity Boxes are supported in this way. Additional guidance will be provided as ASEMS develops.

5.1.3 The diagrams also represent decision points where the choice of subsequent activities is dependent on the answer to a question.

5.1.4 The Process Maps contain "feedback loops" where link lines join back to a previous activity. This shows where activities are expected to be repeated or refined with new information. In an iterative process such as environmental management, it is not possible to show all the possible places in which repetition or refinement may be necessary, and any attempt would lead to overcomplicated diagrams.

5.2 Active Process Maps

5.2.1 Process Maps are perhaps most helpful where they enable people to use the information in an interactive way. The user is then able to navigate around all levels of the complete Process Map and, importantly, can use hyperlinks to move from particular places on the diagrams to access related information such as a procedure or relevant tool. In the paper and *.pdf versions of the manual, the Process Maps are naturally inactive, but the full functionality is available by using the html versions to be found at the ASEMS home page or on CD-ROM versions.

5.2.2 Hyperlinks are shown by the cursor changing to a pointing hand and used by clicking with the mouse. Child diagrams are viewed by clicking with the mouse somewhere within the parent activity box.

5.2.3 The html version of the Process Maps has six icons at the top centre of each screen which permit the user to (reading icons from left to right):

- Show/hide the tree structure of the Process Maps (this structure gives an alternative way of navigating around the hierarchy of the diagrams);
- Go to the home page;
- Go up one level;

- Zoom out;
- Zoom in;
- Print the current screen.

5.2.4 Along the top of every diagram are tabs similar to those on file dividers in a cabinet. These have hyperlinks that allow the user to move to the top diagram for any of the CADMID phases. The title of the current diagram is shown in the middle of the coloured tab, which represents the CADMID phase currently being looked at.

5.3 Format and Conventions

5.3.1 The following conventions have been used on the Process Maps for POSMS and POEMS:

- The top level, immediately below the home page, shows the CADMID phases and milestones between them. The Demonstration and Manufacture phases have been combined;
- Activity boxes are rectangular;
- Decision boxes are diamond shaped, containing the text of the question or decision and two or more paths out of the box that are labelled with answers to the question (eg a YES path and a NO path);
- The milestones are also shown as diamond shaped but are coloured red. The milestones are identified with an abbreviation with a key at the bottom of the CADMID top level diagram;
- Parent activities are shown with a shadow behind them and with an information symbol in the top right hand corner;
- Hyperlinks are shown with text in blue. Procedures linked to particular activity boxes are shown by reference number in a separate area at the bottom of the box;
- Some activity boxes have large arrows in the bottom left. These are hyperlinked back to a previous diagram (for instance when it is necessary to go back to an earlier process for a mid-life update);
- Activities that are not always relevant are shown with lighter shading and text at the bottom that defines their relevance (eg OME Projects only) or “where necessary”. For these activities, the IPT should consider whether the activity is applicable to their project, seeking guidance if they are not certain;
- Activities which are continuous or periodic are shown at the top of the diagram (CADMID phases level only). Each of these continuous activities has a reference number shown immediately after the description. The diagrams show when each of these activities is expected to start relative to the other activities, but they all continue from that point until project closure;
- Where an activity uses an input from one of the continuous activities (eg the Safety or the Environmental Management Plan), then this is shown by using the reference number in a separate area at the top of the box.

Global Diagram	ASEMS: Project-Orientated Environmental System – Home Page

de&s

Welcome to the UK MoD Project-Oriented Environmental Management System Processes

Provide Capability with Tolerable Environmental Impacts Through Life

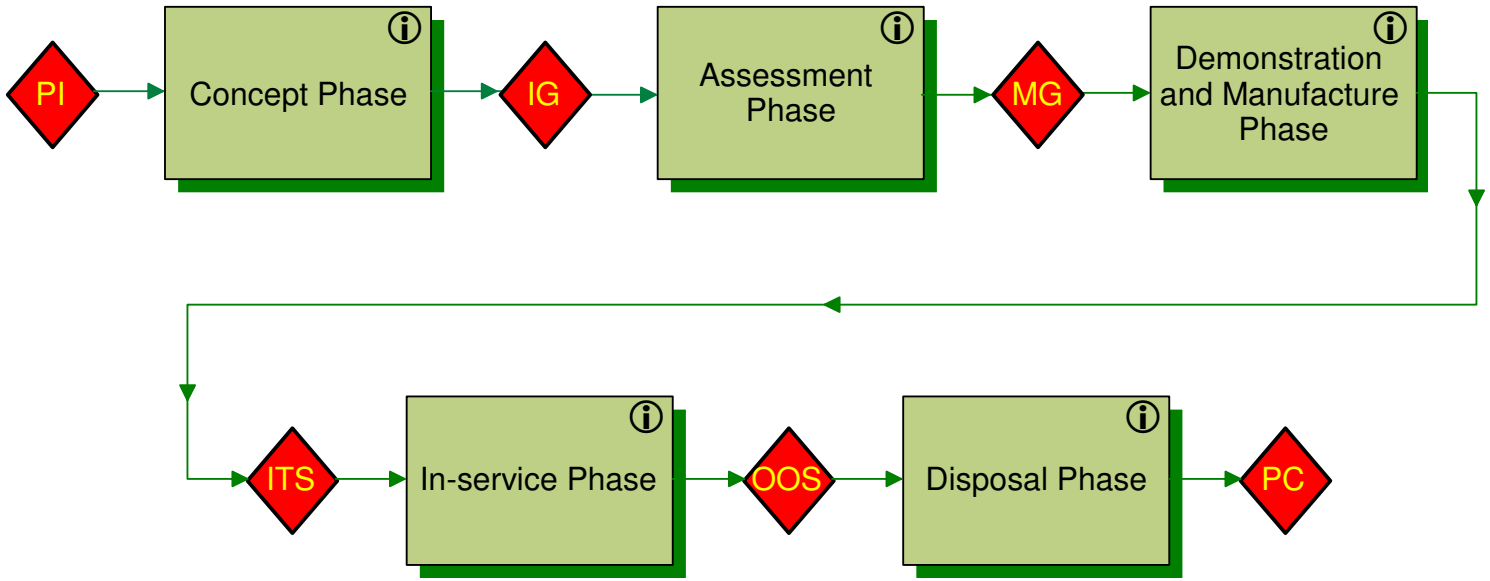
Concept Phase
Assessment Phase
Demonstration & Manufacture Phase
In-service Phase
Disposal Phase

POEMS Manual
ASEMS Homepage

ENVIROS ATKINS

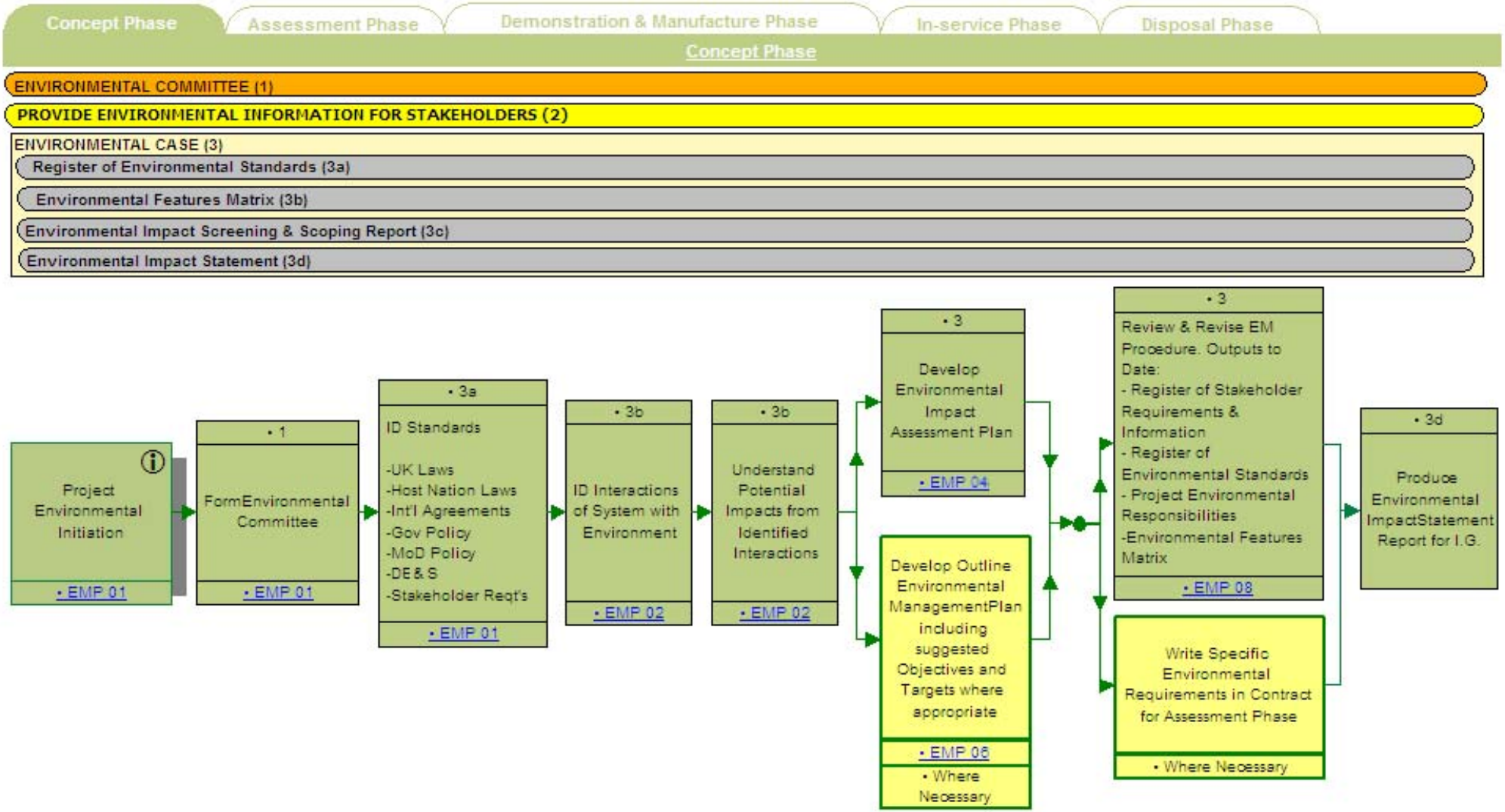
Level 1	Provide Capability with Tolerable Environmental Impacts Through Life

Provide Capability with Tolerable Environmental Impacts Through Life



PI = Project Initiation
IG = Initial Gate
MG = Main Gate
ITS = Introduction to Service
OOS = Out of Service
PC = Project Closure

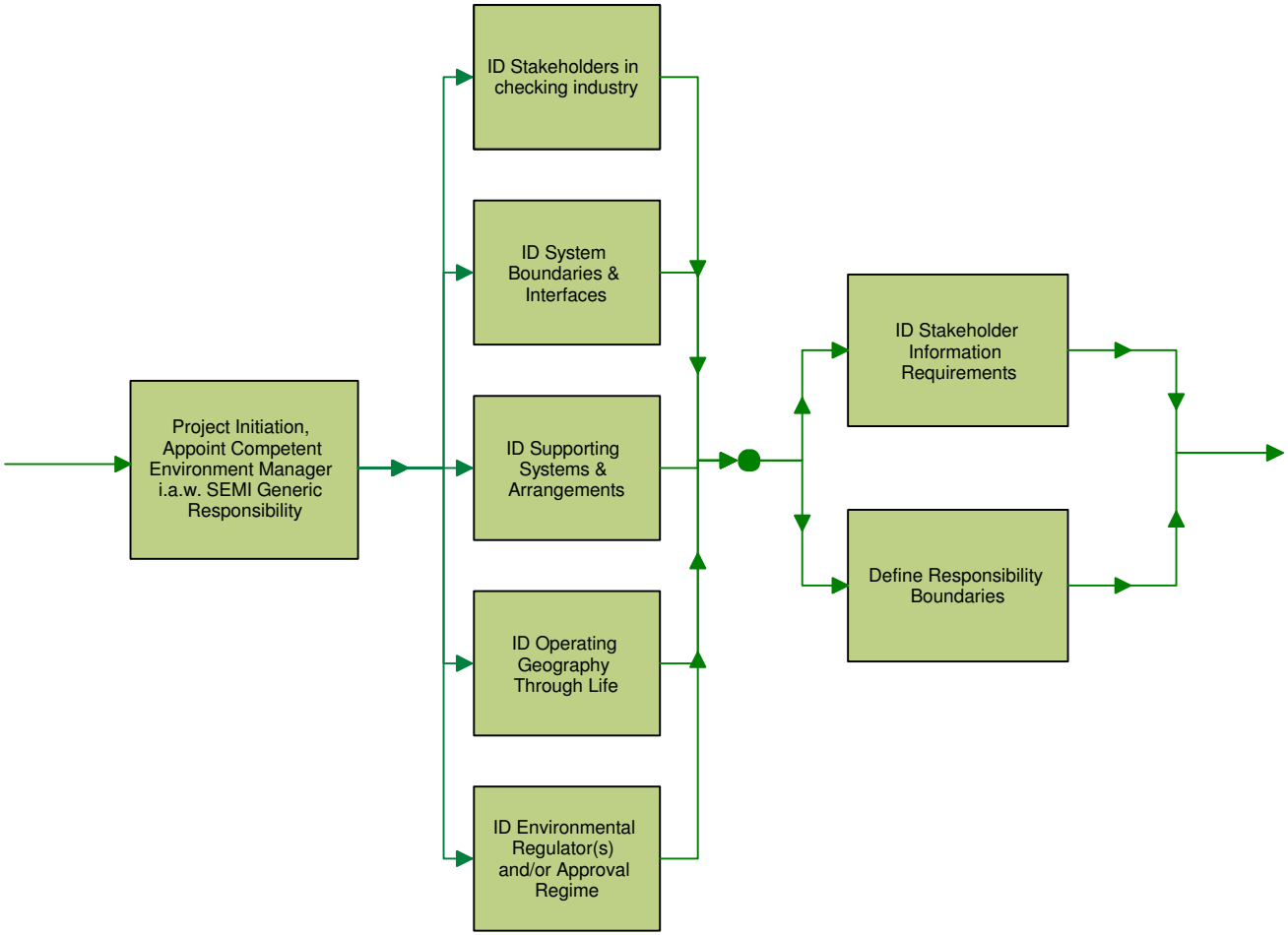
Level 1.1	Concept Phase



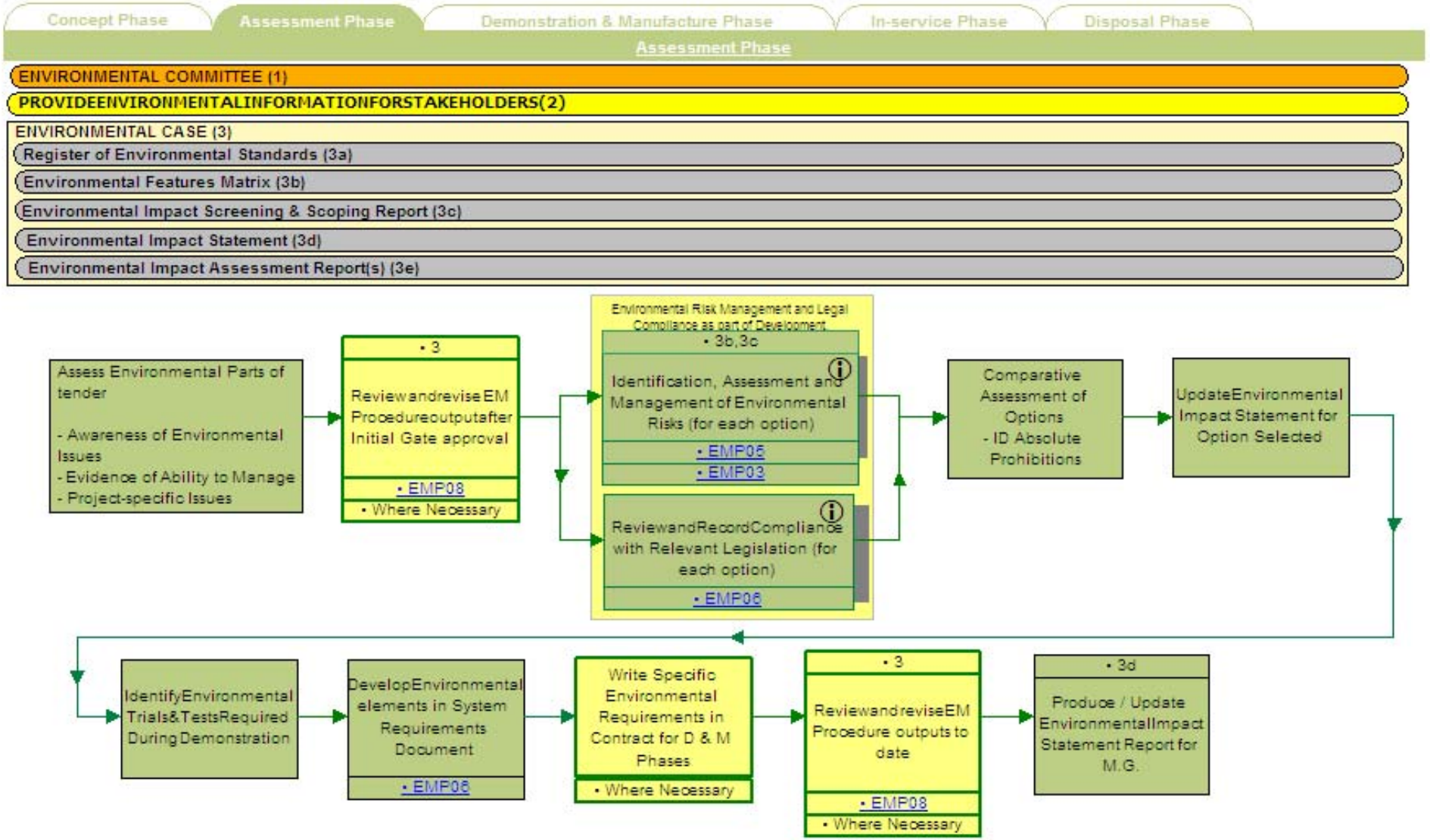
Level 1.1 - C	Project Environmental Initiation

Concept Phase | Assessment Phase | Demonstration & Manufacture Phase | In-service Phase | Disposal Phase

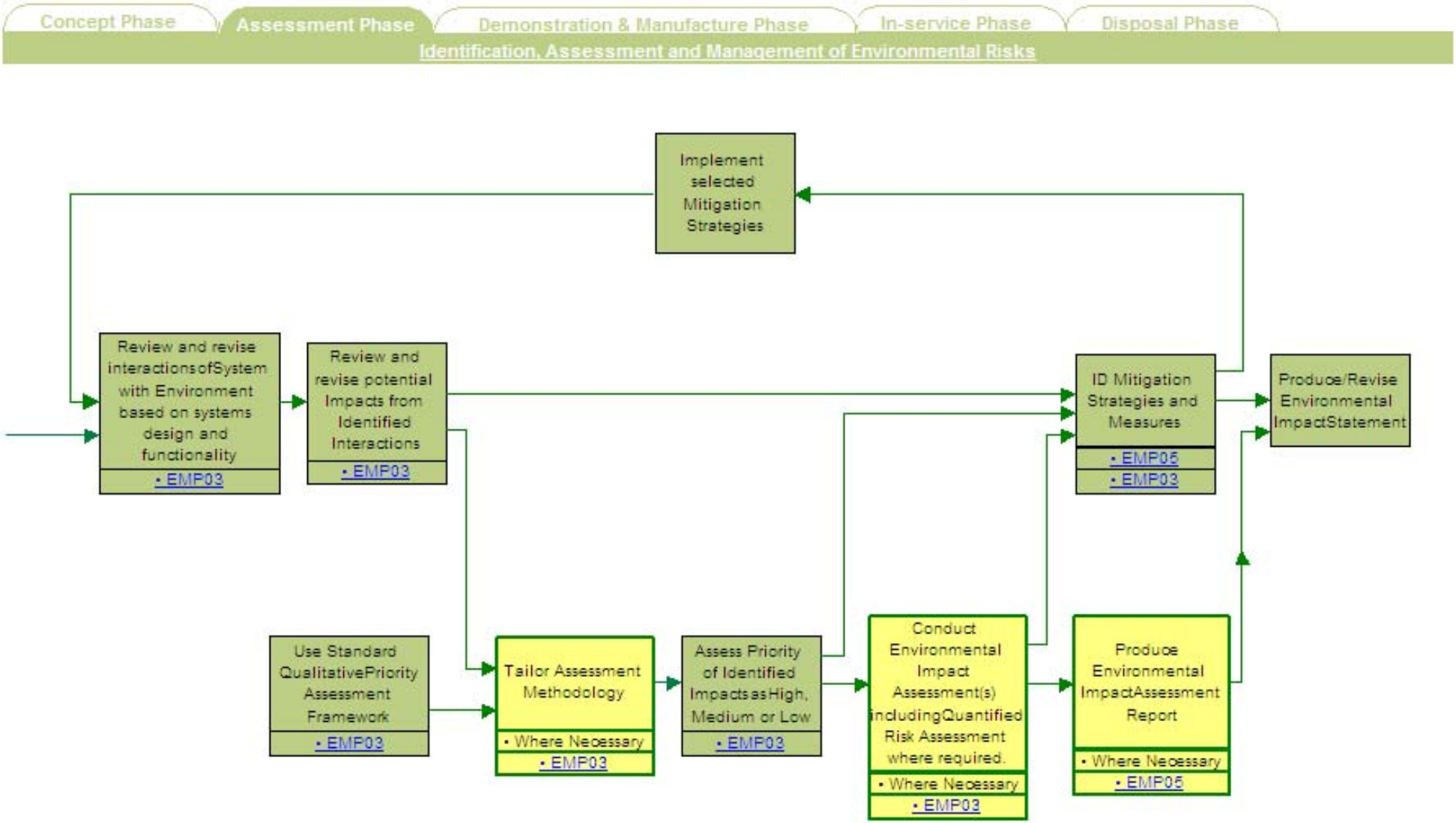
Project Environmental Initiation



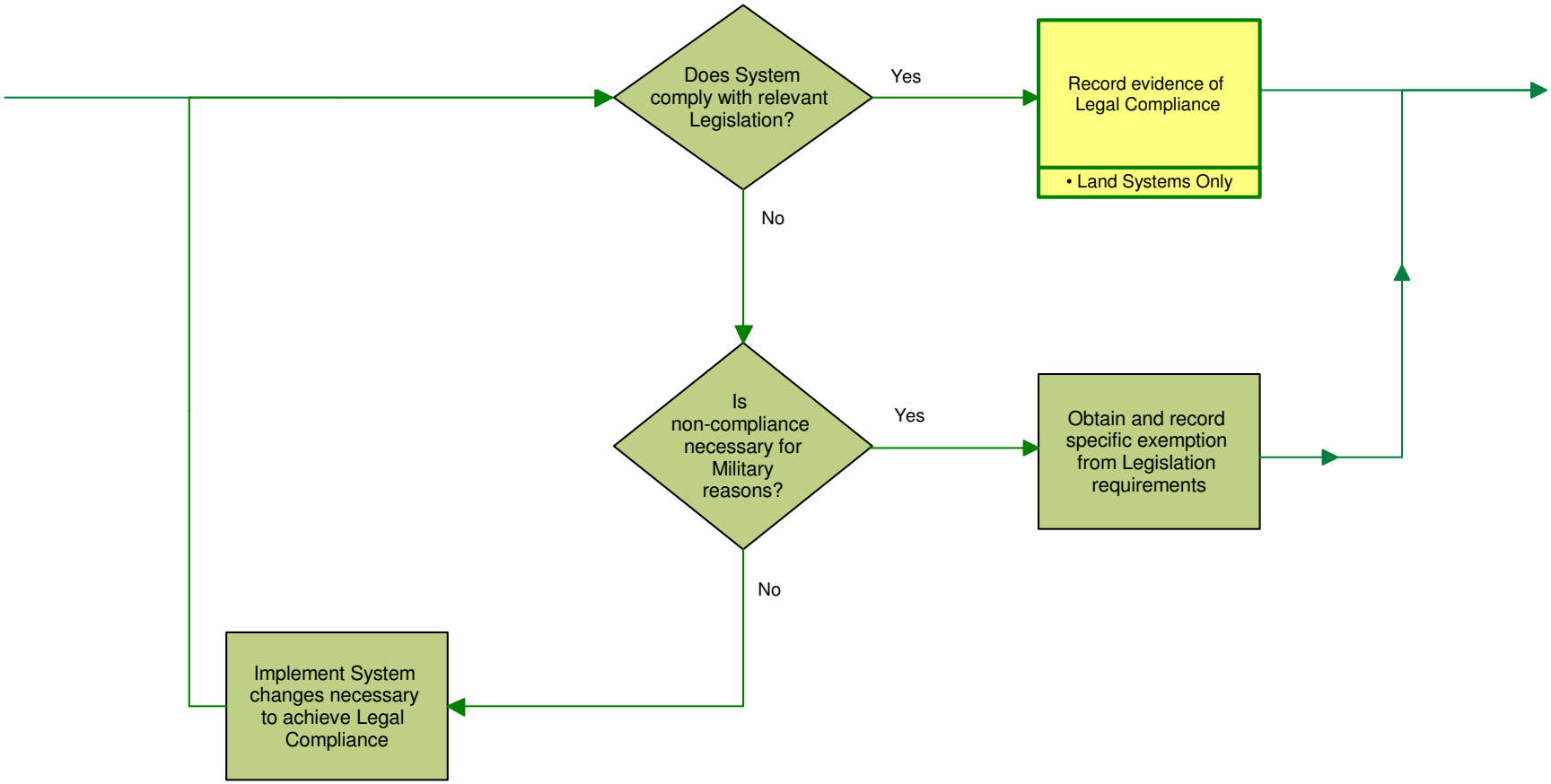
Level 1.2	Assessment Phase



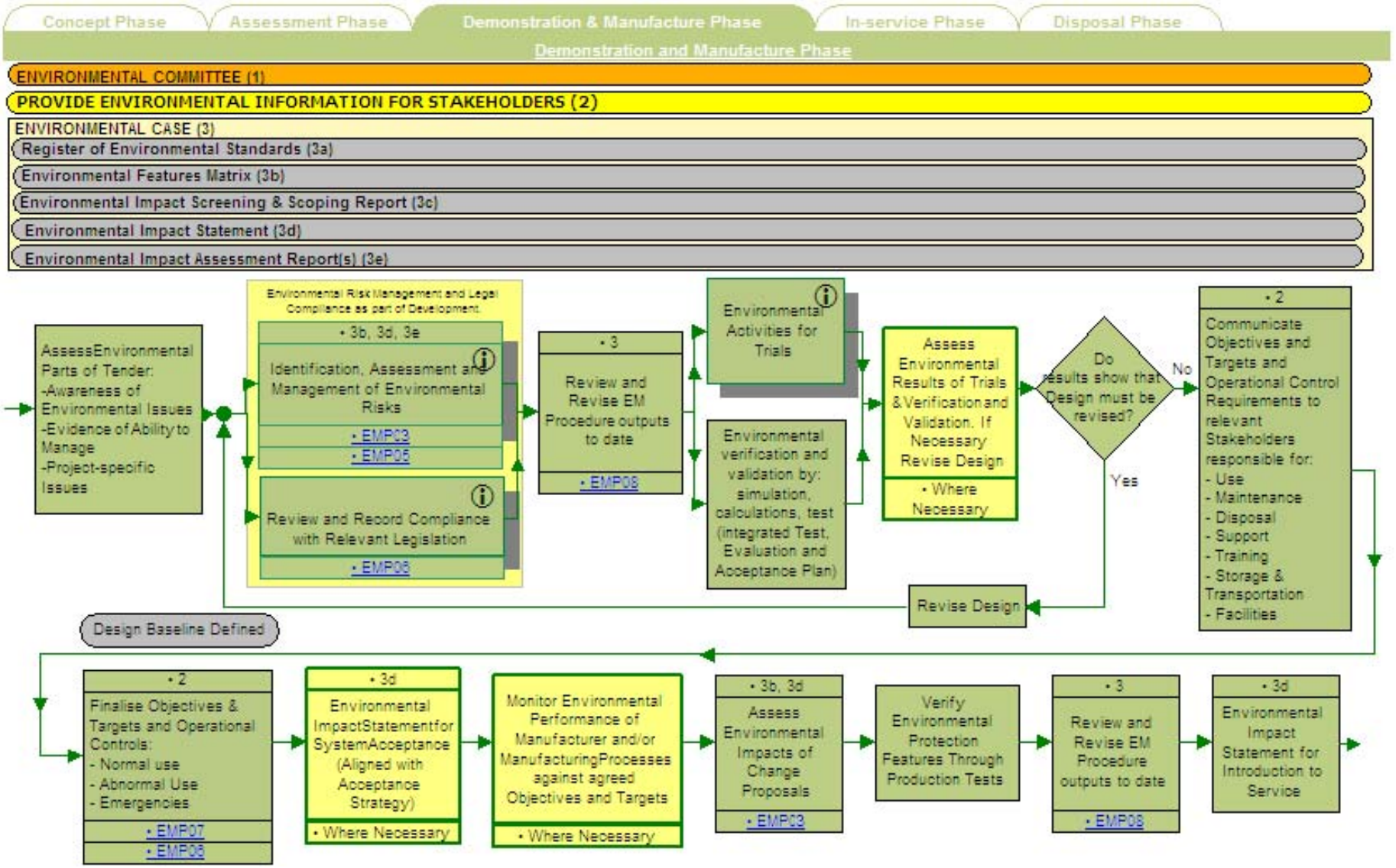
Level 1.2 - A	Identification, Assessment and Management of Environmental Risks (for each option)



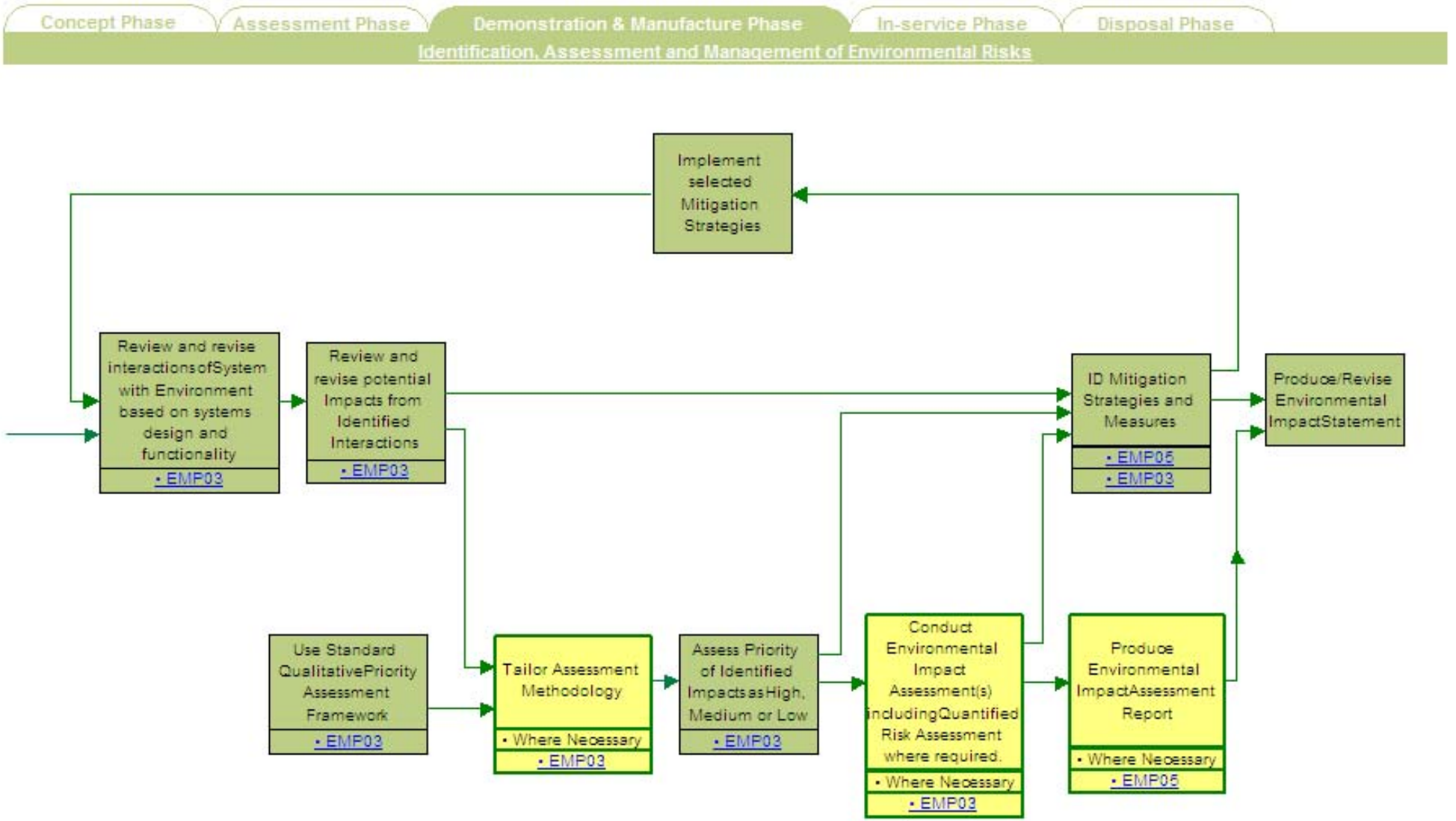
Level 1.2 - B	Review and Record Compliance with Relevant Legislation (for each option)



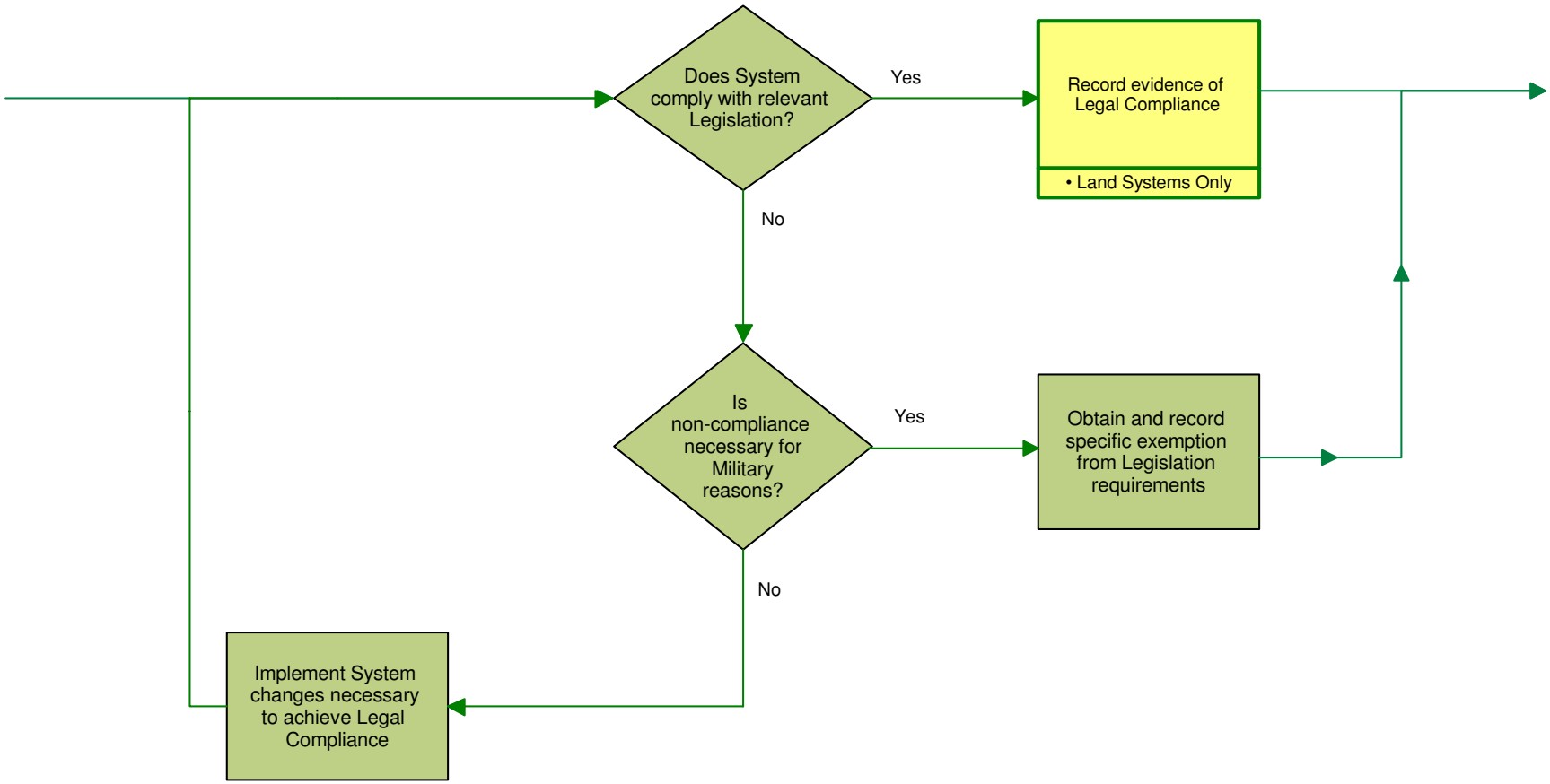
Level 1.3	Demonstration and Manufacture Phase



Level 1.3 - B	Identification, Assessment and Management of Environmental Risks

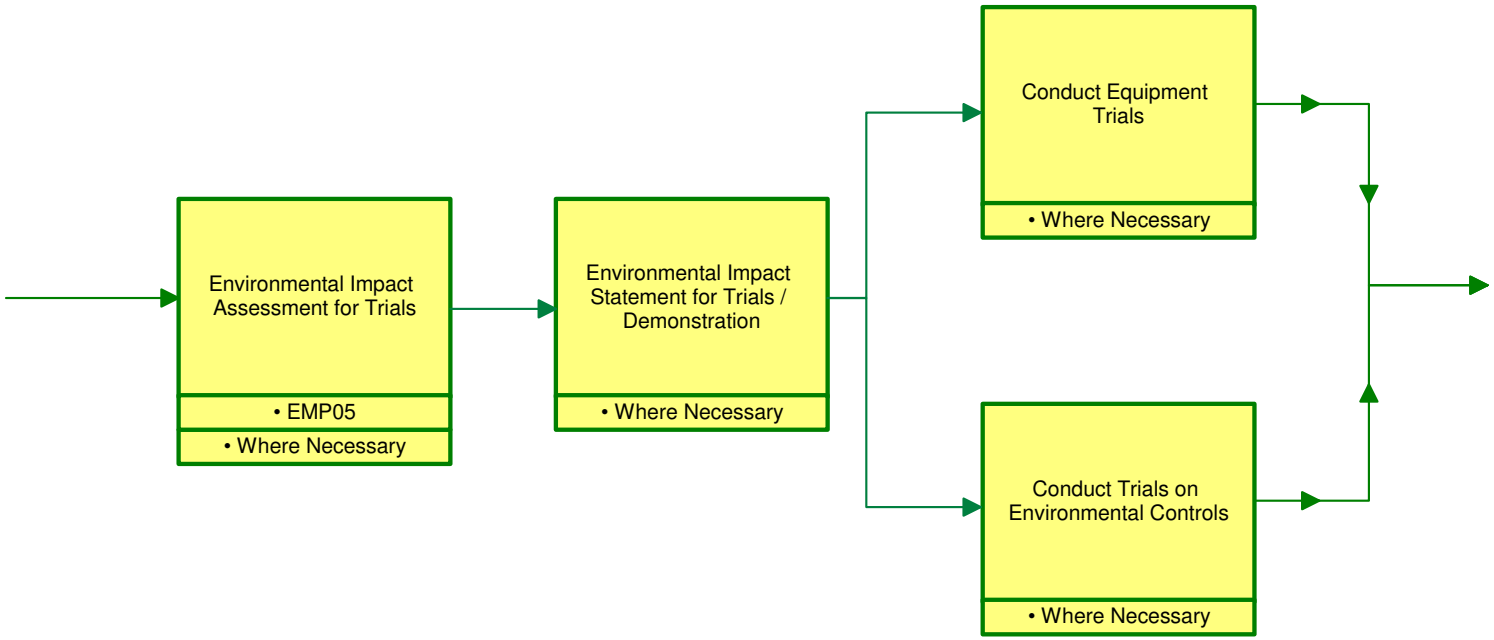


Level 1.3 - C	Review and Record Compliance with Relevant Legislation

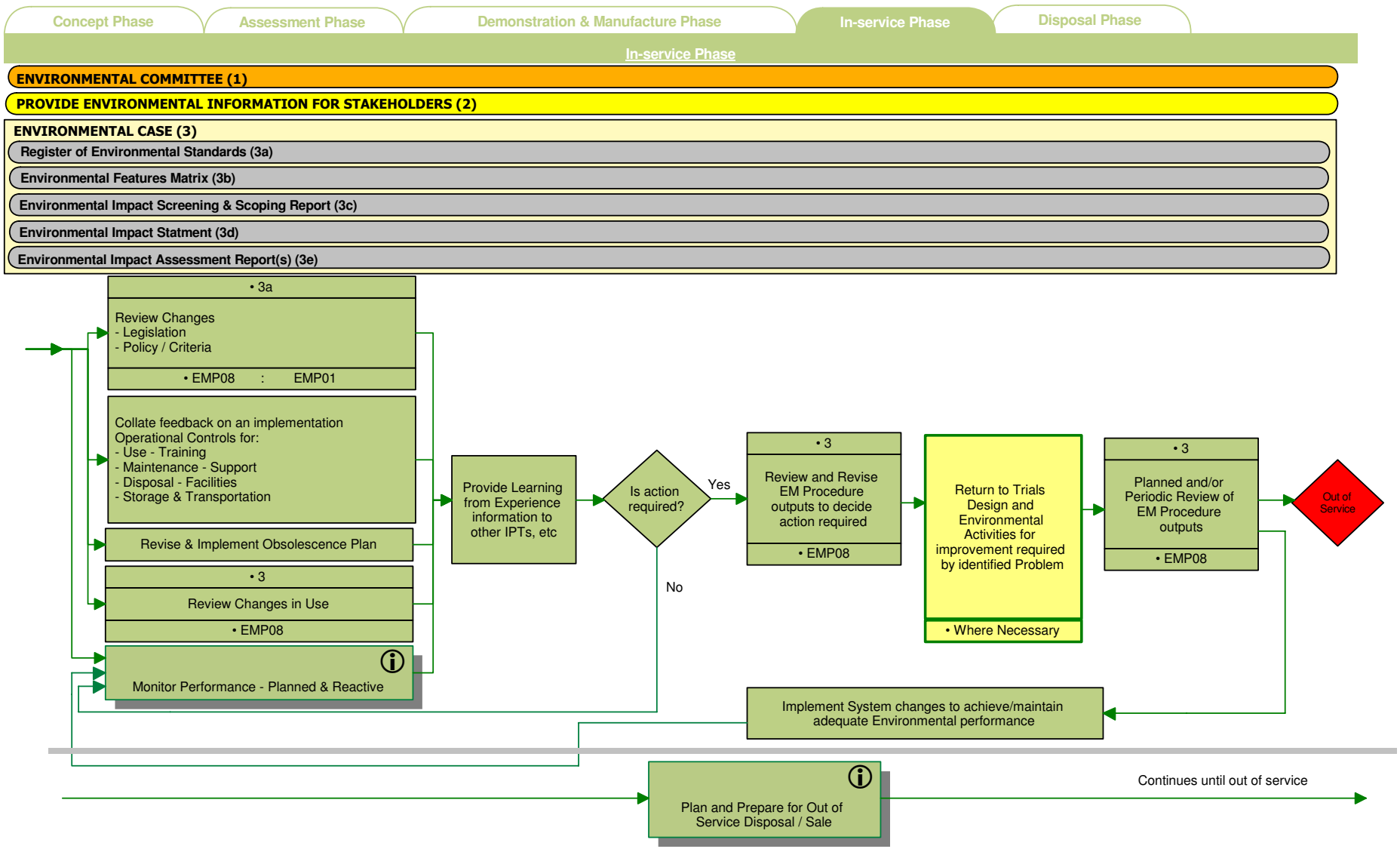


Level 1.3 - A	Environmental Activities for Trials

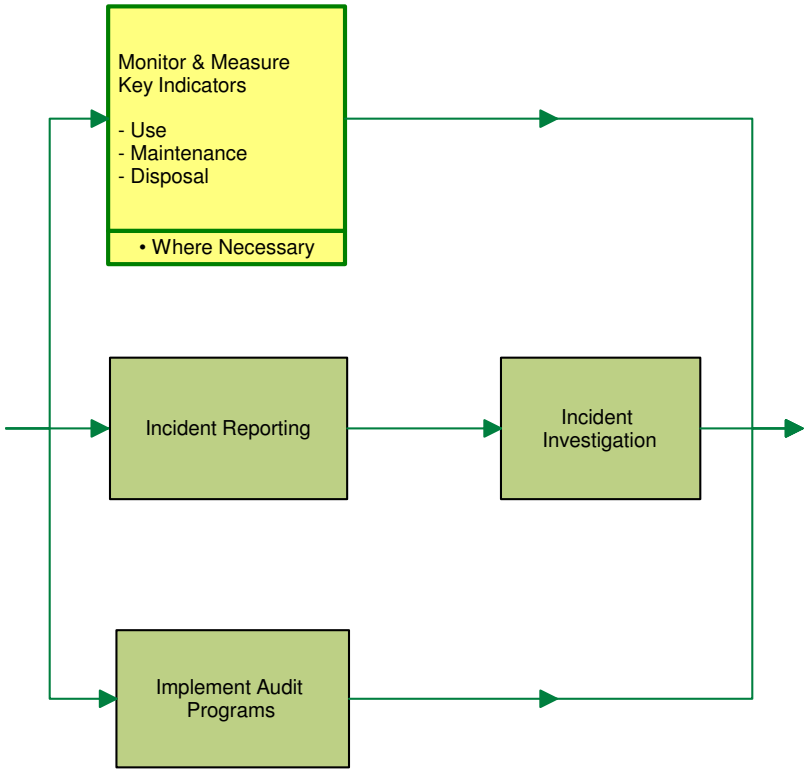
Environmental Activities for Trials



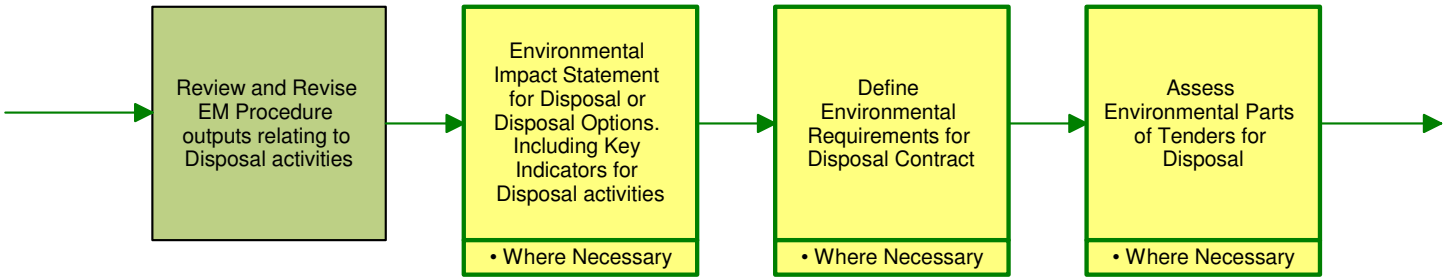
Level 1.5	In-service Phase



Level 1.5 - A	Monitor Performance - Planned & Reactive



Level 1.5 - B	Plan and Prepare for Out of Service Disposal / Sale



Level 1.6	Disposal Phase

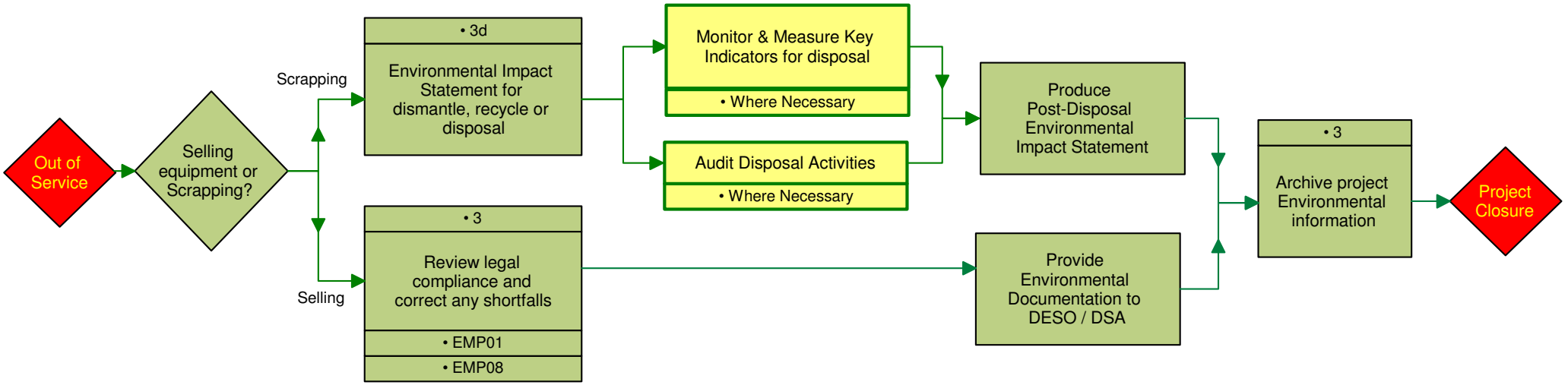
Disposal Phase

ENVIRONMENTAL COMMITTEE (1)

PROVIDE ENVIRONMENTAL INFORMATION FOR STAKEHOLDERS (2)

ENVIRONMENTAL CASE (3)

- Register of Environmental Standards (3a)
- Environmental Features Matrix (3b)
- Environmental Impact Screening & Scoping Report (3c)
- Environmental Impact Statment (3d)
- Environmental Impact Assessment Report(s) (3e)

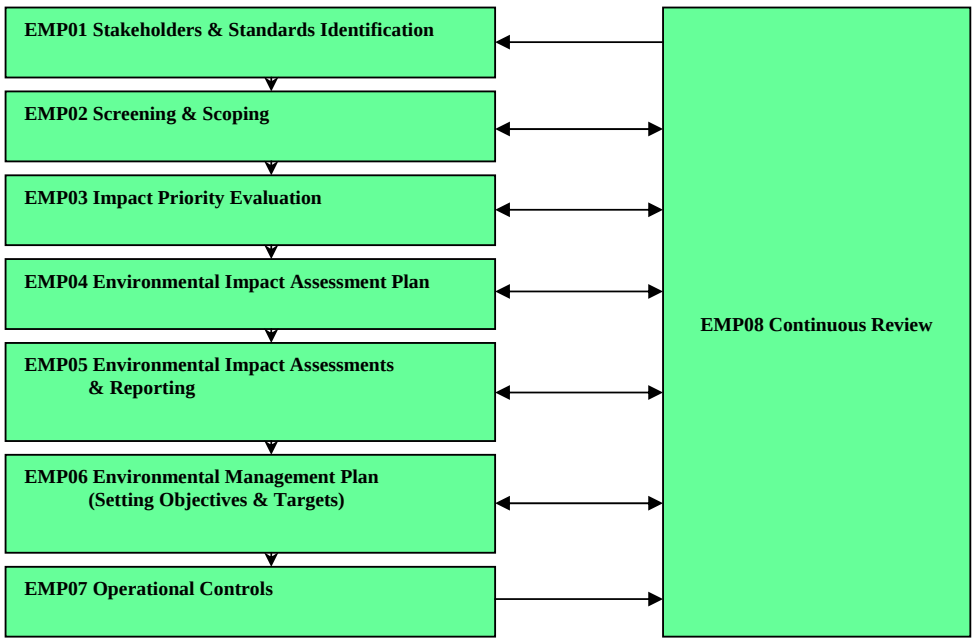


6. Core Procedures

Table 6.1: POEMS Core Procedures

Number	Procedure Type	Procedure Name
EMP01	Core Procedures	Stakeholders and Standards Identification
EMP02	Core Procedures	Screening and Scoping
EMP03	Core Procedures	Impact Priority Evaluation
EMP04	Core Procedures	Environmental Impact Assessment Plan
EMP05	Core Procedures	Environmental Impact Assessment and Reporting
EMP06	Core Procedures	Environmental Management Plan (Setting Objectives and Targets)
EMP07	Core Procedures	Operational Controls
EMP08	Core Procedures	Continuous Review

Figure 6.1: The Core Procedures



6.1 Procedure Structure

6.1.1 For ease of use, the procedures have the same format and structure. The key sections are:

6.2 Procedure Title

6.2.1 The title and reference code for the procedures are as follows:

- EMP for core POEMS procedures;
- SMP for core POSMS procedures;
- SSP for support procedures;
- AAP for assurance and audit procedures.

6.2.2 Note that support and assurance and audit procedures are common to both the POEMS and POSMS.

6.3 Showing Conformance

6.3.1 This explains the four ways of showing conformance with the procedure.

6.4 Introduction

6.4.1 This is an overview of the procedure's purpose in the context of the overall management system.

6.5 Procedure Objectives

6.5.1 This section describes what is to be achieved by following and completing the procedures. Normally the section is in the form of a list of the objectives that need to be achieved in order to demonstrate conformance.

6.6 Responsibilities

6.6.1 This section states who will be accountable and responsible for proper completion of the procedure and who will actually carry out the actions within the procedure. In most cases the IPT will be responsible for procedure management while procedure completion could be carried out by either the IPT, a supplier, contractor or advisor.

6.7 When

6.7.1 This section indicates the stage or stages of CADMID within which the procedure is most likely to be followed.

6.8 Required Inputs

6.8.1 Most of the procedures require reference to be made to the outputs of previous procedures and information from other sources. This section lists the main reference material that will be needed in order to complete the procedure.

6.9 Required Outputs

6.9.1 This lists the procedures outputs, for example completed forms, compiled information etc. It should be noted, however, that it is acceptable within POEMS for an IPT to use alternative methods to those outlined in the procedures providing this is endorsed by ASEG.

6.10 Records and Project Documentation

6.10.1 This includes advice on where outputs of the procedures should be kept and recorded (usually in the Safety or Environmental Case, Case Reports, or related registers and logs) and where other project documentation may also need to include some or all of the output information.

6.11 Description

6.11.1 This section makes up the bulk of the procedure and describes the steps and stages involved in completing the procedure. It includes advice and guidance on how to complete the procedure and advice on when to use each of the associated forms or tools. It should be remembered that this part of the procedure is guidance and it is not therefore mandatory for an IPT to follow procedural guidance to the letter where they have made suitable and equivalent alternative arrangements. The key point is to achieve the required objectives, outputs and outcomes, and to ensure that alternative approaches are clearly documented and agreed.

6.12 Recommended Tools and Forms

6.12.1 Many of the procedures include tools or forms to assist IPTs to undertake the actions outlined in the procedure or to record information produced. This section lists the forms that may be useful in completing the procedure. This can sometimes include forms associated with other procedures. Note that the use of the forms is not mandatory (see Required Outputs above) but that any alternative approaches used should be clearly documented and agreed.

6.13 Guidance

6.13.1 This final section provides guidance on other sources of advice and guidance as well as possible alternative approaches for different procurement strategies and, where appropriate, legacy systems. Also included here are some general comments on potential project risk, that may arise if the procedure is not completed in an appropriate way or at an appropriate time.

6.14 Procedure Use

6.14.1 In the Concept stage, the Core Procedures will be completed by the IPT, with guidance from ASEG where necessary. After Concept, the work required to produce the procedures' outputs is likely to be completed by the equipment or service contractor/supplier or for instance, by an environmental advisor retained by the IPT, although the IPT can carry out this work if suitably qualified and experienced staff are available to do so. This means that the IPT's role may be to complete the procedure or to manage the completion of the procedure by the

contractor or consultants to produce the required outputs. The IPT Leader remains responsible for the quality of the output.

6.14.2 All procedures provide recommended guidance and/or forms to help the user to produce the desired output(s). The use of this guidance is not mandatory, as long as suitable alternative methodologies are used which achieve the desired objectives, as defined in the procedure and that are deemed by ASEG to be equivalent. Therefore four options exist when following the procedure, to demonstrate conformance:

- Follow the defined system procedure using the recommended guidance and tools, including allowed variations and options.
- Use an equivalent process and tool set generated elsewhere and document evidence of procedural equivalence.
- Use an equivalent bespoke process and tool set for the project and document evidence of procedural equivalence.
- Where the procedure is considered to be not relevant, document the basis for this decision.

6.14.3 Table 6.2 which can be found overleaf shows a summary of the responsibilities, timing, inputs and outputs associated with each core procedure.

Table 6.2: Summary of environmental management system procedures

Procedure	When *	Input	Output **	Responsibility ***
EMP01 - Stakeholders and Standards Identification	Concept	The 'Common Documents' these being: User requirement document (URD) and JSP 418 (UK legislation and MOD policy)	EMP01/F/01 – Register of Stakeholder Requirements and Information EMP01/F/02 – Register of Environmental Standards EMP01/F/03 – Project Environmental Responsibilities Environmental Committee assembled and Terms of Reference agreed Communication Plan	IPTs
EMP02 - Screening and Scoping	Concept	The 'Common Documents' (as above)	EMP02/F/01 – Environmental Feature Matrix Environmental Impact Screening and Scoping Report (EISS)	IPTs, advisors or contractors/ supplier
EMP03 - Impact Priority Evaluation	Concept/ Assessment	The 'Common Documents' (as above) Outputs of Procedures EMP01 and EMP02.	EMP02/F/01 – Environmental Feature Matrix, which was started in Procedure 2 will now be completed EMP03/F/01 – Record of priority evaluation methodology	IPTs, advisors or contractors/ supplier
EMP04 - Environmental Impact Assessment Plan	Concept Assessment	The 'Common Documents' (as above). Outputs from Procedures EMP01, EMP02 and EMP03.	EMP04/F/01– Environmental Impact Assessment Plan	IPTs, advisors or contractors/ supplier
EMP05 - Environmental Impact Assessment and Reporting	Concept Assessment	The 'Common Documents' (as above). Outputs from Procedures EMP01-EMP04.	Environmental Impact Assessment Report (EIA Report) Environmental Impact Statement (EIS)	IPTs, advisors / contractors

Procedure	When *	Input	Output **	Responsibility ***
EMP06 - Environmental Management Plan (Setting Objectives and Targets)	Concept/ Assessment/ Demonstration	Environmental Case including: Environmental Feature Matrix (Form EMP02/F/01); Environmental Impact Assessment Report(s) and EIS(s) (Output from Procedure EMP05). System Requirement Document (SRD).	EMP06/F/01 – Setting Objectives and Targets EMP06/F/02 – Environmental Objectives and Targets Register EMP06/F/03 – Environmental Management Plan Record Sheet	IPT or supplier /contractor
EMP07 - Operational Controls	Design	System Requirement Document (SRD). Environmental Case including, outputs from Procedure EMP01, EMP05 and EMP06. Environmental Feature Matrix (Form EMP02/F/01).	Operational controls	IPT or supplier /contractor
EMP08 - Continuous Review	Concept and throughout project	The 'Common Documents' (as above). Outputs from EMP01 – EMP07 inclusive. Outputs from AAP01 - AAP04 inclusive	EMP08/F/01 – Continuous Review Record	IPT or supplier /contractor

* The outputs from all the procedures will require periodic review and update throughout the life cycle of the project
** Or equivalent actions and documentation that ASEG are satisfied achieves the same objectives.
*** The IPT or ASEG is responsible for managing the procedure completion. This column relates to who is responsible for completing the procedure.

0 SHOWING CONFORMANCE

0.1 Options

0.1.1 There are four options to demonstrate conformance when applying this system procedure:

a) Follow the defined system procedure using the recommended guidance and tools, including allowed variations and options.

b) Use an equivalent process and tool set generated elsewhere and document evidence of procedural equivalence.

c) Use an equivalent bespoke process and tool set for the project and document evidence of procedural equivalence.

d) Where the procedure is considered to be not relevant, document the basis for this decision.

1 INTRODUCTION

1.1.1 This procedure is the first in the series and provides the foundation for the project level Environmental Management System. The information gathered at this stage should be as accurate and complete as possible and kept up to date.

1.1.2 To ensure that environmental impacts are identified and appropriately managed, information on relevant stakeholders, their needs and possible contribution to the project is also collated and documented. It is also important to identify any environmental standards that potentially apply to the project. (Note that 'standards' in this context also includes legislation, agreements, MOD policies and strategies).

1.1.3 To ensure that environmental issues are appropriately managed, project environmental responsibilities and communication requirements should be identified and documented.

2 PROCEDURE OBJECTIVES

2.1.1 The main objectives of this procedure are the identification, documentation and maintenance of:

a) Applicable legal requirements (this relates to national and international environmental legislation and agreements);

b) Applicable MOD policy requirements (this relates to environmental policy commitment, strategy commitments and internal regulation);

c) Stakeholders and their requirements and contribution;

d) Project environmental responsibilities;

e) Communication requirements.

2.1.2 A further objective is the assembly of the Environmental Committee.

3 RESPONSIBILITIES

3.1 Accountability

3.1.1 The IPTL is accountable for the completion of this procedure.

3.2 Procedure Management

3.2.1 IPTLs may delegate the management of this procedure to a member (IPT Environmental Focal Point) or members of the IPT.

3.3 Procedure Completion

3.3.1 IPTs will complete the procedure, in conjunction with advice and information from members of the Environmental Committee. In particularly large or complex projects the IPT may task advisors or contractors to complete all or part (eg legislation registers) of the procedure.

4 WHEN

4.1 Initial Application

4.1.1 For new projects this procedure should be undertaken as early as possible in the Concept Stage, prior to Initial Gate approval.

4.2 Review

4.2.1 The outputs of this procedure will require periodic review and possible revision throughout the lifetime of the project. The appropriate timings for such reviews will be determined through following Procedure EMP08 - Continuous Review.

4.2.2 For legacy projects this procedure should be undertaken at the outset to ensure that all relevant stakeholders and Subject Matter Experts are fully engaged and that the latest legislation and policies are being implemented.

5 REQUIRED INPUTS

5.1.1 The ‘Common Documents’:

- User Requirement Document (URD); and
- JSP 418 (UK legislation and MOD policy).

6 REQUIRED OUTPUTS

- Completed **Form EMP01/F/01** – Register of Stakeholder Requirements and Information;
- Completed **Form EMP01/F/02** – Register of Environmental Standards;
- Completed **Form EMP01/F/03** – Project Environmental Responsibilities;
- Environmental Committee assembled and Terms of Reference agreed;
- Communication Plan (also refer to SSP01 – Communication);

OR

Equivalent actions and documentation that ASEG is satisfied achieve the same objectives.

7 DESCRIPTION

7.1.1 The initial identification of the following information will assist you to complete this procedure:

a. Domain of operation of the project (air, land, water);

b. The country (or countries) in which the equipment or service is likely to be deployed;

c. The potential environmental issues associated with the project (eg air pollution, use of non-renewable resources);

d. The life cycle stages the project is likely to pass through (eg CADMID);

e. Other projects or platforms with which the project may be closely associated.

7.1.2 The information gathered for point ‘c’ (potential environmental issues) need not be detailed at this stage. The IPT Environmental Focal Point should be able to produce a preliminary list which may use simple terms such as: air emissions, emissions to water, emissions to land or resource use.

7.2 Step 1 : Identify Stakeholders, their Requirements and Information Available

7.2.1 Stakeholders include individuals/groups that:

a. include Customer 1, Customer 2;

b. may be given responsibility for the project in later stages of CADMID (eg other IPTs);

c. have a regulatory role or function in relation to the deployment and use of the capability being acquired;

d. have environmental requirements from the project (eg Defence Estates who may need information in order to complete site specific environmental

assessments);

e. hold relevant environmental information to the project or related systems or platforms (eg other IPTs, Armed Services, DE);

f. have environmental concerns regarding the project (eg other Government Departments, pressure groups, the general public);

g. are part of MOD and have an assurance role for equipment and capability acquisition projects.

7.2.2 When identifying stakeholders, consideration should be given to stakeholders relevant to each life cycle stage of the project.

7.2.3 **Form EMP01/F/01** - Register of Stakeholder Requirements and Information, includes a list of mandatory consultees as a starting point for identifying relevant stakeholders. This form should be completed by recording stakeholders' environmental concerns, requirements and/or any relevant environmental information they may hold. Where available, contact details for stakeholders should also be recorded in **Form EMP01/F/01**. Please complete one sheet per stakeholder.

7.2.4 **Note that for projects** where the system is likely to receive considerable interest from the general public or external organisations (eg regarding noise issues), that it may not be possible at this stage to accurately establish either the degree of concern, the number of people concerned, the requirements for information or relevant contact details. However, this should not prevent the IPT from recording them as a stakeholder as this information can be gathered later in the project where necessary. Recording such external groups at this stage does not mean that they will be contacted or actively engaged with at any stage, merely that their concerns should be accounted for.

7.3 Step 2 : Produce Communications Plan

7.3.1 For the majority of projects a Communication Plan should be formulated which identifies the need, timing, purpose and appropriate method(s) for Stakeholder consultation. **Form EMP01/F/01** could be expanded to meet this requirement or a separate document could be produced. The Communication Plan should include contact details, information requirements, lines of communication, frequency and media of communication, responsibilities and any relevant security considerations. If an IPT decides that a Communication Plan is not appropriate for the project it should record the justification for this decision.

7.3.2 Initially, stakeholders identified for consultation at this stage will be restricted to the MOD. However, any relevant external stakeholders identified (eg other Government Departments, regulatory bodies etc) should be logged and included in the Communication Plan even if no communications are currently planned.

7.3.3 It should be noted that it is not a requirement of the POEMS to contact every stakeholder. For example, where the project may provoke considerable public interest the risk this may cause to the project may be sufficiently managed by producing relevant objectives and targets (see Procedure EMP06 – Environmental Management Plan (Setting Objectives and Targets)) without engaging in consultation. However, it is the responsibility of the IPT to decide the best way to manage stakeholder concerns taking into account the likely impact of the Freedom of Information Act and the Environmental Information Regulations and the MOD presumption of openness.

7.4 Step 3 : Identify Environmental Standards and their Requirements

7.4.1 This stage identifies all the environmental standards, and their requirements, that will apply to the project over its entire life cycle. This will therefore include:

- National and international environmental legislation and agreements;
- MOD Environmental Policy commitment, strategy commitments and internal regulation.

7.4.2 **Form EMP01/F/02** - Register of Environmental Standards, can be used to list and document these standards for each of the life cycle stages. A separate sheet should be used for each standard identified. Useful information sources for identifying relevant environmental standards include:

- JSP 418 for UK operations;
- Stakeholders, in particular in regards to non-UK environmental legislation and agreements;
- Environmental Committee.

7.4.3 It is expected that in the majority of cases these sources for identifying relevant legislation will be adequate. However, gaps and omissions may occur and in particularly sensitive cases the IPTL may wish to have assurance that any listing is comprehensive.

7.5 Step 4: Define and Agree Project Environmental Responsibilities

7.5.1 It is important at this stage to ensure that any environmental responsibilities in relation to the project are clearly defined and agreed with the relevant internal and external stakeholders. This includes the designation of a member of the IPT who will be responsible for environmental issues related to the project throughout its whole life cycle (the IPT Environmental Focal Point).

7.5.2 Other environmental responsibilities should be assigned and documented if possible at this stage, including the responsibility for carrying out any downstream studies. Downstream studies include sustainability appraisal for projects to be utilised on Defence Estates property, or for providing information to stakeholders eg MOD

POEMS documentation may be required for systems to be used on the Army Training Estate.

7.5.3 Responsibility for the maintenance of documents produced as part of the EMS, and applying for permits and authorisations, should also be assigned and documented. **Form EMP01/F/03** - Project Environmental Responsibilities, should be used for recording these responsibilities. In deciding on roles and responsibilities, consideration should be given to any opportunities for the project to be grouped with other similar projects. In these cases it may be more efficient to undertake an EIA for the whole group rather than individual projects.

7.5.4 Responsibility should be assigned for maintaining the records produced from following this procedure to ensure they are kept up to date and communicated as required.

7.6 Step 5: Assemble Environmental Committee

7.6.1 The Environmental Committee should be assembled for the project.

7.6.2 The members of the Committee should include representatives of the main MOD stakeholders and those having particular expertise relevant to the equipment or service being acquired, eg SMEs (Subject Matter Experts). Members of the Committee external to MOD may comprise industry or scientific experts, consultants or academics who can provide advice to the IPT on environmental issues related to the project.

7.6.3 The members and Terms of Reference of the Environmental Committee should be documented. All individual responsibilities of members of the Environmental Committee should still be recorded in **Form EMP01/F/03**.

7.7 Step 6: Set up Environmental Case

7.7.1 An Environmental Case should be set up for the project. This is a body of evidence that provides a convincing and valid argument that the equipment or service is adequate in terms of environmental issues. The Environmental Case would therefore contain all outputs (and any other relevant information) produced from following these EMS procedures.

8 RECORDS AND PROJECT DOCUMENTATION

8.1.1 Where relevant, the outputs from this procedure should feed into the following:

- SRD (System Requirement Document) – for any specific environmental performance requirements;
- CSA (Customer Supplier Agreement) – to document agreements on environmental studies to be delivered by the IPT;
- TLMP (Through Life Management Plan);

- Input submission for Initial Gate.

8.1.2 A copy of the information produced by following this procedure should be stored in the project's Environmental Case.

9 RECOMMENDED TOOLS AND FORMS

- **Form EMP01/F/01** – Register of Stakeholder Requirements and Information.
- **Form EMP01/F/02** – Register of Environmental Standards.
- **Form EMP01/F/03** – Project Environmental Responsibilities.

10 GUIDANCE

10.1 General

10.1.1 General guidance on applicable standards, including legislation will be found in JSP 418 which is sponsored by DS&C. As a consequence, IPTs should remember that specialist knowledge may yet be helpful to ensure that all major requirements have been identified. (NB in the event that a significant omission in JSP418 is identified, DS&C should be advised). However, assistance is available from ASEG and additionally a number of other JSPs include general advice on some environmental matters (JSPs 454, 520, 442, 518, 430, and 553).

10.1.2 It may also be possible to obtain standards information from suppliers and manufacturers operating in the same areas.

10.2 Committees, Cases and Case Reports

10.2.1 The advice in the POSMS procedures SMP02 (Safety Committee), SMP03 (Safety Planning) and SMP12 (Safety Case and Safety Case Report) may also be helpful in understanding the roles and relationships of Committees and Cases and when it is possible to operate joint Safety and Environment structures, and when it may be advisable to separate the functions.

10.3 Aligning Safety and Environment

10.3.1 The key alignment opportunity in EMP01 is to establish combined Safety and Environmental Committees and Cases.

10.4 Guidance for Different Acquisition Strategies

10.4.1 The objectives for this procedure apply to all acquisition strategies. It is MOD policy that the same standards are met, and that assurance that these standards have been met can be demonstrated for all projects. Some elements of this procedure may be best completed by contractors and suppliers for some strategies such as COTs and MOTs.

10.5 Legacy Systems

10.5.1 Stakeholders and Standards identification for legacy systems should be neither over-engineered nor incomplete. In all cases it will be important to ensure that all applicable legislative requirements have been identified to confirm that all appropriate mitigation measures have been identified and shared with the stakeholders or are now agreed and actioned. Opportunities should be sought in Assisted Maintenance Periods (AMPs), mid-life updates or similar for the introduction of programmes to eliminate or reduce impacts. Thus it will be seen that for many legacy systems, with limited life, it will be appropriate to concentrate on disposal arrangements and impacts especially where there is no evidence of environmental incidents or accidents associated with the system.

10.6 Warnings and Potential Project Risks

10.6.1 If this procedure is not completed, and reviewed (see Procedure EMP08 – Continuous Review), in a timely manner there may be delays in engaging stakeholders, recognising legislative and other requirements, or creating the environmental management arrangements for the project. It is also possible that legislative requirements could go unrecognised, with attendant unrecognised liabilities and ultimately, the possibility of prosecution.

10.6.2 If the project fails to co-ordinate the treatment of stakeholders and legislative requirements between the safety and environmental management systems, there is a risk that there will be inconsistent communication to stakeholders and duplication or omission of requirements (eg falling between the two).

10.6.3 The legislative and other requirements register should not be read across from one project to another, even if they are similar in scope, without a detailed review. The earlier register may have missed requirements and there may have been legal and policy developments since the earlier register had been created. (NB in the event that a significant omission is identified DS&C should be advised).

10.6.4 It is essential that there is clear and documented agreement between the IPT and other MOD stakeholders on the responsibilities and budget allocation for studies (such as sustainability appraisals, where the project does not include the provision of facilities) which may be the responsibility of other parts of the MOD.

Form EMP01/F/01 – Register of Stakeholder Requirements and Information			
Project Title:			
IPT:			
Completed by:		**Date:**	
Reviewed by:		**Date:**	
Mandatory Consultees: (DEC, Customer Two, Defence Estates, other IPTs involved in any sub-systems of the project, other IPTs involved with systems, projects or systems platforms with which the system/project will be closely associated).			
Stakeholder organisation:		**Life cycle stage(s):**	
Stakeholder's Role:		**Contact name:**	
Contact address, telephone, fax, email:			
Requirements or concerns:			
Information available:			
Communication Plan:			

Insert other sheets as required.

Form EMP01/F/02 – Register of Environmental Standards			
Project Title:			
IPT:			
Completed by:		**Date:**	
Reviewed by:		**Date:**	
Summary of Relevant Legislation and Other Requirements (please use a separate sheet for each standard):			
Name of requirement:			
Reference No.			
Enforcing Agency:			
Relevance to project:			
Life Cycle Stage(s) (please circle):	**Concept / Assessment / Demonstration / Manufacture / In-Service / Disposal**		
Country where relevant:			
Compliance Requirements:			
Relevant Procedures or Further Information Sources:			

Form EMP01/F/03 – Project Environmental Responsibilities			
Project Title:			
IPT:			
IPT environmental focal point:			
Contact details:			
Completed by:		**Date:**	
Reviewed by:		**Date:**	
Contact name/ position:	**Organisation/ Section:**	**Responsibilities (and life cycle stage this applies to):**	

0 SHOWING CONFORMANCE

0.1 Options

0.1.1 There are four options to demonstrate conformance when applying this system procedure:

a. Follow the defined system procedure using the recommended guidance and tools, including allowed variations and options.

b. Use an equivalent process and tool set generated elsewhere and document evidence of procedural equivalence.

c. Use an equivalent bespoke process and tool set for the project and document evidence of procedural equivalence.

d. Where the procedure is considered to be not relevant, document the basis for this decision.

1 INTRODUCTION

1.1.1 This procedure describes how to carry out a screening and scoping exercise that identifies the project's potential environmental issues and directs the gathering of relevant environmental information for more detailed study and assessment later in the project level Environmental Management System (EMS). This procedure is likely to be completed immediately after, or at the same time as, Procedure EMP01 – Stakeholders and Standards Identification.

2 PROCEDURE OBJECTIVES

2.1 General

2.1.1 To identify the potential direct and indirect, positive and negative environmental aspects and impacts of the project.

3 RESPONSIBILITIES

3.1 Accountability

3.1.1 The IPTL is accountable for the completion of this procedure.

3.2 Procedure Management

3.2.1 IPTLs may delegate the management of this procedure to a member (IPT Environmental Focal Point) or members of the IPT.

3.3 Procedure Completion

3.3.1 IPTs will complete the procedure, in conjunction with advice and information from members of the Environmental Committee. For particularly large or complex projects the IPT may task advisors or contractors to complete all or part of the procedure (eg the initial completion of the Environmental Feature Matrix).

4 WHEN

4.1 Initial Application

4.1.1 For new projects this procedure should be undertaken as early as possible in the Concept Stage, prior to Initial Gate approval, and outputs reviewed as the project progresses.

4.1.2 For legacy projects, this should be undertaken at the outset of the EIA to ensure that all relevant stakeholders and Subject Matter Experts are fully engaged and that the latest legislation and policies are being implemented.

4.2 Review

4.2.1 The Environmental Feature Matrix, which starts to be developed through this procedure, will be completed in Procedure EMP03 – Impact Priority Evaluation.

4.2.2 The outputs of this procedure will require periodic review and possible revision throughout the lifetime of the project. The appropriate timings for such reviews will be determined through following Procedure EMP08 - Continuous Review.

5 REQUIRED INPUTS

a. The 'Common Documents' (ie User Requirement Document (URD) and JSP 418 (UK legislation and MOD Policy)

b. Outputs from Procedure EMP01 – Stakeholders and Standards Identification.

6 REQUIRED OUTPUTS

a. Partly completed **Form EMP02/F/01** – Environmental Feature Matrix.

b. EISS Report.

c. Draft EIS (where applicable).

OR

Equivalent actions and documentation that ASEG is satisfied achieves the same objectives.

7 DESCRIPTION

7.1 Step 1: Identify activities

7.1.1 The first step in establishing the environmental impacts of a project is to identify all the normal and abnormal activities that may occur throughout all its life cycle stages and conditions, and any emergency situations which could arise. An activity/situation in this context is defined as any specific action, exercise, occurrence or operation that the project may perform or experience in its lifetime.

a. Normal Activity (N) – Planned and frequent activity

b. Abnormal Activity (A)– Planned but one off or infrequent activity

c. Emergency Situation (E) – An unplanned incident

Consideration should be given to each of the CADMID stages to identify all likely activities/situations, although abnormal activities and emergency situations may not arise in all CADMID stages eg it is unlikely that there will be any abnormal activities in the Manufacture stage.

The following list provides some example activities and emergency situations for a notional project concerning the acquisition of a land based transport vehicle.

Demonstration/Testing and Trials/Normal	Testing and trials of vehicle
Demonstration/Testing and Trials/Emergency	Road traffic accident, fire or explosion
Manufacturing/Normal	Manufacture of components, assembly, transport to location where system will be in-service
In-service/Operation/Normal	Transport of personnel and equipment, refuelling, training activities
In-service/Operation/Abnormal	Secondary use of vehicles
In-service/Operation/Emergency	Road traffic accident, fire or explosion
In-service/Routine Maintenance/Normal	Routine servicing and repair, waste, components, oils etc
In-service/Deep Repair and Modification/Normal	Replacement of worn or obsolete parts, modifications
Disposal/Sale/Normal	Selling on of redundant vehicles
Disposal/Scrap or Recycling/Normal	Transport to site for disposal, disposal/recycling, of vehicle components

7.2 Step 2: Identify materials and energies

7.2.1 Identify those materials and energies that will be either embodied or emitted by each of the activities/situations identified. This information will be recorded in **Form EMP02/F/01 - Environmental Feature Matrix**. See the accompanying guidance sheet to **EMP02/G/01** - Environmental Feature Matrix (Identifying

Environmental Aspects and Impacts) for further assistance.

7.2.2 It may also be useful to consider the approximate quantities of materials and energy involved. This information may be available from suppliers or via the outputs of similar projects. Do not be too concerned if this information is not accurate at this stage as this can be examined in more detail in later procedures and updated through Procedure EMP08 – Continuous Review.

7.2.3 Note: 'Embodied' means materials or energies incorporated or used by the project eg resources and energy used in manufacture or fuel use in-service. 'Emitted' means those materials or energies that will be released or created by your project eg exhaust emissions, waste.

7.2.4 The materials and energies that you have identified are referred to in the POEMS as the environmental aspects of the project. Aspects are more accurately described as 'any element of an organisation's activities, products or services that can interact with the environment'. The effects that environmental aspects can have on the environment are referred to as impacts. Impacts can be either positive or negative depending on whether they have a good or bad effect on the environment. Guidance sheet **EMP02/G/01** can help you to identify the environmental impacts of some of the more common environmental aspects.

7.3 Step 3: Other issues for consideration

7.3.1 It should be remembered that when assessing the environmental impacts (EIs) of your project there are likely to be other considerations in addition to material and energy inputs and outputs. Once you have completed Step 2 you should consider these further issues to check that any environmental impacts that could give rise to these concerns are included in the matrix. These other issues include:

a. Financial – unlimited fines can be imposed for some environmental transgressions and claims for clean-up, remediation or compensation can be considerable;

b. PR – a hostile PR campaign mounted by environmental pressure groups will consume unplanned resources to counter;

c. Prosecution – Custodial sentences of up to five years can be awarded because of prosecution for some environmental transgressions;

d. Goodwill – MOD strives to be a 'good neighbour and custodian of the natural environment', this can be jeopardised by ignorance or inadequate consideration of environmental issues;

e. Cumulative impacts – one application of an adverse EI may not be significant, but repeated applications may be more serious if the effect is cumulative.

7.3.2 Note that issues (a) to (d) above should have been considered through following Procedure EMP01 – Stakeholders and Standards Identification, and issue (e) will be dealt with later in Procedure EMP05 – Environmental Impact Assessment and Reporting.

7.4 Step 4: Compile Environmental Feature Matrix

7.4.1 Now that the embodied and emitted energies and materials have been identified for your project, you need to record this information (ie all information gathered since beginning step 2) in **Form EMP02/F/01** – Environmental Feature Matrix. You also need to identify those receptors which may be affected by the embodied and emitted energies and materials and record this in the matrix. Note that a receptor in this context is described as being any living thing (eg humans, animals, plants), inanimate object (eg buildings), social or environmental system (eg culture, climate) which can be adversely affected by changes in the environment.

7.4.2 The matrix takes the form of a spreadsheet which has a separate sheet for each stage of CADMID. (Note that these sheets refer to the stage of CADMID in which the activities take place and not the stage of CADMID in which you are undertaking this exercise). It is only necessary to complete an EFM to cover the current and future CADMID stages of the project, ie you do not need to complete for those stages that have already passed. You need to fill in each of the sheets with the information that you currently have for each stage, even if this is estimated or incomplete. The matrix will be reviewed and updated in later procedures and throughout the EMS so amendments can always be made as further information becomes available.

7.4.3 If you feel that some stages of CADMID need more than one sheet you can insert more to suit your needs, for example you may want to consider the operational and maintenance activities of the In-service stage separately.

7.4.4 Note that at this stage it will only be necessary to complete Columns a to i of the matrix. Guidance sheet **EMP02/G/02** - Environmental Feature Matrix (Completing the Matrix Columns), should assist you to complete the form. The other columns will be completed in EMP03 – Impact Priority Evaluation.

7.5 Step 5: Streamlined Life Cycle Assessment (Optional)

7.5.1 When considering the approach to be taken to assess the environmental impacts of a project, it may be a more effective strategy to direct resources to the stage(s) of the project's life cycle that have the potential to cause the highest environmental impact. For example, for most vehicles, the in-service stage will have a greater impact than the concept design stage. This approach can reduce the amount of effort needed to examine and manage environmental impacts. However, it is important to be aware that this approach could lead to some significant environmental impacts being overlooked, therefore no life cycle stage should be excluded without a clear and documented justification for the exclusion.

7.5.2 If, after completing Step 4 it appears that there are clearly life cycle stages that will cause no or relatively few environmental impacts you may choose to exclude these

from later stages of more detailed assessment. If it is decided that some stages are to be excluded from this point again justifications should be clearly recorded. **Form EMP02/F/02**: Streamlined Life Cycle Assessment Form, can be used to record the decision to concentrate efforts on one or more of the life cycle stages in this way. It is also essential that the relevant stakeholders are informed of these decisions. It should be remembered that the factors influencing these decisions can change. Therefore, it is essential that the appropriateness of the decision is reviewed periodically, and as a minimum at major project milestones, using EMP08 – Continuous Review.

7.6 Step 6: Environmental Impact Screening and Scoping Report

7.6.1 Once the screening and scoping has been completed you need to produce an Environmental Impact Screening and Scoping Report. This report should be based on the information captured in **Form EMP02/F/01** – Environmental Feature Matrix.

7.6.2 The report should include:

- Reference to the information sources used to compile the matrix;
- An overview of the main potential environmental impacts of the project;
- Comment on which CADMID stages are likely to have the greatest environmental impact;
- Which, if any, of the life cycle stages will be excluded from further assessment;
- Any other limitations or restrictions that may be placed on assessment requirements.

7.7 Preparation of initial EIS

7.7.1 Where the EIA process (See EMP04 and EMP05) is unlikely to be engaged until after initial gate, an initial EIS (Environmental Impact Statement) for the project should be prepared. Whilst this will not be able to cover all the issues in the finalised EIS, as outlined in EMP05, it should provide an overview of the key issues and data available at initial gate for the project. If an EIS is produced it should be reviewed and revised as the project progresses (see EMP08).

8 RECORDS AND PROJECT DOCUMENTATION

8.1.1 Where relevant, the outputs from this procedure should feed into the following:

a. SRD (System Requirement Document) – for any specific environmental performance requirements;

b. CSA (Customer Supplier Agreement) – to document agreements on environmental studies to be delivered by the IPT;

c. TLMP (Through Life Management Plan);

d. Input report for Initial Gate.

8.1.2 A copy of the information produced from following this procedure should be stored in

the project's Environmental Case.

9 RECOMMENDED TOOLS AND FORMS

a. **Form EMP02/F/01** – Environmental Feature Matrix.

b. **Guidance Sheet EMP02/G/01** - Environmental Feature Matrix (Identifying Environmental Aspects and Impacts).

c. **Guidance sheet EMP02/G/02** - Environmental Feature Matrix (Completing the Matrix Columns).

d. **Form EMP02/F/02** – Streamlined Life Cycle Assessment Form.

10 GUIDANCE

10.1 General

10.1.1 ISO 14040 Series provides advice on screening and scoping specifically related to product life cycles. It may be possible to obtain information on likely environmental aspects from suppliers and manufacturers operating in the same areas.

10.2 Aligning Safety and Environment

10.2.1 The key alignment opportunity in EMP02 is to cross reference Environmental Features against Safety Hazards so that common issues are identified and where possible assessed together, and to also ensure that the potential environmental impact of a safety hazard, or a safety impact of an environmental hazard is not overlooked.

10.3 Guidance for Different Acquisition Strategies

10.3.1 The objectives for this procedure apply to all acquisition strategies. It is MOD policy that the same standards are met, and that assurance that these standards have been met can be demonstrated for all projects. Some elements of this procedure may be best completed by contractors and suppliers for some strategies such COTs and MOTs.

10.4 Legacy Systems

10.4.1 When applying this procedure to legacy systems it is important that the following questions are asked.

a. What is the remaining length of time of the equipment's or service's projected service life?

b. Has the legislation and other standards review identified a need for mitigation that has not already been put in place?

c. Are there future plans for major modifications and capability enhancements, and if so when?

d. Is there historic evidence of actual environmental incidents and impacts, if so when, where and what?

e. Have there been any legal compliance problems to date or issues with regulators?

f. Has there been any stakeholder (particularly external to MOD) interest to date (for example Parliamentary Questions or enquiries regarding the equipment's environmental performance)?

10.4.2 Considering these questions should ensure that the outputs from this procedure for legacy systems are neither over-engineered nor incomplete. For many legacy systems, with limited life, it will be appropriate to concentrate on disposal arrangements and impacts especially where there is no evidence of environmental incidents or accidents associated with the in-service phase of the system's life cycle. The outcome of the screening and scoping procedure should reflect this.

10.5 Warnings and Potential Project Risks

10.5.1 If this procedure is not completed, and reviewed (see Procedure EMP08 – Continuous Review) in a timely manner there will be an increased risk that subsequent work will go ahead with unrecognised environmental liabilities. Any short comings in this could compromise Initial Gate or Main Gate procedures and approvals result in costly reworks, especially where opportunities to influence design decisions are missed.

10.5.2 If the project fails to screen and scope adequately it is possible that the IPT will engage in unnecessary or overly complex environmental assessment activities, involving unnecessary cost and potential delays. When there is a failure in screening or scoping it is possible that subsequent Impact Assessments will not improve the understanding of environmental issues or the improvement of environmental performance in a cost effective and efficient manner.

<<Enter CADMID stage here>>

Medium Threshold Score = 12
High Threshold Score = 24

Embodied materials and energies (inputs)

PRIORITY ASSESSMENT

a	b	c	d	e										f	g	h	i	k	l	m	n
Internal Reference	Activity	Normal / Abnormal / Emergency	Aspect (materials and energies)	Environmental Receptors										Impact	Positive or negative	Impact code	Notes	Severity	Frequency / Duration	Priority score	Result
				Human	Land	Water	Air	Flora	Fauna	Cultural	Historical	Scientific	Climate								
																				0	
																				0	
																				0	
																				0	
																				0	
																				0	
																				0	
																				0	
																				0	
																				0	

Emitted materials and energies (outputs)

																				0	
																				0	
																				0	
																				0	
																				0	
																				0	
																				0	

Receptor Code (section e)
A - Affected
NA - Not affected
TBC - To be considered

Impact Codes (section h)
CC - Climate Change
Wst - Waste
N - Nuisance (eg odour, dust)
NR - Non-renewable resource use
R - Renewable resource use
WU - Water use
A - Air Pollution
L - Land Pollution
Wat - Water Pollution
H - Human health
B - Biodiversity and eco-systems
O - Other (includes heritage, landscape, social, historical)

Form EMP02/F/02 – Streamlined Life Cycle Assessment Form	
Title of Project:	
IPT:	
Brief Project Description:	
Reason(s) for streamlining:	
Life cycle stage(s) chosen for further detailed investigation:	
Decision made by:	
Date:	
Approved by:	
Date:	

Guidance Sheet EMP02/G/01 – Environmental Feature Matrix (Identifying Environmental Aspects and Impacts)	
Environmental Aspect	**Direct and Indirect Environmental Impacts**
Energy Inputs (Embodied)	
Electrical – Battery use	• Non-renewable resource use (battery production) • Non-renewable resource use (battery charging)
Mains electricity use	• Non-renewable resource use (during energy production)
Gas use	• Non-renewable resource use
Oil use	• Non-renewable resource use
Compressed air use	• Non-renewable resource use (during energy production)
Renewable energy use – fuel cell	• Renewable resource use
Material Inputs (Embodied)	
Use of animal or plant derived materials	• Natural resource use or non-renewable/scarce natural resource use
Use of minerals and mineral derivatives (ie concrete, metals, paint, plastics)	• Non-renewable natural resource use • Energy use (therefore natural resource use or non-renewable natural resource) during extraction and manufacture of material
Use of wood products	• Natural resource use or non-renewable/scarce natural resource use
Use of refrigerants	• Non-renewable natural resource use
Use of water	• Natural resource use (water) • Natural resource use or non-renewable natural resource during water treatment
Energy Outputs (Emitted)	
Acoustic	• Adverse health impact to humans, animals • Potential statutory nuisance liability
Electromagnetic	• Adverse health impact to humans, animals
Thermal – Radiation/Convection /Conduction	• Adverse health impact to humans, animals
Kinetic	• Adverse health impact to humans, animals
Chemical	• Adverse health impact to humans, animals

Environmental Aspect	Direct and Indirect Environmental Impacts
Material Outputs (Emitted)	
Emissions to land	• Potential land and groundwater contamination – (Threat to human health, biodiversity and ecosystems)
Emissions to water	• Potential surface water pollution is not appropriately treated (Threat to human health, biodiversity and ecosystems) • Resource and energy use during water treatment
Emissions to air	• Air pollution (climate change, acid rain, ozone depletion, local air quality)
Waste production (including special waste)	• Incinerated - Air pollution from incinerator and transport and landfill impacts from incinerator waste disposal • Recycled at location - Possible energy and resource use during recycling • Recycled at different location - Air pollution from transport and any energy and resource use during recycling • Landfill - climate change, local air quality, land use and potential land and groundwater contamination

[The table above contains examples only, and is not intended to be fully comprehensive]

Guidance Sheet EMP02/G/02 –Environmental Feature Matrix (Completing the Matrix Columns)

Column a – Internal reference

If you have any other internal references that will help you to identify your aspects and impacts you can enter it in this column.

Column b – Activity

Use this column to list all the activities you identified for your project in Step 1 of Procedure EMP02.

Column c – Normal/Abnormal/Emergency

This column can be used to record whether the activities are normal, abnormal or emergency.

Column d – Aspect

An 'aspect' in the context of an EMS is 'an element of an organisation's activities that can interact with the environment'. This includes all the input and output of materials and energies that you identified in Step 2 of EMP02, so these can now be entered into this column against the appropriate activities. Refer to **guidance sheet EMP02/G/01** for examples of environmental aspects.

Column e – Environmental receptors

This column should be used to record the receptors that each environmental aspect may affect. This information should have been produced by following paragraph 7.4.1 of EMP02. The information should be entered as follows:

- For those receptors that <u>are</u> affected by the impact insert 'A' (affected);
- For those receptors that <u>are not</u> affected by the impact insert 'NA' (not affected);
- For those receptors that have not yet been considered in relation to the impact insert 'TBC' (to be considered).

It is important to use the key above in order to distinguish between cases where the receptor is not affected and cases where the affect on the receptor has not yet been considered.

Column f – Impact

An 'impact' in the context of an EMS is 'any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's activities'. See the **guidance sheet EMP02/G/01** for help with the completion of this column as it provides some example environmental impacts. Please note that for some aspects you may have identified more than one impact. In this case use a separate line for each impact.

Column g – Positive or negative

Environmental impacts can be positive or negative depending on the effect they have on the environment. For most projects the majority of environmental impacts will be negative but it is equally important to list those that are positive as it may be possible to enhance these throughout the project's lifetime. Examples of positive impacts are: improvement in air quality, protection of ecosystems.

Column h – Impact code
This column is included for you to assign a classification to the impacts you have identified in Column F. This can be useful later in the EMS when you need to consider whether cumulative impacts are produced by your project ie whether there are multiple aspects producing the same kind of environmental harm and which could be managed and mitigated together. The matrix includes codes for the main environmental impacts likely to arise as a result of acquisition projects. However, if you find you need to include additional codes this is acceptable so long as they are defined within the matrix. Please also note that only one code can be entered for each aspect so if you find than more that one code applies to the impact see if it can be more precisely described as two or more impacts and insert the appropriate code for each of these.
Column i – Notes
This is included to provide a space for recording any notes or comments relating to the environmental aspects and impacts. It is not therefore mandatory to complete this column.

0 SHOWING CONFORMANCE

0.1 Options

0.1.1 There are four options to demonstrate conformance when applying this system procedure:

a. Follow the defined system procedure using the recommended guidance and tools, including allowed variations and options.

b. Use an equivalent process and tool set generated elsewhere and document evidence of procedural equivalence.

c. Use an equivalent bespoke process and tool set for the project and document evidence of procedural equivalence.

d. Where the procedure is considered to be not relevant, document the basis for this decision.

1 INTRODUCTION

1.1.1 This procedure should be applied to the environmental impacts documented in **Form EMP02/F/01** – Environmental Feature Matrix. The procedure provides guidance on how to assess the priority of the environmental impacts.

2 PROCEDURE OBJECTIVES

2.1.1 To prioritise identified environmental impacts.

3 RESPONSIBILITIES

3.1 Accountability

3.1.1 The IPTL is accountable for the completion of this procedure.

3.2 Procedure Management

3.2.1 IPTLs may delegate the management of this procedure to a member (IPT Environmental Focal Point) or members of the IPT.

3.3 Procedure Completion

3.3.1 IPTs will complete the procedure, in conjunction with advice and information from members of the Environmental Committee especially those that may have related assessment responsibilities. The IPT will most likely task advisors or contractors to complete the feature matrix, in all but the most straightforward cases, and especially where the advisor has specialist knowledge on the assessments issues. It may also be possible to involve potential system suppliers/contractors as they may have existing studies available.

4 WHEN

4.1 Initial Application

4.1.1 This procedure should be applied in the Concept Stage, prior to Initial Gate approval, or at the beginning of the Assessment Stage. If these stages have already been passed, work should be conducted in the current stage.

4.2 Review

4.2.1 The outputs of this procedure will require periodic review and possible revision throughout the lifetime of the project. The appropriate timings for such reviews will be determined through following Procedure EMP08 - Continuous Review.

5 REQUIRED INPUTS

a. The "Common Documents" (ie User Requirement Document (URD) and JSP 418 (UK Legislation and MOD Policy)

b. Outputs from:

- EMP01 – Stakeholders and Standards Identification
- EMP02 – Screening and Scoping

6 REQUIRED OUTPUTS

6.1 If using Recommended Forms and Guidance

a. **Form EMP02/F/01** – Environmental Feature Matrix, which was started in EMP02 will now be completed.

b. **Form EMP03/F/01** – Record of priority evaluation methodology.

OR

Equivalent actions and documentation that ASEG is satisfied achieves the same objectives.

7 DESCRIPTION

7.1.1 Procedure EMP02 - Screening and Scoping, identifies the potential environmental impacts of the project that may have a material risk. These impacts are recorded in **Form EMP02/F/01** – Environmental Feature Matrix. These inputs are prioritised to identify those that require further action to eliminate, mitigate or manage the risk. There are many different ways of carrying out this 'priority based on risk' evaluation but the methodology outlined in this procedure requires you to assess the severity of the likely environmental impact against the frequency/duration of that impact and record this in **Form EMP02/F/01. Note - this methodology may be similar, but not identical, to that used in Health and Safety risk assessments.**

7.1.2 Environmental impacts for all life cycle stages and conditions recorded in **Form**

EMP02/F/01 should be evaluated using this procedure. **Note - studies and evaluations already undertaken for similar equipment systems and capabilities will be extremely helpful in completing this procedure. In some cases it may be possible to use an existing evaluation in its entirety if the capability is sufficiently similar and the evaluation is recent.**

7.2 Step 1: Number of categories to be used

7.2.1 In order to give a reasonable degree of resolution between environmental impacts, it is recommended that 6 categories are used for both severity and frequency/duration. This should provide enough variation and resolution to prioritise the environmental impacts of most projects.

7.2.2 If the IPT strongly feels that this is too many categories it can choose to reduce this number to 5 or 4 for either issue, but no lower than 4 eg where there are very few environmental impacts to be prioritised or where it is obvious which of the impacts are high priority. In this case the maximum score for each category should still be retained as 6, as it would with a 6 category system, to retain the highest priority score of 36. See tables below.

Severity Category

d	6	12	24	36
c	4	8	16	24
b	2	4	8	12
a	1	2	4	6
	1	**2**	**3**	**4**

Frequency Category

Severity Category

f	6	12	18	24	30	36
e	5	10	15	20	25	30
d	4	8	12	16	20	24
c	3	6	9	12	15	18
b	2	4	6	8	10	12
a	1	2	3	4	5	6
	1	**2**	**3**	**4**	**5**	**6**

Frequency Category

Low priority
Medium priority (see Step
High priority (see Step 3)

7.3 Step 2: Assign categories

7.3.1 This step requires you to assign categories for both severity and frequency. In order to ensure a certain degree of consistency between approaches the highest and lowest categories for severity and frequency/duration have been fixed and must be used by all IPTs. However, the intermediary categories must be set by IPTs according to what fits best with their project.

Severity

7.3.2 The severity of an environmental impact is a measure of the degree of environmental damage that the impact represents. The lowest rating for severity is 'negligible' and the highest 'catastrophic'. However, the terminology for intermediate categories 2-5 may vary according to IPTs wishes but as a guide could include the terms: minor, noticeable, significant, serious or critical.

7.3.3 Next the IPT needs to assign definitions to all of these categories (including negligible and catastrophic) to make them applicable to their project. These can be based on factors such as resource use, energy use, air emissions, quantities and type of waste produced, scale of environmental impact or persistence of pollution in the

environment. The following list can be used as a guide but is not intended to be comprehensive:

a. Negligible

Re-use of material, or negligible use of renewable or non-renewable resources.
Produces inert waste.
Negligible environmental impact. For example, temporary disturbance of common species only.

b. Minor

Low to medium use of renewable resources or low use of non-renewable resources.
Non-special waste produced and recycled, or small amounts disposed of.
Notable but limited environmental impact, negligible but widespread. For example, temporary damage to habitat of common species only.

c. Noticeable

Notable to large use of renewable resources, notable use of non-renewable resources.
Notable non-special waste disposal, special waste recycled, small amounts of special waste disposal.
Environmental impact limited to a small area, or widespread impact with minimal lasting damage. For example, permanent damage to habitat of common species only.

d. Serious

Significant use of non-renewable resources, limited use of toxic substances.
Notable amount of special waste produced.
Notable lasting environmental damage. For example, destruction of habitat of common species or temporary damage to habitat of endangered species.

e. Critical

Large scale use of non-renewable resources, significant use of toxic substances.
Large amount of special waste produced.
Large scale environmental damage with national significance, eg release of gases contributing to acid rain (NOx, SOx), or permanent damage to habitat of endangered species.

f. Catastrophic

Large scale use of very scarce resources or toxic resources eg use of heavy metals.
Very large amount of special waste produced.
Severe widespread irreversible environmental damage of international significance eg release of greenhouse gases, release of ozone depleting substances or destruction of habitat of endangered species.

Frequency/duration

7.3.4 'Frequency' is defined as the number of times that the environmental impact will occur, for example, once a week, once a day or once a year. The 'duration' is the length of time that the impact lasts for, for example, 30 minutes, 5 hours or

continuous. The categories you choose may refer to one or both of these parameters, for example, 'once a week' or '5 hours' or '5 hours per week'. They could also include a range of frequencies or durations for example, 'between 5 and 30 hours a week'. However, the categories must be consistent with each other, so it would not be acceptable to have 'once a week' and '10 hours' as different categories.

7.3.5 The categories that you choose for this issue should depend on the nature of the environmental impacts of the project and the overall lifetime of the project. For complex projects which have many and varied environmental impacts, it may be best to choose quite generic categories. You must ensure that the categories are appropriate for assessing normal, abnormal and emergency situations.

7.3.6 The highest category for this issue must be 'continuous' and the lowest category 'occurs rarely, short duration' eg occurs once in the lifetime of the project.

7.3.7 Some examples of category choices are:

1	**Occurs rarely, short duration**	**1**	**Occurs rarely, short duration**
2	Annually	2	0 – 5 hours
3	Monthly	3	5 – 50 hours
4	Weekly	4	50 – 500 hours
5	Daily	5	Over 500 hours
6	**Continuously**	**6**	**Continuously**

7.4 Step 3: Threshold scores for priority action

7.4.1 It is recommended that the 'default' threshold score for further action should be 12 for medium priority impacts, with a higher threshold score of 24 for high priority impacts. The two threshold levels are intended to give greater resolution between priority impacts which require action and should assist the IPT to make management decisions. Any impacts scoring below 12 should not need any immediate further action.

7.4.2 It is impracticable to provide hard and fast rules as to what is, or is not, a high or a medium priority, as the evaluations have elements of judgement and subjectivity as well as being essentially comparative processes. However, it is possible to provide some good general indicators of what is or might be high priority issues. For instance, for a high priority issue there will be a high risk of reputational damage, prosecution, or operational delay. By the same token a low priority issue is very unlikely to result in reputational damage, prosecution or any operational interruptions.

7.4.3 If an IPT wants to change either of the threshold scores it may do so but must provide justification for this. For example, the IPT could reduce the threshold score if the number of environmental impacts that score above the threshold is judged as unmanageable. However, an IPT is required to consult with an internal SME (Subject Matter Expert) or obtain further advice in advance of any changes to threshold scores.

Any consultation or advice received by the IPT should be documented.

7.5 Step 4: Undertake evaluation

7.5.1 Once you have decided on the methodology for priority evaluation you can start to work through your list of environmental impacts, scoring each in turn against the categories you have chosen. These scores can be entered directly into **Form EMP02/F/01** – Environmental Feature Matrix (from Procedure EMP02 – Screening and Scoping), which will then calculate the overall priority score by multiplying the score for severity by the score for frequency/duration.

7.5.2 The default threshold score in the Environmental Feature Matrix is set at 12 for medium priority impacts and 24 for high priority impacts, so this will need to be changed if the IPT has chosen to alter it in Step 3.

7.5.3 Those environmental impacts evaluated as low priority will require no further action at this point and should be recorded as Findings of No Significant Impact (FONSIs) although any straightforward mitigation should be implemented. Prioritisation of impacts may need to be reviewed as a result of project changes. The review of priority evaluation is covered in Procedure EMP08 – Continuous Review.

7.5.4 Note that some projects may not have any environmental impacts above the threshold level (ie classed as medium or high priority). However, in these situations opportunities should still be considered for implementing straightforward mitigation measures. This initial evaluation does not mean that the priority of the environmental impacts could not change over time or if for instance new legislative or policy requirements are introduced. Again reviews of the priority evaluation are covered by following Procedure EMP08 – Continuous Review.

7.5.5 Although medium and high priority impacts will be particularly targeted for further action, this will be in addition to any issues highlighted for action as a result of Procedure EMP01 – Stakeholder and Standards Identification.

7.6 Step 5: Increase resolution between impacts (optional)

7.6.1 You may find that having applied your chosen methodology you have a cluster of environmental impacts with very similar scores close to the assigned threshold score. This can make it difficult to decide which should receive priority action and which should not. In this case you may choose to apply a further ‘filter’ to the results based on the scale of the environmental impact. Scale in this context is determined by the physical effect of the impact for example, the distance that noise travels or the area over which air emissions may disperse. The premise behind this additional step is that the larger the area affected by the environmental impact the higher the priority that impact should be given.

7.6.2 For example, if your results are as follows:

Impact 1 Score 30
Impact 2 Score 18

Impact 3 Score 18
Impact 4 Score 18
Impact 5 Score 18
Impact 6 Score 18
Impact 7 Score 18
Impact 8 Score 18

7.6.3 Clearly Impact 1 will need further action but it will be difficult to choose which of Impacts 2-8 should be given priority. By considering the scale of the environmental harm that each impact produces, greater resolution may be gained, as follows:

Impact 2	Score 18	International (impact felt globally)
Impact 3	Score 18	National (impact felt only in one country eg the UK and territorial waters)
Impact 4	Score 18	Regional (impact felt only in one region eg the Midlands)
Impact 5	Score 18	Local (impact felt locally eg the county of Staffordshire)
Impact 6	Score 18	Local (impact felt locally eg the county of Staffordshire)
Impact 7	Score 18	International (impact felt globally)
Impact 8	Score 18	National (impact felt only in one country eg the UK and territorial waters)

7.6.4 Following this assessment it should be possible to re-organise the impacts in order of the scale of impact which should indicate which impacts require greater priority. Generally, the more widespread the effect of an environmental impact the higher priority it should be.

7.7 Step 6: Record methodology

7.7.1 The methodology in this procedure is purposefully flexible in order that IPTs can adapt it to the needs of their particular project. However, this means that IPTs must document and justify the actual methodology that they use. Form EMP03/F/01 - Record of Priority Evaluation Methodology, can be used for this purpose.

7.7.2 It should be noted that the methodology that is determined at this stage should be used consistently throughout the project lifetime. Also, note that due to the use of different size matrices, the varying nature of projects and the ability to vary the definitions of category classes it is inadvisable to use the resulting priority scores to compare projects.

7.7.3 This evaluation will periodically require review and revision throughout the project's lifetime. Following Procedure EMP08 – Continuous Review, will assist you to identify when, and if, the evaluation needs to be reviewed.

8 RECORDS AND PROJECT DOCUMENTATION

8.1.1 Where relevant, the outputs from this procedure should feed into the following:

a. SRD (System Requirement Document) – for any specific environmental performance requirements;

b. CSA (Customer Supplier Agreement) – to document agreements on environmental studies to be delivered by the IPT;

c. TLMP (Through Life Management Plan);

d. Input report for Initial Gate.

8.1.2 A copy of the information produced from following this procedure should be stored in the project's Environmental Case.

9 RECOMMENDED TOOLS AND FORMS

a. **Form EMP02/F/01** – Environmental Feature Matrix, (partly completed in Procedure 2).

b. **Form EMP03/F/01** – Record of priority evaluation methodology.

10 GUIDANCE

10.1 Guidance for Different Acquisition Strategies

10.1.1 The objectives for this procedure apply to all acquisition strategies. It is MOD policy that the same standards are met, and that assurance that these standards have been met can be demonstrated for all projects. Some elements of this procedure may be best completed by contractors and suppliers for some strategies such COTs and MOTs.

10.2 Aligning Safety and Environment

10.2.1 The key alignment opportunity in EMP03 is to apply a similar risk based approach to establishing the priority of Environmental Features and Safety Hazards but not at the same time.

10.3 Legacy Systems

10.3.1 When applying this procedure to legacy systems it is important that the following questions are asked:

a. What is the remaining length of time of the equipment's or service projected service life?

b. Has the legislation review highlighted a need for mitigation that has not already been put in place?

c. Are there future plans for major modifications and capability enhancements, and if so when?

d. Is there historic evidence of actual environmental incidents and impacts, if so

when, where and what?

e. Have there been any legal compliance problems to date or issues with regulators?

f. Has there been any stakeholder (particularly external to MOD) interest to date (for example Parliamentary Questions or enquiries regarding the equipment's environmental performance)?

10.3.2 Re-considering these questions, which should have been first considered under EMP02, should ensure that appropriate priorities are established for the legacy system and that the outputs from this procedure for legacy systems are neither over-engineered nor incomplete. For many legacy systems, with limited life, it will be appropriate to concentrate on disposal arrangements and impacts especially where there is no evidence of environmental incidents or accidents associated with the system.

10.4 Warnings and Potential Project Risks

10.4.1 If this procedure is not completed, and reviewed (see Procedure EMP08 – Continuous Review), in a timely manner there will be an increase in risk that subsequent work will go ahead with unrecognised environmental liabilities. Equally important is that a poor impact evaluation may cause IPTs to expend unnecessary time and effort on issues which could be considered as insignificant. Any short comings in the application of this procedure could compromise Initial Gate procedures and approvals. In addition, short comings could also result in costly reworks, especially where opportunities to influence design decisions are missed.

Form EMP03/F/01 – Record of Priority Evaluation Methodology					
Project Title:					
IPT:					
Completed by:		**Date:**			
Reviewed by:		**Date:**			
Step 1 – Number of categories to be used **Severity (please tick appropriate box):**					
6 categories (Recommended)		**5 categories**		**4 categories**	
If less than 6 categories were used, please provide reasons:					
Frequency/duration:					
6 categories (Recommended)		**5 categories**		**4 categories**	
If less than 6 categories were used, please provide reasons:					

Step 2 – Assign categories **Please list the categories used to score severity:**
Reasons for choice (if applicable):
Please list the categories used to score frequency/duration:
Reasons for choice (if applicable):

Step 3 – Threshold score for priority action Please record the threshold score used to determine priority action:			
Recommended threshold score of 12 and 24		Other (please specify)	
If the threshold score is not 12 and 24, please provide reasons:			

Step 5 – Increasing resolution between impacts				
Has scale been used to gain better resolution between impacts?	Yes		No	
If yes, please give reasons:				
Record how this has altered the ranking of the impacts:				

0 SHOWING CONFORMANCE

0.1 Options

0.1.1 There are four options to demonstrate conformance when applying this system procedure:

a. Follow the defined system procedure using the recommended guidance and tools, including allowed variations and options.

b. Use an equivalent process and tool set generated elsewhere and document evidence of procedural equivalence.

c. Use an equivalent bespoke process and tool set for the project and document evidence of procedural equivalence.

d. Where the procedure is considered to be not relevant, document the basis for this decision.

1 INTRODUCTION

1.1.1 This procedure is intended to guide the Environmental Impact Assessment (EIA) process by producing an Environmental Impact Assessment Plan. This procedure is likely to be completed immediately after Procedure EMP03 – Impact Priority Evaluation.

1.1.2 Environmental Impact Assessment (EIA) is a process and management technique that can be applied to a project in order to identify all the environmental impacts produced by the project, their relative importance, and measures to eliminate or reduce any negative impacts identified. The EIA should be documented through the production of an EIA Report and summarised in an Environmental Impact Statement (EIS) (see Procedure EMP05 – Environmental Impact Assessment and Reporting).

2 PROCEDURE OBJECTIVES

2.1.1 To identify whether a full EIA and Report are necessary for the project.

2.1.2 If an EIA is required:

2.1.3 To determine the best strategy for applying the EIA process to the project;

2.1.4 To identify where in the CADMID cycle the EIA(s) should be carried out;

2.1.5 To assign responsibilities for carrying out the EIA(s).

3 RESPONSIBILITIES

3.1 Accountability

3.1.1 The IPTL is accountable for the completion of this procedure.

3.2 Procedure Management

3.2.1 IPTLs may delegate the management of this procedure to a member (IPT Environmental Focal Point) or members of the IPT.

3.3 Procedure Completion

3.3.1 IPTs will complete the procedure, in conjunction with advice and information from members of the Environmental Committee, especially those which may have related assessment responsibilities. An IPT may task advisors or contractors to assist with drawing up the assessment plan especially where the advisor has specialist knowledge on the assessments issues. It may also be possible to involve potential system suppliers/contractors in the EIA planning process as they may have existing studies available.

4 WHEN

4.1 Initial Application

4.1.1 For new projects, this procedure should be undertaken towards the end of the Concept Stage or the start of the Assessment Stage.

4.1.2 For legacy projects, this should be undertaken at the outset of the EIA to ensure that all relevant stakeholders and Subject Matter Experts are fully engaged and that the latest legislation and policies are being implemented.

4.2 Review

4.2.1 The outputs of this procedure will require periodic review and possible revision throughout the lifetime of the project. The appropriate timings for such reviews will be determined through following Procedure EMP08 - Continuous Review.

5 REQUIRED INPUTS

a. The ‘Common Documents’ (ie User Requirement Document (URD) and JSP 418 (UK legislation and MOD policy)

b. Outputs of EMP01 - Stakeholders and Standards Identification, EMP02 – Screening and Scoping and EMP03 – Impact Priority Evaluation.

6 REQUIRED OUTPUTS

a. Completed **Form EMP04/F/01** – Environmental Impact Assessment Plan.

OR

Equivalent actions and documentation that ASEG is satisfied achieves the same objectives.

7 DESCRIPTION

7.1.1 For the majority of projects, the earlier the EIA process is applied, the greater the potential will be for reducing negative environmental impacts. The fact that detailed information may not be available at these early stages should not delay the EIA process, as this information can be incorporated in subsequent reviews of the EIS and EIA report. For more detail on what an EIA may require refer to Procedure EMP05 – Environmental Impact Assessment and Reporting. The EIA Plan will periodically require review and possible revision throughout the project's lifetime. Following Procedure EMP08 – Continuous Review, will help to identify when, and if, the EIA Plan needs to be reviewed.

7.2 Step 1: Decide whether a full EIA is necessary

7.2.1 This step requires reconsideration of the environmental impacts (EIs) identified in Step 2 of EMP02 – Screening and Scoping and EMP03 – Impact Priority Evaluation.

7.2.2 Proceed to prepare an EIA report if there is either:

- One or more adverse EIs in the matrix that may present a material risk to either the environment, stakeholders or legislative or policy requirements; or
- Insufficient information to decide whether the adverse EIs present a material risk to either the environment, stakeholders or legislative or policy requirements; or
- Insufficient information to decide whether an environmental impact is adverse.

7.2.3 It is important to note that this step has an element of subjectivity and is therefore open to interpretation. It is recommended therefore that the IPT seeks advice on this issue eg from a SME, Environmental Committee and also ASEG or DE&S particularly in cases where there is doubt as to whether or not the project's impacts warrant proceeding to a full EIA. The decisions made by following this procedure will need to be periodically reviewed and possibly revised throughout the life of the project. They are valid only at the time they are made on the assumption that all available information has been considered. The need for this review will be highlighted through following Procedure EMP08 – Continuous Review.

7.3 Step 2: Decide on an EIA plan

7.3.1 Different projects may require different strategies to be taken within the EIA process. The choice will depend on the nature of the project, the coverage and quality of available data and information, the predicted length of the product's life cycle and its interaction with other projects. Three example strategies are outlined below. However, IPTs should not be limited to these but should decide, in conjunction with relevant stakeholders where appropriate, the best strategy for their project. The three

example strategies are:

a. To carry out an EIA that covers all the life cycle stages from Concept to Disposal. This approach will most suit straightforward projects where information on the whole life cycle is readily available at the Concept stage or where reasonable assumptions and estimates can be made. It is likely that some minor assumptions will be necessary for the later stages of the life cycle, but these can be confirmed or refuted as the project progresses and any necessary changes made to the EIA Report as a result of the Procedure EMP08 – Continuous Review.

C A D M I D	One EIA produced that fully covers all the life cycle stages.

b. Secondly, an EIA could be carried out which only fully addresses the early procurement stages, for example from Concept to Manufacture, but that contains minimal or no information on later stages. This approach would be suitable for projects where detailed information is available for the initial stages of the project but only skeleton or unreliable information for the later stages ie In-service and Disposal. This type of EIA would need to be reviewed at each CADMID stage to incorporate relevant information as it becomes available. For further information see Procedure EMP08 – Continuous Review.

C A D M I D review **C A D M I** D review **C A D M I D**	One EIA produced that fully covers the early life cycle stages and partially covers later stages, which is reviewed throughout the life cycle as more information becomes available to build into a complete EIA. Note that it is not mandatory to cover all of the CADMID stages with an EIA so long as there is good justification for not doing so.

c. The third approach would involve staged EIAs being produced throughout the lifetime of the project, aimed predominantly at the current stage but incorporating an assessment of any information, however limited, available relating to the later stages to ensure that impacts are given proper consideration early enough in the programme to influence their elimination or reduction. As the equipment develops, more detailed EIAs would be produced to fully address the later stages. This will be most suitable for large and complex projects that may interlink with several projects, for example projects involving platforms, or where a significant amount of trials and testing is required.

C	A	D	M I D	Several EIAs produced throughout the project's life cycle that cover one or more of the life cycle stages. Suitable for complex projects and projects that are closely integrated with other projects e.g. equipment platforms. Note that it is not mandatory to cover all of the CADMID stages with an EIA so long as there is good justification for not doing so.

7.3.2 When formulating the EIA Plan, the IPT is advised to contact ASEG, particularly if there is uncertainty in formulating an appropriate strategy or where there is significant deviation from the example strategies provided above. Irrespective of the strategy adopted the EIAPlan should ensure that a material inventory is established for the equipment.

7.3.3 Where other significant assessment activities are to be undertaken, such as any sustainability appraisals, it will also be helpful to show these and their relationship to the environmental impact assessments which are planned in the EIA plan.

7.3.4 As stated above, the EIA strategy formulated will need to be reviewed and possibly revised as the project progresses, for example where it has been identified that a life cycle stage does not require an EIA to be completed, changes to the project may warrant an EIA to be completed for that life cycle stage. The need for this review will be identified through following Procedure EMP08 – Continuous Review.

7.4 Step 3: Decide EIA Responsibilities

7.4.1 This step requires an understanding of the size and nature of the project and the interaction it will have with other projects/platforms, in order to identify the best party to carry out the EIA. If it has the necessary knowledge, experience and resource (ie time) available then the IPT may be the best party to perform the EIA. On the other hand the EIA may be best performed by a third party such as an advisor, contractor or supplier, in the following situations:

a. Complex projects;

b. Projects involving environmental aspects that may give rise to public relations difficulties;

c. Limited knowledge or experience within the IPT on the environmental issues relevant to the project;

d. Limited time availability within IPT;

e. The completion of an EIA by an independent body would be of benefit.

7.4.2 It will also be helpful to record both in the EIA Plan and EMP01 the responsible party for undertaking other related assessments and appraisals.

7.5 Step 4: Record decisions

7.5.1 Any decisions relating to the EIA process should be clearly documented. This is to demonstrate that adequate consideration has been given to the issue. This is particularly relevant where several IPTs will be involved. Relevant stakeholders should also be informed of these decisions. Form EMP04/F/01 – Environmental Impact Assessment Plan can be used to document and communicate these decisions.

8 RECORDS AND PROJECT DOCUMENTATION

8.1.1 Where relevant, the outputs from this procedure should feed into the following:

a. SRD (System Requirement Document) – for any specific environmental performance requirements;

b. CSA (Customer Supplier Agreement) – to document agreements on environmental studies to be delivered by the IPT;

c. TLMP (Through Life Management Plan);

d. Input report for Initial Gate.

8.1.2 A copy of the information produced from following this procedure should be stored in the project's Environmental Case.

9 RECOMMENDED TOOLS AND FORMS

a. **Form EMP04/F/01** – Environmental Impact Assessment Plan.

10 GUIDANCE

10.1 General

10.1.1 The ISO14040 Series, and particularly ISO14042, provides good general guidance on when to carry out product related environmental impact assessments.

10.2 Aligning safety and environment

10.2.1 The key alignment opportunity in EMP04 is to establish whether any planned assessment studies can produce data to meet both safety and environmental evaluation requirements.

10.3 Guidance for Different Acquisition Strategies

10.3.1 The objectives for this procedure apply to all acquisition strategies. It is MOD policy that the same standards are met, and that assurance that these standards have been met can be demonstrated for all projects. Some elements of this procedure may be best completed by contractors and suppliers for some strategies such COTs and MOTs where, in effect, major design issues are already fixed.

10.4 Legacy systems

10.4.1 Note that for legacy systems there may be no benefit to applying the EIA methodology to CADMID stages that have already passed and so any EIA that may be necessary should only address the life cycle stage that the project is currently in (unless this is almost concluded) and any future stages.

10.4.2 When applying this procedure to a legacy system it is important that the following questions are asked:

a. What is the remaining length of time of the equipment's or service's projected service life?

b. Has the legislation and other standards review identified a need for mitigation that has not already been put in place?

c. Are there future plans for major modifications and capability enhancements, and if so when?

d. Is there historic evidence of actual environmental incidents and impacts, if so when, where and what?

e. Have there been any legal compliance problems to date or issues with regulators?

f. Has there been any stakeholder (particularly external to MOD) interest to date (for example Parliamentary Questions or enquiries regarding the equipment's environmental performance)?

10.4.3 Considering these questions should ensure that the outputs from this procedure for legacy systems do not include provision for unnecessary EIAs. For many legacy systems, with limited life, it will be appropriate to concentrate on disposal arrangements and impacts especially where there is no evidence of environmental incidents or accidents associated with the system. Therefore, for a legacy system it may be wholly appropriate that the EIA Plan identifies that only an EIA on the disposal phase is required. However, if there is evidence of environmental incidents and accidents it is likely to be necessary to carry out an EIA of the in-service phase to help to identify any mitigation or control measures which should be applied.

10.5 Warnings and Potential Project Risks

10.5.1 If the IPT fails to plan and co-ordinate the EIAs and any other studies (that maybe carried out elsewhere in MOD) it is possible that the IPT will engage in unnecessary or overly complex environmental assessment activities, involving unnecessary cost and potential delays. Any short comings in the completion of this procedure could compromise Initial Gate procedures and approvals. Omissions may also cause delays in approvals later in the CADMID cycle, such as at Main Gate or ISD. Incomplete or otherwise inadequate EIAs may also compromise (or at least delay) granting of permission and approvals.

Form EMP04/F/01 – Environmental Impact Assessment Plan			
Project Title:			
IPT:			
IPT Environmental Focal Point:			
Contact details:			
Completed by:		**Date:**	
Reviewed by:		**Date:**	

Type of project											
Life cycle stages (CADMID) to be covered by EIA (tick any boxes that apply)											
Concept		Assessment		Demonstration		Manufacture		In-service		Disposal	

Chosen EIA strategy (tick box) (Refer to Section 7.3 of procedure for guidance)	
Single EIA produced that covers all CADMID stages	
Single EIA produced that focuses on early stages	
Multiple EIAs produced throughout lifetime of project	
Other (please describe)	
Responsibilities for managing and completion of EIA(s) should be documented using Form EMP01/F/03 (Project Environmental Responsibilities)	

0 SHOWING CONFORMANCE

0.1 Options

0.1.1 There are four options to demonstrate conformance when applying this system procedure:

Follow the defined system procedure using the recommended guidance and tools, including allowed variations and options.

Use an equivalent process and tool set generated elsewhere and document evidence of procedural equivalence.

Use an equivalent bespoke process and tool set for the project and document evidence of procedural equivalence.

Where the procedure is considered to be not relevant, document the basis for this decision.

1 INTRODUCTION

1.1.1 This procedure focuses on the assessment and reporting of the environmental impacts associated with the project. This procedure is likely to be commenced soon after Procedure EMP04 – Environmental Impact Assessment Plan, for those stages where sufficient data exists or it is possible to make reasonable estimates.

2 PROCEDURE OBJECTIVES

2.1.1 Carry out an EIA(s) in accordance with the EIA Plan developed in Procedure EMP04 – Environmental Impact Assessment Plan.

2.1.2 To identify appropriate mitigation measures for adverse environmental impacts.

2.1.3 To identify ways in which positive environmental impacts could be optimised.

2.1.4 To report on the above.

3 RESPONSIBILITIES

3.1 Accountability

3.1.1 The IPTL is accountable for the completion of this procedure.

3.2 Procedure Management

3.2.1 IPTLs may delegate the management of this procedure to a member (IPT Environmental Focal Point) or members of the IPT.

3.3 Procedure Completion

3.3.1 It is unlikely that the IPT will carry out and report the assessments unless the situation is straightforward. IPTs will generally task advisors or consultants to conduct and report EIAs. It may be possible to involve potential system suppliers/contractors as they may have existing studies available, or even to require system suppliers/developers to provide EIAs and reports to the IPT as part of any contractual arrangements.

3.4 Choosing a Suitable Advisor/Contractor/Supplier

3.4.1 When choosing a suitable advisor/contractor/supplier, IPTs should consider the following competencies:

a. Previous experience of EIA and EIA processes;

b. Knowledge of the Application Domain eg naval, air or land systems;

c. Understanding of the environmental risks and media potentially affected eg previous experience of working with military systems;

d. Working knowledge of ISO 14001 and ISO 14044.

3.4.2 An advisor/contractor/supplier should be chosen on the strength of their combined competencies across these areas.

4 WHEN

4.1 Initial Application

4.1.1 For complex or strategically important capabilities initial EIAs may be carried out as early as the Concept Stage prior to Initial Gate approval. However, in most cases EIAs are likely to commence in the Assessment Stage and some may not be necessary until the Demonstration or even the Manufacturing Stage.

4.1.2 Where an incremental or structured EIA plan has been developed, it is possible the EIAs will need to be initiated at the end of each stage of CADMID.

4.2 Review

4.2.1 The outputs of this procedure will require periodic review and possible revision throughout the lifetime of the project. The appropriate timings for such reviews will be determined through following Procedure EMP08 - Continuous Review. Where the EIA Plan proposes interlinked or incremental EIAs then Procedure EMP08 - Continuous Review must be used to plan the revisions of the EIA Report(s) and EIS.

5 REQUIRED INPUTS

a. The 'Common Documents' (ie User Requirement Document (URD) and JSP 418 (UK legislation and MOD policy)).

Outputs from Procedures:

- EMP01 – Stakeholders and Standards Identification
- EMP02 – Screening and Scoping
- EMP03 – Impact Priority Evaluation
- EMP04 – Environmental Impact Assessment Plan

6 REQUIRED OUTPUTS

a. Environmental Impact Assessment Report (EIA Report).

Environmental Impact Statement (EIS).

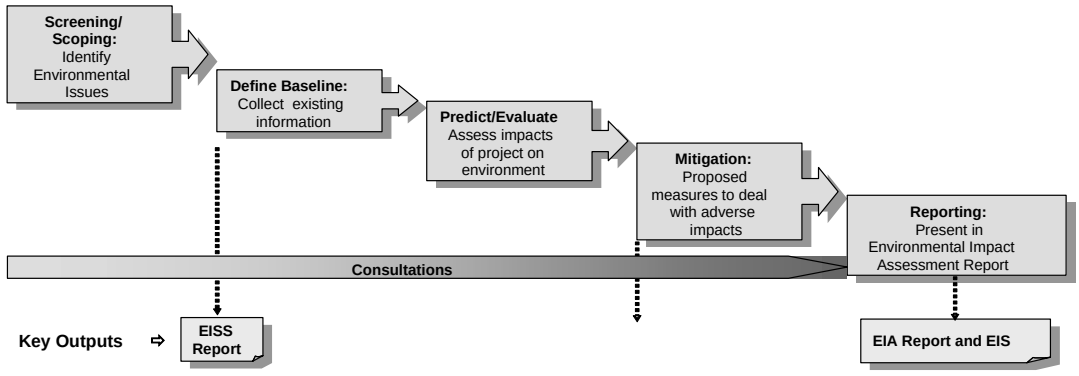
OR

Equivalent actions and documentation that ASEG is satisfied achieves the same objectives.

7 DESCRIPTION

7.1.1 Environmental Impact Assessment is a recognised technique for identifying, assessing and determining mitigating measures of environmental impacts. Figure 5.1 below shows the key stages of this process in diagrammatic form and shows how EIA reporting links into the process.

Figure 5.1: The EIA Process



7.2 Step 1: Document low priority environmental impacts

7.2.1 On completion of EMP03 – Impact Priority Evaluation, impacts will have been prioritised into 3 categories:

a. Low Priority;

b. Medium Priority;

c. High Priority.

7.2.2 All low priority environmental impacts should be listed in the EIA Report, although no further analysis of them is necessary at this point. However, this does not mean that the priority evaluation of these impacts would not be reviewed and reassessed in later stages. The need to review these will be highlighted by following Procedure EMP08 – Continuous Review.

7.3 Step 2: Consider medium priority and high priority environmental impacts

7.3.1 Where Procedure EMP03 – Impact Priority Evaluation has shown that there is a potential for adverse environmental impacts of medium priority or high priority, then appropriate actions to eliminate, reduce and/or monitor the associated environmental aspects, must be formulated. The categorisation of impacts into medium priority and high priority will assist IPTs to make appropriate management decisions for addressing the impacts.

7.3.2 For each impact, or group of similar impacts, evaluated as medium or high priority it is necessary to identify both the assessment methodology and the assessment criterion adopted. Where a number of assessment methodologies exist it will be necessary to provide a justification for the one chosen. However, in some cases it may be advisable to use more than one assessment method for the same issue to provide corroboration of the results. This is required to ensure that readers of the EIA Report can understand the level of reliance that can be given to any forecasts or predictions used.

7.3.3 The Source-Pathway-Receptor (SPR) Model illustrated below, may be useful in formulating appropriate mitigation measures for both medium priority and high priority impacts.

Figure 5.2 – Environmental impact chain

7.3.4 The cause (**"source"**) of the environmental risk follows a route (**"pathway"**) to the entity (**"receptor"**) which could come into contact with the environmentally damaging/polluting substance. A "pollution linkage" occurs when all three components of the SPR Model are in place. Therefore, elimination of any of these three components will break the pollution linkage and mitigate or eliminate the environmental risk. Attention should be placed initially at eliminating or reducing the environmental impact at source before examining ways of removing/protecting the pathway or receptor. **Form EMP02/F/01** Environmental Feature Matrix, should help with this. Mitigation actions identified at this stage should be recorded in the EIA Report.

7.3.5 If, even after this consideration, it is established that no mitigation measures are available to counter any residual adverse EIs, then the nature of the residual risk should be recorded and explained in the EIA Report.

7.3.6 Note - environmental management has not failed in any way if environmental impacts cannot be removed or mitigated against. Providing there is an operational case that outweighs the environmental issues, the project can still proceed because all the outputs of Procedures EMP02 – Screening and Scoping, EMP03 – Impact Priority Evaluation and EMP05 – Environmental Impact Assessment Reporting will have been considered in the EIA. There is therefore evidence that the environmental impacts have been considered, and that practical and reasonable measures have been put in place to eliminate all but the unavoidable adverse EIs.

7.4 Step 3: Consider cumulative impacts

7.4.1 Where an impact is unique to each life cycle stage the assessment of that impact can be straightforward and in some cases may even be trivial. However, in some projects the importance of individual impacts may only become evident when the cumulative effects are considered. In most cases this is taken care of by the frequency and duration element entered in **EMP02/F/01** – Environmental Feature Matrix.

7.4.2 However, there may be occasions when a project has a number of environmental aspects that occur in the same life cycle stage and which give rise to the same impact. This could include burning of fuel, consumption of engine oil and use of electricity all of which produce the same environmental impact - CO_2 emissions to air. In such cases it may be more effective to mitigate the impacts together instead of individually. Using the impact code in the Environmental Feature Matrix within a life cycle stage can assist in identifying such impacts.

7.4.3 There may be situations where the same environmental impact occurs in each of a number of life cycle stages. In this case the relevant impact code in the Environmental Feature Matrix can also be used to group incidents of the same impact across the life cycle stages.

7.5 Step 4: Identify ways to enhance any positive environmental impacts

7.5.1 If having undertaken Procedure EMP03 – Impact Priority Evaluation, positive environmental impacts have been identified, ways of enhancing these positive effects should now be identified and recorded for inclusion in the EIA Report.

7.6 Step 5: Produce EIA Report

7.6.1 There are many formats that an EIA Report may follow. **Guidance Sheet EMP05/G/01** – Suggested Content for EIA Report, can be used either as a specification for commissioning an EIA or for use as a guide for an internally produced EIA. **Guidance Sheet EMP05/G/02** – Checklist for EIA Report, is intended as a checklist of quality rather than content and can either be used to assist the production of the EIA Report and/or to check an EIA Report produced by a third party. A copy of the EIA Report should be stored in the project's Environmental Case.

7.7 Step 6: Prepare Environmental Impact Statement (EIS)

7.7.1 Essentially, the EIS is a non technical summary of the EIA Report and therefore should avoid technical jargon and lengthy explanations. It should cover the key points of the issues covered in the EIA Report along with an overview of any recommended mitigation measures. A copy of the EIS should be stored in the project's Environmental Case. Formats of EIS may vary, however the following headings should be included as a minimum requirement:

- Description of the equipment or service
- Life cycle stages covered
- Environmental features, adverse and beneficial impacts
- Review of environmental impacts including any residual impacts
- Outline of mitigation measures
- Those responsible for managing mitigation measures

7.8 Approval and Authorisation of an EIS by the IPT Leader

7.8.1 Authorisation of the Environmental Impact Statement by the IPT Leader, at a particular point in a project's life cycle, indicates their satisfaction with the progress of the project's EMS, and specifically the Environmental Impact Assessment Processes. Authorisation by the IPT Leader also indicates their acceptance that the environmental risks described in the EIS and associated with the project, and any control or mitigation measures, are appropriate for that stage of the project's life cycle. The Authorised EIS forms an auditable project record.

7.8.2 Before authorisation, the IPT Leader must ensure the satisfactory resolution of any deficiencies or observations raised through the project's Environmental Committee or by parties engaged by the IPT Leader to undertake independent audits or assessments.

8 RECORDS AND PROJECT DOCUMENTATION

8.1.1 Where relevant, the outputs from this procedure should feed into the following:

a. SRD (System Requirement Document) – for any specific environmental performance requirements;

b. CSA (Customer Supplier Agreement) – to document agreements on environmental studies to be delivered by the IPT;

c. TLMP (Through Life Management Plan);

d. Input report for Initial or Main Gate.

8.1.2 A copy of the information produced from following this procedure should be stored in the project's Environmental Case.

9 RECOMMENDED TOOLS ANDFORMS

a. **Guidance Sheet EMP05/G/01** – Suggested Content for EIA Report.

Guidance Sheet EMP05/G/02 – Checklist for EIA Report.

10 GUIDANCE

10.1 General

10.1.1 General guidance on the EIA will be found in JSP 418. A number of other JSPs also include general advice on some EIA matters (JSPs 454, 520, 442, 518, 430, and 553). The Defence Estates' Sustainability Appraisal Handbook is helpful on EIA issues and processes.

10.1.2 It may be possible to obtain existing EIA reports and studies from suppliers and manufacturers operating in the same technology areas or which produce similar and related equipment or services.

10.2 Aligning Safety and Environment

10.2.1 The key alignment opportunities in EMP05 are to conduct assessment studies to meet both safety and environmental evaluation requirements. Where this is not possible alignment should also help ensure that results of safety assessments are reviewed for environmental implications and vice versa.

10.3 Guidance for Different Acquisition Strategies

10.3.1 The objectives for this procedure apply to all acquisition strategies. It is MOD policy that the same standards are met, and that assurance that these standards have been met can be demonstrated for all projects. In many cases EIAs will be best completed by contractors and equipment suppliers that have knowledge of the specific issues and areas.

10.4 Legacy Systems

10.4.1 Outputs from this procedure for legacy systems should be neither over-engineered nor incomplete (the outputs from EMP02-04 will help define the most appropriate extent and nature of the work required). In all cases it will be important to ensure that all applicable legislative and other requirements have been identified to confirm that all appropriate mitigation measures have been identified and shared with the stakeholders or are now agreed and actioned. Only in cases where a mid-life update or similar is planned would there be a need to look at possible elimination of impacts. Thus it will be seen that for many legacy systems, with limited life, it will be appropriate to concentrate on disposal arrangements and impacts especially where there is no evidence of environmental incidents or accidents associated with the system.

10.4.2 This procedure still requires an EIS to be produced in all cases, even if it is possible to limit the extent and scope of the EIA process for a legacy system.

10.5 Warnings and Potential Project Risks

10.5.1 If this procedure is not completed, and reviewed (see Procedure EMP08 – Continuous Review), in a timely manner there will be an increase in risk that subsequent work will go ahead with unrecognised environmental liabilities. Any short comings in this could compromise Main Gate procedures and approvals. In addition, short comings could also result in costly reworks, especially where opportunities to influence design decisions are missed.

Guidance Sheet EMP05/G/01 - Suggested content for EIA Report

a) Statement of Need

- Information about the need for the equipment or service and any alternatives that have been considered (the URD (User Requirement Document) and SRD (System Requirement Document) should form the basis of this).

b) Description of the Equipment or Service and Potential Priority Impacts

- The methodology or methodologies that have been used for the assessment including a summary of the scope of the assessment.
- A description of the equipment's or service's physical characteristics.
- A description of the main characteristics and impacts of any proposed testing, trials or demonstration activities.
- A description of the main characteristics and impacts of the manufacturing processes, for instance the nature and quantity of the materials used.
- An estimate, by type and quantity, of expected releases and emissions (including water, air and soil pollutants, noise, vibration, light, heat and radiation) from the in-service stage for the system. NB the in-service stage includes: Operation, (Normal, Abnormal, Emergency) and Maintenance (Routine, Deep/Repair, Up-grade).
- Consideration of issues and impacts associated with the disposal of the system at the end of its life highlighting where impacts may exceed regulatory requirements.

c) For each of the Priority Impacts identified above the Report should include:

- Reference to relevant legal and policy requirements highlighting where impacts may approach or exceed regulatory thresholds.
- Quantitative information on the predicted scale of each impact (allowing for the incorporated mitigations).
- Consideration of how individual impacts may combine to produce cumulative effects.
- A description of receptors where there is the potential to be significantly affected by the project (in particular - population, fauna, flora, soil, water, air, climatic factors, material assets (including heritage), and any interaction between them).
- A description of the forecasting methods used.
- An indication of any difficulties (technical difficulties or lack of know-how) encountered in compiling the required information.
- An outline of any missing or incomplete knowledge.

d) Mitigation and monitoring

- Details of mitigation measures that can be incorporated into the design of the proposed development.
- Details of mitigation measures that can be applied to the system to reduce environmental impacts.
- A list of any potential mitigation measures that it has not been possible to include, and the reasons why.
- Statement of any residual impacts.
- Suggested monitoring regimes.
- Suggested plan for undertaking any suggested mitigation measures.
- An indication of any difficulties (technical difficulties or lack of know-how) encountered in compiling the required information.
- Consideration of any positive environmental impacts the project may have and ways in which these can be optimised.

e) Conclusion

- Conclusion that outlines for each known or potential priority impact whether:
  - Suitable mitigation is identified; or
  - No suitable mitigation is available: the EIA Report should provide evidence that all reasonable and practicable alternatives were explored in a structured and documented manner; and
  - The nature and scale of any residual impacts.

Guidance Sheet EMP05/G/02 - Checklist for EIA Report

EIA Reports can vary widely in layout and content. However, the list below can be used to check that the Report meets existing good practice.

a. Does the report include a systematic approach to the gathering and analysis of information?

b. Is the information presented in a clear, comprehensive and objective manner?

c. Is there a relatively concise main report that draws on the technical studies and summarises them as necessary?

d. Is there sufficient cross referencing for the reader to make the links between the Non-Technical Summary (EIS), the main report, appendices, and any separate studies?

e. Is the attention given to environmental issues proportional to their potential impacts, and are those aspects with insignificant impacts also identified?

f. Are mitigation measures presented as a prioritised list?

g. Are mitigation measures described in appropriate detail and timetabled?

h. Does it state the means by which monitoring will be carried out?

i. Are the methods by which the analysis was carried out and the EIA Report prepared explained?

j. Are the credentials of the authors/contributors involved stated?

k. Are detailed technical studies contained in appendices?

l. Is the 'Non Technical Summary' (EIS) a summary in every-day language?

Note: The above has been developed using existing good practice from a range of Standards Bodies and Government Departments including the MOD.

0 SHOWING CONFORMANCE

0.1 Options

0.1.1 There are four options to demonstrate conformance when applying this system procedure:

a) Follow the defined system procedure using the recommended guidance and tools, including allowed variations and options.

b) Use an equivalent process and tool set generated elsewhere and document evidence of procedural equivalence.

c) Use an equivalent bespoke process and tool set for the project and document evidence of procedural equivalence.

d) Where the procedure is considered to be not relevant, document the basis for this decision.

1 INTRODUCTION

1.1.1 For the majority of projects, a number of potential environmental impacts will have been identified as a result of following Procedures EMP02 - Screening and Scoping, and EMP03 - Impact Priority Evaluation. Priority Impacts may have been assessed in an EIA Report, and will be identified along with any mitigation measures in the related EISS and EIS to an EIA process - Procedure EMP05 – Environmental Impact Assessment and Reporting.

1.1.2 This procedure is intended to direct the formulation of appropriate objectives and targets for those impacts which:

- Have been evaluated as medium or high priority; or which
- Enhance any potential benefits.

1.1.3 Objectives, targets and an Environmental Management Plan (EM Plan) should be developed covering all environmental impacts that have been assessed as medium or high priority through the completion of Procedure EMP03 – Impact Priority Evaluation. Low priority impacts should also be addressed where these can be easily eliminated or mitigated. For information, guidance on these terms based on the ISO 14001 standard, are included below:

- Objective - An “overall environmental goal, consistent with the environmental policy, that an organization sets itself to achieve.”
- Target - A “detailed performance requirement, applicable to the organisation or parts thereof, that arises from the environmental objectives and that needs to be set and met in order to achieve those objectives”

1.1.4 Objectives and targets are also vital in helping to maintain environmental performance and drive continuous improvement. Once objectives and targets have been set, an EM Plan for achieving them will be developed.

2 PROCEDURE OBJECTIVES

2.1.1 To establish environmental objectives and targets for the equipment or service. In establishing objectives and targets the following issues should be considered:

- Adverse environmental impacts;
- Positive environmental impacts;
- Legislative and other standards;
- Relevant environmental standards;
- Stakeholder concerns;
- Technical issues;
- Operational requirements; and
- Financial cost.

2.1.2 To produce an EM Plan to achieve the environmental objectives and targets, which shall include responsibility for achieving the objective and targets and the means and time-frame by which they are to be achieved.

2.1.3 To document justification for the objectives and targets which have been formulated.

3 RESPONSIBILITIES

3.1 Accountability

3.1.1 The IPTL is accountable for the completion of this procedure.

3.2 Procedure Management

3.2.1 IPTLs may delegate the management of this procedure to a member (IPT Environmental Focal Point) or members of the IPT.

3.3 Procedure Completion

3.3.1 The IPT is responsible for ensuring that the procedure is completed. However, completion will most likely be carried out by the project supplier or contractor, or possibly by an advisor. Any suggested objectives and targets produced as part of this procedure should be agreed with the IPT and endorsed by the Environmental Committee.

4 WHEN

4.1 Initial Application

4.1.1 Concept Stage, Assessment Stage or Demonstration Stage and reviewed as the project progresses. If the project has already passed these stages, appropriate and proportional work must be conducted in the current project stage. IPTs should not be overly concerned if detailed information upon which to base the objectives and targets, is not available at the earlier stages of the project's life cycle. Objectives and targets may be initially based on reasonable assumptions and estimates and then reviewed and amended, as and when necessary, throughout the lifetime of the project (for example, when further information becomes available). Once the objectives and targets are produced, an EM Plan for achieving them can be developed which should follow the whole life cycle of the project.

4.2 Review

4.2.1 The outputs of this procedure will require periodic review and revision throughout the lifetime of the project. This is relevant where objectives or targets have been set early within the project for later life cycle stages. The appropriate timings for such reviews will be determined through following Procedure EMP08 - Continuous Review. Where the EIA Plan (EMP04/F/01) proposes interlinked or incremental EIAs then Procedure EMP08 - Continuous Review, should be used to plan the revisions of the EM Plan.

5 REQUIRED INPUTS

a) Environmental Case including:

- Environmental Feature Matrix (Output from Procedures EMP02 – Screening and Scoping, and EMP03 – Impact Priority Evaluation);
- Environmental Impact Assessment Report(s) and EIS(s) (Output from Procedure EMP05 – Environmental Impact Assessment and Reporting).

b) System Requirement Document (SRD).

6 REQUIRED OUTPUTS

a) **Form EMP06/F/01** – Setting Objectives and Targets;

b) **Form EMP06/F/02** – Environmental Objectives and Targets Register;

c) **Form EMP06/F/03** – Environmental Management Plan Record Sheet.

OR

Equivalent actions and documentation that ASEG is satisfied achieves the same objectives.

7 DESCRIPTION

7.1.1 Targets should be devised once a finalised list of objectives has been developed.

7.1.2 Each objective should be examined separately and a target (or multiple targets) set to act as criteria against which performance is measured.

7.1.3 Targets should be "SMART"; Specific, Measurable, Achievable, Realistic and Time-bound. Targets can be expressed in many ways including percentages and total quantities or in terms of a regulatory threshold or specific actions.

7.1.4 The development of key performance indicators (KPIs) may be required to show that an objective and target has been achieved. KPIs should be recorded in **Form EMP06/F/03** - Environmental Management Plan Record Sheet.

7.1.5 The Environmental Management Plan is the means through which the objectives and targets are achieved.

7.2 Step 1: Group Priority Environmental Aspects and Impacts

7.2.1 To facilitate objective, target and EM Plan development, medium and high priority environmental aspects and impacts should be grouped where it is known that improvement in one area would bring about improvement in another. This will ensure that repetition or overlaps in objectives and targets are minimised.

7.2.2 **Form EMP06/F/01** - Setting Objectives and Targets can be used to document the above.

7.3 Step 2: Set Objectives and Targets

7.3.1 Any measures to eliminate, mitigate or manage environmental impacts that were identified in EMP05 - Environmental Impact Assessment and Reporting, should be considered when developing objectives and targets.

7.3.2 In addition, consideration should also be given to developing objectives and targets to ensure that the project conforms to any environmental standards identified in Procedure EMP01 – Stakeholders and Standards Identification, and to ensure that no deterioration in environmental performance occurs. Consideration of stakeholder concerns should also be part of objective and target setting, particularly for projects where there may be considerable interest from the general public or environmental pressure groups. Note that for projects which did not proceed to a full EIA or projects where the EIA did not identify any medium or high priority environmental impacts, these may be the only objectives and targets needed.

7.3.3 Objectives and targets may be set which span a project's life cycle from Concept through to Disposal. However, IPTs should be aware that objectives and/or targets can be set which only apply to particular stages of CADMID. Once set, objectives and targets should be reviewed and revised when necessary throughout the lifetime of the project. For example, objectives and/or targets may require amendment in response to changes in project design or environmental legislation. Following Procedure EMP08 – Continuous Review, will ensure they are reviewed when required.

7.3.4 Considerable consultation with stakeholders and/or research may be required to assess the feasibility of objectives and/or targets associated with a project. For example, if the completion of this procedure is carried out by the project supplier or contractor, any suggested objectives and targets produced would then need to be referred to and agreed by the IPT with advice from the Environmental Committee.

7.3.5 The table below gives some examples of areas where objectives and targets could be developed. Note that there may be more than one target for each objective.

Objective	Target
To reduce the amount of hazardous materials contained in the project.	Reduce the amount of lead used in manufacturing the equipment by 10% by December 2008.
To reduce noise emissions from the system.	Reduce system's engine noise emissions by 5dB within 3 years. Reschedule aircraft maintenance activities that involve the running of aero engines in or near residential areas by the end of the year to avoid the hours between 2200 and 0700.
To improve fluid containment to reduce risk of leakages and spills.	Ensure that all staff involved in fuel dispensing are trained in best practice spillage protection measures by end of June 2005.

7.3.6 **Form EMP06/F/01** - Setting Objectives and Targets can be used to document objective and target setting.

7.3.7 When formulating and prioritising objectives and targets, consideration should be given to MOD policy, corporate risk and:

a) Priority of environmental impact;

b) Applicable legislation and standards;

c) Ease of implementation;

d) Financial implications;

e) Operations implementation;

f) Disposal implications;

g) Safety implications;

h) Technological options;

i) Project timescales;

j) Stakeholder requirements and interests.

7.3.8 The reasons why objectives and targets have been formulated should be clearly documented in case justification is required in the future.

7.3.9 If an objective and target has not been produced for a medium or high priority environmental impact justification for this should be clearly documented.

7.4 Step 3: Document Objectives and Targets

7.4.1 Firstly, enter the environmental impact, standard requirement (including legislation and policies) or stakeholder concern you are aiming to manage into the first column of **Form EMP06/F/02** - Environmental Objective and Target Register. For environmental impacts, this information should be taken from **Form EMP02/F/01** – Environmental Feature Matrix (output from Procedures EMP02 and EMP03) and for standard requirements and stakeholder concerns, from Forms **EMP01/F/01** and **EMP01/F/02** (output of Procedure EMP01). Next, transfer the identified objectives and targets from completed **Form EMP06/F/01** to **Form EMP06/F/02** and assign a reference for each.

7.5 Step 4: Develop the Environmental Management Plan

7.5.1 An EM Plan is a "framework for action" (JSP418). An EM Plan should be developed and maintained to achieve the objectives and targets that have been set. Form **EMP06/F/03** - Environmental Management Plan Record Sheet, can be used as the basis for an EM Plan. According to ISO 14001, the plan should include:

a) Designation of responsibility for achieving objectives and targets at each relevant function and level of the organisation;

b) The means and time-frame by which they are to be achieved.

7.5.2 The plan should be reviewed for new activities, significant changes and long-term projects. Progress against the objectives and targets set should be reviewed periodically using Procedure EMP08 – Continuous Review.

7.5.3 Ensure that **Form EMP06/F/02** and **Form EMP06/F/03** are cross-referenced accurately using common references for objectives, targets and the EM Plan.

8 RECORDS AND PROJECT DOCUMENTATION

8.1 Environmental Case

8.1.1 A copy of the information produced from following this procedure should be stored in the project's Environmental Case.

9 RECOMMENDED TOOLS AND FORMS

a) **Form EMP06/F/01** – Setting Objectives and Targets.

b) **Form EMP06/F/02** – Environmental Objective and Target Register.

c) **Form EMP06/F/03** – Environmental Management Plan Record Sheet.

10 GUIDANCE

10.1 General

10.1.1 Advice on the purpose of objectives and targets is available in the EMS annex to JSP418 and also in ISO 14001 and related standards such as EN ISO 14031 Environmental Performance Evaluation Guidelines. In general, objectives establish overall aims and specify outcomes whereas targets will more usually specify performance or improvement requirements including the time frame within which they are to be achieved. In addition to those issues identified through the EIA process any action required to ensure compliance with legal requirements or conformance with policy requirements should also be included.

10.2 Aligning Safety and Environment

10.2.1 The key alignment opportunity in EMP06 is to ensure that environmental objectives and targets and related safety objectives and targets are consistent and compatible, and where possible are achieved by the same action.

10.3 Guidance for Different Acquisition Strategies

10.3.1 The setting of appropriate environmental objectives and targets should be carried out irrespective of the acquisition strategy. However, under some strategies it may be necessary, or appropriate, to negotiate objectives and targets rather than impose them, especially where the acquisition is one of international collaboration. In respect of MOTs and COTs projects, objectives and targets are probably best developed early in the acquisition process to ensure they can form part of the specification or requirement, and hence have potential as a differentiator between products which are design stable. For other acquisition strategies it may be possible to develop objectives and targets with any contractor or supplier, provided some consideration has been given by the IPT, or its advisor to baseline performance and the potential for improvement during the life of the system.

10.4 Legacy Systems

10.4.1 For legacy systems it may only be possible to set some basic objectives and targets for the in-service phase as these issues are unlikely to have been considered during the design manufacture and early supply of the system. However, the improvement of the environmental performance of even legacy systems can be driven by the careful selection of incremental targets during the remainder of the system's operational life.

10.4.2 It should be possible to set appropriate objectives and targets for the disposal phase and disposal activities.

10.5 Warnings and Potential Project Risks

10.5.1 Environmental objectives and targets should be established at the earliest stages of the project life cycle (even if they are revised and refined as the project progresses) since they have a fundamental role in keeping focus on the environmental performance of the project and influencing specific elements of the subsequent project. Failure to do so can have far reaching effects on both costs and programme as it may not be possible to otherwise identify the level of control required on environmental issues or those issues with environmental consequences.

Form EMP06/F/01 – Setting Objectives and Targets	
Medium Priority / High Priority Impact(s):	
Aspects giving rise to the impact(s):	
Life cycle stage (inc. status and condition where relevant):	
Any issues that could affect objective and target setting (see Step 2 of this procedure)	
Short Listed Objectives and Targets	
Objective(s) and Targets selected	
Justification for selection	

Form EMP06/F/02 – Environmental Objectives and Targets Register

Priority Impact (Medium/High)	Objective	Objective Ref. No	Associated Target(s)	Target Ref. No	EM Plan Ref. No	Life cycle stage (inc. status and condition where relevant):	Responsibility for meeting Objectives and Targets

Issued by	Name:	Position:	Issue Level:	
Approved by	Name:	Position:	Issue Date:	

Form EMP06/F/03 – Environmental Management Plan Record Sheet			
EM Plan ref. no:		**EMP Owner:**	
Objective and ref no:			
Target and ref no:			
Key Performance Indicator:			
Responsibility for meeting Objectives and Targets:			

Task	**Timescale**	**Responsibility**

Date Target Achieved:		Name:
		Signed:

0 SHOWING CONFORMANCE

0.1 Options

0.1.1 There are four options to demonstrate conformance when applying this system procedure:

a) Follow the defined system procedure using the recommended guidance and tools, including allowed variations and options.

b) Use an equivalent process and tool set generated elsewhere and document evidence of procedural equivalence.

c) Use an equivalent bespoke process and tool set for the project and document evidence of procedural equivalence.

d) Where the procedure is considered to be not relevant, document the basis for this decision.

1 INTRODUCTION

1.1.1 An operational control exists to ensure an activity is completed in the correct/desired way. An operational control could therefore be one or a combination of the following:

a) a written procedure/work instruction describing how, when and by whom an activity is to be performed (this would also include the use of signage);

b) a contract or agreement;

c) a physical measure, (e.g. computer or mechanical control);

d) use of trained personnel.

1.1.2 **Guidance Sheet EMP07/G/01** – Operational Control Decision Tree, is designed to assist IPTs to identify whether present controls, or proposals for controls, already exist and whether these are adequate from an environmental control perspective. **EMP07/G/01** should also identify where any controls need amendment, or if new controls are required.

1.1.3 Where possible any environmental operational controls under this procedure should be combined with other operational controls associated with the operation of the equipment or service. In most situations separate environmental operational controls will not be required to the controls which would normally be developed.

1.1.4 Existing operational controls may include controls applied in operational situations by the Armed Forces even though such operational controls would not be covered by the POEMS.

2 PROCEDURE OBJECTIVES

2.1.1 To ensure appropriate controls are developed (for system testing and trialing, operation and disposal):

a) Where required to achieve objectives and targets;

b) Where required to achieve standard and stakeholder requirements;

c) To control all priorty environmental impacts;

d) To control the environmental impacts which could give rise to a environmental emergency situation;

e) To deal with an emergency situation if it was to occur.

2.1.2 The IPT may also have responsibility for completing the following checks during trials and testing of the equipment or service prior to its in-service date:

a) Check the use and adequacy of the operational controls; and

b) Physically test the adequacy of operational controls which exist to control environmental emergency situations, where this is practicable.

3 RESPONSIBILITIES

3.1 Accountability

3.1.1 The IPTL is accountable for the completion of this procedure.

3.2 Procedure Management

3.2.1 IPTLs may delegate the management of this procedure to a member(s) of the IPT (e.g. IPT Environmental Focal Point).

3.3 Procedure Completion

3.3.1 The IPT is responsible for ensuring that the procedure is completed. However, completion will most likely be carried out by the project supplier or contractor, or possibly by an advisor. Any suggested operational controls identified or produced as part of this procedure should be agreed with the IPT and agreed by the Environmental Committee.

3.3.2 The procedure will normally be completed by the contractor for the Assessment or Demonstration Stages (if one is appointed) or the equipment supplier or service contractor as project documentation including operating procedures and disposal plans or related information is developed.

4 WHEN

4.1 Initial Application

4.1.1 The initial application of this procedure is likely to be in the Assessment or Demonstration Stages. If these stages have already passed, any arrangements already in place must be reviewed to ensure that environmental risks are still adequately covered. Depending on the nature of the project, operational controls could be required during any stage or phase of the systems operation but may also be required during system testing and trialing and disposal.

4.2 Review

4.2.1 The outputs of this procedure, and operational controls, will require periodic review and revision throughout the lifetime of the project. This is relevant where operational controls have been set early within the project for later life cycle stages. The appropriate timings for such reviews will be determined through following Procedure EMP08 - Continuous Review. Where the EIA Plan proposes interlinked or incremental EIAs then Procedure EMP08 - Continuous Review, should be used to plan the review and revision to operational control(s).

5 REQUIRED INPUTS

a) System Requirement Document (SRD).

b) Environmental Case including outputs from Procedures EM01 – Stakeholders and Standards Identification, EMP02 – Screening and Scoping, EMP03 – Impact Priority Evaluation, EMP05 - Environmental Impact Assessment and Reporting and EMP06 - Environmental Management Plan (Setting Objectives and Targets).

6 REQUIRED OUTPUTS

a) **Form EMP07/F/01** – Environmental Operational Control Index.

OR

Equivalent actions and documentation that ASEG is satisfied achieves the same objective.

7 DESCRIPTION

7.1 Step 1 – Identify where Operational Controls are required

7.1.1 List where operational controls are required, see section 2 of this procedure.

7.2 Step 2 – Index the Operational Controls

7.2.1 Using Guidance Sheet EMP07/G/01 (Operational Control Decision Tree) identify:

a) Whether present or proposed controls already exist and whether these are

adequate from an environmental control perspective or need amendment; or

b) No controls are present or proposed so new controls are required.

7.2.2 An operational control could be one or a combination of the following:

a) A written procedure/work instruction describing how, when and by whom an activity is to be performed, (this would also include the use of signage);

b) A contract or agreement;

c) A physical measure, (e.g. computer or mechanical control);

d) Use of trained personnel.

7.2.3 The type of control must be sufficient to ensure that the activity is adequately completed to bring about the desired result.

7.2.4 Separate operational controls may not be required to manage each Medium Priority and High Priority environmental impact, or those Low Priority impacts that can be easily mitigated, as one control could cover numerous environmental impacts. Similarly, environmental operational controls do not necessarily need to be separate to other controls in position as often, environmental requirements can easily be integrated with other controls which are already set up or are due to be developed (e.g. in operational manuals for equipment systems). This is generally considered to be the most efficient method of producing operational controls, for example environmental controls will most likely be integrated within the following:

a) Standard Operating Procedures (SOPs);

b) Emergency Procedures;

c) Maintenance Procedures;

d) Disposal Procedures.

Note: The above list is not exhaustive.

7.2.5 It is essential for assurance and audit purposes to have a list or index of where the relevant EMS operational controls can be found and therefore **Form EMP07/F/01** - Environmental Operational Control Index, should be completed.

7.3 Step 3 – Check use and adequacy of Operational Controls during trials and testing

7.3.1 The IPT may also have responsibility for completing the following checks during trials and testing of the equipment or service prior to in-service:

a) Check the use and adequacy of the operational controls, and

b) Physically test the adequacy of operational controls which exist to control environmental emergency situations, where this is practicable.

8 RECORDS AND PROJECT DOCUMENTATION

8.1.1 A copy of the information produced by following this procedure should be stored in the Project's Environmental Case. If it would be impractical to store all environmental operational controls in the Environmental Case as well as in the Through Life Management Plan a cross reference document to the relevant controls should be included within the Environmental Case, this being **Form EMP07/F/01** - Environmental Operational Control Index.

9 RECOMMENDED TOOLS AND FORMS

a) **Form EMP07/G/01** – Operational Procedures Decision Tree.

b) **Form EMP07/F/01** – Environmental Operational Control Index.

10 GUIDANCE

10.1 General

10.1.1 General advice on operational control procedures will be found in the EMS annex to JSP418 and also ISO 14001.

10.2 Aligning Safety and Environment

10.2.1 The key alignment opportunity in EMP07 is to ensure wherever possible that Operational Controls for the equipment or service control both safety and environmental impacts.

10.3 Guidance for Different Acquisition Strategies

10.3.1 The objectives for this procedure apply to all acquisition strategies. It is MOD policy that the same standards are met, and that assurance that these standards have been met can be demonstrated for all projects.

10.4 Legacy Systems

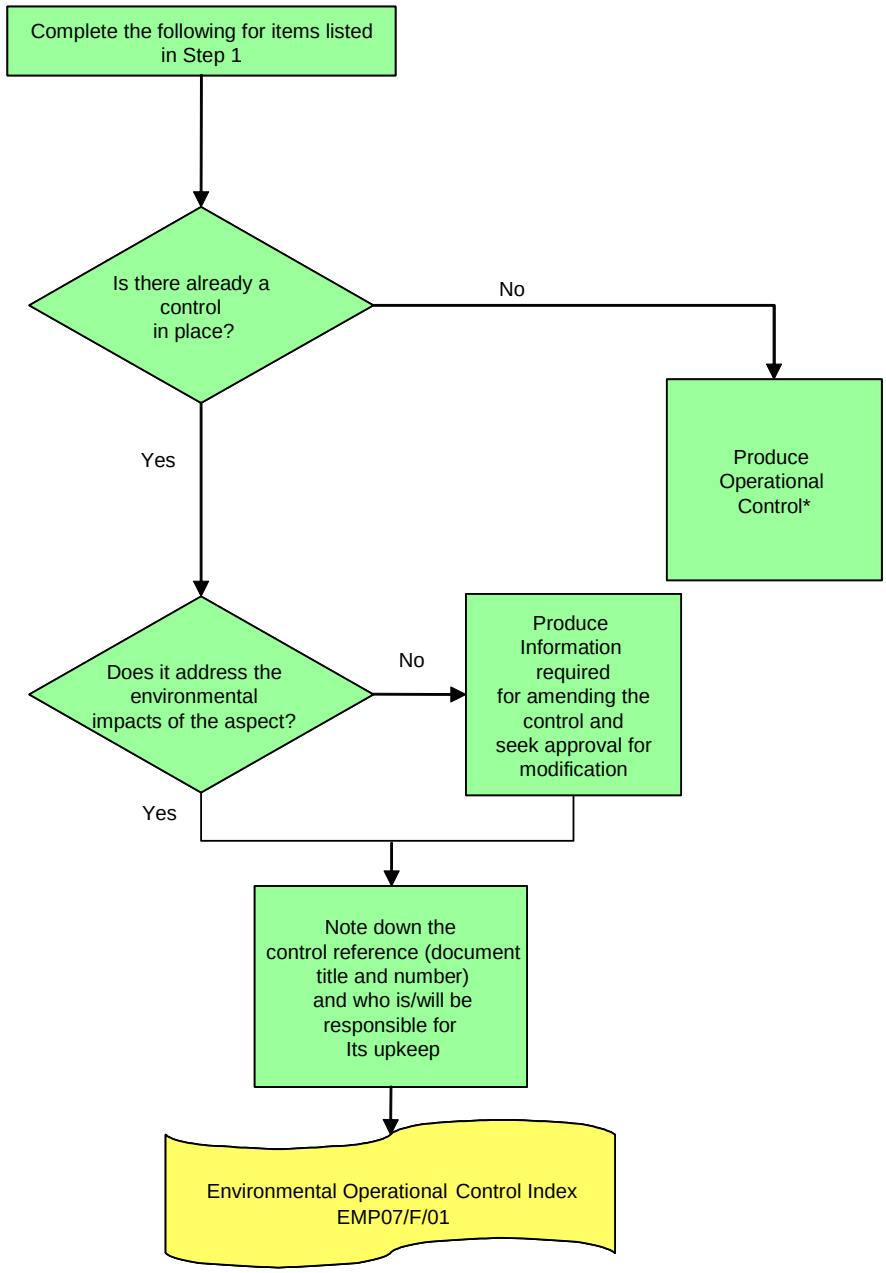
10.4.1 For legacy systems it will be necessary to identify or create operational control procedures where objectives and targets have been identified under Procedure EMP06 - Environmental Management Plan (Setting Objectives and Targets). However, if, because of the legacy nature of the system, any objectives and targets are limited then the associated operational controls are also likely to be limited.

10.5 Warnings and Potential Project Risks

10.5.1 Failures to set operational controls may introduce or increase risks. These risks are likely to relate to unmanaged environmental liabilities and un-discharged legal obligations. It is possible that the consequences of this could be increased cost resulting from delays for bringing the equipment or capability into service, or having to suspend the use of existing equipment. However, consequences might also include limitations to the operational envelopes for equipment and increased cost of remediation or clean-ups.

Form EMP07/F/01 – Environmental Operational Control Index				
Environmental impact(s) to be controlled	**Operational control ref**	**Title of control (and reference if applicable)**	**Person responsible for the control's maintenance**	**Where located**

Guidance Sheet EMP07/G/01 – Operational Control Decision Tree



* Where practical combine EMS control requirements with any other controls which need to be developed for the project (i.e. operating manuals, Health and Safety Procedures).

0 SHOWING CONFORMANCE

0.1 Options

0.1.1 There are four options to demonstrate conformance when applying this system procedure:

a) Follow the defined system procedure using the recommended guidance and tools, including allowed variations and options;

b) Use an equivalent process and tool set generated elsewhere and document evidence of procedural equivalence;

c) Use an equivalent bespoke process and tool set for the project and document evidence of procedural equivalence;

d) Where the procedure is considered to be not relevant, document the basis for this decision.

1 INTRODUCTION

1.1.1 As projects evolve and change, and as new information comes to light, it is necessary to review and modify the outputs produced from these procedures:

EMP01 – Stakeholders and Standards Identification;

EMP02 – Screening and Scoping;

EMP03 – Impact Priority Evaluation;

EMP04 – Environmental Impact Assessment Plan;

EMP05 - Environmental Impact Assessment and Reporting;

EMP06 – Environmental Management Plan (Setting Objectives and Targets);

EMP07 – Operational Controls.

1.1.2 This will ensure that the outputs are kept up to date with overall project and other developments. Reviews can be triggered by a number of factors for example, changes to equipment design or service, a change in a relevant standard, or a change in the customer requirements. A review could also be part of a planned process of the revision of outputs as the project progresses in order to incorporate improved or amended information, or as the result of audit findings.

2 PROCEDURE OBJECTIVES

2.1.1 The main objectives of this procedure are:

a) To initiate the review and possible revision of procedure outputs when changes occur that affect the project or information available;

b) To initiate the review and possible revision of procedure outputs at set intervals;

c) To record the results of the above reviews.

3 RESPONSIBILITIES

3.1 Accountability

3.1.1 The IPTL is accountable for the completion of this procedure.

3.2 Procedure Management

3.2.1 IPTLs may delegate the management of this procedure to a member (IPT Environmental Focal Point) or members of the IPT.

3.3 Procedure Completion

3.3.1 The IPT is responsible for ensuring that the procedure is completed. However, completion will most likely be carried out by the project supplier or contractor, or possibly by an advisor. Any suggested revisions produced as part of this procedure should be agreed with the IPT and endorsed by the Environmental Committee.

4 WHEN

4.1 Initial Application

4.1.1 This procedure will apply throughout the life of a project.

5 REQUIRED INPUTS

a) The 'Common Documents' (ie User Requirement Document (URD) and JSP 418 (UK legislation and MOD policy)

b) Outputs from Procedures EMP01 – EMP07 inclusive.

c) When available, outputs from Procedures:

- AAP01 – System Audit;
- AAP02 – Management Review;
- AAP03 – Non-Conformance and Corrective Action.
- AAP04 – Monitoring and Measurement.

6 REQUIRED OUTPUTS

a. Completed **Form EMP08/F/01** – Continuous Review Record – (plus amended outputs as required).

OR

Equivalent actions and documentation that meets the same objectives and has been approved by ASEG.

7 DESCRIPTION

7.1.1 Most of the outputs from the procedures will require periodic review and possibly modification as the project progresses. When an output (for instance a completed form or report) is produced from following Procedures EMP01 –EMP07, its details should be entered into Form EMP08/F/01 – Continuous Review Record. At this point a date or stage for review of the output should also be entered into Form EMP08/F/01.

7.1.2 Wherever possible periodic reviews of outputs should be organised to coincide with the major stages and hold points of the CADMID cycle. This will increase the likelihood that the most complete and up to date information is available for decisions at the hold points.

7.1.3 Reviews should also be undertaken before major information deliverables are released to stakeholders.

7.1.4 The following list summarises some of the potential triggers for ad hoc reviews of procedure outputs, which could occur at any time in the project's life:

a) Change to relevant project stakeholders;

b) Change to project stakeholders' requirements or concerns;

c) Change to the information available from project stakeholders;

d) Change to planned project activities (in any stage of the project life cycle);

e) Change to relevant environmental standards;

f) Change to equipment or service specification;

g) Change to operation geography or use;

h) Change in project responsibilities;

i) Change in information available on the environmental impacts associated with the project, ie type, frequency or severity of impact;

j) Change in the environmental assessment plan;

k) Change in impact priority evaluation methodology;

l) The occurrence of an environmental incident;

m) Non-achievement of objective and/or target;

n) The identification of a non-conformance.

o) Note that any of the above 'triggers' may also cause another trigger to apply, for example a change in equipment use or operational domain could cause a change in relevant stakeholders.

7.1.5 Most ad-hoc triggers are unlikely to require an immediate and complete review of the EMS and outputs. Therefore, in many cases it will be possible to schedule an ad-hoc review to coincide with one of the planned periodic reviews.

7.1.6 However, there will be a small number of strategic changes and triggers which will cause the IPT to instigate an immediate and thorough review irrespective of the overall review plan. In such cases it is probably wise to bring the planned periodic review forward as opposed to duplicating review effort.

7.1.7 Any significant changes to EMS outputs will require the amendment and reissuing of the relevant output. For instance, if new or improved information becomes available on certain impacts it may be necessary to carry out a new Environmental Impact Assessment, or at least prepare an addendum to the EIA Report produced under Procedure EMP05 - Environmental Impact Assessment and Reporting. Keeping EMP01 forms up to date in respective of stakeholder contact details and a communication plan will help and greatly simplify the reissuing process.

7.1.8 As part of any review the implications of changes have to be followed through the whole EMS. So for instance, a change to the Environmental Feature Matrix is likely to necessitate changes to the Environmental Objective and Target Register which will likely cause changes to the EM Plan.

7.1.9 If a change is identified as required to a procedure output which is also a controlled document then this should be completed and recorded by following SSP03 – Document and Record Control.

8 RECORDS AND PROJECT DOCUMENTATION

8.1.1 This procedure could cause any of the outputs produced from Procedures EMP01-EMP07 to be reviewed and amended:

8.1.2 A copy of the information produced from following this procedure should be stored in the project's Environmental Case.

9 RECOMMENDED FORMS

a) **Form EMP08/F/01** – Continuous Review Record.

10 GUIDANCE

10.1 General

10.1.1 ISO 14001 and the ISO 14000 series of standards generally, are helpful in understanding how to manage continuous environmental improvement through an Environmental Management System. This concept also underlies all quality management system and approaches as well as systematic management approaches to health and safety risks. Therefore general guidance on continuous improvement may also be found in standards dealing with any management system approaches.

10.2 Aligning Safety and Environment

10.2.1 The key alignment opportunity in EMP08 is to undertake reviews of safety and environmental records dealing with common issues at the same time, and to ensure that changes introduced by the review process are assessed for both environmental and safety implications.

10.3 Guidance for Different Acquisition Strategies

10.3.1 The objectives for this procedure apply to all acquisition strategies. It is MOD policy that the same standards are met, and that assurance that these standards have been met can be demonstrated for all projects.

10.4 Legacy Systems

10.4.1 For legacy systems reviews are likely to be required as the system moves towards disposal phase, or if there are other major changes such as modifications, changes to the operating geography or new legal and policy requirements.

10.5 Warnings and Potential Project Risks

10.5.1 If this procedure is not completed in a timely manner there will be an increase in risk that the Environmental Case will not evolve and develop in keeping with equipment or service developments and decisions. If the Environmental Case lags too far behind the development of the equipment or service then there are increased risks of the IPT not being suitably prepared for approvals and permissions within the CADMID approach. It is also possible that any new or changed environmental liabilities brought about by changes in other project work streams may go unrecognised and therefore be uncontrolled. The consequences of this could be increased cost, however it might also include limitations to operational envelopes and delays for bringing the equipment system or capability into service.

Form EMP08/F/01 – Continuous Review Record

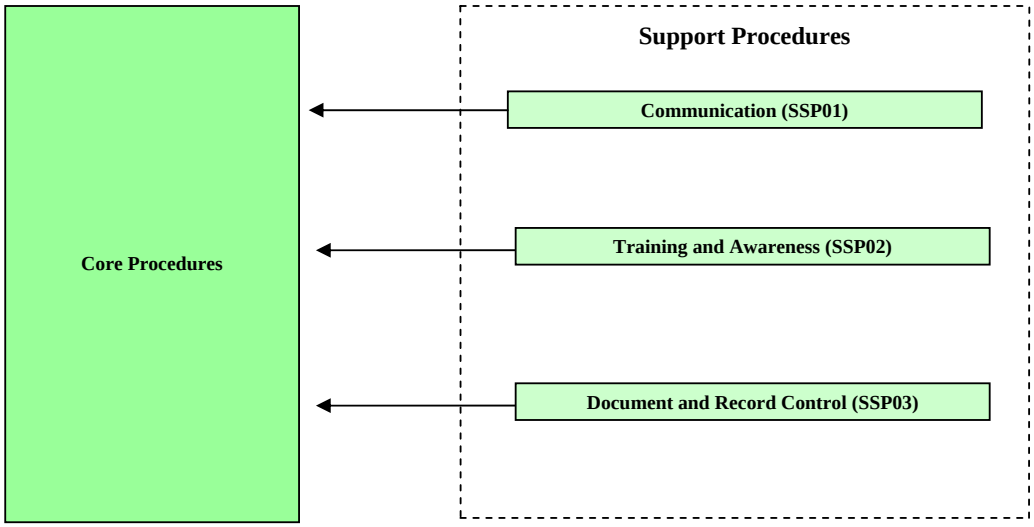
Document reference	Date of Review (Proposed)	Date of Review (Actual)	CADMID Stage	Reason for Review (Summary)	Procedures Reviewed (List)	Outputs Amended (List)	Brief Summary of Changes	Review Signed Off

7. Support Procedures

Table 7.1: POEMS Support Procedures

Number	Procedure Type	Procedure Name
SSP01a	Support Procedures	Communications - IPTs
SSP01b	Support Procedures	Communications - ASEG
SSP02a	Support Procedures	Training and Awareness - IPTs
SSP02b	Support Procedures	Training and Awareness - ASEG
SSP03a	Support Procedures	Document and Record Control - IPTs
SSP03b	Support Procedures	Document and Record Control - ASEG

Figure 7.1: The Support Procedures



7.1 Procedure Structure

7.1.1 For ease of use, the procedures have the same format and structure. The key sections are:

7.2 Procedure Title

7.2.1 The title and reference code for the procedures are as follows:

- EMP for core POEMS procedures;
- SMP for core POSMS procedures;
- SSP for support procedures;
- AAP for assurance and audit procedures.

7.2.2 Note that support and assurance and audit procedures are common to both the POEMS and POSMS.

7.3 Showing Conformance

7.3.1 This explains the three ways of showing conformance with the procedure. This is different to the core procedures which have four ways of showing conformance. The reason for this difference is that it is not acceptable within POSMS or POEMS for the support procedures to be considered 'not relevant'.

7.4 Introduction

7.4.1 This is an overview of the procedure's purpose in the context of the overall management system.

7.5 Procedure Objectives

7.5.1 This section describes what is to be achieved by following and completing the procedures. Normally the section is in the form of a list of the objectives that need to be achieved in order to demonstrate conformance.

7.6 Responsibilities

7.6.1 This section states who will be accountable and responsible for proper completion of the procedure and who will actually carry out the actions within the procedure. Two versions of each support procedure have been produced to reflect the different levels of responsibilities of IPTs and ASEG within POSMS and POEMS.

7.7 When

7.7.1 This section indicates when the procedure is most likely to be followed. For the core procedures this is usually a stage or stages of CADMID. However, for the IPT support procedures, this will usually be when the SMS and EMS are implemented, although the system does not have to be complete for the procedure to apply. For ASEG's support procedures, application will be ongoing from the

introduction of POSMS and POEMS until they are withdrawn from use or replaced.

7.8 Required Inputs

7.8.1 Most of the procedures require reference to be made to the outputs of previous procedures and information from other sources. This section lists the main reference material that will be needed in order to complete the procedure.

7.9 Required Outputs

7.9.1 This lists the procedure's outputs, for example completed forms, compiled information etc. It should be noted, however, that it is acceptable within POEMS for alternative methods to be used to those outlined in the procedures providing this is endorsed by ASEG.

7.10 Records and Project Documentation

7.10.1 This includes advice on where outputs of the procedures should be kept and recorded (usually in the Safety or Environmental Case, Case Reports, or related registers and logs) and where other project documentation may also need to include some or all of the output information.

7.11 Description

7.11.1 This section makes up the bulk of the procedure and describes the steps and stages involved in completing the procedure. It includes advice and guidance on how to complete the procedure and advice on when to use each of the associated forms or tools. It should be remembered that this part of the procedure is guidance and it is not therefore mandatory for an IPT to follow it to the letter where they have made suitable and equivalent alternative arrangements. The key point is to achieve the required objectives, outputs and outcomes, and to ensure that alternative approaches are clearly documented and agreed.

7.12 Recommended Tools and Forms

7.12.1 Many of the procedures include tools or forms to assist IPTs and ASEG to undertake the actions outlined in the procedure or to record the information produced. This section lists the forms that may be useful in completing the procedure. This can sometimes include forms associated with other procedures. Note that the use of the forms is not mandatory (see Required Outputs above) but that any alternative approaches used should be clearly documented and agreed.

7.13 Guidance

7.13.1 This final section provides guidance on other sources of advice and guidance. Also included in this section of the IPT procedures are some general comments on

potential project risk that may arise if the procedure is not completed in an appropriate way or at an appropriate time.

7.14 Procedure Use

7.14.1 Separate procedures have been written for IPTs and ASEG. This is because there are distinct differences between their responsibilities relating to POSMS and POEMS. IPTs are responsible for applying POSMS and POEMS at a project or IPT level whilst ASEG's prime responsibility is to aid IPTs in their implementation role by providing suitable advice and guidance. The procedure numbers either end in 'a' (for IPT procedures) or 'b' (for ASEG).

7.14.2 For those procedures that apply to IPTs it is envisaged that the completion of the procedure will be carried out by a member of the IPT although this may be delegated to a third party if desired. The ASEG procedures should be completed by ASEG although some activities may be delegated to advisors or contractors eg training delivery.

7.14.3 All support procedures provide recommended guidance and/or forms to help the user to produce the desired output(s). The use of this guidance is not mandatory, as long as suitable alternative methodologies are used which achieve the desired objectives, as defined in the procedure and that are deemed by ASEG to be equivalent. Therefore three options exist when following the procedures, to demonstrate conformance:

- Follow the defined system procedure using the recommended guidance and tools, including allowed variations and options.
- Use an equivalent process and tool set generated elsewhere and document evidence of procedural equivalence.
- Use an equivalent bespoke process and tool set for the project and document evidence of procedural equivalence.

7.14.4 This is slightly different from the core procedures which had a fourth option to cover situations where the procedure was not considered relevant. However, the support procedures will always be relevant and therefore this option has been removed.

7.14.5 Table 7.2 which can be found overleaf shows a summary of the responsibilities, timing, inputs and outputs associated with each support procedure.

7.14.6 The support procedures are designed to meet the requirements of the relevant clauses of both ISO 14001 and OHSAS 18001 (See Table 2.3 Chapter 2) and follow the same structure as the core procedures (see Chapter 6).

7.14.7 If a project management system or procedures (ISO 9000 or otherwise) already exists within the IPT or ASEG then this may be used as an alternative to the support procedures so long as ASEG is satisfied it meets the same objectives.

Table 7.2: Summary of support procedures

Procedure	When *	Input	Output **	Responsibility ***
SSP01a – Communication - IPTs	Concept	• **EMP01/F/01** – Register of Stakeholder Requirements and Information • Requests for information (external or internal) • Any existing communication arrangements within the IPT	Documented arrangements for: • Managing any planned internal or external communications on the IPT's SMS or EMS (**Form SSP01a/F/01** – Communications Plan). • Responding to internal and external queries on project related safety and environmental issues; • Recording inward and outward communications (**Form SSP01a/F/02** – Communications Log); • Recording the IPT's decision on whether or not to report publicly on safety and environmental project information.	IPTs
SSP01b – Communication - ASEG	Continuous	• Any existing communication arrangements within ASEG	Documented arrangements for: • Managing planned internal and external communications, about the POEMS and POSMS (**Form SSP01b/F/01** – Communications Plan); • Responding to POEMS and POSMS related queries received from both internal and external sources; • Recording inward and outward communications (**Form SSP01b/F/02 –** Communications Log).	ASEG
SSP02a – Training and Awareness – IPTs	Concept	• **EMP01/F/03** - Project Environmental Responsibilities Form • Project Safety Management Plan (from SMP03). • **AAP01a/G/01 –** Auditor Competency Interim Guidance; • System Safety and Environmental Functional	• **SSP02a/F/01** - Training Needs Matrix; • **SSP02a/F/02 –** General Awareness Training Declaration Form.	IPTs

		Competences; • Any existing management arrangements for training IPT staff; • Training records of IPT staff (and contractors/suppliers where applicable).		
SSP02b – Training and Awareness – ASEG	Continuous	• Any existing arrangements or agreements relating to ASEG's role in providing guidance to IPTs. • Existing arrangements for training of ASEG staff. • Any existing training records for ASEG staff.	• **SSP02b/F/01 -** Training Needs Matrix;	ASEG
SSP03a – Document and Record Control - IPTs	Concept	• Documents – Any information produced as outputs of POEMS and POSMS in any media eg paper, electronic, photographic. • Records – Any document that states results achieved or provides evidence of activities performed (eg monitoring results, audit record etc). • Any existing document or record control arrangements within the IPT.	• Appropriately controlled documents (**Form SSP03a/F/01** – Document Log); • Appropriately managed records (**Form SSP03a/F/02** – Record Log); • **SSP03a/F/03 -** Document Change Request Form.	IPTs
SSP03b – Document and Record Control – ASEG	Continuous	• Documents – All POSMS and POEMS manuals, procedures, tools and guidance. • Records – All ASEG records relating to POSMS and POEMS eg summary audit reports, ASEG staff training records. • Any requests received by ASEG for changes to POSMS or POEMS documents **(Form SSP03a/F/03** – Document Change Request Form). • Any existing document or record control arrangements within ASEG.	• Appropriately controlled documents (**Form SSP03b/F/01** – Document Log) • Appropriately managed records (**Form SSP03b/F/02** – Record Log)	ASEG

* The outputs from all the procedures will require periodic review and update throughout the life cycle of the project.
** Or equivalent actions and documentation that ASEG are satisfied achieve the same objectives.
*** The IPT or ASEG is responsible for managing the procedure completion. This column relates to who is responsible for completing the procedure.

0 SHOWING CONFORMANCE

0.1 Options

0.1.1 There are three options to demonstrate conformance when applying this system support procedure:

a. Follow the defined system support procedure using the recommended guidance and tools, including allowed variations and options.

b. Use an equivalent process and tool set generated elsewhere and document evidence of procedural equivalence.

c. Use an equivalent bespoke process and tool set for the project and document evidence of procedural equivalence.

1 INTRODUCTION

1.1.1 Effective communication of the principles, goals and outputs of the IPT's SMS and EMS will be essential to the success of managing safety and environmental risks. It is important to ensure that relevant responsibilities are understood and that actions are carried out in a coordinated and efficient way.

1.1.2 Information relating to individual projects needs to be communicated within the IPT and between IPTs as well as other parts of MOD.

1.1.3 External communication ie outside of the MOD, may also be required. This can include documenting and responding to safety and environmental information requested by interested parties which may be covered by the Freedom of Information Act or the Environmental Information Regulations.

1.1.4 External communication may also include liaising with public authorities on emergency planning and other relevant issues.

1.1.5 An IPT may also wish to proactively communicate on safety or environmental issues to a wider audience eg via a project or case file website.

2 PROCEDURE OBJECTIVES

2.1.1 To establish, implement and maintain arrangements to:

- Proactively communicate environment and safety information to internal stakeholders.
- Respond to internal and external project related safety and environmental queries;
- Record inward and outward communications on safety and environmental issues, including those covered by the Freedom of Information Act or the Environmental Information Regulations;
- Record the IPT's decision on whether or not to report publicly on safety and environmental project information.

3 RESPONSIBILITIES

3.1 Accountability

3.1.1 The IPTL is accountable for the completion of this procedure.

3.2 Procedure Management

3.2.1 IPTLs may delegate the management of this procedure eg to the IPT's Environmental and Safety Focal Point(s).

3.3 Procedure Completion

3.3.1 Safety and Environmental Focal Point(s) are likely to be responsible for the completion of this procedure although this could be delegated to a third party if desired.

4 WHEN

4.1.1 For new projects this procedure should be undertaken as early as possible in the Concept Stage, prior to Initial Gate approval, and outputs maintained throughout the project.

5 REQUIRED INPUTS

a. **EMP01/F/01** – Register of Stakeholder Requirements and Information.

b. Requests for information whether from internal or external sources.

c. Any existing communications arrangements within the IPT.

6 REQUIRED OUTPUTS

6.1 Documented arrangements for:

a. Managing any planned internal or external communications on the IPT's SMS or EMS (**Form SSP01a/F/01** – Communications Plan).

b. Responding to internal and external queries on project related safety and environmental issues;

c. Recording inward and outward communications (**Form SSP01a/F/02** – Communications Log);

d. Recording the IPT's decision on whether or not to report publicly on safety and environmental project information.

OR

Equivalent actions and documentation that ASEG is satisfied achieve the same objectives.

7 DESCRIPTION

Introduction

7.1.1 For the majority of projects a Communication Plan will be needed that identifies the need, timing, purpose and appropriate method(s) for communication with project stakeholders on safety and environmental issues. This plan can cover both safety and environmental communications or the IPT can develop separate plans for these issues.

7.2 **Establish arrangements for managing planned communication**

7.2.1 In order to manage planned communications the IPT will need to identify:

- Person or group(s) that will receive communications;
- The subject matter or issues on which to communicate;
- The frequency of the communications;
- The media to be used; and
- Person responsible for ensuring it happens.

7.2.2 **Form SSP01a/F/01 –** Communications Plan can be used to record this information. Section 10 of this procedure provides guidance on communications media and the type

of information that an IPT may need to communicate.

7.2.3 The IPT should also consider the benefit of proactively communicating safety and environmental project information externally to the IPT and document its decision. If the IPT decides this is appropriate then the relevant details should be added to **Form SSP01a/F/01** - Communication Plan.

7.2.4 Note that MOD policy encourages regular contact with regulatory authorities, local authorities, and where appropriate, pressure groups and Non Governmental Organisations (NGOs).

7.3 **Establish arrangements for managing unplanned communications**

7.3.1 In addition to the communications that are planned throughout the project there may be a need for additional communications in response to requests for information, complaints or enquiries either from internal or external sources. The IPT needs to ensure that such unplanned communications are properly managed.

7.3.2 The arrangements for ensuring this is carried out should ensure that all external requests for information, including those received from the press or TV, are replied to in accordance with existing MOD FOI and EIR policies ie that IPTs do not respond to requests for safety or environmental information without consulting and agreeing subsequent communications with the relevant FOI desk.

7.3.3 For requests that require a less than straightforward response the IPT may want to consult the Safety and Environmental Committee, ASEG or other advisors before responding in full.

7.3.4 As some requests for information may be received by third parties working on behalf of the IPT the IPT should ensure that such parties are aware of the MOD requirements for responses under FOI and EIR.

7.4 **Establish arrangements for recording inward and outward communications**

7.4.1 The IPT should establish a log for recording:

- External requests for safety or environmental information and any subsequent responses (to show compliance with the Freedom of Information Act or the Environmental Information Regulations);
- Communications to and from public or regulatory authorities; and
- Any other internal or external environmental and safety communications that the IPT considers should be formally recorded.

7.4.2 **Form SSP01a/F/02** – Communications Log can be used as a means of recording such communications.

7.4.3 Copies of logged communications should be kept by the IPT and their location recorded in the Communications Log.

8 RECORDS AND PROJECT DOCUMENTATION

8.1.1 A copy of the information produced by following this procedure should be stored in the Project Environmental Case.

9 RECOMMENDED TOOLS AND FORMS

a. **Form SSP01a/F/01** – Communications Plan

b. **Form SSP01a/F/02** – Communications Log

10 GUIDANCE

10.1 General

10.1.1 General advice on project communication can be found in the ISO14001 and ISO14004 Standard, OHSAS 18001 and various sections of JSP418. The BS ISO14063 Environmental Management – Environmental Communication – Guidelines and Examples is also a useful reference.

10.1.2 If an existing project management system or procedures (eg ISO 9001) covers communication activities, the IPT can decide to follow these instead of this procedure so long as ASEG is satisfied that they meet the same objectives.

10.1.3 Communications media that an IPT may use to communicate on safety and environmental issues include:

- Notice boards;
- Direct contact;
- Meetings;
- Telephone;
- Emails;
- Memos;
- Intranet or internet;
- IPT newsletter

10.1.4 The type and extent of communications required will vary between projects and IPTs and will probably include some or all of the following:

- MOD's Safety and Environmental Policies;

- Project environmental and safety policies (where these exist);
- Project-related safety hazards and risks and environmental aspects and impacts;
- Project related environmental and safety legal and non-legal standards;
- Planned/current improvements or mitigation measures;
- Information on project and equipment system environmental and safety performance;
- Results of audits; and
- Changes in safety and environmental management system documentation or requirements;

10.1.5 The need to communicate with public and civil authorities on emergency planning and other relevant issues should also be considered. For example, if the equipment is to be based at a specific location and is likely to produce noise emissions that could affect nearby residences, the relevant authorities should be informed. Similarly, there may be a need to produce and communicate an emergency response plan if the equipment may give rise to significant safety or environmental hazards at a specific location.

10.1.6 Additional advice and guidance on the MOD's response to the Freedom of Information Act is available from www.foi@mod.uk

10.2 **Warnings and Potential Project Risks**

10.2.1 Communication is an essential part of any Safety or Environmental Management System. If lines of communication are not agreed and documented from the commencement of the project there may be delays and misunderstandings later in the project.

10.2.2 Logging and tracking of communications and related responses are necessary to ensure that appropriate information is released or provided to relevant parties in a timely manner, and that significant communications are appropriately authorised.

Form SSP01a/F/01 – Communications Plan							
Project Title:							
IPT:							
Completed by:		**Date:**					
Reviewed by:		**Date:**					
Ref to Stakeholder Register(s) (EMP01/F/01 and SMP01/F/01)	**Stakeholder**	**Issue/information to be communicated**	**Frequency of communication**	**Date for communication**	**Media to be used**	**Person responsible**	**Security issues**

Form SSP01a/F/02 – Communications Log

Date	To	From	Method of communication (letter, fax, email etc)	Subject(s) covered	Person who received enquiry	Person who responded to enquiry	Response date	Documents stored at:

0 SHOWING CONFORMANCE

0.1 Options

0.1.1 There are three options to demonstrate conformance when applying this system support procedure:

a. Follow the defined system support procedure using the recommended guidance and tools, including allowed variations and options.

b. Use an equivalent process and tool set generated elsewhere and document evidence of procedural equivalence.

c. Use an equivalent bespoke process and tool set for the project and document evidence of procedural equivalence.

1 INTRODUCTION

1.1.1 Effective communication of the principles, goals and requirements of the POSMS and POEMS will be essential to their successful implementation by IPTs.

1.1.2 There is also a need for information directly or indirectly relating to POSMS and POEMS manuals to be communicated throughout the Acquisition Community to ensure that IPTs and other groups know about the latest developments, sources of further guidance, training courses, best practice etc.

1.1.3 External communication i.e. outside of the MOD, may also be required. This can include documenting and responding to safety and environmental relevant information requested by interested parties which may be covered by the Freedom of Information Act or the Environmental Information Regulations.

2 PROCEDURE OBJECTIVES

2.1.1 To establish, implement and maintain arrangements to:

a. Ensure that IPTs and any third parties know where they can access the latest versions of POSMS and POEMS;

b. Proactively communicate on issues directly or indirectly related to POEMS and POSMS to IPTs and relevant stakeholders;

c. Respond to POEMS and POSMS related queries received from IPTs and other sources; and

d. Record inward and outward communications on safety and environmental issues, including those covered by the Freedom of Information Act or the Environmental Information Regulations.

3 RESPONSIBILITIES

3.1 Accountability

3.1.1 Overall responsibility for ensuring this procedure is carried out lies with ASEG.

3.2 Procedure Management

3.2.1 ASEG will be responsible for the management of this procedure.

3.3 Procedure Completion

3.3.1 ASEG will be responsible for the completion of this procedure.

4 WHEN

4.1 The applicability of this procedure is ongoing from the introduction of the POSMS and POEMS.

5 REQUIRED INPUTS

a. Any existing communications arrangements within ASEG.

6 REQUIRED OUTPUTS

6.1 Documented arrangements for:

a. Managing planned internal and external communications, about the POEMS and POSMS (**Form SSP01b/F/01** – Communications Plan);

b. Responding to POEMS and POSMS related queries received from both internal and external sources;

c. Recording inward and outward communications (**Form SSP01b/F/02** – Communications Log);

OR

Equivalent actions and documentation that ASEG is satisfied achieve the same objectives.

7 DESCRIPTION

7.1 Planned communications with IPTs and other relevant stakeholders

7.1.1 ASEG needs to ensure that the latest versions of POSMS and POEMS (the manuals, procedures, tools and guidance) are available to all IPTs and any other relevant stakeholders. There may also be a need for communications on related issues such as:

- Any revisions or modification to POSMS and/or POEMS;
- POSMS and POEMS awareness material (eg Green and White Book)
- Information on relevant training courses;
- Best practice guidance for implementing POSMS and POEMS;
- Availability of guidance for implementing POSMS and POEMS.

7.1.2 In order to manage this process ASEG should identify:

- Person or group(s) that will receive communications;
- The subject matter or issues on which to communicate;
- The frequency of the communications;
- The media to be used; and
- Person responsible for ensuring it happens.

7.1.3 **Form SSP01b/F/01** – Communications Plan can be used to record this information.

7.2 **Establish arrangements for system for managing unplanned communications**

7.2.1 In addition to planned communications there may be a need for additional communications in response to requests for information, complaints or enquiries either from internal or external sources. ASEG needs to ensure that such unplanned communications are properly managed.

7.2.2 The arrangements for ensuring this is carried out should ensure that all external requests for information, including those received from the press or TV, are replied to in accordance with existing MOD FOI and EIR policies ie that ASEG and IPTs do not respond to requests for safety or environmental information without first consulting the relevant FOI desk.

7.2.3 As some requests for information may be received by third parties working on behalf of ASEG eg contractors and consultants, ASEG should ensure that such parties are aware of the MOD requirements for responses under FOI and EIR.

7.3 **Establish arrangements for recording inward and outward communications**

7.3.1 ASEG should establish a log for recording:

- External requests for safety or environmental information and any subsequent responses (to show compliance with the Freedom of Information Act or the Environmental Information Regulations);
- Internal (ie within MOD) communications relating directly or indirectly to POSMS and POEMS eg reissue of manuals.
- Any other environmental and safety communications that the IPT considers should be formally recorded.

7.3.2 **Form SSP01b/F/02 –** Communications Log can be used as a means of recording such communications.

7.3.3 Copies of logged communications should be kept by the IPT and their location recorded in the Communications Log.

8 RECORDS AND PROJECT DOCUMENTATION

8.1.1 ASEG should ensure that any records and documents produced from following this procedure are stored and maintained.

9 RECOMMENDED TOOLS AND FORMS

a. **Form SSP01b/F/01** – Communications Plan

b. **Form SSP01b/F/02** – Communications Log

10 GUIDANCE

10.1 General

10.1.1 General advice on project communication can be found in the ISO 14001 and ISO 14004 Standard, OHSAS 18001 and various sections of JSP418. The BS ISO14063 Environmental Management – Environmental Communication – Guidelines and Examples is also a useful reference.

10.1.2 If ASEG already have communications policies, plans or logs then these may be used as an alternative to this procedure so long as ASEG deems them equivalent ie that they meet the same objectives as this procedure.

10.1.3 It should be noted that MOD policy encourages regular contact with regulatory authorities, local authorities, and where appropriate, pressure groups and Non Governmental Organisations (NGOs). ASEG will therefore consider communicating the safety and environmental management work being undertaken in DE&S more widely and include this within its communication system where relevant.

10.2 Warnings and Potential Project Risks

10.2.1 Communication is an essential part of any Safety or Environmental Management System. If lines of communication are not agreed and documented from the commencement of the project there may be delays and misunderstandings later in the project.

10.2.2 Logging and tracking of communications and related responses are necessary to ensure that appropriate information is released or provided to relevant parties in a timely manner, and that significant communications are appropriately authorised.

Form SSP01b/F/01 – Communications Plan							
Completed by:		**Date:**					
Reviewed by:		**Date:**					
Ref to Stakeholder Register(s) (EMP01/F/01 and SMP01/F/01)	**Stakeholder**	**Issue/information to be communicated**	**Frequency of communication**	**Date for communication**	**Media to be used**	**Person responsible**	**Security issues**

Form SSP01b/F/02 – Communications Log								
Date	**To**	**From**	**Method of communication (letter, fax, email etc)**	**Subject(s) covered**	**Person who received enquiry**	**Person who responded to enquiry**	**Response date**	**Documents stored at:**

0 SHOWING CONFORMANCE

0.1 Options

0.1.1 There are three options to demonstrate conformance when applying this system support procedure:

a. Follow the defined system support procedure using the recommended guidance and tools, including allowed variations and options.

b. Use an equivalent process and tool set generated elsewhere and document evidence of procedural equivalence.

c. Use an equivalent bespoke process and tool set for the project and document evidence of procedural equivalence.

1 INTRODUCTION

1.1.1 Effective training and awareness of POSMS and POEMS will be essential to success in managing safety and environmental risks. It is important to ensure that staff are aware of their relevant responsibilities, have the appropriate level of competence and appreciate any impacts potentially caused by the project(s). They must also be aware of how their work may affect safety and environmental risk and the consequences of departure from procedural or operational requirements.

1.1.2 Training will be required at several levels, including:

- General awareness training for all staff whose work may be affected either directly or indirectly by the IPT's SMS and EMS.
- Safety and environment management system training is required for those with direct responsibility for POEMS and POSMS implementation and maintenance;
- Auditor training will be required for individuals involved in auditing the SMS and EMS;
- Other training may be required to ensure project specific environment and safety roles and responsibilities are carried out in accordance with the IPTs SMS and EMS;

1.1.3 The training requirements outlined above should also apply to any contractors or subcontractors where their work may affect safety or environmental management or where they have responsibilities within the SMS and/or EMS.

2 PROCEDURE OBJECTIVES

2.1.1 To ensure there are documented arrangements for:

a. Identifying the safety and environmental competency requirements of project staff.

b. Assessing project staff competencies against those requirements in order to identify the need for further training;

c. Ensuring training needs are met through training delivery;

d. Evaluating training effectiveness; and

e. Maintaining records of the above.

3 RESPONSIBILITIES

3.1 Accountability

3.1.1 Overall responsibility for ensuring this procedure is carried out lies with the IPTL for training relating within the IPT.

3.2 Procedure Management

3.2.1 The IPTL is responsible for the management of this procedure although this may be delegated to a member or members of the IPT. In most cases this will be the Safety and Environment Focal Point.

3.3 Procedure Completion

3.3.1 The IPTL is responsible for the completion of this procedure although this may be delegated to a member or members of the IPT. In most cases this will be the Safety and Environment Focal Point.

4 WHEN

4.1.1 The applicability of this procedure is ongoing from the introduction of the POSMS and POEMS to the end of the project. It also applies when new staff join the IPT or existing staff change roles within the IPT.

5 REQUIRED INPUTS

a. **EMP01/F/03** - Project Environmental Responsibilities Form.

b. Project Safety Management Plan (from SMP03).

c. **AAP01a/G/01** – Auditor Competency Interim Guidance;

d. System Safety and Environmental Functional Competences;

e. Any existing management arrangements for training IPT staff;

f. Training records of IPT staff (and contractors/suppliers where applicable);

6 REQUIRED OUTPUTS

a. **SSP02a/F/01** - Training Needs Matrix;

b. **SSP02a/F/02** – General Awareness Training Declaration Form.

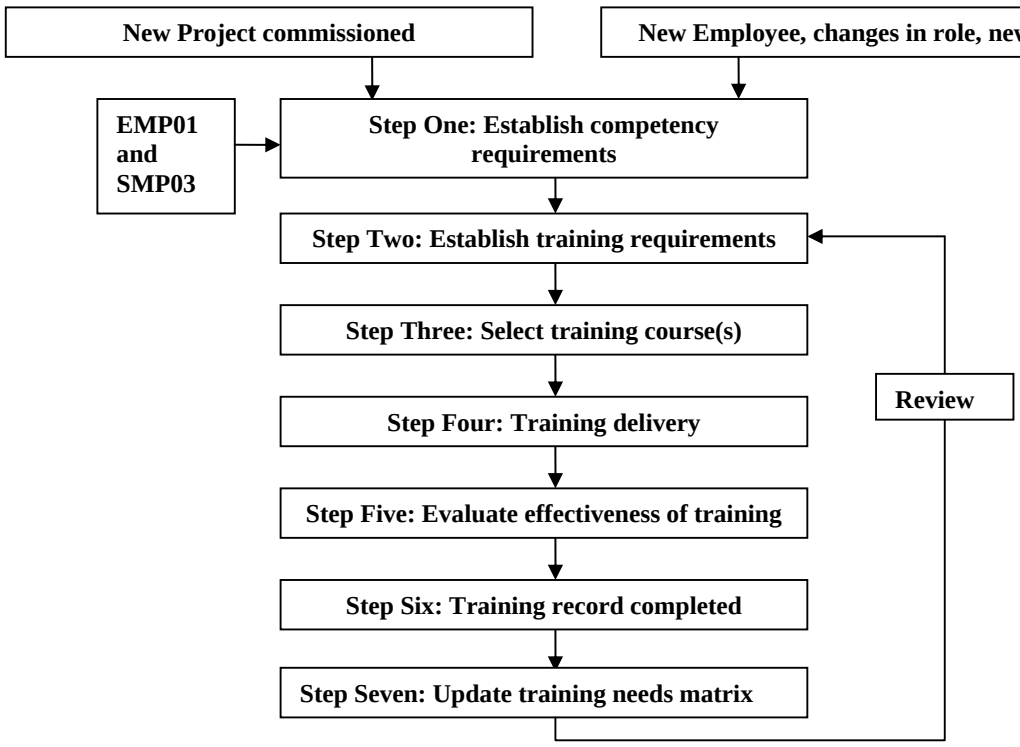
OR

Equivalent actions and documentation that ASEG is satisfied achieve the same objectives.

7 DESCRIPTION

7.1 Introduction

7.1.1 The diagram below shows the steps described in this section.



7.1.2 Training is a requirement of any safety and environmental management system and is vital to their successful implementation.

7.2 Step One: Establish competency requirements

7.2.1 Before any individual training needs are assessed the IPT needs to match competencies to the various roles and responsibilities within the SMS and EMS. EMS roles and responsibilities should have been recorded in **Form EMP01/F/03** - Project Environmental Responsibilities Form and SMS in the Project Safety Management Plan (from SMP03).

7.2.2 To identify safety competencies the IPT should refer to the Acquisition Functional Competency – System Safety 1 (AFC-SysSaf1) available from http://defenceintranet.diiweb.r.mil.uk/NR/rdonlyres/6D5AD97F-191A-4662-8D2E-7064626A906F/0/SystemSafetyNov05.doc. To identify environmental competencies the IPT should refer to the System Environmental Functional Competences, available from http://defenceintranet.diiweb.r.mil.uk/NR/rdonlyres/DB34105C-77F6-43E6-B4FE-73888CEAB104/0/SystemEnvironmentalFC.doc. At the time of writing there were no equivalent documents for auditor competencies, therefore, as an interim measure AAP01/G/01 – Auditor Compentency Interim Guidance can be used.

7.3 Step Two: Establish training requirements

7.3.1 Once the roles and responsibilities within the SMS and EMS have been matched to the appropriate competency area and, where applicable, the level the IPT needs to compare these with the current competency of the staff members fulfilling those roles. When assessing an individual's competency, previous training or experience should be considered. This can include work experience and on-the-job training. Where the staff member does not meet the competency level required for their role a training need is identified.

7.3.2 **Form SSP02a/F/01** – Training Needs Matrix can be used to record required competencies and actual competency for staff members, thereby showing any training needs. The IPT can record safety and environmental training needs within the same matrix or separately as desired.

7.3.3 In addition to identifying competency 'areas' the matrix can be used to show the competency 'level' required by inserting the level number (taken from the competency guidance documents) in the appropriate box. It should be noted however, that not all competency areas have levels eg general awareness training.

Step Three: Select Training Course(s)

7.3.4 Once training needs have been identified, the IPT needs to find appropriate training courses to bring individual's competency up to the required level. For general awareness the IPT may decide to use its own staff to deliver training but the majority of training will be delivered by external parties eg RAF Halton and the Royal Military College of Science and Defence Academy of the UK, Shrivenham. A register of courses recognised as addressing core competencies should be available from ASEG.

7.3.5 In order to match an individual's needs with the training, it is important to find out when and where courses are being held in addition to their content. IPTs should note that courses can be delivered via software packages in addition to more traditional methods.

7.4 **Step Four: Training delivery**

7.4.1 Training delivery can take place once the training package has been selected and agreed with the individual concerned.

7.5 **Step Five: Evaluate training effectiveness**

7.5.1 On completion of the training its effectiveness should be evaluated. For general awareness training this could be via a simple questionnaire or brief interview with the individual to establish whether awareness has improved. For more specialised training the IPT may confirm effectiveness if:

- The training was delivered via an accredited or recognised course; or
- The trainee successfully passed the end of course assessment or test (where

applicable).

7.6 **Step Six: Complete training record**

7.6.1 For general awareness training the individual should use Form **SSP02a/F/02 –** General Awareness Training Declaration Form to confirm to the IPT that the training has been delivered. These forms should be stored by the IPT for future reference. For more formal courses, records of attendance may be used to confirm delivery. Once confirmed the individual's training record should be updated.

7.7 **Step Seven: Update training needs matrix**

7.7.1 The training needs matrix **(Form SSP02a/F/01)** should be updated to show that training has been completed.

8 RECORDS AND PROJECT DOCUMENTATION

8.1.1 Where relevant, the outputs from this procedure should feed into the following:

a. Individual training records.

8.1.2 A copy of the Training Needs Matrix (**Form SSP02a/F/01**) produced by following this procedure should be stored in the Project Environmental Case.

9 RECOMMENDED TOOLS AND FORMS

a. **SSP02a/F/01** - Training Needs Matrix;

b. **SSP02a/F/02** - General Awareness Training Declaration Form.

10 GUIDANCE

10.1 General

10.1.1 General advice on competence, awareness and training can be found in ISO 14001 Standard, OHSAS 18001 and various sections of JSP418.

10.1.2 If a project management system (ISO 9000 or otherwise) is already in place for the project which covers training activities, the IPT can use these in place of this procedure so long as ASEG is satisfied they meet the same objectives.

10.1.3 Where there is no formalised project management system or no pre-existing arrangements for competence, awareness and training, then the IPT should follow this procedure to manage training arrangements.

10.2 **Training on POSMS and POEMS systems General Awareness Training**

10.2.1 All staff whose work may affect the safety or environmental impacts of the equipment or have roles or responsibilities within POSMS and POEMS, including contractors and suppliers, should receive general awareness training.

10.2.2 General awareness training should include:

a. An introduction to safety and environmental issues.

b. An introduction to POSMS and POEMS and the IPT's SMS and EMS.

c. The importance of conformity with POSMS and POEMS requirements;

d. Any safety and environment requirements that affect staff's day to day work;

e. The priority environmental impacts and safety risks associated with their work;

f. Their roles and responsibilities in achieving conformity;

g. Applicable environmental and safety legal and non legal requirements;

h. Improvement and mitigation measures (planned or current);

i. Location of relevant documentation;

j. How to report accidents and incidents;

k. Requirements of the MOD Environmental Policy;

l. Project safety and environment policy (where it exists);

m. Points of contact within the IPT for safety and environmental issues.

10.2.3 The Green Book and White Book may be used for raising general awareness.

10.3 **Internal Auditor Training**

10.3.1 **Form AAP01a/G/01** outlines three competency levels for system auditing as follows:

- Lead Auditor.
- Auditor.
- Aspirant Auditor.

10.3.2 Internal auditor training should be delivered by staff at Lead Auditor level that have experience of auditing SMSs and EMSs.

10.4 **POEMS and POSMS Implementation and Operation Training**

10.4.1 This training will be required by any staff members (including contractors and

suppliers) who have roles or responsibilities within the IPT's SMS and EMS.

10.5 **Other training requirements**

10.5.1 Other safety and environment training may be required in the operation of the IPT's Safety and Environment Management System(s), for example specialised safety training for OME projects.

Form SSP02a/F/01 – Training Needs Matrix

Name	Position	Role or responsibility within POEMS	POEMS and POSMS Awareness		Auditor skills		EMS Implementation and Management		SMS Implementation and Management		Other E.g. specific technical knowledge	
			Required	Actual	Required	Actual	Required	Actual	Required	Actual	Required	Actual

SSP02a/F/02 – General Awareness Training Declaration Form	
Name:	
Responsibilities:	
Project:	
Date of Training:	
I confirm that I have received and understood the General Awareness Training for POEMS and POSMS	.....*Signature*
Comments	

Name:	
Responsibilities:	
Project:	
Date of Training:	
I confirm that I have received and understood the General Awareness Training for POEMS and POSMS	.....*Signature*
Comments	

0 SHOWING CONFORMANCE

0.1 Options

0.1.1 There are three options to demonstrate conformance when applying this system support procedure:

a. Follow the defined system support procedure using the recommended guidance and tools, including allowed variations and options.

b. Use an equivalent process and tool set generated elsewhere and document evidence of procedural equivalence.

c. Use an equivalent bespoke process and tool set for the project and document evidence of procedural equivalence.

1 INTRODUCTION

1.1 Assisting IPTs

1.1.1 ASEG has two main responsibilities relating to assisting IPTs:

- To make available to IPT staff, a register of appropriate training courses for safety and environmental competence (see para 10.1.4); and
- To develop and circulate guidance on safety and environmental issues and POSMS and POEMS implementation.

1.2 ASEG Training

1.2.1 ASEG staff may be called upon by IPTs to provide advice and guidance on how to implement POSMS and POEMS. In some circumstances they may be called upon to develop training materials on POSMS and POEMS and may be required to perform auditing roles. It is therefore important that ASEG staff have a thorough knowledge of both systems, practical knowledge on how they can be implemented at an IPT or project level and how to perform audits.

1.2.2 Within ASEG there will be a need for the following competencies:

- In-depth knowledge of POSMS and POEMS;
- Advanced knowledge of environmental and safety issues;
- Auditing skills.

2 PROCEDURE OBJECTIVES

2.1.1 The main objectives of this procedure are for ASEG to:

a. Establish arrangements for providing training guidance to IPT staff on safety and environmental issues and implementation of POSMS and POEMS.

b. Establish documented arrangements within ASEG for:

- Identifying the safety and environmental competency requirements of ASEG staff;
- Assessing staff competencies against those requirements in order to identify the need for further training;
- Ensuring training needs are met through training delivery;
- Evaluating training effectiveness; and
- Maintaining records of the above.

3 RESPONSIBILITIES

3.1 Accountability

3.1.1 ASEG is accountable for the completion of this procedure.

3.2 Procedure Management

3.2.1 ASEG is responsible for the management of this procedure although this may be delegated to a member or members of ASEG.

3.3 Procedure Completion

3.3.1 ASEG is responsible for the completion of this procedure although this may be delegated to a member or members of ASEG.

4 WHEN

4.1.1 The applicability of this procedure is ongoing from the introduction of the POSMS and POEMS.

5 REQUIRED INPUTS

a. Any existing arrangements or agreements relating to ASEG's role in providing guidance to IPTs.

b. Existing arrangements for training of ASEG staff.

c. Any existing training records for ASEG staff.

6 REQUIRED OUTPUTS

a. **SSP02b/F/01** - Training Needs Matrix;

OR

Equivalent actions and documentation that ASEG is satisfied achieve the same objectives.

7 DESCRIPTION

Assisting IPTs

7.1 Step One: Develop and maintain a register of training courses

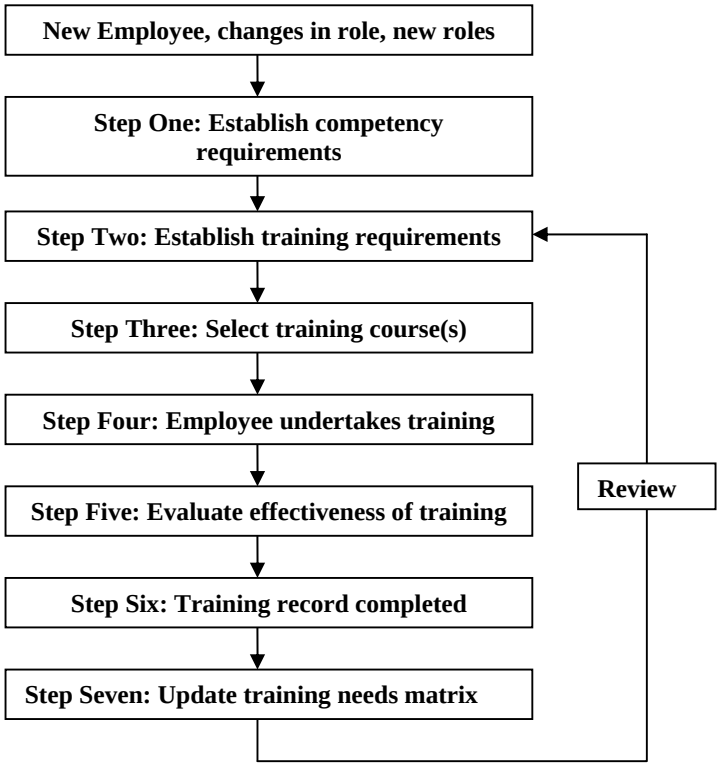
7.1.1 In order for IPTs to select suitable training courses to address the training needs of their staff they will need access to a list or register of safety and environmental courses. This register should include details of the training body delivering each course, the competency level achieved by completing each course. Where possible the register should also include details of dates, locations and cost of the training courses. ASEG should develop such a register of courses that address the following competencies:

- POEMS and POSMS;
- Safety and environmental issues;
- ISO14001 and OHSAS18001;
- Auditing skills.

7.2 Step Two: Develop and maintain advice and guidance for IPTs

7.2.1 In its IPT guidance role ASEG should develop and maintain advice and guidance on safety and environmental issues, POEMS and POSMS. This includes publications such as the Green Book and White Book and the AMS website. It may also include provision of training on POSMS and POEMS or related issues.

ASEG Training



7.3 **Step One: Establishing Competency Requirements**

7.3.1 Before any individual training needs are assessed ASEG needs to match competencies to the various roles and responsibilities within the group.

7.3.2 To identify safety competencies ASEG could refer to the Acquisition Functional Competency – System Safety 1 (AFC-SysSaf1) available from www.ams.mod.uk/ams/content/docs/comframe/pdg/saf.htm. However, at the time of writing, equivalent documents for environmental and auditing competencies do not exist although these will be developed in the future. Therefore, as an interim measure **AAP01a/G/01**– Auditor Competency Interim Guidance and **SSP02a/G/01 –** Environmental Competency Interim Guidance may be used.

7.4 **Step Two: Establish training requirements**

7.4.1 Using the competencies established in Step One ASEG can compare these with the existing competencies of ASEG staff to identify any gaps. When assessing an individual's competency, previous training or experience should be considered. This can include work experience and on-the-job training. Where the staff member does not meet the competency level required for their role a training need is identified.

7.4.2 Form **SSP02b/F/01** – Training Needs Matrix can be used to record required competencies and actual competency for staff members, thereby showing any training needs. ASEG can record safety and environmental training needs within the same matrix or separately as desired.

7.4.3 In addition to identifying competency 'areas' the matrix can be used to show the competency 'level' required by inserting the level number (taken from the competency guidance documents) in the appropriate box. It should be noted however, that not all competency areas have levels eg general awareness training.

7.5 **Step Three: Select training courses**

7.5.1 Once the training gaps have been identified ASEG needs to identify courses or workshops to provide the necessary training to the required level of competency.

7.6 **Step Four: Training delivery**

7.6.1 Training delivery can take place once the training package has been selected and agreed with the individual concerned.

7.7 **Step Five – Evaluate training effectiveness**

7.7.1 Once the individual has completed the training, the effectiveness of the training should be evaluated. ASEG may confirm the effectiveness of the training if:

- The training was delivered via an accredited or recognised course; or
- The trainee successfully passed the end of course assessment or test (where applicable).

7.8 **Step Six – Complete Training Record**

7.8.1 When ASEG is satisfied that the training has been delivered and was effective the individual's training record should be updated.

7.9 **Step Seven: Update training needs matrix**

7.9.1 The training needs matrix should be updated to show that the training has been completed.

8 RECORDS AND DOCUMENTATION

8.1.1 The outputs from this procedure should be stored and maintained by ASEG according to existing document control arrangements.

9 RECOMMENDED TOOLS AND FORMS

a. **Form SSP02b/F/01** - Training Needs Matrix

10 GUIDANCE

10.1 General

10.1.1 General advice on competence, awareness and training can be found in ISO 14001 Standard, OHSAS 18001 and various sections of JSP418.

10.1.2 If ASEG already has designated responsibilities and arrangements for providing guidance to IPTs with regard to safety and environmental issues and POSMS and POEMS implementation these may be used as alternatives to the IPT guidance elements of this procedure.

10.1.3 If ASEG already has systems or procedures for training of staff these may be used as alternatives to the training elements of procedure so long as they meet the same objectives.

10.1.4 At the time of writing the MOD is in the process of defining functional competencies for environmental management and sustainable development so ASEG may not be able to completely fulfil their responsibility to provide IPTs with training courses matched against competency levels until these have been produced.

10.2 Training Courses

10.2.1 The civil service college operates a number of environmental and safety training courses, including IOSH and Internal Auditor Training.

10.2.2 The Specialist Management Training Wing at RAF Halton operates a number of courses, some of which are specific to EMS and ISO14001.

Form SSP02b/F/01 – Training Needs Matrix

Name	Position	Role or responsibility	POEMS and POSMS Awareness		Auditor skills		EMS Implementation and Management		SMS Implementation and Management		Other eg specific technical knowledge	
			Required	Actual	Required	Actual	Required	Actual	Required	Actual	Required	Actual

0 SHOWING CONFORMANCE

0.1 Options

0.1.1 There are three options to demonstrate conformance when applying this system procedure:

a. Follow the defined system procedure using the recommended guidance and tools, including allowed variations and options;

b. Use an equivalent process and tool set generated elsewhere and document evidence of procedural equivalence;

c. Use an equivalent bespoke process and tool set for the project and document evidence of procedural equivalence.

1 INTRODUCTION

1.1.1 The POSMS and POEMS are frameworks for delivering project level management systems and continuous improvement in safety and environmental performance. Rigorous and careful control of documents and storage of records is key to developing a successful management system.

1.1.2 Within this procedure the following definitions are used:

- Document – Any information produced as outputs of POSMS and POEMS procedures, in any medium eg paper, electronic, photographic.

- Record – Any document that states results achieved or provides evidence of activities performed. At an IPT level this may include monitoring results, audit records etc.

1.1.3 Many documents will require review and update throughout the lifetime of the project and are likely to move through several reviewed versions during the life of the system eg Register of Environmental Standards. However, records are static and fixed in time. Records are not revised and updated eg waste management licences, monitoring results.

2 PROCEDURE OBJECTIVES

2.1 Documents

2.1.1 Documented arrangements are in place to ensure that all documents produced within the project level SMS or EMS (eg Register of Standards, Register of Stakeholders):

a. Are approved for adequacy prior to issue;

b. Are reviewed and updated as necessary;

c. Are identifiable by date, version number and (where applicable) revision status;

d. Are available in their current version at locations where operations essential to the effective functioning of POSMS and POEMS are performed.

2.2 Records

2.2.1 Documented arrangements are in place to ensure:

a. All records associated with POSMS and POEMS eg monitoring results or licences, are established, maintained and disposed of when required.

b. To ensure that records are identifiable, legible and traceable and are stored and maintained in such a way that they are readily retrievable and protected against damage, deterioration and loss.

c. To establish retention times for records.

3 RESPONSIBILITIES

3.1 Accountability

3.1.1 The IPTL is accountable for the completion of this procedure.

3.2 Procedure Management

3.2.1 The IPTLs may delegate the management of this procedure to the Environmental Focal Point.

3.3 Procedure Completion

3.3.1 IPTs will be responsible for completing the procedure.

4 WHEN

4.1.1 Regarding document control, the applicability of this procedure is ongoing from the production of POSMS and POEMS outputs.

4.1.2 For project records this procedure is applicable throughout the duration of any project and afterwards if a need is identified for project records being retained after the

project's conclusion.

5 REQUIRED INPUTS

a. Documents – Any information produced as outputs of POEMS and POSMS in any media eg paper, electronic, photographic.

b. Records – Any document that states results achieved or provides evidence of activities performed (eg monitoring results, audit record etc).

c. Any existing document or record control arrangements within the IPT.

6 REQUIRED OUTPUTS

a. Appropriately controlled documents (**Form SSP03a/F/01** – Document Log);

b. Appropriately managed records (**Form SSP03a/F/02** – Record Log);

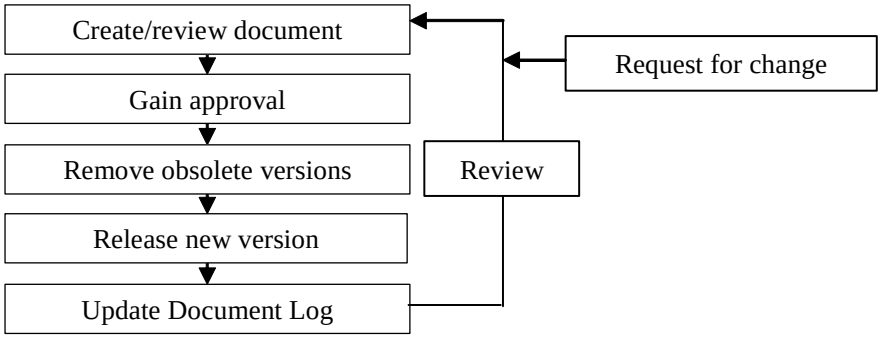
c. **SSP03a/F/03** - Document Change Request Form.

OR

Equivalent actions and documentation that ASEG is satisfied achieve the same objectives.

7 DESCRIPTION

Document Control



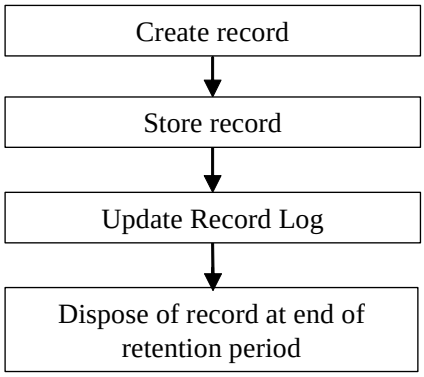
7.1.1 POSMS and POEMS procedures require that most project level outputs are documented. Many of these documents will need review and revision throughout the lifetime of the project.

7.1.2 The IPT should ensure that all POSMS and POEMS documents are legible, show their title, the date they were created, the version number, the person responsible for their maintenance and revision and the person responsible for their approval.

7.1.3 In addition, documents should be logged to ensure that the most up to date versions are

available and that these are easily located. **Form SSP03a/F/01** – Document Log can be used to record this information.

Record Control



7.1.4 The IPT is responsible for ensuring that records required in relation to proving compliance with the POSMS and POEMS requirements are established, maintained and disposed of when no longer required.

7.1.5 Records include the following:

- Reports/studies completed (ie EIA Reports, SCRs etc.);
- Waste Management Licences
- Other supporting records produced in relation to the project POSMS and POEMS.

7.1.6 Records should be legible, identifiable and traceable. This can be accomplished through ensuring that they include a title, the date they were created and the person responsible for their storage and maintenance.

7.1.7 All safety and environmental records, unless otherwise required, should be retained for the lifetime of the project. The IPT should identify where records may be required to be stored for longer or shorter.

7.1.8 A log of all records produced by following the POSMS and POEMS procedures should be created and maintained. This should include information on who is responsible for maintaining/storing the record and the retention time. **Form SSP03a/F/02** – Record Log can be used to record this information.

Requesting a change to POSMS, POEMS and IPT documents

7.1.9 It is a central objective of any SMS or EMS for the system to continually improve. IPTs, as users of the POSMS and POEMS, have a responsibility to contribute to their continual improvement through the submission of suggestions and recommendations for change.

7.1.10 IPTs can request amendments to POSMS and POEMS by submitting a completed **Form SSP03a/F/03** – Document Change Request Form to ASEG for consideration.

7.1.11 This form may also be used within or between IPTs to request changes to IPT level documentation eg Register of Stakeholder Requirements and Information. If such a request is made within an IPT the recipient of the form (usually the Safety and Environmental Focal Point) is responsible for completing the second half of the form. Before deciding whether to make an amendment, the recipient of the form may consult with other parties eg Subject Matter Expert, ASEG, Safety or Environmental Committee. Any consultees involved in the process should be documented on the form.

8 RECORDS AND PROJECT DOCUMENTATION

8.1.1 Not applicable.

9 RECOMMENDED TOOLS AND FORMS

a. **SSP03a/F/01** – Document Log

b. **SSP03a/F/02** – Record Log

c. **SSP03a/F/03** – Document Change Request Form

10 GUIDANCE

10.1 General

10.1.1 General advice on document control and record keeping procedures can be found in the ISO 14001, ISO 14004, OHSAS 18001 and various sections of JSP418.

10.1.2 If a project management system (ISO 9000 or otherwise) is already in place for the project which includes document control and/or record keeping, the IPT should follow these requirements or procedures as an alternative to this procedure, so long as ASEG is satisfied they meet the same objectives.

10.1.3 Where there is no formalised project management system or no pre-existing arrangements for record keeping, then the IPT should follow this procedure to establish appropriate record keeping arrangements.

10.1.4 In some cases, records will be produced by equipment or service suppliers or advisors. Where this is the case the records may be maintained by other parties however the IPT should have relevant information to demonstrate conformance with the objectives of this procedure.

10.2 **Warnings and Potential Project Risks**

10.2.1 Failure in producing and maintaining appropriate documents and records could cause problems for the IPT and other stakeholders in managing safety and environmental issues or proving that safety and environmental issues have been appropriately managed. This could result in financial costs in terms of reproducing documents/studies or even prosecution.

10.3 **Record Retention**

10.3.1 IPTs should be aware that there may be legal or other requirements for records to be retained for specific lengths of time eg for health monitoring, asbestos or commercial records. Advice should be sought from subject matter experts on the specific requirements.

10.3.2 Further guidance is available from the National Archives at http://www.nationalarchives.gov.uk/documents/sched_health_safety.pdf

Form SSP03a/F/01 – Document Log

Title	Date created	Date of next review	Document owner	Document approver	Security status	Document stored at:

Form SSP03a/F/02 – Record Log

Title	Date created	Record owner	Security status	Retention time	Record stored at:

SSP03a/F/03 – Document Change Request Form	
Title of Document:	
Reference Number:	
Nature of Change Requested:	
Reason(s) for change:	
Contact Details for Person Requesting Change:	
Date of Request:	
Following to be completed by Recipient	
Received by:	
Consultees (where applicable)[1]:	
Outcome of Request (please circle):	Approved: Approved (with amendments): Rejected: Date:
Reason for Rejection (if applicable)	
Other notes	
Forwarded for Action:	To: Date:
Change Completed:	Date:

[1] Where the request involves a major change to POSMS or POEMS, ASEG must be consulted.

0 SHOWING CONFORMANCE

0.1 Options

0.1.1 There are three options to demonstrate conformance when applying this system procedure:

a. Follow the defined system procedure using the recommended guidance and tools, including allowed variations and options;

b. Use an equivalent process and tool set generated elsewhere and document evidence of procedural equivalence;

c. Use an equivalent bespoke process and tool set for the project and document evidence of procedural equivalence.

1 INTRODUCTION

1.1.1 The POSMS and POEMS are frameworks for delivering continuous improvement in safety and environmental performance. Rigorous and careful control of documents and storage of records is key to developing a successful management system.

1.1.2 Within this procedure the following definitions are used:

- Document – For ASEG this term primarily refers to the POSMS and POEMS Manuals including procedures, tools and guidance;
- Record – This is a document that states results achieved or provides evidence of activities performed. For ASEG this can include copies of summary audit reports, ASEG staff training records, copies of communications relating to POSMS and POEMS.

2 PROCEDURE OBJECTIVES

2.1 Documents

2.1.1 Documented arrangements are in place to ensure that all POSMS and POEMS documents (ie the manuals, procedures, tools and guidance):

a. Are approved for adequacy prior to issue;

b. Are reviewed and updated as necessary;

c. Are identifiable by date, version number and (where applicable) revision status;

d. Are available in their current version at locations accessible by IPTs and interested third parties.

2.2 Records

2.2.1 Documented arrangements are in place to ensure:

a. All records associated with POSMS and POEMS eg summary audit reports, are established, maintained and disposed of when required.

b. To ensure that records are identifiable, legible and traceable and are stored and maintained in such a way that they are readily retrievable and protected against damage, deterioration and loss.

c. To establish retention times for records.

3 RESPONSIBILITIES

3.1 Accountability

3.1.1 ASEG is accountable for the completion of this procedure in regards to documents.

3.2 Procedure Management

3.2.1 ASEG will manage the procedure in regards to controlling documents.

3.3 Procedure Completion

3.3.1 ASEG will follow the procedure in regards to controlling documents.

3.3.2 Anyone who uses, refers to or has an informed opinion on the POSMS and POEMS can request a change to POSMS and POEMS documents (**Form SSP03a/F/03** can be used for this purpose).

4 WHEN

4.1.1 Regarding document control, the applicability of this procedure is ongoing from the first publication of the POSMS and POEMS Manuals until they are withdrawn from use.

4.1.2 For records required by ASEG e.g. summary audit reports, this procedure is applicable from the first publication of the POSMS and POEMS Manuals until they are withdrawn from use, and afterwards if a need is identified for records to be retained.

5 REQUIRED INPUTS

a. Documents – All POSMS and POEMS manuals, procedures, tools and guidance.

b. Records – All ASEG records relating to POSMS and POEMS eg summary audit reports, ASEG staff training records.

c. Any requests received by ASEG for changes to POSMS or POEMS documents **(Form SSP03a/F/03** – Document Change Request Form).

d. Any existing document or record control arrangements within ASEG.

6 REQUIRED OUTPUTS

a. Appropriately controlled documents (**Form SSP03b/F/01** – Document Log);

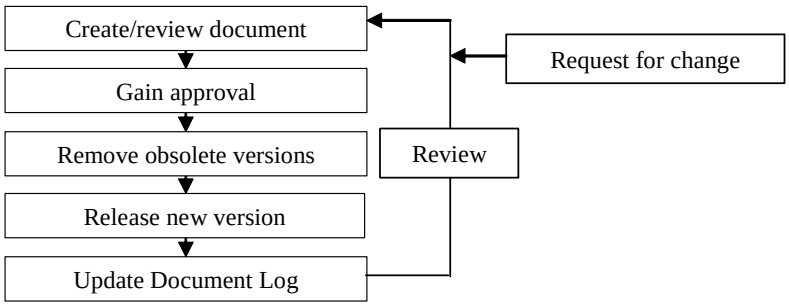
b. Appropriately managed records (**Form SSP03b/F/02** – Record Log);

OR

Equivalent actions and documentation that ASEG is satisfied achieve the same objectives.

7 DESCRIPTION

Document Control



7.1.1 The master copies of the POSMS and POEMS documents will be held by ASEG and should be individually identified through the inclusion of: title, date of issue, revision

number, name of the issuer and approver. ASEG should ensure that any new versions of documents are approved prior to use.

7.1.2 Controlled copies of the POSMS and POEMS documents should be made available to all IPTs. Uncontrolled copies may be distributed to any interested personnel. All uncontrolled copies should be identified as such.

7.1.3 Requests for amendments to POSMS and POEMS documents may be made by IPT staff by submitting a completed **Form SSP03a/F/01** – Document Change Request Form to ASEG for consideration.

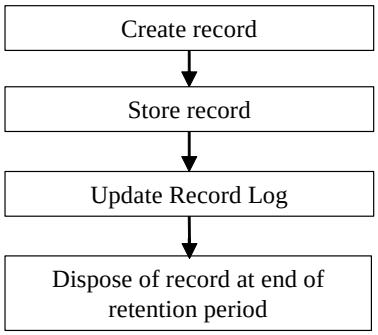
7.1.4 The recipient of the form is responsible for completing the second half of the form. On receipt of the form, ASEG should consider any suggested changes and if appropriate make those changes. ASEG may consult with other parties before deciding whether to make an amendment. If this is the case then the consultee(s) should be documented in the form. Any changes must then be communicated to the acquisition community. Implementation of suggested changes may be saved until a planned update of POSMS or POEMS to avoid frequent re-issues of the manuals. Any changes made to POSMS and POEMS documents should be authorised by ASEG.

7.1.5 Obsolete versions should be destroyed if no longer deemed useful or, if retained, identified as obsolete.

7.1.6 A log of all POSMS and POEMS documents that are the responsibility of ASEG (including the Manuals, procedures, tools and guidance) should be created and maintained. This log should show who is responsible for their maintenance and where the master copies of the documents are located. **Form SSP03b/F/01** – Document Log can be used for this purpose.

7.1.7 Archival documents and data retained for legal and/or knowledge preservation purposes, should also be suitably identified and logged.

Record Control



7.1.8 ASEG is responsible for maintaining records associated with POEMS and POSMS.

7.1.9 These may include the following:

- Summary audit reports;
- Communications received or dispatched;
- ASEG staff training records.

7.1.10 Records should be legible, identifiable and traceable. This can be accomplished through ensuring that they include a title, the date they were created and the person responsible for their storage and maintenance. They should be stored in such a way that they are readily retrievable and protected against damage, deterioration or loss.

7.1.11 A log of all ASEG's records relating to POSMS and POEMS should be created and maintained. This should include information on who is responsible for maintaining/storing the record and the required retention time. **Form SSP03b/F/02** – Record Log can be used for this purpose.

8 RECORDS AND PROJECT DOCUMENTATION

8.1.1 Not applicable.

9 RECOMMENDED TOOLS AND FORMS

a. **SSP03b/F/01** – Document Log

b. **SSP03b/F/02** – Record Log

10 GUIDANCE

10.1 General

10.1.1 General advice on document control and record keeping procedures can be found in the ISO 14001, ISO 14004, OHSAS 18001 and various sections of JSP418.

10.1.2 If a management system (ISO 9000 or otherwise) is already in place within ASEG which includes document control and/or record keeping, ASEG should follow these requirements or procedures as an alternative to this procedure, so long as it is satisfied they meet the same objectives.

10.1.3 Where there is no formalised project management system or no pre-existing arrangements for record keeping, then this procedure should be followed to establish appropriate record keeping arrangements.

10.2 Warnings and Potential Risks

10.2.1 If the POSMS and POEMS documents are not appropriately controlled there is a risk

that IPTs could be following out of date procedures. This could result in problems and inconsistencies in managing safety and environmental issues throughout the acquisition community.

Form SSP03b/F/01 – Document Log

Title	Date created	Date of next review	Document owner	Document approver	Security status	Document stored at:

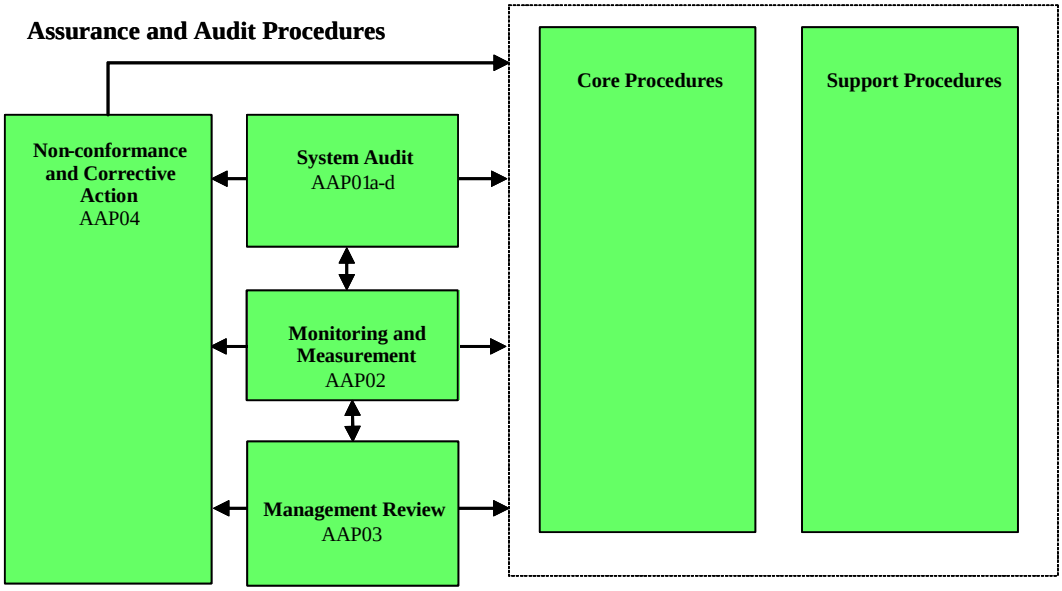
Form SSP03b/F/02 – Record Log					
Title	**Date created**	**Record owner**	**Security status**	**Retention time**	**Record stored at:**

8. Assurance and Audit Procedures

Table 8.1 - ASEMS Assurance and Audit Procedures

Number	Procedure Type	Procedure Name
AAP01a	Assurance and Audit Procedures	System Audit (Audit Management and Initiation)
AAP01b	Assurance and Audit Procedures	System Audit (Audit Planning)
AAP01c	Assurance and Audit Procedures	System Audit (Audit Conduct)
AAP01d	Assurance and Audit Procedures	System Audit (Audit Reporting and Follow up)
AAP02	Assurance and Audit Procedures	Monitoring and Measurement
AAP03	Assurance and Audit Procedures	Management Review
AAP04	Assurance and Audit Procedures	Non-conformance and Corrective Action

Figure 8.1 The Assurance and Audit Procedures



8.1 Procedure Structure

8.1.1 For ease of use, the procedures have the same format and structure. The key sections are elaborated in points 8.1.2 to 8.1.13 inclusive.

8.1.2 Procedure Title

8.1.2.1 The title and reference code for the procedures are as follows:

- AAP01 - System Audit;
- AAP02 - Monitoring and Measurement;
- AAP03 - Management Review; and
- AAP04 - Non-conformance and Corrective Action.

8.1.2.2 The assurance and audit procedures are common to both the POEMS and POSMS.

8.1.3 Showing Conformance

8.1.3.1 This explains the three ways of showing conformance with the procedure.

8.1.4 Introduction

8.1.4.1 This is an overview of the procedure's purpose in the context of the overall management system.

8.1.5 Procedure Objectives

8.1.5.1 This section describes what is to be achieved by following and completing the procedures. Normally this section is in the form of a list of the objectives that must be achieved in order to demonstrate conformance.

8.1.6 Responsibilities

8.1.6.1 This section states who will be accountable and responsible for proper completion of the procedure, and who will actually carry out the actions within the procedure. In most cases the IPT will be responsible for procedure management while procedure completion could be carried out by a number of different parties as shown in the procedures.

8.1.7 When

8.1.7.1 This section indicates when the procedure is to be followed in terms of the SMS or EMS implementation.

8.1.8 Required Inputs

8.1.8.1 Most of the procedures require reference to be made to the outputs of previous procedures and information from other sources. This section lists the main reference material that will be needed in order to complete the procedure.

8.1.9 Required Outputs

8.1.9.1 This lists the outputs, for example completed forms, compiled information etc. It should be noted, however, that it is acceptable within POSMS and POEMS for an IPT to use alternative methods to those outlined in the procedures, providing that this is endorsed by ASEG.

8.1.10 Description

8.1.10.1 This section makes up the bulk of the procedure and describes the steps and stages involved in completing the procedure. It includes advice and guidance on how to complete the procedure and when to use each of the associated forms or tools. It should be remembered that this part of the procedure is for guidance only so it is not mandatory for an IPT to follow it to the letter where they have made suitable and equivalent alternative arrangements. The key point is to achieve the required objectives, outputs and outcomes, and to ensure that alternative approaches are clearly documented and agreed.

8.1.11 Records and Project Documentation

8.1.11.1 This includes advice on where outputs of the procedures should be kept and recorded (usually in the Safety or Environmental Case, Case Reports, or related registers and logs) and where other project documentation may have to include some or all of the output information.

8.1.12 Recommended Tools and Forms

8.1.12.1 Many of the procedures include tools or forms to assist IPTs to undertake the procedure or to record information produced. This section lists the forms that may be useful in completing the procedure. This can sometimes include forms associated with other procedures. Note that the use of the forms is not mandatory (see Required Outputs above) and that any alternative approaches used should be clearly documented and agreed.

8.1.13 Guidance

8.1.13.1 This final section provides guidance on other sources of advice. Also included here are some general comments on potential project risk that may arise if the procedure is not completed in an appropriate way or at an appropriate time.

8.2 Procedure Use

8.2.1 The IPT is usually (see Section 8.4 below) responsible for managing the completion of the requirements of the Assurance and Audit procedures. The IPT is also likely to have a significant involvement in the practical application of the procedures. A number of other parties may also have significant roles in meeting the requirements of the procedures, these are detailed within the relevant procedures.

8.2.2 All procedures provide recommended guidance and/or forms to help the user to produce the desired output(s). The use of this guidance is not mandatory, so long as suitable alternative methodologies are used which achieve the desired objectives, as defined in the procedure and that are deemed by ASEG to be equivalent. Therefore three options exist when following the procedures, to demonstrate conformance:

- Follow the defined system procedure using the recommended guidance and tools, including allowed variations and options.
- Use an equivalent process and tool set generated elsewhere and document evidence of procedural equivalence.

- Use an equivalent bespoke process and tool set for the project and document evidence of procedural equivalence.

8.2.3 This is in contrast with the core procedures which have four options for showing conformance including one where the procedure is considered not relevant. However, the assurance and audit procedures will always be relevant and therefore must be applied.

8.2.4 Table 8.2 overleaf shows a summary of the responsibilities, timing, inputs and outputs associated with each assurance and audit procedure.

8.3 Use of Assurance and Audit procedures outside POSMS and POEMS

8.3.1 The assurance and audit procedures have primarily been developed for use within POSMS and POEMS but may be used for other system audits if desired. To this end, the following sections have been designed so they may be used together as part of a stand-alone Audit Manual:

- Section 8 of POSMS and POEMS – Assurance and Audit Procedures
- AAP01a-d
- AAP04
- Section 9 – Glossary

Table 8.2 – Summary of POSMS and POEMS Assurance and Audit Procedures

Procedure	Input	Output **	Responsibility ***
AAP01a - System Audit (Audit Management and Initiation)	Environmental and System Safety Case(s) including • Results of previous audits (**Form AAP01d/F/01**); • Record of Management Reviews (**Form AAP03/F/01**); • Record of Monitoring and Measurement (**Form AAP02/F/02**); • Environmental Management Plans (**Form EMP06/F/03**); • Safety Management Plans (outputs from SMP03) • Non-Conformance and Corrective Actions (**Form AAP04/F/01**); • Register of Stakeholder Requirements (**Form EMP01/F/01** and **SMP01/F/02**) • Register of Standards (**Form EMP01/F/02** and **SMP01/F03**) • List of operational controls (**Form EMP07/F/01** and outputs from SMP08) • Other POSMS and POEMS outputs. Audit schedules produced by other parties where these cover auditing all or some of the elements of the SMS and EMS.	• **AAP01a/F/01** - Audit Schedule • **AAP01a/F/02** - Audit Details, Team Composition and Competence Record • **AAP01a/F/03** – Notification of Audit Letter	IPT, ASEG, supplier, or contractor.
AAP01b - System Audit (Audit Planning)	• Audit Question Toolset (available from ASEG); • **Form AAP01a/F/01** - Audit Schedule; • **Form AAP01a/F/02** - Audit Details, Team Composition and Competence Record Form; • Other documents relevant to the scope and objective of the audit (i.e. POEMS, POSMS); • IPT safety management system and environmental management system documents; and • **Form AAP01d/F/01** – Previous audit reports	• **Form AAP01b/F/01** - Audit Plan • **Form AAP01b/F/02** - Audit Pro-forma (partly complete)	IPT, ASEG, supplier, or contractor.

Procedure	Input	Output **	Responsibility ***
AAP01c - System Audit (Audit Conduct)	• **Form AAP01b/F/01** - Audit Plan • **Form AAP01b/F/02** - Audit Pro-forma (partly complete) • Relevant IPT documentation; • **Form AAP04/F/01** – Non-conformance, Corrective and Preventive Action Form (If required). • **Form AAP01c/F/01** – Record of Audit Meeting.	• **AAP04/F/01** – Non-conformance and Corrective Action Form • **AAP01b/F/02** - Audit Pro-forma(s) – (Fully complete) • **Form AAP01c/F/01** – Record of Audit Meeting (completed for Opening Meeting); • **Form AAP01c/F/01** – Record of Audit Meeting (completed for Audit Team Meeting(s)); and • **Form AAP01c/F/01** – Record of Audit Meeting (completed for Closing Meeting).	IPT, ASEG, supplier, or contractor.
AAP01d - System Audit (Audit Reporting and Follow up)	• **Form AAP01b/F/01** - Audit Plan; • **Form AAP01b/F/02** - Audit Pro-forma(s); • **Form AAP04/F/01** - Non-conformance and Corrective Action Form(s), if relevant (partly complete). • IPT documentation relevant to the audit; • **Form AAP01c/F/01** - Audit meeting records	• **AAP01d/F/01** - Audit Report Template • **AAP04/F/01** - Non-conformance and Corrective Action Record, if relevant – (fully complete)	IPT, ASEG, supplier, or contractor.
AAP02 – Monitoring and Measurement	• **Form EMP06/F/02, Form EMP06/F/03** – Safety Management and Environmental Management Plans and outputs from SMP03); • Operational controls (**Form EMP07/F/01** and outputs from SMP07); • **Form AAP03/F/01** - Non-conformance and corrective action records; • **Form AAP03/F/01**- Management Review Records; and • Performance data on equipment system and supporting activities.	• **AAP02/F/01** – Monitoring Schedule. • **AAP02/F/02** – Monitoring Data - Assessment Record.	IPT and supplier / contractor.

Procedure	Input	Output **	Responsibility ***
AAP03 – Management Review	• EMS documents and records (Outputs of EMP01-EMP08). • SMS documents and records (Outputs of SMP01 – SMP13). • Results of internal and external SMS and EMS audits (AAP01). • Internal and external communications regarding the IPTs' SMS and EMS including suggestions for improvement (SSP01). • Internal and external communications regarding the equipment's safety and environmental performance including complaints (SSP01). • **Form AAP04/F/01** - Any non-conformance and corrective action reports raised • **Form AAP02/F/02** - Record of Monitoring Reviews • **Form AAP02/F/01** - Previous management review meeting minutes	• **AAP03/F/01** – Record of Management Review	IPT and supplier / contractor
AAP04 – Non-conformance and Corrective Action	• Results of internal and external audits • Internal and external communications regarding the IPT's safety and environmental management(s), including suggestions for improvement. (See SSP01) • Internal and external communications regarding the equipment's safety and environmental performance, including complaints. (See SSP01) • **AAP02/F/02** – Record of Monitoring Review; and • **Form AAP03/F/01**- Management Review Records.	• **AAP04/F/01** – Non-Conformance and Corrective Action Record	IPT, ASEG, supplier, or contractor.

* The outputs from all the procedure require periodic review and update throughout the lifecycle of the project.
** Or equivalent actions and documentation that ASEG are satisfied achieves the same objectives.
*** The IPT or ASEG is responsible for managing the procedure completion. The column relates to who is or may be responsible for completing the procedure.

8.4 System Audit Procedures AAP01

System Audit Structure

8.4.1 There are four System Audit procedures as follows:

- AAP01a - Audit Management and Initiation
- AAP01b - Audit Planning
- AAP01c - Audit Conduct
- AAP01d - Audit Reporting and Follow up

8.4.2 The System Audit procedures can be applied to the SMS or EMS at any time during its implementation: it is not necessary for the full system to be in place before planning and carrying out audits.

8.4.3 An IPT would be expected to have produced a self audit schedule and audited each element of the SMS and EMS before Main Gate. Auditing will then continue throughout the life of the project(s).

8.4.4 These procedures have been based on the requirements of ISO 19011, ISO 14001, OHSAS 18001 standards and have been developed in line with other POSMS and POEMS procedures, and the various JSPs which cover system auditing.

8.4.5 The System Audit procedures are not intended to replace audit sections where provided in JSPs but to align with their requirements.

8.4.6 ASEG should be contacted if further advice or assistance is required on complying with these procedures.

8.4.7 If an IPT already has a project management system or procedures (eg ISO 9000) that cover system auditing, then these may be used in place of these POSMS and POEMS procedures so long as ASEG is satisfied that they meet the same objectives.

8.4.8 Figure 8.2 below provides further details on each procedure's structure.

System Audit Purpose

8.4.9 The system audit procedures have been produced to ensure that the IPT's SMS and EMS are audited throughout the life of the project(s). The System Audit procedures specify how system audits should be completed, and how combined safety and environmental management system audits can be completed. The procedures should not be used in lieu of auditor training and therefore do not cover auditing techniques in detail.

System Audit Objectives

8.4.10 The objectives of undertaking system audits are to:

- Assess whether the IPT's SMS and EMS are operating as designed;
- Assess compliance of the SMS and EMS with the requirements of POSMS and POEMS;

- Identify opportunities to improve the SMS and EMS;
- Identify opportunities to improve safety and environmental performance;
- Identify opportunities to raise awareness, training and competency of safety and environmental issues;
- Provide assurance of compliance with applicable safety and environmental legal and non-legal standards;
- Comply with Functional Safety Boards' Policy requirement for audits;
- Recognise good practice;
- Inform the Management Review process;
- Inform Policy development; and
- Identify opportunities to improve POSMS / POEMS Manuals (applies to ASEG only).

System Audit Scope

8.4.11 At the present time POSMS and POEMS are to be used to establish project level SMSs and EMSs by acquisition IPTs within DE&S. All activities that are undertaken or managed by the IPT, and which have a bearing on safety and environmental performance of the capability being acquired, have the potential to come within the scope of the audit procedures.

8.4.12 Activities undertaken by parties other than the IPT, and which are not undertaken under the management responsibility of the IPT, are currently outside the scope of these audit procedures, although they may come under other audit regimes.

8.4.13 However, information from other audit regimes, focussed on issues such as equipment performance, will be of use to the IPT and should be logged through the POSMS and POEMS communications procedures; and may depending on their nature give rise to non-conformance and corrective action reports within POSMS and POEMS. In addition, any non-conformance and corrective action identified under the audit regime established by POSMS and POEMS may have to be communicated to other parties, although the IPT may have no method of formally requiring the other party to carry out the corrective action.

System Audit Responsibilities

8.4.14 Although the procedures have been produced primarily for use by and on behalf of IPTs, they may also be used by ASEG to carry out audits on the SMS and EMS. In addition, these procedures may also be used for auditing all or parts of an IPT's SMS and EMS by other parties such as:

- Functional Safety Board Secretariats;
- DS&C;
- Third Parties invited by CDM;

- Independent Safety Auditors;
- MOD and TLB Internal Audit Functions;
- Equipment system contractor;
- Personnel seconded from another IPT;
- Customer 2;
- SME;
- Environmental and Safety Consultants.

8.4.15 Any third party using these procedures should note that they have primarily been written for use by IPTs and therefore may use terminology specific to IPTs. However, this should not preclude a third party from using the procedures.

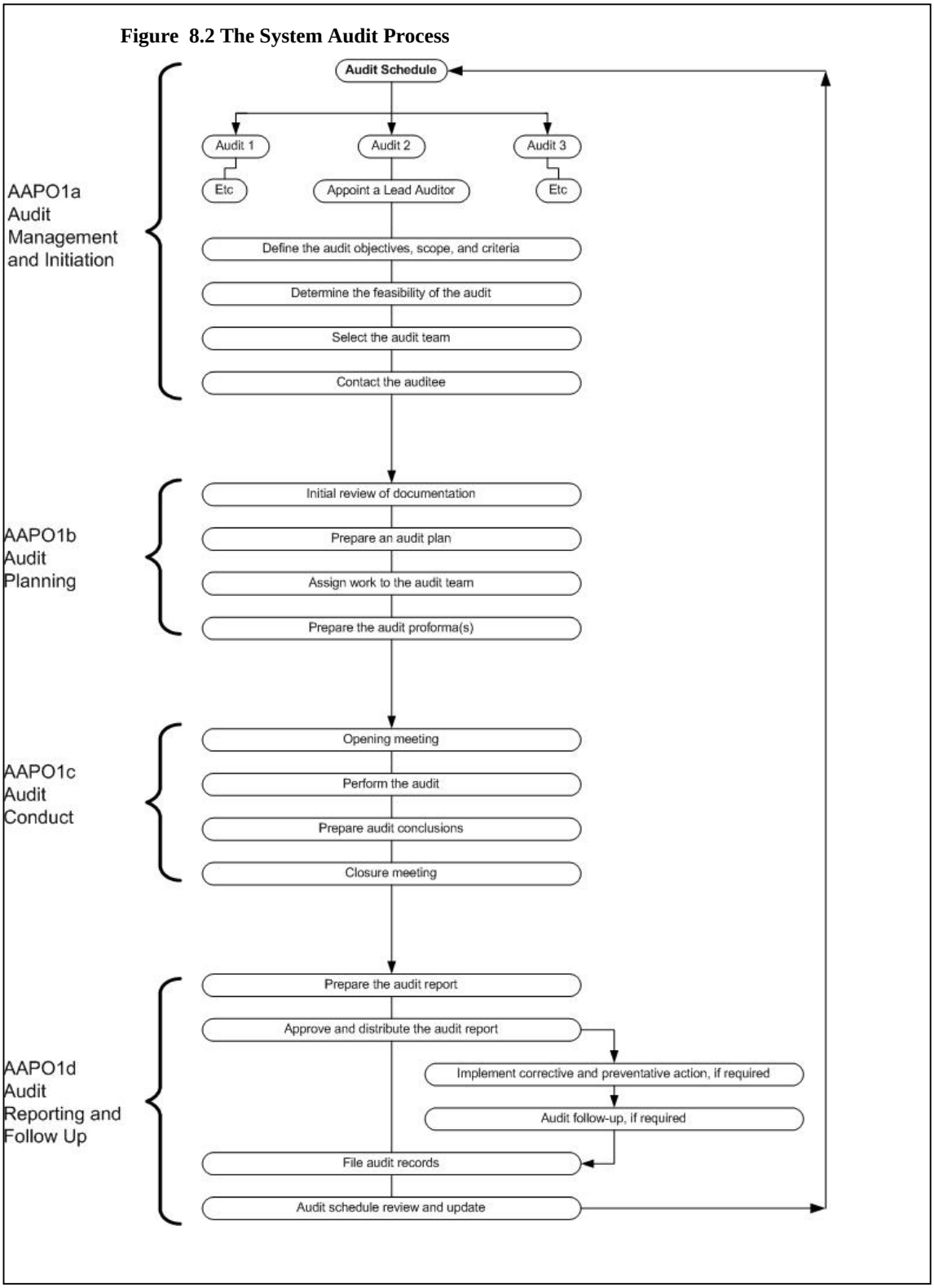
8.4.16 Throughout the procedures the term 'Audit Client' has been used to describe the group, organisation or individual commissioning an audit, as this may be distinct from the party carrying out the audit.

System Audit Reporting

8.4.17 The IPT should refer to its stakeholder forms (EMP01/F/01 and SMP01/F/02) to identify which stakeholders should receive a copy of the Audit Report. The following identifies some of the authorities or organisations that the IPT may decide require a copy of the Audit Report:

- The delegation chain PM, IPTL, Cluster DG, CDM, SofS (via Defence Environment Safety Board);
- Other TLBs through Annual Report to DESB;
- 2* Directors and 1* Deputy Directors;
- Functional Safety Boards and Secretariats;
- Directorate of Performance and Analysis and Defence Audit Committee (through Functional Safety Boards);
- DS&C;
- Stakeholders (Customer 1 and 2, DE, CESOs etc.) through Safety Committees;
- Other Government Departments (HSC, DEFRA, DTI etc.) through MOUs;
- Environment Agency for England and Wales;
- Scottish Environmental Protection Agency;
- Environment and Heritage Service for NI;
- General Public;
- ISAs and other Auditors;
- International Partners.

Figure 8.2 The System Audit Process



8.5 Monitoring and Measurement Procedure - AAP02

8.5.1 The monitoring and measurement procedure is structured around the completion of the following steps:

- Step 1: Identify elements to be monitored and reviewed
- Step 2: Produce a Monitoring Schedule
- Step 3: Produce measurement and calibration protocols
- Step 4: Collect monitoring data
- Step 5: Assess monitoring data

8.5.2 The purpose of the monitoring and measurement procedure is to track, and provide assurance data on safety and environmental performance. During the early stages of CADMID an IPT will concentrate on tracking progress in the implementation of SMS and EMS, and then as the SMS and EMS are implemented, and objectives, targets and operational controls are developed, an IPT will turn its attention to tracking the performance of these as well as other performance measurements. Monitoring and measurement will identify areas for improvement in addition to changes to keep management systems on track.

8.5.3 The results of monitoring and measurement would feed into the management review procedure.

8.6 Management Review Procedure - AAP03

8.6.1 The management review procedure is structured around the completion of the following steps:

- Step 1: Assemble Management Review Team
- Step 2: Agree Frequency of Management Review
- Step 3: Gather Documents and Evidence for the Review
- Step 4: Perform and Record the Review

8.6.2 The purpose of the management review is to provide assurance that the SMS and EMS continue to be suitable, adequate and effective for the project they seek to manage. This review should be undertaken by Senior Managers and it should not get involved in the details but rather, look at the ‘big picture’. The review should identify areas for improvement in addition to changes to keep the systems on track.

8.6.3 The management review should cover all elements of the SMS and EMS. The IPT can choose whether to undertake the management review of the SMS and EMS separately or together. For example, if the IPT has a combined SMS and EMS it may be more efficient to combine the management review.

8.7 Non-Conformance and Corrective Action Procedure - AAP04

8.7.1 The non-conformance and corrective action procedure is structured around the completion of the following steps:

- Step 1: Identify non-conformance or observation
- Step 2: Investigate non-conformance or observation
- Step 3: Recommended corrective, preventive or improvement action
- Step 4: Decide action to be taken
- Step 5: Review and update or documentation

8.7.2 The purpose of the non-conformance and corrective action procedure is to provide a system for the identification, investigation and recording of non-conformances and observations and for the identification and implementation of appropriate corrective and preventive action. This is important as it allows the systems to be continually improved as a result of experience and past performance.

8.7.3 This procedure applies to all the elements of the SMS and EMS regardless of whether these are the responsibility of the IPT or a contractor.

0 SHOWING CONFORMANCE

0.1 Options

0.1.1 There are three options to demonstrate conformance when applying this system procedure:

a. Follow the defined system procedure using the recommended guidance and tools, including allowed variations and options.

b. Use an equivalent process and tool set generated elsewhere and document evidence of procedural equivalence.

c. Use an equivalent bespoke process and tool set for the project and document evidence of procedural equivalence.

1 INTRODUCTION

1.1.1 This procedure is the first in a set of four System Audit procedures and deals with initial audit planning activities. This procedure describes how an audit schedule can be developed in order to organise self audits of the IPT's SMS and EMS. The activities covered in this procedure will form the basis of the system audit process so it is important that issues are considered carefully to avoid duplication of effort or gaps in the audit process later on.

1.1.2 The audit schedule should describe the scope and frequency of self audits and set out a timeframe for their completion.

1.1.3 Although this and the companion procedures have been produced primarily for use by and on behalf of IPTs, they may also be used by ASEG to carry out audits on the SMS and EMS. In addition, these procedures may also be used for auditing all or parts of an IPT's SMS and EMS by other parties such as:

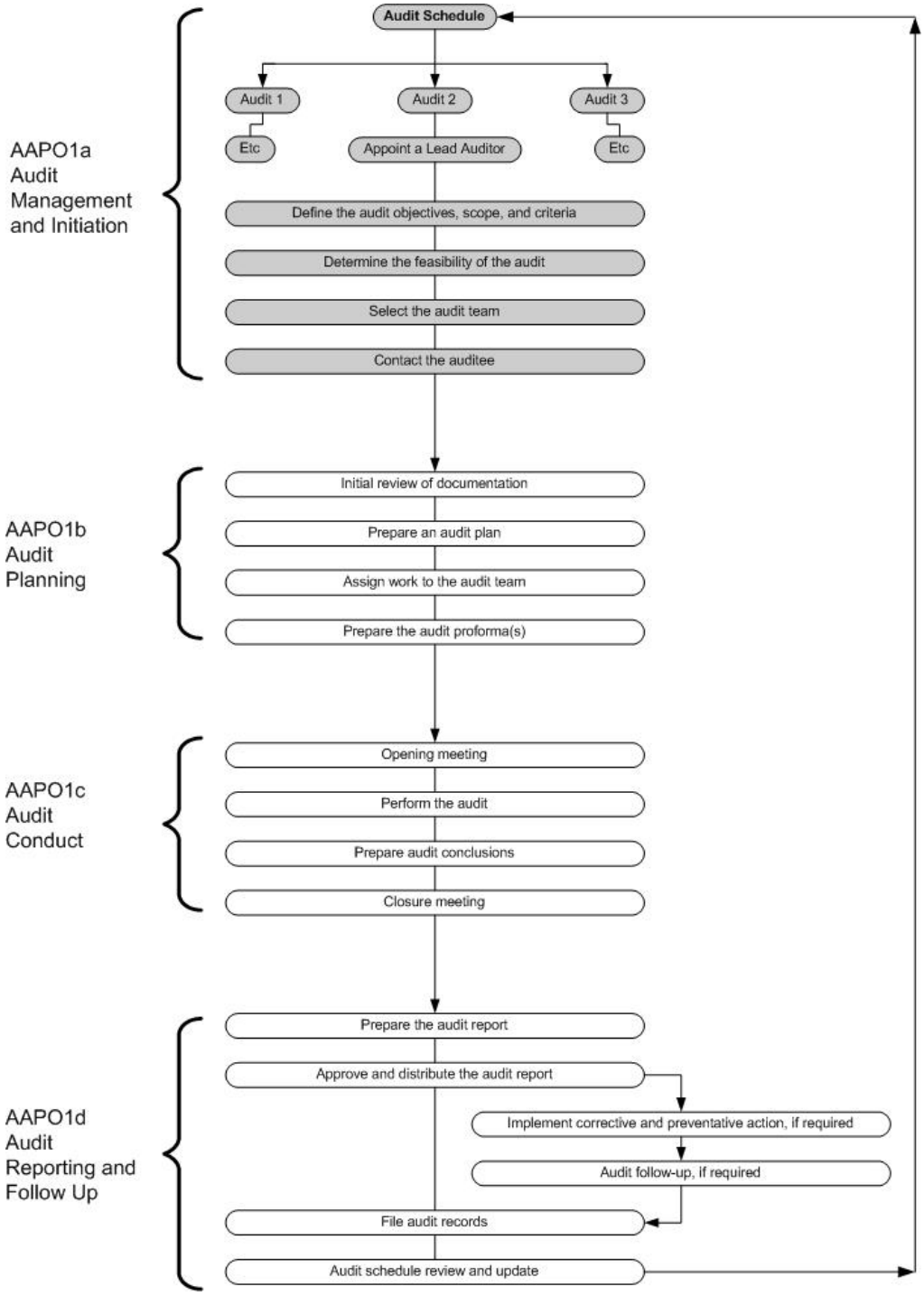
- Functional Safety Board Secretariats;
- DS&C;
- Third Parties invited by CDM;
- Independent Safety Auditors;
- MOD and TLB Internal Audit Functions;
- Equipment system contractor;
- Personnel seconded from another IPT;
- Customer 2;
- SME;
- Environmental and Safety Consultants.

1.1.4 Any third party using these procedures should note that they have primarily been written for use by IPTs and therefore may use terminology specific to IPTs. However,

this should not preclude a third party from using the procedures.

1.1.5 Throughout the procedures the term 'Audit Client' has been used to describe the group, organisation or individual commissioning an audit, as this may be distinct from the party carrying out the audit.

Figure 1 Steps within the system audit procedures



2 PROCEDURE OBJECTIVES

2.1.1 The objectives of this procedure are to:

- Produce a schedule, for auditing all elements of the IPT's SMS and EMS, that includes details on how and when these audits will take place;
- Ensure that audits are undertaken by appropriately competent auditors; and
- Contact the Auditee and confirm arrangements for undertaking the audit.

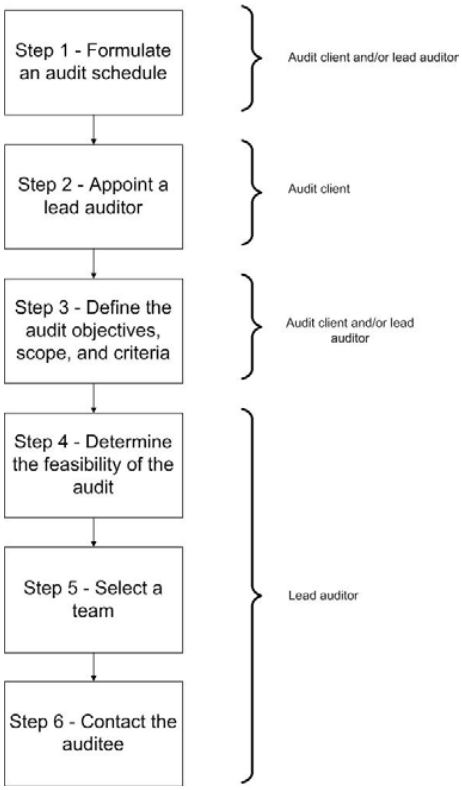
3 RESPONSIBILITIES

3.1 Accountability

3.1.1 The Audit Client is accountable for the completion of this procedure.

3.2 Procedure Management and Procedure Completion

3.2.1 The diagram below shows the steps described in the Description section of this procedure against those parties or individuals that may be responsible for their completion.



3.2.2 Note that where the Lead Auditor has responsibility, this may on particular occasions be delegated to members of the Audit Team.

4 WHEN

4.1.1 This procedure can be applied to the SMS or EMS at any time during its implementation, it is not necessary for the full system to be in place before planning and carrying out audits.

4.1.2 An IPT will be expected to have produced an audit schedule and audited each element of its SMS and EMS before Main Gate. Auditing will continue throughout the life of the project(s).

5 REQUIRED INPUTS

5.1.1 Safety and Environmental Case(s), for example:

- Results of previous audits (**Form AAP01d/F/01**);
- Record of Management Reviews (**Form AAP03/F/01**);
- Record of Monitoring and Measurement (**Form AAP02/F/02**);
- Environmental Management Plans (**Form EMP06/F/03**);
- Safety Management Plans (outputs from SMP03)
- Non-Conformance and Corrective Actions (**Form AAP04/F/01**);
- Register of Stakeholder Requirements (**Form EMP01/F/01** and **SMP01/F/02**)
- Register of Standards (**Form EMP01/F/02** and **SMP01/F03**)
- List of operational controls (**Form EMP07/F/01** and outputs from SMP08)
- Other POSMS and POEMS outputs.

5.1.2 Audit schedules produced by other parties where these cover auditing all or some of the elements of the SMS and EMS.

6 REQUIRED OUTPUTS

Form AAP01a/F/01 - Audit Schedule

Form AAP01a/F/02 - Audit Details, Team Composition and Competence Record Form

Form AAP01a/F/03 – Notification of Audit Letter.

OR

Equivalent actions and documentation that ASEG is satisfied achieve the same objectives.

7 DESCRIPTION

7.1 Step 1 – Formulate an audit schedule

Introduction

7.1.1 Note: Where the Audit Client wishes to involve the Lead Auditor in the production of the audit schedule then Step 2 – Appoint Lead Auditor should be completed before this step.

7.1.2 In order to produce an audit schedule the following must be decided:

- What elements of the SMS and EMS must the audits cover (i.e. scope);
- How many audits are necessary;
- How often will these audits be undertaken; and
- When audits are to be undertaken.

7.1.3 In terms of scope the schedule can apply to:

- Individual project level SMS and EMSs; or
- Several project level SMS and EMSs; or
- An IPT level SMS and/or EMS.

7.1.4 The organisation and scope of the audit schedule will depend largely on how much of the SMS and EMS is in place and how these systems are organised within the IPT or project. For example, an IPT may decide to develop separate schedules for the SMS and EMS if the systems are distinct from each other, or combine schedules where elements are shared, similar or connected.

7.1.5 The overall audit schedule should cover all the existing elements of the SMS and EMS regardless of whether these are the responsibility of the IPT or a contractor.

7.1.6 When developing the schedule, consideration should be given to any other planned audits that may cover aspects of safety or environmental management. These other audits may fulfil some or all of the objectives of the audit schedule and may therefore be used as alternatives to avoid duplication of effort.

Audit Scope

7.1.7 Although it is possible to audit the whole SMS or EMS at once, this is generally considered poor practice (unless the systems are very simple), as this may require significant Auditee and auditor resources.

7.1.8 It is therefore accepted practice to divide the audit schedule into a number of audits each of which is a manageable task. This can be done in a number of ways:

- By POSMS / POEMS and IPT SMS/EMS requirement - This involves the auditing of the whole project(s) against each POSMS / POEMS and IPT SMS/EMS requirement in turn. This approach may cross several activities and/or projects/organisations.
- By POSMS / POEMS procedure – This approach allows a full audit trail to be gathered.
- By activity, project, organisation or geographical basis – This approach provides a full audit trail only when all departments have been assessed.

- By safety risk or environmental impact - Full audit trails are obtained by crossing projects, organisations or activities, although the audit can be difficult to structure.

7.1.9 When deciding on how to partition the audit schedule, the following issues should be considered:

- Purpose of the audit;
- Any external requests for an audit to take place. For example, from:
  - The delegation chain PM, IPTL, Cluster DG, CDM, SofS (via DESB);
  - Other TLBs;
  - 2* Directors and 1* Deputy Directors;
  - Functional Safety Boards;
  - ASEG;
  - DS&C; and
  - Stakeholders (Customer 1 and 2, DE, CESOs etc) through Safety Committees.
- Scope of the EMS and SMS;
- Relevant domain JSP auditing requirements;
- Stakeholders' expectations;
- Existing IPT audit regimes including any audits planned or recently completed by other parties.
- Logistics;
- Where different parts of the same management system are best audited together;
- Where elements of the safety and environmental management systems are best audited together;
- The auditees and auditors likely to be involved;
- Timeframe for implementing the management system(s); and
- The frequency that the system element needs to be audited (i.e. try not to group elements of the management system which are best audited at a different frequency).

7.1.10 SMS and EMS elements would be expected to be audited more frequently in the following situations:

- They have not been covered or only partially covered by previous audits;
- A high number of non-conformances have been identified;
- There is a high safety risk or priority environmental impact;
- Accidents, incidents or occurrences with safety or environmental implications have been reported;

- A prescriptive legal or other standard applies;
- There is a demonstrable level of stakeholder interest or concern;

7.1.11 There may also be a need for more frequent audits in cases where:

- The project is approaching a critical milestone;
- There has been a major change in procedures, equipment system specification or use, or environmental and safety standards;
- There have been major staff changes.

7.1.12 When you have partitioned up the audit schedule into manageable pieces, double check that all elements to be audited are being covered.

Audit Frequency

7.1.13 The next task in formulating the audit schedule is to set a frequency for how often each audit should be completed. Audit frequency should be kept to a minimum to reduce the likelihood of 'audit fatigue' in the Auditee, but frequent enough to provide assurance that the management system(s) is operating effectively.

7.1.14 The frequency of audits will vary from project to project but should aim to cover each element of the management system(s) at least once every 3 years. To avoid 'over-auditing' it is recommended that each element of the management system should be audited no more frequently than every 6 months (this excludes follow-up checks).

7.1.15 The IPT should refer to the relevant domain JSP to establish whether it requires a shorter minimum auditing interval (higher frequency). Audit frequency may also be influenced by stakeholders' expectations, existing IPT's regimes and Project Review and Assurance (PR&A) schedules.

Documentation and Communication

7.1.16 Form AAP01a/F/01 - Audit Schedule can be used to record the scope, frequency and timing of audit(s).

7.1.17 For audits where the audit client is not the IPTL, it is recommended that the Auditee should be contacted at this early stage to give them advance notice of the impending audit. **Form AAP01a/F/03** may be used for this purpose.

7.2 Step 2 – Appoint the Lead Auditor

7.2.1 For each audit defined in the audit schedule, a Lead Auditor should be appointed. The Lead Auditor may be selected from any of the following groups:

- The Audit Client;
- The equipment system contractor, (eg where they have a significant role in implementing the SMS and/or EMS)*;
- From another IPT than is to be audited**;
- SMEs (eg Safety and/or Environmental Consultants)**;
- Another part of the MOD.

* Where an IPT uses equipment system contractors to audit the SMS or EMS, then the IPT is to undertake sample checks on the audit schedule to ensure the procedure has been followed correctly.

** The use of these parties may be helpful in cases where it is important to demonstrate the independence of the auditors from the IPT.

7.2.2 The following aspects should be considered when appointing the Lead Auditor:

- Auditing competency;
- Knowledge of POSMS and POEMS;
- Equipment system and domain knowledge;
- Personal attributes; and
- Security clearance.

7.2.3 Further information on establishing and evaluating auditor competency can be found in guidance sheet **AAP01a/G/01 –** Auditor Competency Interim Guidance**.**

7.3 Step 3 – Define the audit objectives, scope and criteria

7.3.1 Although the audit schedule defines the general scope of the audit, more detail on its scope, objectives and criteria should be defined by the Audit Client and Lead Auditor (see Section 8 of POSMS and POEMS).

7.3.2 Audit criteria should be used to determine the tests for conformity with the objectives of the audit and be defined through discussions between the Audit Client and the Lead Auditor. **Form AAP01a/F/02** - Audit Details, Team Composition and Competence Record Form can be used to record these decisions.

7.3.3 As part of the audit, the Audit Client may also request that the Lead Auditor:

- Provides recommendations to address any non-conformance identified;
- Reviews corrective and preventive actions proposed by Auditee; and
- Completes follow-up checks to confirm non-conformances have been closed out.

7.4 Step 4 – Check the feasibility of the audit

7.4.1 The Auditee should be given sufficient notice that an audit will be taking place and be made aware of the objectives, scope and criteria of the audit. This will not only remind the Auditee of the planned audit, but also allow the feasibility of undertaking the audit as timetabled to be confirmed. **Form AAP01a/F/03** – Notification of Audit Letter may be used for this purpose.

7.4.2 Factors that will affect the feasibility of undertaking the audit at a particular time will include the availability of:

- Sufficient and appropriate information to plan the audit; and
- Adequate time and resources of the Auditee and auditors.

7.4.3 If it has been determined that it is not feasible to undertake the audit, an alternative solution should be agreed between the Audit Client, Lead Auditor and Auditee.

7.5 Step 5 – Select the audit team

7.5.1 Depending on the scope, size, and timescale of the audit, an Audit Team may consist of only the Lead Auditor, or it may consist of a number of auditors. When selecting members of the Audit Team, the following issues should also be considered:

- Audit objectives, scope and criteria (See **Form AAP01a/F/02**);
- Independence of the Audit Team and the entity being audited;
- Audit timescales (See **Form AAP01a/F/02**);
- Auditor availability; and
- Competence of Audit Team to achieve audit objectives.

7.5.2 It is reasonable to include Aspirant Auditors within the Audit Team as a means to improve their competence level for future audits, as long as the aspirant auditor is not permitted to audit without appropriate direction and guidance from a competent auditor(s). On particularly large or complex audits it may be advisable to have administrative support within the Audit Team. Note it is also possible to meet skills or knowledge requirements through the inclusion of an auditing expert or Subject Matter Expert to support the Audit Team.

7.5.3 Further information on establishing and evaluating auditor competency can be found in guidance sheet **AAP01a/G/01 -** Auditor Competency Interim Guidance.

7.6 Step 6 – Contacting the Auditee

7.6.1 The Lead Auditor should contact the Auditee to arrange an initial visit prior to the onsite audit phase. This should take place no less than 1 month before the site audit to allow the Auditee sufficient time to prepare for the audit.

7.6.2 The objectives of this initial visit include:

- For the Auditee to understand the purpose of the audit;
- To enable audit methodology, limitations and timetable to be discussed;
- For the Auditee to meet the Lead Auditor (or team member) and for them to explain who has been appointed on the Audit Team;
- To establish Auditee role/contribution to the audit (e.g. to provide a guide to escort the team during the audit and provide access to areas, documentation and staff)
- To identify staff to be interviewed and their availability;
- To agree office and support arrangements for the Audit Team;
- For the Lead Auditor to gain an understanding of the area(s) to be audited;
- To identify documentation which will be required to be examined before and during the audit;
- To confirm confidentiality of documentation; and
- To facilitate the production of the audit plan.

7.6.3 Where the Lead Auditor considers that an initial site visit is not appropriate or required, then planning for the audit can be made by letter/e-mail etc. Issues to consider in deciding whether a site visit is required are as follows:

- Existing familiarity with the area being audited;
- Travel time/costs; and
- Type, scope and depth of audit.

7.6.4 The Lead Auditor may also utilise a Pre-Audit Questionnaire where they consider that this would be of benefit to the audit process. The time the Auditee will need to complete the questionnaire should be minimal and the questionnaire should only be used to gather information to assist in the audit planning and document review stage, not as a replacement of work which should be completed during the on-site audit.

7.6.5 Where the Auditee objects to any members of the Audit Team completing the audit, then they should have a strong justified reason for doing so before another team member is appointed. Where the Audit Client and Auditee are unable to agree on a particular Audit Team member (including the Lead Auditor) then this should be referred to ASEG.

8 RECORDS AND PROJECT DOCUMENTATION

8.1.1 Where relevant, the outputs from this procedure should feed into the following:

- Assurance and Audit Procedure AAP01b – Audit Planning

8.1.2 A copy of the information produced by following this procedure should be stored in the Project Safety and Environmental Cases as appropriate.

9 RECOMMENDED TOOLS AND FORMS

a. **Form AAP01a/F/01** - Audit Schedule

b. **Form AAP01a/F/02** - Audit Details, Team Composition and Competence Record Form

c. **AAP01a/G/01** – Auditor Competency Interim Guidance

d. **Form AAP01a/F/03** – Notification of Audit Form

10 GUIDANCE

10.1 General

10.1.1 JSP 375, 430, 454, 518, 520, 538, 553 and the SHEF audit manual all include information on auditing. The ISO14000 series is useful, particularly ISO14001 and ISO14004, and also OHSAS 18001, ISO 19011 and ISO9001.

10.1.2 Although auditing Customer 2 is out of the scope of the audit procedure, information provided by Customer 2 in showing compliance with SMS and EMS requirements, and required equipment system safety and environmental performance (e.g. objectives and targets and operational controls) should be included in the audit.

10.1.3 If an IPT already has a project management system or procedures (eg ISO 9000) that cover system auditing, then these may be used in place of these POSMS and POEMS procedures so long as ASEG is satisfied that they meet the same objectives.

10.1.4 Further guidance on the application of this procedure can be obtained from ASEG. The Institute of Environmental Management and Assessment (IEMA) and Institute of Safety and Health (IOSH) are professional bodies in environmental and safety auditing respectively and may hold useful information on auditing (Further information can be found at http://www.iema.net & http://www.iosh.co.uk).

10.2 Aligning Safety and Environment

10.2.1 The key alignment opportunity in this procedure is to ensure that both safety and environmental issues are audited together, where this is practical and beneficial.

10.3 Guidance for ASEG

10.3.1 In addition to completing sample audits of IPT's safety and environmental managements systems, ASEG should ensure that it also audits its compliance against the procedures which solely apply to ASEG, eg SSP01b, SSP02b, SSP03b.

10.4 Warnings and Potential Project Risks

10.4.1 If audits are not completed correctly or not completed at all, there is an increased risk that IPTs fail to operate effective SMS and EMS, which in turn increases the risk of poor or ineffective management of safety and/or environmental risks within the project(s). It may also lead to delays and cost impacts if shortcomings in the SMS and/or EMS are identified late, because rework may be required or approvals may be delayed.

Form AAP01a/F/01 – Audit Schedule			
Project(s) Title			
IPT:			
Completed by:		Date:	
Reviewed by:		Date:	

Audit title or ref	Audit scope	Audit date	Audit Frequency	Date completed	Auditee's details	Additional information

Form AAP01a/F/02 – Audit Details, Team Composition and Competence Record			
Project(s) Title			
IPT:			
Completed by:		**Date:**	
Reviewed by:		**Date:**	
Audit title or ref:			
Lead Auditor (name and organisation):			
Audit team (names & organisations):			
Competency details of each member of team **(See Form AAP01a/G/01)**			
Audit scope:			
Audit objectives:			
Audit criteria:			
Auditee:			
Planned date for audit:			
Security classification:	**Unrestricted / Restricted / Secret / Top-Secret**		
Additional information:			

AAP01a/G/01 – Audit Competency Interim Guidance	
There are 3 main parties involved in auditing the safety and environmental management systems in POEMS and POSMS, these being: • **Lead Auditor** – The person responsible for leading and managing an audit and audit team. • **Auditor** – A person who forms part of an audit team • **Aspirant Auditor** – A person who forms part of the audit team who is undergoing training, or other development process, in order to attain auditor status.	
General attributes of all auditors:	
Personal:	**Auditors at all levels should be -** • Ethical. • Open-minded. • Diplomatic. • Observant. • Perceptive. • Versatile. • Decisive. • Self-reliant.
Knowledge and skills:	**All staff involved in auditing POSMS and POEMS procedures should be able to:** • Apply audit principles, procedures and techniques. • Conduct an audit (or designated task) within agreed time schedule. • Collect information through effective interviewing, listening, observing and reviewing relevant information. • Verify the accuracy of collected information. • Use correct documentation to record audit activities. • Prepare audit reports. • Maintain confidentiality. • Understand system standards. • Have an awareness of relevant laws, regulations and requirements. • Understand relevant environmental and safety terminology. • Understand environmental/safety management principles. • Understand relevant environmental and safety management tools.

Aspirant auditor	
Competency and experience:	Initially the most important areas of experience and competence are the attributes outlined in the General Attributes section above. However, in addition aspirant auditors should: • Have some knowledge of, and the ability to apply (under supervision) audit processes. • Be proficient at effectively utilising their time during audits. • Provide assistance to the Lead Auditor and audit team members where required. • Help with the preparation and production of the audit report. • Understand MoD Safety and Environmental management requirements. • Have knowledge of ASEMS, POEMS and POSMS.
Auditor	
Competency and experience:	An Auditor is expected to: • Have successfully completed an accredited auditing course (eg ISO 14001, 9001, OHSAS 18001) or have equivalent practical training and experience. • Have gained experience in the entire audit process by participating in a minimum of two audits, including undertaking document review and audit reporting. • Be proficient at effectively utilising their time during audits. • Provide assistance to aspirant auditors. • Help with the preparation and production of the audit report. • Understand MoD safety and environmental management requirements. • Have knowledge of ASEMS, POEMS and POSMS.
Lead Auditor:	
Competency and experience:	A Lead Auditor is expected to: • Have successfully completed an accredited auditing course (eg ISO 14001, 9001, OHSAS 18001) or have equivalent practical training and experience. • Have acted as an auditor in at least two complete audits. • Advise on and interpret requirements of audit processes with sufficient breadth of experience, knowledge and depth of understanding, to be able to apply audit management requirements. • Generate an effective auditing strategy and plan, based on the identified audit requirements. • Be proficient at planning and effectively utilising resources during audits. • Organise and direct audit team members. • Provide guidance and assistance to aspirant auditors.

	• Lead the audit team to reach the audit conclusions. • Prepare, complete and review the audit report. • Understand MoD safety and environmental management requirements. • Have knowledge of ASEMS, POEMS and POSMS and domain functional policy requirements. Do not forget that any audit must be able to inform the functional Boards that policy is being implemented effectively. Note that whilst Lead Auditors are required to have competencies in auditing and ASEMS, it is not necessary for them to be competent with the domain of the equipment and services being audited. The Lead Auditor can call on auditors with domain competence, or SMEs to support, or be part of, the audit team.

AAP01a/F/03 – Notification of Audit Letter

Example letter to notify Auditee of an impending audit

To: *(Auditee)*

RE: PROJECT ORIENTED ENVIRONMENTAL AND SAFETY MANAGEMENT SYSTEM (POEMS/POSMS) AUDIT

As part of the continual improvement in the operation of (*insert IPT/project(s)*) safety and environmental management systems, I have been requested by (*insert Audit Client name*) to act as Lead Auditor for a system audit covering (*insert detail of scope of audit)to* be undertaken on (*Date).*

The objectives of the audit will be *(Insert objectives of audit).*

Please can you and/or your Safety Manager/Project Manager attend a pre-audit meeting with me and my colleague(s) (*insert name of Audit Team Member(s)*) so we can discuss the audit process and scope and prepare for undertaking the audit.

Please do not hesitate to contact me (*insert contact details*) if you have any queries. Otherwise I will contact you in one week to confirm a mutually acceptable date and time for the pre-audit meeting.

From: *(Insert name Lead Auditor)*

0 SHOWING CONFORMANCE

0.1 Options

0.1.1 There are three options to demonstrate conformance when applying this system procedure:

a. Follow the defined system procedure using the recommended guidance and tools, including allowed variations and options.

b. Use an equivalent process and tool set generated elsewhere and document evidence of procedural equivalence.

c. Use an equivalent bespoke process and tool set for the project and document evidence of procedural equivalence.

1 INTRODUCTION

1.1.1 This procedure is the second in a set of four System Audit procedures and deals with the details of planning the on-site audit.

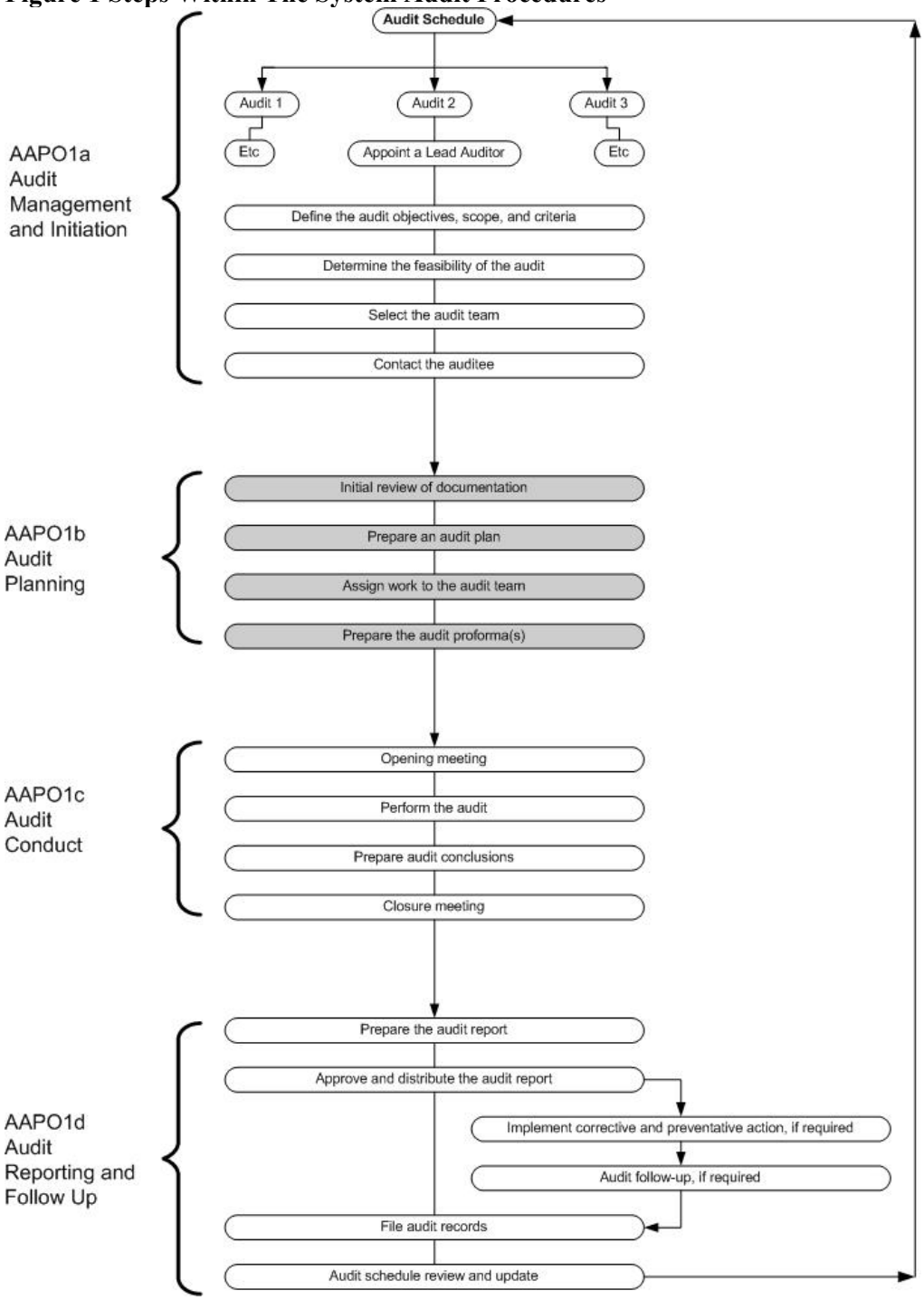
1.1.2 Although this and the companion procedures have been produced primarily for use by and on behalf of IPTs, they may also be used by ASEG to carry out audits on the SMS and EMS. In addition, these procedures may also be used for auditing all, or parts of, an IPT's SMS and EMS by other parties such as:

- Functional Safety Board Secretariats;
- DS&C;
- Third Parties invited by CDM;
- Independent Safety Auditors;
- MOD and TLB Internal Audit Functions;
- Equipment system contractor;
- Personnel seconded from another IPT;
- Customer 2;
- SME;
- Environmental and Safety Consultants.

1.1.3 Any third party using these procedures should note that they have primarily been written for use by IPTs and therefore may use terminology specific to IPTs. However, this should not preclude a third party from using the procedures.

Throughout the procedures the term 'Audit Client' has been used to describe the group, organisation or individual commissioning an audit, as this may be distinct from the party carrying out the audit.

Figure 1 Steps Within The System Audit Procedures



2 PROCEDURE OBJECTIVES

2.1.1 The objectives of this procedure are to:

- Produce a plan, for auditing any or all elements of the IPT's SMS and EMS;
- Assign work to the audit team; and
- Prepare an Audit Pro-forma.

3 RESPONSIBILITIES

3.1 Accountability

3.1.1 The Audit Client is accountable for the completion of this procedure.

3.2 Procedure Management and Procedure Completion

3.2.1 The Lead Auditor is responsible for ensuring that this procedure is managed and completed. The Lead Auditor may delegate tasks to members of the Audit Team in regards to the management and completion of this procedure.

4 WHEN

4.1.1 Immediately after the completion of Procedure AAP01a.

5 REQUIRED INPUTS

- Audit Question Toolset (available from ASEG);
- **Form AAP01a/F/01** - Audit Schedule;
- **Form AAP01a/F/02** - Audit Details, Team Composition and Competence Record Form;
- Other documents relevant to the scope and objective of the audit (e.g. POSMS / POEMS);
- IPT SMS and EMS documents and records; and
- **Form AAP01d/F/01** - Previous audit reports

6 REQUIRED OUTPUTS

Form AAP01b/F/01 - Audit Plan

Form AAP01b/F/02 - Audit Pro-forma (partly complete)

OR

Equivalent actions and documentation that ASEG is satisfied achieve the same objectives.

7 DESCRIPTION

7.1 Step 1 – Initial document review

7.1.1 By following AAP01a the Lead Auditor should have identified and obtained any documents that have to be reviewed as part of the preparation for the audit. This documentation should include all the management system documents, records and any previous audit reports relevant to the scope of the audit. Previous audit reports should be examined to establish follow-up work which may be required and to ensure that the audit does not duplicate work competed in a recent audit.

7.1.2 If this document review reveals major non-conformances with the management system then the Lead Auditor may decide that it would be better to postpone the audit until the documentation discrepancies have been resolved. This should be discussed with the Audit Client before a decision is made and communicated to the Auditee.

7.2 Step 2 – Prepare the Audit Plan

7.2.1 The Lead Auditor must prepare an Audit Plan to ensure that the audit meets all the identified criteria and is carried out in a professional manner with efficient use of time and resources.

7.2.2 The Audit Plan should be written so it is flexible enough to permit any minor changes which may be needed during the course of the audit, for example additional staff may have to be interviewed.

7.2.3 The Audit Plan(s) should cover the following elements:

- Location of audit;
- Audit scope and objectives (from Form AAP01a/F/01) and criteria (from AAP01a/F/02;
- Reference documents;
- Auditors' details;
- Auditee's names and contact details; and
- Audit date and timetable/on-site work agenda;

7.2.4 The Audit Plan may also include:

- Areas and documents to inspect;
- Any language requirements e.g. for production of audit report;
- Logistic arrangements (travel, on-site facilities, etc);
- On site administrative arrangement (site access, security clearance);
- Health and safety issues associated with carrying out the audit; and
- Any security requirements including document confidentiality.

Form AAP01b/F/01 can be used to document the Audit Plan.

7.2.5 Once the Audit Plan(s) has been drawn up, it should be approved by the Audit Client and Auditee before use. Any objections by the Auditee should be resolved between

the Lead Auditor, the Auditee and the Audit Client. Any revised Audit Plan should then be agreed among the parties concerned before continuing.

7.3 Step 3 - Assign work to the audit team

7.3.1 The Lead Auditor, in consultation with the Audit Team, should assign each team member with specific tasks. The competency and independence of the Auditor Team members should be taken into consideration (see **Form AAP01/F/02)**.

7.3.2 During the completion of this Step, the Lead Auditor may identify the need to make changes to the members of the Audit Team (e.g. all competences required are not covered in the Audit Team). If changes are required to be made to the Audit Team composition, then the Lead Auditor should amend **Form AAP01a/F/02** and inform the Auditee and Audit Client of this change.

7.4 Step 4 - Prepare Audit Pro-forma(s)

7.4.1 A key part of the planning stage will be to produce the Audit Pro-formas that will be used by the Audit Team members in the completion of the assigned audit tasks. These pro-formas will be generated by the Audit Team with reference to the Audit Plan and should include the audit questions. These should be identified by:

- Identifying which Question Toolset(s)(Available electronically at http://www.ASEG.dii.r.mil.uk) is relevant to the audit;
- Where necessary, tailoring the model questions from the relevant question sets to suit the audit criteria; and
- Adding further questions, based on audit-specific issues and knowledge of the project being audited.

7.4.2 The use of an Audit Pro-forma has many benefits including:

- It provides a structured set of questions, ensuring that no subject areas are inadvertently overlooked;
- It facilitates the smooth running of the audit, thereby causing minimal disruption to project work; and
- It provides a traceable and documented process of the generation of audit findings.

7.4.3 All Audit Pro-forma(s) should be reviewed by the Lead Auditor prior to use.

7.4.4 The Pro-forma(s) should be used in the audit to record:

- Audit Findings:
  - **Questioning**: How is the requirement satisfied?
  - **Evidence**: What evidence is provided in support?
  - **Auditor's Opinion**: Draw conclusions from responses.
- Assessed level of compliance; and
- Notes (e.g. any recommendations that have been made as part of the audit).

7.4.5 The 'Assessed level of compliance' field will record the Audit Team's judgement on whether the Auditee has satisfied the specific area under review. The response to be recorded will be one of the following:

- **Assessed compliant**: No weaknesses observed: the required system procedure or process has been adhered to;
- **Non-conformance**: Example identified by the Audit Team where a required system procedure or process has not been adhered to (refer to AAP04 – Non-Conformance and Corrective Action); or
- **Observation**: Written report by the Audit Team which does not relate to a conformance issue but may otherwise be of benefit to the Auditee or the Audit Client, eg possible improvements (refer to AAP04 – Non-Conformance and Corrective Action).

7.4.6 **Form AAP01b/F/02** provides a blank Audit Pro-forma which should be used to record the questions to be asked by the auditors. Separate pro-formas may be completed per auditor/audit/system element.

8 RECORDS AND PROJECT DOCUMENTATION

8.1.1 Where relevant, the outputs from this procedure should feed into the following:

- Assurance and Audit Procedure - AAP01c

8.1.2 A copy of the information produced by following this procedure should be stored in the Project Safety and Environmental Cases as appropriate.

9 RECOMMENDED TOOLS AND FORMS

Form AAP01b/F/01 - Audit Plan

Form AAP01b/F/02 - Audit Pro-forma

Audit Question Toolsets (available from ASEG)

10 GUIDANCE

10.1 General

10.1.1 JSP 375, 430, 454, 518, 520, 538, 553 and the SHEF audit manual all include information on auditing. The ISO14000 series is useful, particularly ISO14001 and ISO14004, and also OHSAS 18001, ISO 19011 and ISO9001.

10.1.2 Although audits of Customer 2 are outside the scope of the system audits, information provided by Customer 2 which relates to SMS and EMS requirements or the safety and environmental performance of the equipment (e.g. objectives and targets and operational controls) should be included in the audit.

10.1.3 If an IPT already has a project management system or procedures (e.g. ISO 9000) that

cover system auditing, then these may be used in place of these POSMS and POEMS procedures so long as ASEG is satisfied that they meet the same objectives.

10.1.4 Further guidance on the application of this procedure can be obtained from ASEG. The Institute of Environmental Management and Assessment (IEMA) and Institution of Occupational Safety and Health (IOSH) are professional bodies in environmental and safety auditing respectively and may produce useful information on auditing. (Further information can be found at http://www.iema.net & http://www.iosh.co.uk).

10.2 Aligning Safety and Environment

10.2.1 The key alignment opportunity in this procedure is to plan safety and environmental audits together, where this is practical and beneficial.

10.3 Guidance for ASEG

10.3.1 In addition to completing sample audits of IPTs' SMS and EMSs, ASEG should ensure that audits are performed that check ASEG's compliance with those procedures that apply directly to it eg SSP01b, SSP02b, SSP03b.

10.4 Warnings and Potential Project Risks

10.4.1 If audits are not completed or are incomplete, there is an increased risk that an IPT's SMS or EMS does not achieve its objectives. This may lead to increased safety and environmental risks associated with the project. It may also lead to delays and cost impacts if shortcomings in the SMS and/or EMS are identified late, because rework may be required or approvals may be delayed.

Form AAP01b/F/01 – Audit Plan			
Project Security classification:			
Project(s) Title			
IPT:			
Completed by:		**Date:**	
Reviewed by:		**Date:**	
Audit title/ref:			
Audit team details:			
Auditee's names and contact details			
Location of audit:			
Audit scope, objectives and criteria			
Reference documents:			
Audit date(s)			
Audit timetable/on-site work agenda			
Where appropriate please document the following -			
Areas and documents to inspect			
Language of audit process (if different to language of the auditor)			
Logistical arrangements (travel, on-site facilities, etc.)			
On-site administrative arrangements (site access, security clearance)			
Safety Issues			
Additional information:			

Form AAP01b/F/02 – Audit Pro-forma			
Project(s) Title			
IPT:			
Completed by:		Date:	
Reviewed by:		Date:	
Audit title/ref.		Pro-forma ref.	
Auditor(s)		Pro-forma objective	
Interviewee(s)		Pro-forma scope	

Question Reference	Source Document	Audit Question	Guidance for Auditor	Questioning	Evidence	Auditor's Opinion	Assessed Level of Compliance	Actions

0 SHOWING CONFORMANCE

0.1 Options

0.1.1 There are three options to demonstrate conformance when applying this system procedure:

a. Follow the defined system procedure using the recommended guidance and tools, including allowed variations and options.

b. Use an equivalent process and tool set generated elsewhere and document evidence of procedural equivalence.

c. Use an equivalent bespoke process and tool set for the project and document evidence of procedural equivalence.

1 INTRODUCTION

1.1.1 This is the third of four System Audit procedures and describes how system audits should be performed. Once the audit plan has been agreed and the audit pro-formas compiled, the audit can take place. Details of how the audit will be undertaken will have been defined in the Audit Plan and should include opening and closing meetings in addition to the collection, verification and documentation of audit findings and conclusions.

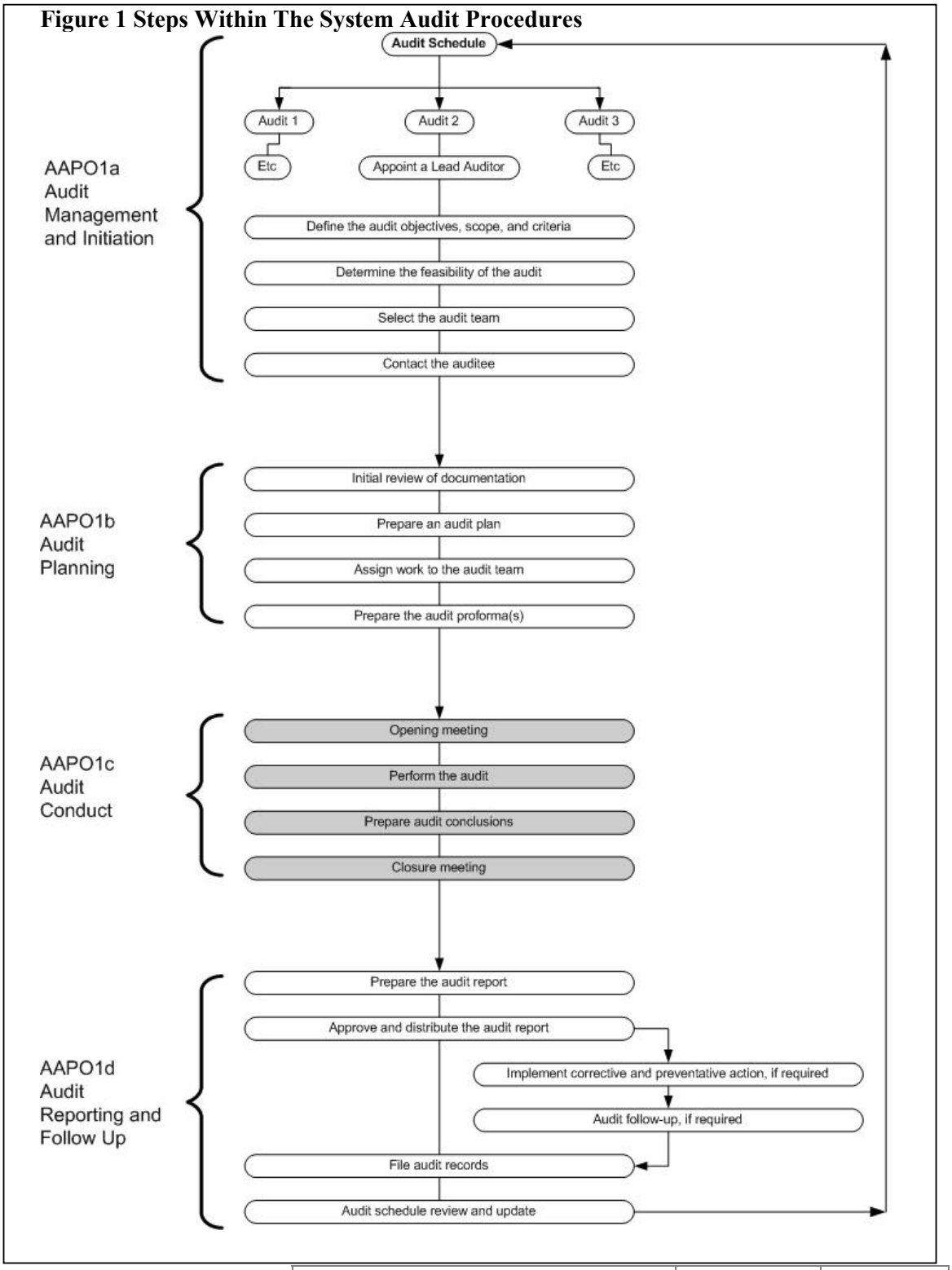
1.1.2 Although this and the companion procedures have been produced primarily for use by and on behalf of IPTs, they may also be used by ASEG to carry out audits on the SMS and EMS. In addition, these procedures may also be used for auditing all or parts of an IPT's SMS and EMS by other parties such as:

- Functional Safety Board Secretariats;
- DS&C;
- Third Parties invited by CDM;
- Independent Safety Auditors;
- MOD and TLB Internal Audit Functions;
- Equipment system contractor;
- Personnel seconded from another IPT;
- Customer 2;
- SME;
- Environmental and Safety Consultants.

1.1.3 Any third party using these procedures should note that they have primarily been written for use by IPTs and therefore may use terminology specific to IPTs. However, this should not preclude a third party from using the procedures.

Throughout the procedures the term 'Audit Client' has been used to describe the group, organisation or individual commissioning an audit, as this may be distinct from the party carrying out the audit.

Figure 1 Steps Within The System Audit Procedures



2 PROCEDURE OBJECTIVES

2.1.1 The objectives of this procedure are to:

- Ensure that audits are performed efficiently and effectively in accordance with the Audit Plan;
- Identify non-conformances and observations when performing audits.

3 RESPONSIBILITIES

3.1 Accountability

3.1.1 The Audit Client is accountable for the completion of this procedure.

3.2 Procedure Management and Procedure Completion

3.2.1 The Lead Auditor is responsible for ensuring that this procedure is managed and completed. The Lead Auditor may delegate tasks to members of the Audit Team in regards to the management and completion of this procedure.

4 WHEN

4.1.1 As per the Audit Plan.

5 REQUIRED INPUTS

- **Form AAP01b/F/01** - Audit Plan;
- **Form AAP01b/F/02** - Audit Pro-forma (partially completed in AAP01b);
- Relevant IPT documentation;
- **Form AAP04/F/01** – Non-conformance and Corrective Action Form (if needed); and
- **Form AAP01c/F/01** – Record of Audit Meeting.

6 REQUIRED OUTPUTS

Form AAP04/F/01 – Non-conformance and Corrective Action Form;

Form AAP01b/F/02 - Audit Pro-forma(s) – Fully completed;

Form AAP01c/F/01 – Record of Audit Meeting (completed for Opening Meeting);

Form AAP01c/F/01 – Record of Audit Meeting (completed for Audit Team Meeting(s)); and

Form AAP01c/F/01 – Record of Audit Meeting (completed for Closing Meeting).

OR

Equivalent actions and documentation that ASEG is satisfied achieve the same objectives.

7 DESCRIPTION

7.1 Step 1 - Opening meeting

7.1.1 On the day of the audit it is good practice to hold an opening meeting on-site before the audit commences. This should be attended by the Auditee and Audit Team and can include the following issues:

- Introduce Audit Team members to the Auditee(s);
- Confirm that the resources and facilities needed by the Audit Team are available;
- Briefly discuss the audit scope, objectives and methodology;
- Briefly discuss the Audit Plan, (e.g. personnel and areas to be interviewed);
- Confirm communication arrangements between the Audit Team and the Auditee;
- Confirm the roles and responsibilities of any guides and observers that may be used;
- Confirm any security or confidentiality arrangements;
- Confirm the circumstances under which the audit may be terminated;
- Safety and housekeeping arrangements; and
- Confirm the time and date for the closing meeting and any interim meetings of the Audit Team and the Auditees.

7.1.2 The above could be used as a basis for the agenda for the opening meeting. Minutes from the opening meeting should be recorded on **Form AAP01c/F/01** – Record of Audit Meeting.

7.1.3 It is important in the meeting to allay any concerns the Auditee may have, for example by explaining that the audit is to assist them rather than to judge. The Auditee should be allowed the opportunity to clarify any concerns they may have regarding the audit. Minutes of this meeting, including a record of attendees should be taken and kept. The meeting will be chaired by the Lead Auditor.

7.2 Step 2 – Perform the audit

7.2.1 The aim of the on-site audit is to obtain objective evidence on actual practices (current and past) and to identify the degree of compliance and any areas for potential improvement. The Audit Pro-formas should be used to record the audit findings.

7.2.2 Non-conformances and any subsequent recommendations should be recorded by the Audit Team following procedure AAP04 – Non-conformance and Corrective Action.

7.2.3 Interviews, observations, document review and reviews of previous audits are all acceptable methods for collecting evidence to support the audit findings. Auditors should aim to follow an audit trail and may ask additional questions to those in the Audit Pro-formas, where they consider that this will assist the audit process.

7.2.4 Auditors should attempt to compile and document evidence that can be evaluated

against the audit criteria to form the audit findings. Where possible this should be verifiable, although anecdotal evidence can be used as a basis for audit findings. In many cases, audit findings may be based on opinions formed by examining samples of data or information, rather than whole datasets, and this element of uncertainty should be acknowledged when presenting the audit findings.

7.2.5 Any potential non-conformance should be discussed immediately with the interviewee so they understand the basis of the non-conformance and agree that the audit finding is accurate.

7.2.6 Evidence collected during the audit which suggests that there is a safety or environmental risk which requires immediate attention (even if this is not within the scope of the audit) should be reported without delay to the Lead Auditor, who should report it immediately to the Auditee. Any concerns relating to non-urgent issues identified that are outside the scope of the audit should be noted and reported to the Lead Auditor who should then report it to the Audit Client and Auditee.

7.2.7 If during the course of the audit it becomes apparent that the objectives of the audit are not going to be achieved, this should be reported and appropriate action determined between the Lead Auditor, the Audit Client and the Auditee. Such actions may include the modification to the Audit Plan, changes to the audit objectives or scope or, if necessary, the termination of the audit.

7.2.8 Guides from the Auditee organisation used to accompany the Audit Team must not be permitted to have any influence over, or cause interference with, the conduct of the audit. Their purpose is only to assist the Audit Team and act on the request of the Lead Auditor. They may be required to undertake any or all of the following:

- Establish contacts and times for interviews;
- Arrange visits;
- Ensure that safety and security arrangements are communicated and followed;
- Act as witness for the Auditee; and
- Provide clarification or assist in the collection of information.

7.2.9 The Lead Auditor should supervise the Audit Team throughout the audit and review any audit findings at the close of each day. **Form AAP01c/F/01** – Record of Audit Meeting may be used to record these meetings. He/she should also ensure that the Audit Team can contact him/her to discuss any issues that may arise through the course of the audit.

7.3 Step 3 - Prepare audit conclusions

7.3.1 After completing the audit the Audit Team should meet to:

- Review the audit findings, and any other appropriate information collected during the audit, against the audit objectives;
- Agree on the audit conclusions, taking into account the uncertainty inherent in the audit process;

- Prepare recommendations, if this is one of the audit's objectives; and
- Discuss audit follow-up, if the Audit Client has specified that this will be part of the auditor role.

7.3.2 **Form AAP01c/F/01** – Record of Audit Meeting can be used to record this meeting.

7.4 Step 4 – Closure meeting

7.4.1 The closing meeting should be chaired by the Lead Auditor and be attended by the Auditee, and possibly the Audit Client. Minutes of the meeting, including a list of attendees, should be made by a member of the Audit Team and included in the Audit Report. The closing meeting may include:

- An informal debrief for the Auditee;
- A summary of the audit activities and findings;
- Overview of system strengths and weaknesses;
- Discussion of preliminary findings, including non-conformances (highlighting any findings requiring immediate attention);
- Discussion of any findings that can be closed out immediately by the Auditee.
- Audit limitations (e.g. situations encountered during the audit that may decrease the reliance that can be placed on the audit conclusions);
- Address Auditee questions or concerns;
- Where included within the objectives of the audit, recommended corrective/preventive actions. (The Auditee should be made aware that these are recommendations, and they will have the opportunity to later propose actions they consider more appropriate);
- Discuss timeframe for issuing draft Audit Report;
- Discuss scope and contents and recipients of the Audit Report; and
- Where required, agree timeframe for the Auditee to present a corrective/preventive action plan.

7.4.2 The above could be used as a basis for the agenda for the closing meeting. Minutes from the closing meeting should be recorded on **Form AAP01c/F/01** – Record of Audit Meeting.

7.4.3 Diverging opinions regarding the audit findings and/or conclusions between the Audit Team and the Auditee should be discussed and resolved where possible. Any unresolved issues will be noted and reported to the Audit Client.

8 RECORDS AND PROJECT DOCUMENTATION

8.1.1 Where relevant, the outputs from this procedure should feed into the following:

- Assurance and Audit Procedure AAP01d

A copy of the information produced by following this procedure should be stored in the Project Safety and Environmental Cases as appropriate.

9 RECOMMENDED TOOLS AND FORMS

a. **Form AAP01c/F/01** – Record of Audit Meeting.

10 GUIDANCE

10.1 General

10.1.1 JSP 375, 430, 454, 518, 520, 538, 553 and the SHEF audit manual all include information on auditing. The ISO14000 series is useful, particularly ISO14001 and ISO14004, and also OHSAS 18001, ISO 19011 and ISO9001.

10.1.2 Although audits of Customer 2 are out with the scope of the system audits, information provided by Customer 2 which relates to SMS and EMS requirements or the safety and environmental performance of the equipment (e.g. objectives and targets and operational controls) should be included in the audit.

10.1.3 If an IPT already has a project management system or procedures (eg ISO 9000) that cover system auditing, then these may be used in place of these POSMS and POEMS procedures so long as ASEG is satisfied that they meet the same objectives.

10.1.4 Further guidance on the application of this procedure can be obtained from ASEG. The Institute of Environmental Management and Assessment (IEMA) and Institution of Occupational Safety and Health (IOSH) are professional bodies in environmental and safety auditing respectively and may produce useful information on auditing. (Further information can be found at http://www.iema.net & http://www.iosh.co.uk).

10.2 Aligning Safety and Environment

10.2.1 The key alignment opportunity in this procedure is to plan safety and environmental audits together, where this is practical and beneficial.

10.3 Guidance for ASEG

10.3.1 In addition to completing sample audits of IPTs' SMS and EMSs, ASEG should ensure that audits are performed that check ASEG's compliance with those procedures that apply directly to it eg SSP01b, SSP02b, SSP03b.

10.4 Warnings and Potential Project Risks

10.4.1 If audits are not completed or are incomplete there is an increased risk that an IPT's SMS or EMS does not achieve its objectives. This may lead to increased safety and environmental risks associated with the project. It may also lead to delays and cost impacts if shortcomings in the SMS and/or EMS are identified late, because rework may be required or approvals may be delayed.

Form AAP01c/F/01 – Record of Audit Meeting			
Project(s) Title			
IPT:			
Audit title or ref:			
Completed by:		**Date:**	
Reviewed by:		**Date:**	
Date of meeting:			
Location of meeting:			
Attendees:			
Minutes:			

0 SHOWING CONFORMANCE

0.1 Options

0.1.1 There are three options to demonstrate conformance when applying this system procedure:

a. Follow the defined system procedure using the recommended guidance and tools, including allowed variations and options.

b. Use an equivalent process and tool set generated elsewhere and document evidence of procedural equivalence.

c. Use an equivalent bespoke process and tool set for the project and document evidence of procedural equivalence.

1 INTRODUCTION

1.1.1 This fourth and final System Audit procedure deals with the activities to be conducted after the on-site audit has been completed.

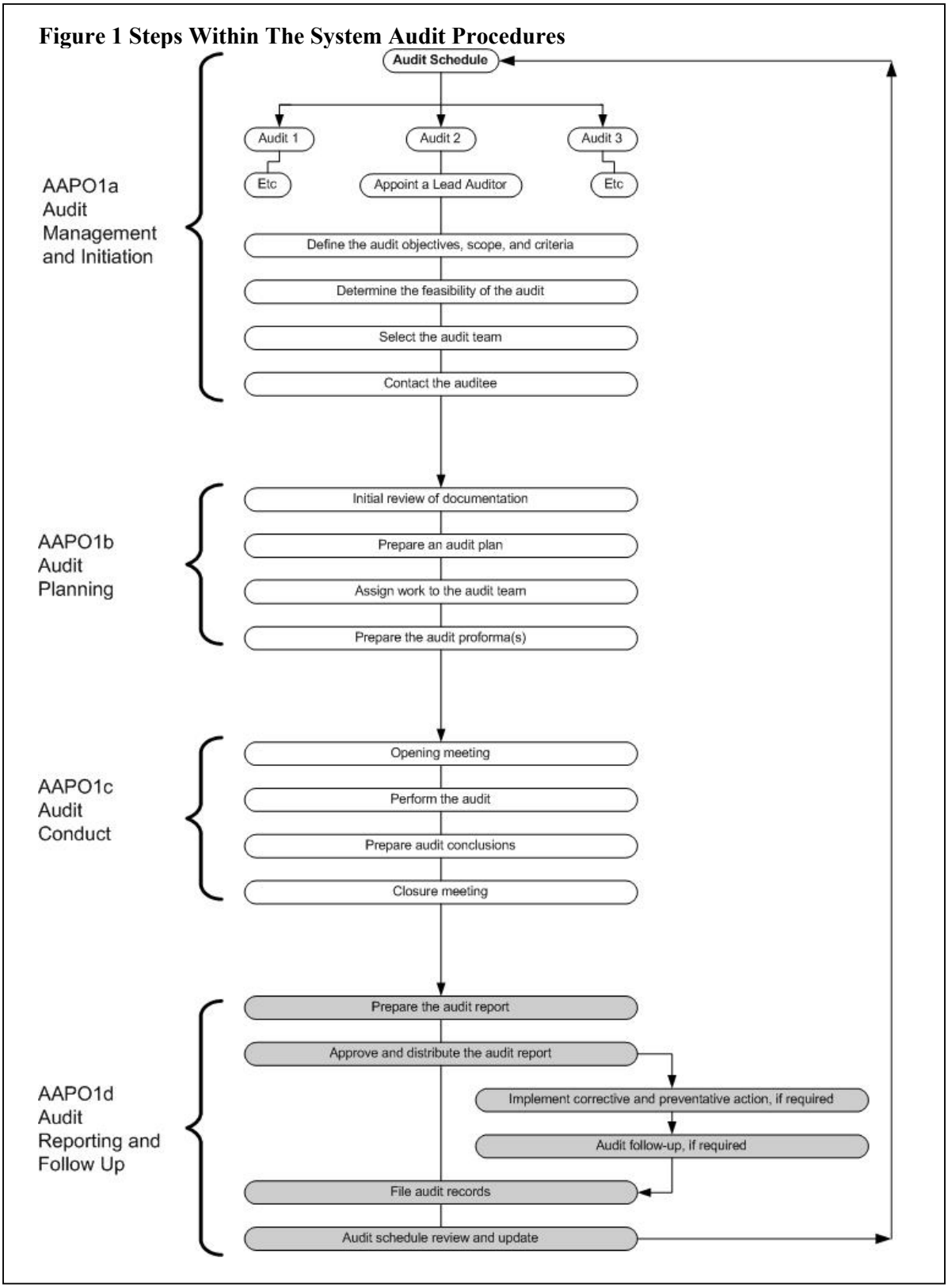
1.1.2 Although this and the companion procedures have been produced primarily for use by and on behalf of IPTs, they may also be used by ASEG to carry out audits on the SMS and EMS. In addition, these procedures may also be used for auditing all or parts of an IPT's SMS and EMS by other parties such as:

- Functional Safety Board Secretariats;
- DS&C;
- Third Parties invited by CDM;
- Independent Safety Auditors;
- MOD and TLB Internal Audit Functions;
- Equipment system contractor;
- Personnel seconded from another IPT;
- Customer 2;
- SME;
- Environmental and Safety Consultants.

1.1.3 Any third party using these procedures should note that they have primarily been written for use by IPTs and therefore may use terminology specific to IPTs. However, this should not preclude a third party from using the procedures.

1.1.4 Throughout the procedures the term 'Audit Client' has been used to describe the group, organisation or individual commissioning an audit, as this may be distinct from the party carrying out the audit.

Figure 1 Steps Within The System Audit Procedures



2 PROCEDURE OBJECTIVES

2.1.1 The objectives of this procedure are to:

- Produce and circulate an Audit Report, once authorised;
- Ensure that audit records are stored and communicated appropriately;
- Ensure that audit follow-up is planned and that the audit schedule is updated;
- Ensure that any audit reports are provided to ASEG.

3 RESPONSIBILITIES

3.1 Accountability

3.1.1 The Audit Client is accountable for the completion of this procedure.

3.2 Procedure Management and Procedure Completion

3.2.1 The Lead Auditor is responsible for ensuring that this procedure is managed and completed. The Lead Auditor may delegate tasks to members of the Audit Team in regards to the management and completion of this procedure.

4 WHEN

4.1.1 This procedure should be conducted once the on-site audit has been completed, as defined in Procedure AAP01c.

5 REQUIRED INPUTS

- **Form AAP01b/F/01** Audit Plan;
- **Form AAP01b/F/02** Audit Pro-forma(s);
- **Form AAP04/F/01** Non-conformance and Corrective Action Form(s), if relevant (partly complete).
- IPT documentation relevant to the audit;
- **Form AAP01c/F/01 -** Audit meeting records

6 REQUIRED OUTPUTS

Audit Report (based on **Form AAP01d/F/01 -** Audit Report Template)

Form AAP04/F/01 - Non-conformance and Corrective Action Form(s), if relevant – (fully completed)

OR

Equivalent actions and documentation that ASEG is satisfied achieve the same objectives.

7 DESCRIPTION

7.1 Step 1 - Prepare the Audit Report

7.1.1 On completion of the audit an Audit Report should be drafted as agreed between the Lead Auditor and Audit Client. The Lead Auditor will be responsible for the preparation and content of this report. Where the audit covered safety and environmental issues, the Audit Client can request that these are reported separately.

7.1.2 An Audit Report will contain the following:

- Introduction and background to the audit;
- Audit dates and locations; (Available from **AAP01b/F/01** – Audit Plan)
- Audit scope, criteria and objectives; (Available from **AAP01b/F/01** – Audit Plan)
- Description of audit approach and methodology;
- Audit Client;
- Audit Team; (Available from **AAP01b/F/01** – Audit Plan)
- Areas of strength and areas for improvement;
- Audit findings;
- Conclusions; and
- The confidential nature of the contents.

7.1.3 The Audit Report may also include the following, as appropriate and agreed with the Audit Client:

- Audit limitations (e.g. situations encountered during the audit that may decrease the reliance that can be placed on the audit conclusions; areas not covered, although within the audit scope)
- Any unresolved diverging opinions between the Audit Team and the Auditee;
- Recommendations for improvement, where the Audit Client has specified in the audit objectives that this is required as part of the audit;
- Agreed follow-up action plans, (e.g. follow-up meeting), where specified in the audit objectives; and
- Annexes;
  - Audit Team Composition and Competence Record Form (Form **AAP01a/F/02**);
  - Audit Plan (Form **AAP01b/F/01**);
  - Audit Pro-formas (Form **AAP01b/F/02**);
  - Non-conformance and Corrective Action Forms (Form **AAP04/F/01**)
  - Opening and closing meeting minutes

Form AAP01d/F/01 can be used to document the Audit Report.

7.1.4 The contents of the report should be easy to understand, concise and unambiguous. It should contain only that information which is supported by relevant audit evidence, and be independent, objective, fair and constructive. The Lead Auditor should consider the report's target audience and that it may be made publicly available under the Environmental Information Regulations or the Freedom of Information Act at some point in the future. The IPT should refer to its Register of Stakeholders (EMP01/F/01 and SMP01/F/02) to identify which stakeholders should receive a copy of the Audit Report.

7.2 Step 2 - Approve and distribute the audit report

7.2.1 Upon completion of the draft Audit Report, the Lead Auditor should forward the report to the Auditee for review and approval. The purpose of this review is to check for factual errors and not to negotiate the report's content. The Lead Auditor should propose a reasonable time by which the comments should be provided. The audit report should be finalised within 2 weeks to 1 month of receiving the comments.

7.2.2 The Lead Auditor should forward a copy of the dated final audit report to the Auditee, Audit Client, ASEG and other agreed recipients.

7.3 Step 3 – Implement corrective/preventive actions

7.3.1 After the final Audit Report has been issued, the Auditee should record non-conformance, observations, and (where specified in the audit objectives) recommended corrective and preventive action using Form AAP04/F/01.

7.3.2 Procedure AAP04 should be used to manage non-conformances and observations, noting the following:

- The Audit Client and/or Lead Auditor should review the corrective and preventive actions planned by the Auditee to ensure that they appropriately address the non-conformances raised. In the event that these are not considered to be acceptable, the Audit Client will contact the Auditee to agree an acceptable course of action. **Should this not be agreed, then the matter may be referred to ASEG for resolution.**
- The Auditee should keep the Audit Client informed of the status of the progress of corrective and preventive actions.

7.4 Step 4 – Audit follow-up

7.4.1 The completion and effectiveness of corrective and preventive actions for identified non-conformances should be verified. The verification can be completed in a number of ways, for example the follow up could be:

- part of the current audit;
- a separate task; or
- integrated within the next appropriate audit.

7.4.2 The results of the verification should be filed with the Audit Report. On completion

of the follow-up tasks, the Audit Client will arrange for a copy of the non-conformance close out report to be sent to the Auditee and any other persons to whom the original audit report was sent.

7.5 Step 5 – File audit records

7.5.1 Documents pertaining to the audit should be retained or destroyed by agreement between the participating parties and in accordance with the management system(s) record procedure(s) and applicable statutory, regulatory and contractual requirements. The IPT should keep audit records within the Safety/Environment Case.

7.6 Step 6 – Audit schedule review and update

7.6.1 On completion of Step 5 above, the Audit Schedule should be reviewed and where necessary modified.

8 RECORDS AND PROJECT DOCUMENTATION

8.1.1 Where relevant, the outputs from this procedure should feed into the following:

Form AAP01a/F/01 - Audit Schedule;

AAP02 – Monitoring and Measurement;

AAP03 – Management Review; and

AAP04 – Non-conformance and Corrective Action.

8.1.2 A copy of the information produced by following this procedure should be stored in the Project Safety and Environmental Case(s).

9 RECOMMENDED TOOLS AND FORMS

Form AAP01d/F/01 - Audit Report Template

Form AAP04/F/01 – Non-Conformance and Corrective Action Report Form – fully completed.

10 GUIDANCE

10.1 General

10.1.1 JSP 375, 430, 454, 518, 520, 538, 553 and the SHEF audit manual all include information on auditing. The ISO14000 series is useful, particularly ISO14001 and ISO14004, and also OHSAS 18001, ISO 19011 and ISO9001.

10.1.2 Although audits of Customer 2 are outwith the scope of the system audits, information provided by Customer 2 which relates to SMS and EMS requirements or the safety and environmental performance of the equipment (e.g. objectives and targets and operational controls) should be included in the audit.

10.1.3 If an IPT already has a project management system or procedures (eg ISO 9000) that cover system auditing, then these may be used in place of these POSMS and POEMS

procedures so long as ASEG is satisfied that they meet the same objectives.

10.1.4 Further guidance on the application of this procedure can be obtained from ASEG. The Institute of Environmental Management and Assessment (IEMA) and Institution of Occupational Safety and Health (IOSH) are professional bodies in environmental and safety auditing respectively and may produce useful information on auditing. (Further information can be found at http://www.iema.net & http://www.iosh.co.uk).

10.2 Aligning Safety and Environment

10.2.1 The key alignment opportunity in this procedure is to plan safety and environmental audits together, where this is practical and beneficial.

10.3 Guidance for ASEG

10.3.1 In addition to completing sample audits of IPTs' SMS and EMSs, ASEG should ensure that audits are performed that check ASEG's compliance with those procedures that apply directly to it eg SSP01b, SSP02b, SSP03b.

10.4 Warnings and Potential Project Risks

10.4.1 If audits are not completed or are incomplete there is an increased risk that an IPT's SMS or EMS does not achieve its objectives. This may lead to increased safety and environmental risks associated with the project. It may also lead to delays and cost impacts if shortcomings in the SMS and/or EMS are identified late, because rework may be required or approvals may be delayed.

Form AAP01d/F/01 - Audit Report Template			
IPT:			
Project(s) sampled during audit – title(s)/description			
Audit title and ref			
Audit dates:			
Audit client:			
Audit locations:			
Audit team:			
Completed by:		**Date:**	
Reviewed by:		**Date:**	
Audit scope, criteria and objectives:			
Description of approach and methodology:			
Audit findings:			
Areas of strength:			
Areas for improvement:			
Conclusions:			
Additional information:			

If appropriate and agreed with the Auditee, the following may also be provided	
Audit limitations:	
Any unresolved issues between auditor/auditee	
Recommendations for improvement (if required by Audit client)	
Agreed follow up plans (if specified in the audit objectives)	
Annexes:	Please indicate whether the audit report contains the following annexes – (If not included please indicate why)
Audit team composition form:	
Audit team competency record form:	
Audit plan:	
Audit Pro-formas	
Non-conformance, Observation, Corrective and Preventive action forms	
Opening and closing meeting minutes	

0 SHOWING CONFORMANCE

0.1 Options

0.1.1 There are three options to demonstrate conformance when applying this system procedure:

a. Follow the defined system procedure using the recommended guidance and tools, including allowed variations and options.

b. Use an equivalent process and tool set generated elsewhere and document evidence of procedural equivalence.

c. Use an equivalent bespoke process and tool set for the project and document evidence of procedural equivalence.

1 INTRODUCTION

1.1.1 This procedure describes how IPTs should monitor and assess the performance of the safety and environmental management system(s), equipment and supporting activities (e.g. maintenance). The procedure thus covers both direct measures of safety and environmental performance (e.g. incident rates in service) and indirect measures (e.g. non-conformances in the Safety and Environmental Management Systems, late production of documentation).

1.1.2 Protocols for collecting safety and environmental performance data, (e.g. noise monitoring) and calibrating monitoring equipment may also be required.

2 PROCEDURE OBJECTIVES

2.1.1 To ensure that there are arrangements in place to monitor, measure, assess and document progress of the following:

- SMS and EMS implementation;
- Completion of objectives and targets and Safety and Environmental Management Plans;
- Completion of actions arising from non-conformance and observations;
- Completion of actions arising from Management Reviews; and
- Safety and environmental performance of equipment and supporting activities, (for example, priority environmental impacts and safety risks, compliance with legal and non-legal standards and adherence to operational controls).

3 RESPONSIBILITIES

3.1 Accountability

3.1.1 The IPTL is accountable for the completion of this procedure.

3.2 Procedure Management

3.2.1 IPTLs may delegate the management of this procedure to the IPT Safety and Environmental Focal Point(s).

3.3 Procedure Completion

3.3.1 IPT Safety and Environmental Focal Point(s), and/or contractor could be responsible for the completion of this procedure.

4 WHEN

4.1.1 The applicability of this procedure is ongoing from the initial implementation of POSMS and POEMS to the end of the project

5 REQUIRED INPUTS

a. Environmental Management Plan (**Form EMP06/F/02, Form EMP06/F/03**) and Safety Management Plan (outputs from SMP03);

b. Operational controls (**Form EMP07/F/01** and outputs from SMP07);

c. Non-conformance and corrective action records (**Form AAP04/F/01**);

d. Safety and environmental communications (SSP01);

e. Management Review Records (**Form AAP03/F/01**); and

f. Performance data on equipment and supporting activities.

6 REQUIRED OUTPUTS

a. Completed **Form AAP02/F/01** – Monitoring Schedule.

b. Completed **Form AAP02/F/02** – Monitoring Data - Assessment Record.

OR

Equivalent actions and documentation that ASEG is satisfied achieve the same objectives.

7 DESCRIPTION

7.1 Step 1: Identify elements to be monitored and assessed

7.1.1 An IPT will identify the elements that will be monitored and assessed. This will include as a minimum the following:

- SMS and EMS implementation;
- Progress against objectives and targets and Safety and Environmental Management Plans;
- Progress of corrective or preventive actions produced from Non-conformances and Observations;
- Progress of actions produced in Management Reviews; and
- Safety and environmental performance of equipment and supporting activities (for example, priority environmental impacts and safety risks, compliance with legal and non-legal standards and adherence to operational controls).

7.1.2 If an IPT believes there are other elements in addition to the above that should be monitored (e.g. roll out of training) then these should also be defined and documented.

7.2 Step 2: Produce a Monitoring Schedule

7.2.1 The elements of the SMS and EMS that the IPT has to monitor and assess should be documented. Information to be documented is as follows:

- Element to be monitored;
- Frequency of monitoring data collection;
- Frequency of monitoring data assessment;
- Who is responsible for collecting the monitoring data
- Who is responsible for assessing the monitoring data;
- Data source (where the information is to be obtained from); and
- Comparison requirements (e.g. comparison against legal compliance requirements, operational control requirements, objectives and targets).

7.2.2 **Form AAP02/F/01** – Monitoring Schedule can be used to document the above information.

7.2.3 Various parties may be responsible for collecting safety and environmental monitoring data, depending on what data is required to be collected. For example as well as the IPT, this may also include Customer 2 and contractors. Monitoring data collected by Regulators and local authorities may also be utilised.

7.2.4 Where the monitoring schedule includes monitoring data which will be collected by parties outside of the scope of the SMS and EMS, for example Customer 2, the IPT can only request that the third party provides the information rather than demand it. It should be noted that equipment contractors would be classed as being within the

scope of the SMS and EMS, if they were undertaking activities on an IPT behalf.

7.3 Step 3: Produce measurement and calibration protocols

7.3.1 In addition to the production of the monitoring schedule, it may be necessary to produce detailed monitoring procedures which set out how the monitoring data should be collected, eg noise monitoring.

7.3.2 Where monitoring equipment is used, it should be calibrated or verified at specified intervals, or prior to use, against measurement standards traceable to international or national measurements standards. If no such standards exist, the basis used for calibration should be recorded.

7.3.3 Where the activities described in this step may be performed by parties outside the scope of the SMS and EMS, for example Customer 2, the IPT can only request that they are carried out rather than demand it. Where the activities are being performed by contractors on behalf on an IPT, they will be classed as being within the scope of the SMS and EMS.

7.4 Step 4: Collect monitoring data

7.4.1 Monitoring data will be collected as defined in the Monitoring Schedule (**Form AAP02/F/01**).

7.5 Step 5: Assess monitoring data

7.5.1 At set intervals defined in the Monitoring Schedule **(Form AAP02/F/01**), the Safety and Environmental Focal Point(s) and other designated parties will assess monitoring data to establish actual performance against designed or required performance. Where non-conformances or observations are identified, these should be dealt with in accordance with AAP04 – Non-conformance and corrective action.

7.5.2 Other parties which may be involved in the assessment include the:

- Safety and Environmental Committee(s) (for example for large or complex projects);
- Equipment contractors or consultants where they have a notable role in the operation of the SMS or EMS, and/or
- IPTL.

7.5.3 An IPT may wish to combine this assessment with the Management Reviews (AAP03). This may not be suitable for large and/or complex projects.

7.5.4 **Form AAP02/F/02** - Monitoring Data – Assessment Record, can be used to document the result of the monitoring review.

8 RECORDS AND PROJECT DOCUMENTATION

8.1.1 Where relevant, the outputs from this procedure should feed into the following:

a. Audit Schedules (**Form AAP01a/F/01**).

b. Management Review (AAP03).

c. Non-Conformance and corrective action (AAP04).

8.1.2 A copy of the information produced from following this procedure should be stored in the Project Safety and Environmental Cases as appropriate.

9 RECOMMENDED TOOLS AND FORMS

a. **Form AAP02/F/01** – Monitoring Schedule.

b. **Form AAP02/F/02** – Monitoring Data – Assessment Record

10 GUIDANCE

10.1 General

10.1.1 JSP 375, 430, 438, 418, 454, 553 include some guidance on monitoring and measurement. The ISO14000 series is also useful, particularly ISO14001 and ISO 14004, and OHSAS 18001 and ISO 9001.

10.1.2 It may be beneficial in the assessment process to utilise formal techniques (e.g. trend analysis) in the process of reviewing performance and identifying areas for improvement.

10.2 Aligning safety and environment

10.2.1 The key alignment opportunity in this procedure is to monitor and review safety and environmental performance at the same time.

10.3 Warnings and Potential Project Risks

10.3.1 If monitoring and measurement is not carried out, it will not be possible to demonstrate that the SMS and EMS are achieving their aims of continual improvement. Not carrying out monitoring and measurement could also result in an increase in safety and environmental risks and impacts, and non-compliance with applicable standards and operational controls.

Form AAP02/F/01 – Monitoring Schedule				
Project(s) Title				
IPT:				
Completed by:			**Date:**	
Reviewed by:			**Date:**	
Element to be monitored/assessed	**Frequency of monitoring/assessment**	**Data source**	**Responsibility for monitoring/assessment**	**Comparison requirements**

Form AAP02/F/02 – Monitoring Data - Assessment Record			
Project(s) Title			
IPT:			
Audit name and or reference no:			
Completed by:		**Date:**	
Reviewed by:		**Date:**	
Date of meeting:			
Location of meeting:			
Attendees:			
Minutes:			

0 SHOWING CONFORMANCE

0.1 Options

0.1.1 There are three options to demonstrate conformance when applying this system procedure:

a. Follow the defined system procedure using the recommended guidance and tools, including allowed variations and options.

b. Use an equivalent process and tool set generated elsewhere and document evidence of procedural equivalence.

c. Use an equivalent bespoke process and tool set for the project and document evidence of procedural equivalence.

1 INTRODUCTION

1.1.1 It is important that the SMS and EMS are periodically reviewed by senior management within the IPT, to ensure their continuing suitability, adequacy and effectiveness.

1.1.2 The principle of continuous improvement is equally applicable to the performance of the IPT's SMS and EMS as it is to the safety or environmental performance of equipment projects.

1.1.3 Although other reviews take place in the management systems (as shown below) these are detailed reviews, whilst management reviews examine the "bigger picture".

- Monitoring and Measurement (AAP02)
- Continuous Review (EMP08)

2 PROCEDURE OBJECTIVES

2.1.1 To ensure the continuing suitability, adequacy and effectiveness of the SMS and EMS, through periodic reviews by senior management within the IPT.

2.1.2 To identify the need to make modifications or improvements to the management system.

2.1.3 To record the findings of management reviews.

3 RESPONSIBILITIES

3.1 Accountability

3.1.1 The IPTL is accountable for the completion of this procedure.

3.2 Procedure Management

3.2.1 IPTLs may delegate the management of this procedure to the IPT Safety and Environmental Focal Point(s).

3.3 Procedure Completion

3.3.1 The procedure will be completed by the IPTL, and other selected senior management within the IPT and the Safety and Environmental Focal Point(s).

3.3.2 Where a contractor has a significant role in operating the SMS or EMS, relevant senior management from the contractor would also be involved in the completion of this procedure.

4 WHEN

4.1.1 This procedure applies as soon as the EMS and SMS is first implemented. The procedure will continue to apply until the end of the project(s) to which the SMS and EMS apply. As a minimum, an IPT will be expected to complete a management review before Initial Gate, Main Gate, the In-service Date and any Out of Service Date.

5 REQUIRED INPUTS

a. EMS documents and records (Outputs of EMP01-EMP08).

b. SMS documents and records (Outputs of SMP01 – SMP13).

c. Results of internal and external SMS and EMS audits (AAP01).

d. Internal and external communications regarding the IPT's SMS and EMS including suggestions for improvement (SSP01).

e. Internal and external communications regarding the equipment's safety and environmental performance, including complaints (SSP01).

f. Any non-conformance and corrective action reports raised **(Form AAP04/F/01).**

g. Record of Monitoring Reviews **(Form AAP02/F/02)**

h. Previous management review meeting minutes **(Form AAP03/F/01)**

6 **REQUIRED OUTPUTS**

a. Completed **Form AAP03/F/01** – Record of Management Review.

OR

Equivalent actions and documentation that ASEG is satisfied achieve the same objectives.

7 **DESCRIPTION**

7.1 **Introduction**

7.1.1 It is not uncommon for Management Reviews to become lengthy and laboured, often due to the large amount of information being reviewed. It is very important therefore, that it is kept in mind that this is a **top-level** review, which should avoid going into fine detail, as detailed reviews take place in AAP02 – Monitoring and Measurement and EMP08 – Continuous Review.

7.2 **Step 1: Assemble Management Review Team**

7.2.1 The members of the Management Review Team should include, as a minimum, the IPTL and the Safety and Environmental Focal Point(s). Other senior management within the IPT can also be appointed to sit on the management review team and where considered appropriate, selected members of the Safety and/or Environmental Committee. Where appropriate parties sit on the Safety and/or Environment Committee, the Management Review may be completed by the Committee.

7.2.2 Where a contractor has a significant role in operating the SMS or EMS relevant senior management from the contractor would also sit on the Management Review Team.

7.3 **Step 2: Agree Frequency of Management Review**

7.3.1 The frequency of management reviews will depend on the IPT or project concerned. For most IPTs an annual review period should be appropriate, and as a minimum reviews should take place every three years. The IPT will also be required to undertake a management review before Initial Gate, Main Gate, In-service Date and Out of Service Date, as a minimum.

7.3.2 The frequency of reviews should reflect the complexity of the project, the project timescales and the degree of progress made with the SMS and EMS.

7.3.3 For very large SMSs and EMSs it may be beneficial for the IPT to review different elements of the management system throughout the year, rather than cover all elements in one meeting.

7.4 **Step 3: Gather Documents and Evidence for the Review**

7.4.1 Once the scope and frequency of the review has been established, the documents and evidence to be considered by the Management Review Team should be compiled. This may include:

a. EMS documents and records (Outputs of EMP01-EMP08).

b. SMS documents and records (Outputs of SMP01 – SMP13).

c. Results of internal and external SMS and EMS audits.

d. Internal and external communications regarding the IPT's SMS and EMS, including suggestions for improvement.

e. Internal and external communications regarding the equipment's safety and environmental performance including complaints.

f. Any non-conformance and corrective action reports raised **(Form AAP04/F/01).**

g. Monitoring and measurement results/meeting minutes (AAP02)

h. Previous management review meeting minutes **(Form AAP03/F/01)**

7.4.2 It is likely that the Safety and Environmental Focal Point, with assistance from other parties as required, will be the most appropriate person to review the above and prepare the material to be presented and discussed in the management review.

7.4.3 The Safety and Environmental Focal Point should ensure that the Management Review Team is provided with the necessary information to allow it to assess the continuing suitability, adequacy and effectiveness of the SMS and EMS.

7.5 **Step 4: Perform and Record the Review**

7.5.1 During the meeting the Management Review Team should consider and verify that:

- Actions identified in the last management review have been completed;
- Comprehensive and effective audits are being carried out;
- Actions to address non-conformances and observations are adequate and are being implemented on schedule;
- The IPT/Project Safety and Environmental policy is still appropriate, (where one exists),
- The SMS and EMS comply with POSMS and POEMS;
- The IPT complies with MOD Safety and Environmental Policy;
- The IPT complies with functional Safety and Environmental Policy defined in relevant JSPs.
- Objectives and targets are still effective and on schedule;
- SMS and EMS documents and records are adequate and complete;
- The project is complying with relevant safety and environmental legal and non-legal standards;
- Overall safety and environmental performance is acceptable;
- Stakeholder expectations are being met; and

- Sufficient resources are available for the effective operation of the SMS and EMS.

7.5.2 Other issues to discuss include pending changes to the IPT or project, and pending changes to safety and environmental legal and non-legal standards.

7.5.3 Where the need for modifying or improving the SMS or EMS has been identified, responsibilities and deadlines should be assigned against these.

7.5.4 The Safety and Environmental Focal Point should ensure that records of the management reviews are taken. **Form AAP03/F/01 -** Management Review Form.

8 RECORDS AND PROJECT DOCUMENTATION

8.1.1 Where relevant, the outputs from this procedure can feed into any element of the SMS and EMS, depending on where modifications, or improvements where identified as being required.

8.1.2 A copy of the information produced from following this procedure should be stored in the Project Safety and Environmental Cases as appropriate.

9 RECOMMENDED TOOLS AND FORMS

a. **Form AAP03/F/01** – Record of Management Review.

10 GUIDANCE

10.1 General

10.1.1 It is possible to combine the management review and monitoring and measurement meetings, for example, when the project is particularly small, as long as all the elements required in both procedures are covered and the IPTL is present at the meetings.

10.1.2 It is also possible for the management review to cover more than one EMS or SMS. For example, if an IPT has implemented management systems within each project it supports, there may be a central review regime. This will be particularly useful where the projects are very small or similar.

10.1.3 Where the EMS and SMS are separate systems, the IPT may examine both within the same management review, if this will be of benefit to the IPT and would not reduce the quality of the review.

10.1.4 JSP418 Chapter 11 includes some guidance on Management Review. The ISO14000 series is also useful, particularly ISO14001 and ISO 14004, and OHSAS 18001.

10.2 Aligning safety and environment

10.2.1 The key alignment opportunity in this procedure is to undertake a review of both the

SMS and EMS at the same time.

10.3 **Warnings and Potential Project Risks**

10.3.1 If the SMS or EMS ceases to be adequate and effective, the IPT risks increased safety and environmental liabilities arising from its project(s). This is clearly unacceptable under MOD policy and may lead to reputation damage, project delays or legal penalties.

Form AAP03/F/01 – Management Review Form			
Project(s) Title			
IPT:			
Completed by:		**Date:**	
Reviewed by:		**Date:**	
Date of meeting:			
Location of meeting:			
Attendees:			
Minutes:			

Actions to be taken		
What	**Who**	**To be completed by**

Closure		
Completed by:		
Date:		

0 SHOWING CONFORMANCE

0.1 Options

0.1.1 There are three options to demonstrate conformance when applying this system procedure:

a. Follow the defined system procedure using the recommended guidance and tools, including allowed variations and options.

b. Use an equivalent process and tool set generated elsewhere and document evidence of procedural equivalence.

c. Use an equivalent bespoke process and tool set for the project and document evidence of procedural equivalence.

1 INTRODUCTION

1.1.1 It is important that measures are put in place to ensure that gaps and deviances (known as non-conformances), in the operation of the SMS and EMS are identified and where necessary corrected, and prevented from recurring. It is also beneficial for measures to be put in place to capture and address areas of potential improvement which have been identified (Observations). Non-conformances and observations are equally important to the SMS and EMS documentation and records, as they are to the equipment's safety and environmental performance.

1.1.2 Non-conformances and observations are most likely to be identified by IPT staff, auditors and the equipment users, but may also be highlighted by external parties or become apparent through an accident or incident. It is essential that the IPT has a process for capturing details of the non-conformances and observations and using this to continually improve both the Management Systems' and the equipment's performance.

1.1.3 Further information on how this procedure interacts with other non-conformance system is provided in the Guidance section at the end of this procedure.

2 PROCEDURE OBJECTIVES

2.1.1 To ensure that gaps, inaccuracies and improvements in the IPTs' SMS and EMS, and equipment's safety and environmental performance are identified, reported and then investigated and recorded.

2.1.2 To ensure that corrective, preventive and improvement actions are planned, implemented and recorded.

3 RESPONSIBILITIES

3.1 Accountability

3.1.1 The IPTL is accountable for the completion of this procedure.

3.2 Procedure Management

3.2.1 IPTLs may delegate the management of this procedure to the IPT Safety and Environmental Focal Point(s).

3.3 Procedure Completion

3.3.1 The diagram below shows the steps described in the Description section of this procedure against those parties or individuals that may be responsible for their completion.

3.3.2 Where a contractor is responsible for operating part of the SMS or EMS, they will also have a role in the completion of this procedure. Where tasked by the IPT, the contractor can take on the role of the Safety and Environmental Focal Point(s) and subsequently operate the management system on behalf of the IPT.

4 WHEN

4.1.1 This procedure applies as soon as the IPT starts to implement its SMS or EMS, as non-conformances can surface as soon as the first elements of the management systems have been implemented. The procedure will continue to apply until the end of the project(s) to which the SMS and EMS apply.

5 REQUIRED INPUTS

a. Results of internal and external audits (see AAP01);

b. Internal and external communications regarding the IPT's safety and environmental management system(s), including suggestions for improvement. (See SSP01)

c. Internal and external communications regarding the equipment's safety and environmental performance, including complaints. (See SSP01)

d. Results of Monitoring and Measurement (See AAP02)

e. Results of Management Reviews (See AAP03)

6 REQUIRED OUTPUTS

a. Completed **Form AAP04/F/01** – Non-Conformance and corrective action record.

OR

Equivalent actions and documentation that ASEG is satisfied achieve the same objectives.

7 DESCRIPTION

7.1 Introduction

7.1.1 A non-conformance is a situation that does not comply with the requirements of one or more of the following:

- POSMS, POEMS or functional safety management policy;
- IPT's SMS and EMS;
- Applicable safety or environmental legal and non-legal standards; or
- Equipment safety or environmental performance.

7.1.2 An observation can also be identified in the above areas. An observation is an identified improvement or need for improvement which does not relate to a conformance issues but may otherwise be of benefit. It can also be used to note good practice which may be of benefit to other parties conducting similar activities.

7.1.3 The following steps define a system for identifying, reporting, investigating, actioning and recording non-conformances and observations.

7.2 Step 1: Identify non-conformance or observation

7.2.1 Non-conformances can be identified in a number of ways:

- As a result of system audits (see AAP01) or equipment audits;

- As a result of accidents, incidents and near-misses;
- From internal and external communications, including suggestions and complaints (see SSP01);
- As a result of monitoring and measurement (See AAP02);
- As a result of management reviews (See AAP03).

7.2.2 A non-conformance or observation can be identified and reported by a member of the IPT, internal or external auditors, Customer 2, contractors, regulatory authorities or members of the public. In fact, non-conformances or observations can be identified and reported by anyone who has a role or interest in the safety and environmental issues of the equipment.

7.2.3 When a potential or actual non-conformance is identified it must be recorded. **Form AAP04/F/01** – Non-conformance and corrective action record form can be used to do this. This records details of the non-conformance, including its severity and how it was identified, by whom and when. Non-conformances will be classified as either major or minor, as shown below:

7.2.4 Major non-conformance:

- An absence of control/system where they are required;
- Where the control/system is in place but there are significant failings/inadequacies; * or
- Issue otherwise requiring urgent attention.

7.2.5 Minor non-conformance:

- Where the control/system are in place but there are non-significant failings/inadequacies; * or
- Where there is a minor breach of controls/procedures which could cause a problem if no corrective action to be taken

* where more than one failings/inadequacies are identified but are significantly related, these can be managed as one non-conformance

7.3 Step 2: Investigate non-conformance or observation

7.3.1 Non-conformances will be investigated to establish whether there is potential for recurrence. This investigation will try to answer the following questions:

- What happened?
- Why did it happen?
- Who or what was responsible?
- How serious was the actual and potential consequence(s)?
- Could this happen again? If yes, how likely is this?

- How could this situation be avoided in future?

7.3.2 The results of the investigation will be recorded on the **Form AAP04/F/01** – Non-conformance and corrective action record form.

7.3.3 Observations will be investigated to establish whether the identified area for improvement is justified and feasible.

7.3.4 The Safety and Environmental Focal Point(s) will normally undertake the investigations, or they may assign an alternative person to complete the task, for example, a person who works in the area where the non-conformance or observation has been identified.

7.3.5 Alternatively, an IPT may decide to ask ASEG, an independent safety consultant, or SME to undertake the work where assistance is required in the task, or where proving objectivity is important.

7.4 Step 3: Recommended Corrective, Preventive or Improvement Action

7.4.1 The person who undertakes the investigation will identify one or more recommended course of action.

7.4.2 It should be noted that where a non-conformance or observation has been identified in a system audit, a recommended action may also be identified by an auditor. They may provide recommended actions without undertaking the investigation stage detailed in Step 2 above. In this case the Safety and Environmental Focal Point(s) may decide to undertake Step 2 above, before confirming the course of action to be taken.

7.4.3 It is possible to decide that no action will be taken in relation to observations, for example if it is considered not practical or cost effective to implement an improvement. Justification for all decisions taken is to be recorded.

7.5 Step 4: Decide Action to be taken

7.5.1 The investigation will have identified one or more ways of mitigating and/or avoiding a recurrence of the non-conformance, or possible improvements to address an observation. This may include changes to SMS or EMS documentation, or operational control, or it may identify a training need.

7.5.2 It is not mandatory to undertake the recommended action when an alternative action can be identified. This particularly applies where actions have been recommended by auditors who have not completed the investigation stage prior to providing a recommended action. When deciding what corrective and preventive action will be taken, it is important to ensure that the action is proportional to the seriousness of the non-conformance.

7.5.3 Where the non-conformance applies to an area outside the IPT's control, it is appropriate for an action to be raised regarding communicating the presence of the non-conformance to the party concerned. For example, where Customer 2 has not complied with a documented safety or environmental objective or operational control, it would be necessary to inform them of this. In this situation Customer 2 would be

required to keep the IPT informed of progress in addressing the non-conformance (which would feed into AAP03 – Monitoring and Measurement), although auditing the effectiveness of the action would be outside the remit of the IPT.

7.5.4 The Safety and Environmental Focal Point(s) and the manager of the areas in which the non-conformance or observation was identified, will decide the action to be taken. For particularly sensitive or major non-conformances/observations it is recommended that the Safety and/or Environmental Committee(s) is involved in deciding, or endorsing the action to be taken.

7.5.5 Once appropriate actions have been identified and agreed, responsibility for ensuring that they are carried out must be assigned, along with a timetable for implementation. This can be documented in **Form AAP04/F/01** – Non-conformance and corrective action record form.

7.5.6 For observations it is possible that no action will be taken, for example if it is considered not practical or cost effective to implement an improvement.

7.5.7 AAP02 – Monitoring and Measurement procedure will track progress of the decided action to be taken.

7.6 Step 5 Review and update of documentation

7.6.1 On completion of Step 4 above, the audit schedule (**Form AAP01/F/01** – Audit Schedule) should be reviewed and modified to ensure that, checking the effectiveness of actions, is included in future audits.

7.6.2 Where the non-conformance was associated with an incident, accident or near-miss, then the Safety Hazard Log (SMP11) and/or Environmental Features Matrix **(Form EMP02/F/01)** should be reviewed and possibly revised, as it may be necessary to increase the probability rating, or to even insert the hazard if it was not identified already.

8 RECORDS AND PROJECT DOCUMENTATION

8.1.1 Where relevant, the outputs from this procedure should feed into the following:

a. **Form AAP01/F/01** – Audit Schedule;

b. Management Reviews (See AAP03); and

c. Monitoring and Measurement (See AAP02).

8.1.2 A copy of the information produced from following this procedure should be stored in the Project Safety and Environmental Case.

9 RECOMMENDED TOOLS AND FORMS

a. **Form AAP04/F/01** – Non-conformance and corrective action record.

10 GUIDANCE

10.1 General

10.1.1 JSP 454, 430, 538 and 553 include guidance on non-conformance, corrective and preventive action. The ISO14000 series is useful, particularly ISO14001 and ISO14004, and also OHSAS 18001, ISO 19011 and ISO 9001.

10.1.2 It should be noted that JSP 442 – Accident Reporting System, covers the procedure which should be followed when reporting serious safety and environmental incidents, accidents or near misses. Where this procedure applies, the Accident Reporting Form shown in JSP 442 must be completed in addition to **Form AAP04/F/01** as the latter Form documents the completion of corrective and preventive action.

10.1.3 There may be other systems which must be followed in the event of an incident, accident or near miss, for example, D LOG (Strike) BP 1301 – reporting and Monitoring of Airworthiness matters and services occurrences. Where these systems cover all the issues documented in **Form AAP04/F/01**, there is no need to complete Form **AAP04/F/01**.

10.1.4 Where a safety and environmental non-conformance has been identified by Customer 2, details of the non-conformance, investigations completed and corrective and preventive action undertaken should be communicated to the IPT in order for it to review whether and how this affects the SMS and EMS.

10.1.5 Where the IPT has identified non-conformance associated with Customer 2, corrective, preventative action will generally involve the communication of the issue to Customer 2 for action, as they are outside the scope of the SMS and EMS and outside the direct control of the IPT.

10.2 Aligning safety and environment

10.2.1 The key alignment opportunity in this procedure is to ensure that both safety and environmental issues are considered when deciding upon corrective or preventive action. It is important to ensure that any safety implications of environmental changes are considered and vice versa.

10.3 Warnings and Potential Project Risks

10.3.1 If non-conformances are not recorded and responded to, there is a risk that they may reoccur. The outcome could be more serious next time, so near misses must be recorded, assessed and addressed.

Form AAP04/F/01 – Non-Conformance and Corrective Action Form	
Project(s) Title	
IPT:	
Non-Conformance or Observation	
Non-conformance/ Observation	Major non-conformance / Minor non-conformance / Observation
Details of the non-conformance/observation (including how identified)**:**	
Identified by:	
Date Identified:	
Investigation (If appropriate)	
Completed by:	
Date:	
Details of investigation: (e.g. Why did it happen? Who or what was responsible? How serious were the actual and potential consequence(s)? Any immediate corrective action already taken?	
What is the likelihood of this happening again?	Not Possible / Unlikely / Likely / Very Likely / Almost Certain

Recommended Corrective, Preventive or Improvement Action			
Completed by:			
Date:			
Recommended corrective, and or, preventative action:			
Action to be taken			
Action		**Person responsible**	**Deadline**
Closure			
Completed by:			
Date:			

9. Glossary and Abbreviations

9.0.1 Note that for reasons of consistency and ease of reference, this section is common to both the POSMS and POEMS and therefore covers terminology and abbreviations used in both environmental and safety management.

9.1 Glossary

Accident	An unintended event, or sequence of events, that causes harm. [Def Stan 00-56].
Accident Sequence	The progression of events that results in an accident. [Def Stan 00-56].
Acquired Item	In the context of this manual, 'acquired item' refers to a capability being procured through the acquisition process. It is intended to differentiate between the system being procured and the safety management system.
Activity	The operations of an organization that are 'large enough for meaningful examination and small enough to be sufficiently understood'. For example, vehicle maintenance.
ALARP	As Low As Reasonably Practicable. Used in reference to safety management. A risk is ALARP when it has been demonstrated that the cost of any further Risk Reduction, where the cost includes the loss of defence capability as well as financial or other resource costs, is grossly disproportionate to the benefit obtained from that Risk Reduction. [Def Stan 00-56].
Assumption	An assertion about the system, its operating environment or modes of use, that is employed without proof, although justification may be required. [Def Stan 00-56].
Assurance	A statement, or process, intended to provide confidence on the condition or status of a system, process, activity, or materiel. Types of assurance include: • **Regulatory Assurance** - A statement, or process, intended to provide confidence to a regulatory body on the condition or status of a system, process, activity, or materiel through a regulation or approval regime. • **Safety Assurance** - Part of Safety Management focused on providing confidence that adequate safety will be achieved and sustained.

Audit	A systematic independent and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which the audit criteria are fulfilled. (EN ISO 19011:2002) Types of audit include: • **First Party Audit** – An audit conducted by an organisation on the activities it has direct responsibilities for. (19011) • **Second Party Audit** – An external audit by a body or organisation having an interest in the activity or process examined, e.g. a customer or client. (19011) • **Third Party Audit** – An external audit by a recognised independent auditing organisation with no interest in the activity or process examined. (19011) • **Capability Performance Audit** – An audit of a capability or equipment system to provide assurance that the performance objectives or targets of the capability are being achieved. • **Combined Audit** – An audit the scope of which covers more than one management system operated by the organisation, or related to an activity, being examined. (19011) • **Compliance Audit** – An audit to provide assurance that a process, activity, or materiel is carried out or achieved in such a manner as to achieve compliance with legal, policy or other requirements; i.e. the audit criteria are restricted to compliance issues within the scope of the audit. • **Joint Audit** – An audit conducted by two or more auditing organisations. (19011) • **Management System Audit** – An audit the scope of which includes the process and procedures making up the whole or part of a formalised management system. • **Supplier Audit (pre contract)** – An audit conducted pre-award of a contract to provide assurance evidence that a supplier has management systems in place which can or do comply with MOD requirements. • **Supplier Audit (post contract)** – An audit of a supplier post award of contract to provide assurance that the goods or services being provided, or that a supplier's management systems, are in conformance with MOD requirements.
Audit Client	The person/project/IPT/organisation requesting the audit.
Audit Conclusion	Outcome of an audit, provided by the audit team after consideration of audit objectives and all audit findings (ISO 19011)
Audit Criteria	Set of policies, procedures or requirements (ISO 19011) against which a system process or material is audited
Audit Objectives	Statement(s) setting out the purpose and aims of the audit. These should be set by, or agreed with, the audit client and should form the basis for the audit scope and criteria.

Audit Plan	Description of the activities and arrangements for an audit. (ISO19011)
Audit Programme	In relation to DE&S Acquisition Safety Environmental Management System (ASEMS) this audit manual together with the Audit Schedule forms an Audit Programme.
Audit Report	The written report supplied by the Lead Auditor to the Audit Client describing the audit, findings and conclusions.
Audit Schedule	Specifies the scope, frequency and timeframe for completing audits
Audit Scope	Extent and boundaries of an audit. (ISO19011)
Audit Team	Team of auditors, including a lead auditor, conducting an audit. May also include specialist matter experts (see SMEs) and trainee auditors.
Audit Trail	Series of linked and related questions asked, and the evidence produced, in order to ascertain compliance against a specific objective or to support the accuracy of data or claims. The questions and evidence making up an audit trail should be documented and the trail should be repeatable.
Auditee	The individual or organisation being subject to audit.
Auditor	Person with the competence to conduct an audit. (ISO19011) (see also Lead Auditor)
Availability	The ability of an item to be in a state to perform a required function under given conditions at a given instant of time or over a given time interval assuming that the required external resources are provided. [Def Stan 00-56].
Best Available Technique	A term used with reference to environmental management. The most effective and advanced stage in the development of activities and their methods of operation which indicates the practical suitability of particular techniques for providing in principle the basis for emission limit values designed to prevent and, where that is not practicable, generally to reduce emissions and the impact on the environment as a whole. [The Pollution Prevention and Control (England and Wales) Regulations 2000 SI No 1973].
Best Practicable Environmental Option	A term used with reference to environmental management. The outcome of a systematic consultative decision making procedure that emphasises the protection of the environment across land, air and water. [The Royal Commission on Environmental Pollution, 12th report, 1988].
Best Practicable Means	In this term, ‘practicable’ means reasonably practicable having regard among other things to local conditions and circumstances, to the current state of technical knowledge and to the financial implications. [Environmental Protection Act 1990].
‘Black Box’	Having visibility of only the externally visible performance and interfaces. [Def Stan 00-56].

Broadly Acceptable	A level of risk that is sufficiently low that it may be tolerated without the need to demonstrate that the risk is ALARP. [Def Stan 00-56].
Cause	The origin, sequence or combination of circumstances leading to an event. [Def Stan 00-56].
Competence	Demonstrated personal attributes and demonstrated ability to apply knowledge and skills. (ISO19011)
Complex Electronic Equipment	An element of a system that is implemented in software or custom hardware. [Def Stan 00-56].
Consequence	The outcome, or outcomes, resulting from an event. [Def Stan 00-56].
Continual Improvement	In terms of safety: Recurring process of enhancing the OH&S management system in order to achieve improvements in overall OH&S performance consistent with the organization's OH&S policy. [OHSAS 18001:2007]. In terms of environment: Recurring process of enhancing the environmental management system in order to achieve improvements in overall performance, consistent with the organisation's environmental policy. [EN ISO14001:2004].
Controlled Documents	Any documents forming part of the Safety or Environmental Management Systems that are subject to document control procedures eg Safety or Environmental Manual, System Procedures.
Counter Evidence	Evidence that has the potential to refute specific safety claims. [Def Stan 00-56].
Custom Hardware	Electronic components for which the design can be controlled or influenced by the Duty Holder or the Contractor. [Def Stan 00-56].
Demonstration Evidence	Evidence of the properties of a system, or an element of a system, achieved by testing, trials or operational execution. [Def Stan 00-56].
Direct Evidence	Evidence of the properties of a system, or an element of a system, that is obtained directly from testing analysis, experience of use or inspection of the system. [Def Stan 00-56].
Diverse Evidence	Evidence of the properties of a system, or an element of a system, that is based on mutually independent, but reinforcing, pieces of evidence. [Def Stan 00-56].
Document	Information and its supporting medium (medium can be paper, magnetic, electronic or optical computer disc, photograph or master sample, or a combination thereof). [EN ISO 14001:2004]

Duty Holder	A person with specific responsibilities for the safety management of the system. [Def Stan 00-56].
Empirical Evidence	Evidence of the properties of a system, or an element of a system, that is based on experience or observation rather than theory. [Def Stan 00-56].
Enforcing Authority	The authority responsible for enforcing environmental legislation eg Environment Agency, local authorities.
Environment	Surroundings in which an organization operates, including air, water, land, natural resources, flora, fauna, humans and their interrelation. NOTE: Surroundings in this context extend from within an organization to the global system. [EN ISO 14001:2004]
Environmental Aspect	Element of an organization's activities, products or services that can interact with the environment'. NOTE: A significant environmental aspect has or can have a significant environmental impact [EN ISO 14001:2004] (For example, vehicle exhaust emissions.)
Environmental Case	A body of evidence that is compiled and maintained throughout the lifetime of a project on its environmental aspects and impacts.
Environmental Feature Matrix	The matrix produced through following EMP02 and EMP03 which records material and energy inputs and outputs, the associated environmental impacts and the priority accorded to the impact.
Environmental Hazard	A threat to the environment posed by an environmental aspect.
Environmental Impact	Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's environmental aspects. [EN ISO 14001:2004] For example, an increase or reduction in emissions to air of polluting gases as a result of transport operations is an environmental impact. Other examples include climate change, ozone depletion and river pollution.
Environmental Impact Assessment	Environmental Impact Assessment (EIA) is a process and management technique that can be applied to a project in order to identify all the environmental impacts produced by the project, their relative importance, and measures to eliminate or reduce any negative impacts identified.
Environmental Impact Assessment Plan	The document that details the implementation of MOD-wide policy on Environmental Impact Assessment within DE&S.
Environmental Impact Assessment Policy	The document that details the implementation of MOD-wide policy on Environmental Impact Assessment within DE&S.

Environmental Impact Assessment Report	The document which outlines the methodology, results and conclusions of an Environmental Impact Assessment.
Environmental Impact Screening and Scoping Report	A report produced after the initial identification of the environmental impacts associated with a project which includes reference to the information sources used to identify those impacts, an overview of the impacts, comment on which of the project stages will have the greatest impact, and which, if any, of these stages will be excluded from further assessment.
Environmental Impact Statement	The document which summarises the main points, results and conclusions of either an EISS Report or an EIA Report. Can also be referred to as the Enironmental Case Report in that it summarises the arguments and evidence of the Environmental Case, and documents progress against the environment programme.
Environmental Issue	Issue for which validated information on environmental aspects deviates from selected criteria and may result in liabilities or benefits, effects on the assessee's or the client's public image or other costs." [ISO 14015:2001(E)] For example, global warming, habitat loss, depletion of ozone layer.
Environmental Log	A file containing all information on the potential or actual environmental impacts of a project.
Environmental Management Plan	A document that outlines the actions identified by an organization in order to eliminate or reduce its environmental impacts.
Environmental Management System (EMS)	Part of an organization's management system used to develop and implement its environmental policy and manage its environmental aspects. Note 1: A management system is a set of interrelated elements used to establish policy and objectives and to achieve those objectives. Note 2: a management system includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources. [EN ISO 14001:2004]
Environmental Panel	A group of individuals that have particular expertise relevant to the equipment system or project in question who can provide independent advice to the IPT on environmental issues related to the project.
Environmental Policy	The overall intentions and direction of an organization related to its environmental performance as formally expressed by top management. [EN ISO 14001:2004]
Environmental Risk	A rating of the severity of an environmental hazard against the likelihood of its occurrence.

Environmental Standards	Any national or international environmental legislation, policy, agreement or initiative or any environmental policy commitment, strategy commitment or internal regulation that applies to an organization or to which an organization subscribes.
Equipment System	In the context of this manual, 'equipment system' refers to a capability being procured through the acquisition process. It is intended to differentiate between the system being procured and the environmental management system.
Error	Discrepancy between a computed, observed or measured value or condition and the true, specified or theoretically correct value or condition. [Def Stan 00-56].
Evidence	Records, statements or facts or other information, which are relevant to the audit criteria and verifiable [ISO 19011].
Finding	Results of the evaluation of the collected audit evidence, against audit criteria.
Harm	Death, physical injury or damage to the health of people, or damage to property or the environment. [Def Stan 00-56].
Hazard	A physical situation or state of a system, often following from some initiating event, that may lead to an accident. [Def Stan 00-56].
Hazard Analysis	The process of describing in detail the hazards and accidents associated with a system, and defining accident sequences. [Def Stan 00-56].
Hazard Identification	The process of identifying and listing the hazards and accidents associated with a system. [Def Stan 00-56].
Hazard Log	The continually updated record of the hazards, accident sequences and accidents associated with a system. It includes information documenting risk management for each hazard and accident. [Def Stan 00-56].
Human Factors	The systematic application of relevant information about human capabilities, limitations, characteristics, behaviours and motivation to the design of systems. [Def Stan 00-56].
Impact Priority Evaluation	The process of assessing identified environmental impacts in order to prioritise them for further action.
Incident	The occurrence of a hazard that might have progressed to an accident, but did not. [Def Stan 00-56].

Independent Safety Auditor	An individual or team, from an independent organization, that undertakes audits and other assessment activities to provide assurance that safety activities comply with planned arrangements, are implemented effectively and are suitable to achieve objectives; and whether related outputs are correct, valid and fit for purpose. [Def Stan 00-56].
ISO14001	The international standard for Environmental Management Systems.
ISO14040	The international standard for Life Cycle Assessment.
Knowledge Base	A store of useful information on various topics, kept by ASEG for future reference.
Lead Auditor	Person recognised within the organization as having the required level of competence to manage and perform audits (See also Auditor)
Life Cycle Assessment	Compilation and evaluation of the inputs, outputs and the potential environmental impacts of a product system throughout its life cycle. [EN ISO 14040:2006].
Life Cycle Stages	The stages of acquisition through which a system passes ie CADMID.
Major non-conformance	An absence of control/system where they are required; where the control/system are in place but there is are significant failing/inadequacies; or issue requires urgent attention.
Material Risk	In terms of the EMS a material risk is something that has the capacity to effect any of the following issues: Cost, including inflated cost of achieving efficient disposal – any risk that a financial budget may be exceeded is a material risk Delays – any risk that project milestones such as the Initial Gate may be missed should be considered to be material Legal penalties – any risk of incurring legal penalties is material Reputation damage – any risk that may damage the MOD's reputation is material Environmental impairment – any risk that irreversible damage to the environment may be caused is a material risk.
Minor non-conformance	Where the control/system are in place but there are non-significant failing/inadequacies or where there is a minor breach of controls/procedures which could cause a problem if no corrective action to be taken
Mitigation Statement	A statement outlining the actions identified by an organization in order to prevent or control its environmental impact(s).
Mitigation Strategy	A measure that, when implemented, reduces risk. [Def Stan 00-56].

Nonconformance	Is a situation that does not comply with the requirements of one or more of the following: • POSMS or POEMS; • IPT's SMS and EMS; • Applicable safety or environmental legal and non-legal standards; or • Equipment system safety or environmental performance.
Non-conformance and corrective action form	A document that records an observation or non-conformance, in addition to corrective, preventive and improvement action to be undertaken in relation to the observation and non-conformance.
Objectives	In terms of health and safety: Goals, in terms of OH&S performance, that an organization sets itself to achieve. [OHSAS 18001:2007]. In terms of environment: Overall environmental goal, consistent with the environmental policy, that an organization sets itself to achieve. [BS ISO 14001:2004]
Observation	Where a possible improvement or need for improvement has been identified which doe not relate to a conformance issues but may otherwise be of benefit
Occupational Health and Safety	(OH&S) – conditions and factors that affect, or could affect, the health and safety of employees, temporary workers, contractor personnel, visitors and any other person in the workplace. [OHSAS 18001:2007].
Operating Environment	The total set of all external natural and induced conditions to which a system is exposed at any given moment. [Def Stan 00-56].
Operational Controls	Any document, measure or system which contains elements that control an organization's operations with the aim of avoiding or reducing one or more environmental impacts.
Performance	In terms of Health and Safety: Measurable results an organization's management of its OH&S risks. Note 1: Performance measurement includes measuring the effectiveness of the organization's controls. [OHSAS 18001:2007]. In terms of Environment: Measurable results of an organization's management of its environmental aspects. [EN ISO 14001:2004]

Pre-Audit Questionnaire	Questionnaire supplied by the audit leader to the organisation to be examined. Usually requires basic information regarding the organisation, personnel, and the processes or activities it manages or has responsibility for. Will also identify documents or other records that the audit team will expect to consult during the audit.
Procedure	A documented instruction which aims to ensure that the organization's environmental policy and its objectives and targets are met. These procedures will include: Environmental Management System core procedures, support procedures, assurance and audit procedures, operational control procedures and any overarching policy commitment procedures.
Process Evidence	Evidence of the properties of a system, or an element of a system, that is based on its development process. [Def Stan 00-56].
Project	In the context of this manual, 'project' refers to a single process that results in the acquisition of one or more equipment systems.
Qualitative Evidence	Evidence of the properties of a system, or an element of a system, that is not numerically based. [Def Stan 00-56].
Quantitative Evidence	Evidence of the properties of a system, or an element of a system, that is based on countable or measurable properties on a numerical scale. [Def Stan 00-56].
Receptor	Any organism or object that can be affected by a change in the environment eg humans, flora, fauna, buildings.
Record	A *document* stating results achieved or providing evidence of activities performed. [EN ISO 14001:2004].
Regulatory Authority	The authority responsible for enforcing environmental legislation eg Environment Agency, local authorities.
Reliability	The probability of failure-free operation for a specified time for in a specified environment. [Def Stan 00-56].
Residual Risk	The risk remaining after risk reduction. [Def Stan 00-56].
Restricted Substance	Any substance that is controlled by law eg mercury, cadmium, PCBs.
Rigorous	Extremely thorough and accurate as well as strictly applied and followed. [Def Stan 00-56].
Risk	Combination of the likelihood of harm and the severity of that harm. [Def Stan 00-56].
Risk Acceptance	The systematic process by which relevant stakeholders agree that risks may be accepted. [Def Stan 00-56].

Risk Analysis	The systematic use of available information to estimate risk.
Risk and ALARP Evaluation	The systematic determination, on the basis of tolerability criteria, of whether a risk is broadly acceptable, or tolerable and ALARP, and whether any further Risk Reduction is necessary. [Def Stan 00-56].
Risk Estimation	The systematic use of available information to estimate risk. [Def Stan 00-56].
Risk Management	The systematic application of management policies, procedures and practices to the tasks of Hazard Identification, Hazard Analysis, Risk Estimation, Risk and ALARP Evaluation, Risk Reduction and Risk Acceptance. [Def Stan 00-56].
Risk Reduction	The systematic process of reducing risk. [Def Stan 00-56].
Safe	Risk has been demonstrated to have been reduced to a level that is broadly acceptable, or tolerable and ALARP, and relevant prescriptive safety requirements have been met, for a system in a given application in a given operating environment. [Def Stan 00-56].
Safety and Environmental Focal Point(s)	Is the person(s) who has been assigned with responsibility for overseeing the implementation and maintenance of the SMS and EMS within an IPT.
Safety Argument	A logically stated and convincingly demonstrated reason why safety requirements are met. [Def Stan 00-56].
Safety Audit	A systematic and independent examination to determine whether safety activities comply with planned arrangements, are implemented effectively and are suitable to achieve objectives; and whether related outputs are correct, valid and fit for purpose. [Def Stan 00-56].
Safety Case	A structured argument, supported by a body of evidence that provides a compelling, comprehensible and valid case that a system is safe for a given application in a given operating environment. [Def Stan 00-56].
Safety Case Report	A report that summarises the arguments and evidence of the Safety Case, and documents progress against the safety programme. [Def Stan 00-56].
Safety Claim	An assertion that contributes to the safety argument. [Def Stan 00-56].
Safety Committee (Safety Panel)	A group of stakeholders that exercises, oversees, reviews and endorses safety management and safety engineering activities. [Def Stan 00-56].
Safety Integrity Requirements	Safety requirements relating to properties of the system that contribute to resistance to dangerous failure, including (but not limited to) reliability, availability, robustness, timeliness and use of resources, as well as the degree of confidence in these properties. [Def Stan 00-56].

Safety Management	The application of organizational and management principles in order to achieve safety with high confidence. [Def Stan 00-56].
Safety Management Plan	A document that defines the strategy for addressing safety and documents the Safety Management System for a specific project. [Def Stan 00-56].
Safety Management System	The organizational structure, processes, procedures and methodologies that enable the direction and control of the activities necessary to meet safety requirements and safety policy objectives. [Def Stan 00-56]
Safety Programme	The part of the Safety Management Plan that documents safety timescales, milestones and other date-related information. [Def Stan 00-56].
Safety Property	An invariant that is a necessary condition for a safety requirement to be met. [[Def Stan 00-56].
Safety Requirement	A requirement that, once met, contributes to the safety of the system or the evidence of the safety of the system. [Def Stan 00-56].
Software	Intellectual creation comprising the programs, procedures, data, rules and any associated documentation pertaining to the operation of a data processing system. [Def Stan 00-56].
Stakeholder	Any individual or group concerned with or affected by the safety or environmental performance of an organisation.
Standards	Written specifications of the requirements of a process, system or material. Issued by standards Bodies eg ISO, BSI etc
Statutory Threshold	A maximum limit prescribed by law or legal permit for releases or emissions of particular substances to an environmental medium.
Sub- System	A system that is an element of another system. [Def Stan 00-56].
Subject Matter Expert (SME)	Person who has specific knowledge or expertise in a defined area. May be called upon to support the audit team.
Super-System	A system that includes at least one element that is itself a system. [Def Stan 00-56].
System	A combination, with defined boundaries, of elements that are used together in a defined operating environment to perform a given task or achieve a specific purpose. The elements may include personnel, procedures, materials, tools, equipment, facilities, services and/or software as appropriate. [Def Stan 00-56].
System Platform	A piece of equipment that acts as the fixing point for another equipment system.

Target	Detailed performance requirement, quantified where practicable, applicable to the organization or parts thereof, that arises from the safety objectives and that needs to be set and met in order to achieve those objectives. In terms of environment: Detailed performance requirement, applicable to the organization or parts thereof, that arises from the environmental objectives and that needs to be set and met in order to achieve those objectives. [EN ISO 14001:2004]
Tolerability Criteria	Quantitative or qualitative measures for determining whether a risk is unacceptable, tolerable or broadly acceptable. [Def Stan 00-56].
Tolerable	A level of risk that may be tolerated when it has been demonstrated that the risk is ALARP and is not unacceptable. [Def Stan 00-56].
Unacceptable	A level of risk that is tolerated only under exceptional circumstances. [Def Stan 00-56].
Validated Safety Argument	A safety argument with supporting evidence that has been subjected to sufficient scrutiny to provide assurance of the robustness of the argument and evidence. [Def Stan 00-56].
'White Box'	Having visibility of the internal architecture, structures, features and implementation as well as the externally visible performance and interfaces. [Def Stan 00-56].

9.2 Abbreviations

AAP	Assurance and Audit Procedure
ALARP	As Low As Reasonably Practicable
AMP	Assisted Maintenance Period
ASEMS	Acquisition Safety and Environment Management System
ASEG	Acquisition Safety and Environmental Group
ATE	Army Training Estate
CADMID	An acronym describing the different phases of acquisition ie Concept, Assessment, Demonstration, Manufacture, In-service, Disposal.
CBA	Cost Benefit Analysis
CDM	Chief of Defence Materiel
CESO	Chief Environment and Safety Officer
CHASP	Central Health And Safety Project
COTS	Commercial Off The Shelf
CSA	Customer Supplier Agreement
DE	Defence Estates
DEC	Director Equipment Capability
DEFRA	Department of Environment Food and Rural Affairs
DESB	Defence Environment Safety Board
DESO	Defence Exports and Sales Organisation
DE&S	Defence Equipment and Support
DSA	Defence Sales Agency
DS&C	Directorate Safety and Claims
D SMT	Department of Specialist Management Training
DTI	Department of Trade and Industry
EI	Environmental Impact

EIA PM	Environmental Impact Assessment Policy Memorandum
EIR	Environmental Information Regulations 1992
EIS	Environmental Impact Statement
EISS	Environmental Impact Screening and Scoping
EMP	Environmental Management Plan
EMS	Environmental Management System
FSB	Functional Safety Board
FSMO	Functional Safety Management Office
HI&A	Hazard Identification and Analysis
HSC	Health and Safety Commission
IEA	Independent Environmental Auditor
IEMA	Institute of Environmental Management and Assessment
IG	Initial Gate in the CADMID cycle
IOSH	Institution of Occupational Safety and Health
IPT	Integrated Project Team (also used to cover Integrated Business Team)
IPTL	Integrated Project Team Leader
IS	In-Service
ISA	Independent Safety Auditor / Assessor / Advisor (according to context)
ISO14001	International Standard for Environmental Management Systems
ISO14004	Guidance on the International Standard for Environmental Management Systems
ISO14040	International Standard for Life Cycle Assessment
JSP	Joint Service Publication
LOD	Letter of Delegation
LoD	Lines of Development
MG	Main Gate in the CADMID cycle

MOTS	Military Off The Shelf
MOU	Memorandum of Understanding
NGO	Non Government Organisation
OCP	Operational Control Procedure
OH&S	Occupational Health and Safety
OHSAS 18001:2007	Occupational Heath and Safety Management Systems – Specification
PFI	Private Finance Initiative
PHI&A	Preliminary Hazard Identification and Analysis
POEMS	Project-Oriented Environmental Management System
POSMS	Project-Oriented Safety Management System
PPP	Public Private Partnership
PR&A	Project Review and Assurance
RACI	Responsible / Accountable / Consulted / Informed (a technique to record, usually in a Table, the level of involvement of different authorities in a range of activities)
SEMIs	Safety and Environmental Management Instructions
SEMS	Safety Environmental Management System
SHEF	Safety Health Environment and Fire
SME	Subject Matter Expert
SMO	Safety Management Office or Officer
SMP	Safety Management Plan OR Safety Management Procedure
SMS	Safety Management System
SOP	Standard or System Operational Procedures (including Operational Procedure)
SofS	Secretary of State
SQEP	Suitably Qualified and Experienced Person(s)
SRD	System Requirement Document

SSP	System Support Procedure
TLB	Top Level Budget
TLMP	Through Life Management Plan
UOR	Urgent Operational Requirement
URD	User Requirement Document
VPF	Value of Preventing a Fatality