

## ENVIRONMENTAL MANAGEMENT SYSTEMS

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### INTRODUCTION

1 MOD recognises the importance of protecting the environment and that good environmental management performance has, more than ever, to be demonstrated. This is because:

- Public opinion expects it.
- Increased efficiency requires it.
- Local ecosystems and global cycles are preserved by it.
- The reputation of the MOD depends on it.
- MOD policy insists upon it.

2 An Environmental Management System (EMS) is a formal, structured approach to managing the aspects of a sites activities, products or services that have, or could have an impact upon the environment.

3 There are many types of EMS standards available; the most widely recognised is ISO 14001; however there is also the EC Eco-Management and Audit Scheme (EMAS) and the British Standard (BS) 8555. Despite variations in content between different EMS standards, they all follow the same; PLAN, DO, CHECK, REVIEW cycle.

### MOD POLICY

4 MOD EMS Policy requires that all MOD sites are covered by an EMS based on the ISO 14001 standard. EMSs should be proportional to the risks associated with the size of the site, and the types of activities undertaken by the site.

5 Under certain circumstances, e.g. smaller low risk sites, it may be appropriate for them to be covered by either a nearby sites EMS or, as part of a higher level EMS i.e. TLB level

## RESPONSIBILITIES

6 The Commanding Officer (CO), Head of Establishment (HoE), and Senior Managers shall ensure that:

- The site they are responsible for is operating an EMS in line with MOD policy.
- The EMS is personally endorsed and periodically reviewed to ensure continual improvement by them.

7 Site Environmental Protection Officers (EPO)/SHEF advisors are responsible for:

- Advising on application of EMS at the site in line with MOD Policy
- The day to day management of the EMS

8 Line Managers must ensure that personnel responsible for implementing and managing EMSs are appropriately trained and competent.

9 TLB CESOs or equivalents are responsible for advising on EMS policy in their TLBs and providing assurance of compliance in line with the MOD process ownership model.

## INTERNATIONAL AND UK LEGISLATION

### EU Policy/Legislation

10 Although there is no mandatory EU legislation or policies on EMS, the EU has introduced the EC Eco-Management and Audit Scheme (EMAS). EMAS is a voluntary EU initiative designed to improve companies' environmental performance and aims to recognise and reward those sites that go beyond minimum legal compliance and continuously improve their environmental performance. For further information visit [http://ec.europa.eu/environment/emas/index\\_en.htm](http://ec.europa.eu/environment/emas/index_en.htm).

### UK Policy/Legislation

11 The UK policy for EMS is laid out in position statement issued by Defra,. It recommends that organisations should consider the value of adopting a national or international standard or scheme such as ISO 14001 or BS 8555 and aim to achieve certification of their EMS by using auditors accredited by the United Kingdom Accreditation Service (UKAS). The full position statement is available on the Defra website: <http://www.defra.gov.uk/environment/business/scp/documents/position-statement.pdf>

12 There are no formal legislative requirements for EMS's in UK law. However, within the Environmental Permitting Regulations 2010 core guidance document (Chapter 9) it is recommended sites should have an Environmental Management System in place. Regulators may refuse to grant a permit if an operator's management system is deemed inadequate.

## **TRAINING**

13 The Specialist Training School at RAF Halton provides accredited training (by the Institute of Environmental Management and Assessment (IEMA)) in implementing Environmental Management Systems and Environmental Auditing, which are tailored towards MOD sites and policy.

<http://www.raf.mod.uk/rafhalton/aboutus/environmentalprotection.cfm>

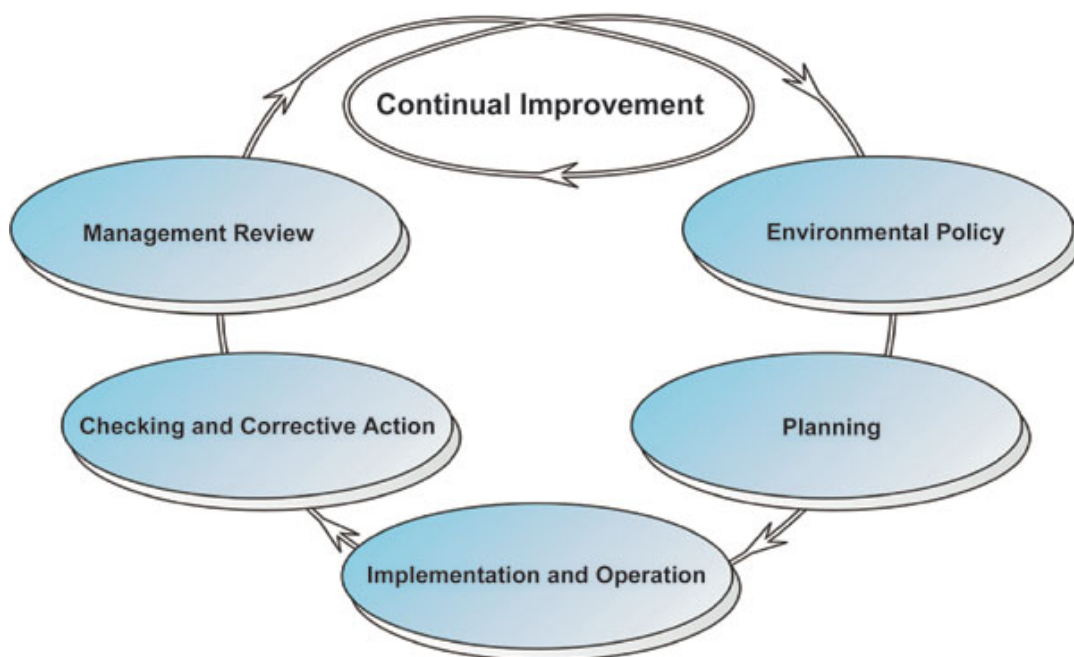
**Annex A**

**GUIDANCE FOR IMPLEMENTING AN EMS**

**INTRODUCTION**

1. An Environmental Management System consists of the following inter-related functions (commonly known as the “plan, do, check, review” cycle), with the end result being developing a system of continuous improvement .

- **PLAN: Planning.** Planning establishes the overall direction for environmental programmes. It provides the framework for establishing policy goals, for setting objectives and targets, as well as identifying the sites environmental aspects and impacts and their legal responsibilities.
- **DO: Implementation and Operation.** Establishing and recording the structure, roles and responsibilities for managing environmental aspects. This provides the operational framework, procedures and documentation required by an EMS. It requires strong communication, awareness and training components.
- **CHECK: Checking and corrective action.** The framework for measuring results, acknowledging performance and diagnosing problems through audits and inspections. Checking and corrective action, keeps the site on track to meet its environmental goals, objectives and targets.
- **REVIEW: The Management review** assesses progress against defined objectives and targets. It is an opportunity to assess what change, if any, is required to sustain continual improvement in overall environmental performance.



2. The MOD through its policy has committed to implementing EMSs based on ISO14001. Due to copyright laws it is not possible to provide a copy of this standard, to support this guidance.

3. This annex provides guidance on developing and implementing an EMS in line with ISO 14001 requirements, additionally a selection of example/template documentation is available at appendix 1.

### **EMS Stage 1 - Setting Up**

4. In most cases the first step in the implementation of an EMS is for Sites to review their current management practices in order to prioritise actions and develop a programme to implement the MOD EMS. There are two key elements:

- Documented top-level commitment and leadership setting out the senior management vision of performance and accountability and the appointment of a “management representative” to oversee the implementation of the EMS...
- Initial environmental review or a gap analysis to assess existing practices against an EMS based on ISO 14001.

5. Top level commitment and leadership have been provided by the Secretary of State in the Safety, Health, Environmental Protection and Sustainable Development [Policy Statement](#). Similar commitment is also required within the Site. Furthermore, commitment is required by all, from top to bottom and from bottom to top. Gaining commitment should not be seen as achieved by issuing a statement: it needs to be built and sustained throughout the process by leadership, including will also need reinforcement from top management who undertake regular system reviews.

6. In preparing for the development of EMSs, an initial environmental review may be undertaken prior to the implementation of the key elements of the EMS. The initial review may not be necessary for those sites where there is a history of EMS development. An initial environmental review is a scoping study to:

- Establish a baseline form which you can measure performance
- Establish current environmental practice/policy.
- Identify key areas of environmental significance.
- Highlight priorities for improved performance.
- Provide a mechanism to set out a project plan for implementation.

7. The initial environmental review is closely linked to the “planning stage” of the EMS and therefore these are often combined; further information on the type of analysis required can be found from paragraph 13.

### **Environmental Policy**

8. The environmental aims and policies of a site and its declared obligations are usually expressed in a policy statement or a site organisation and arrangements (O&A) statement. Statements must be maintained; they shall be revised when circumstances

change and, in any case, shall be reviewed at least annually and/or as part of the Management Review. The O&A statement is the driver for the site's EMS.

9. The O&A statement is a 'statement of the intentions and principles of action of the site regarding its environmental aspects'. It should refer to the Secretary of State's Policy Statement on SHEP & SD and also reflect local considerations and priorities. It must include commitments to comply with all environmental legislation, with MOD and TLB policy, and to continual improvement in environmental performance. Specific legislation need not be identified. It must be signed and dated and identify the parts of the site covered.

10. In addition, where appropriate, the policy statement may include:

- A brief description of the site.
- Significant aspects and what will be done to manage them.
- Personal commitments of the Commanding Officer/Head of Establishment (OIC/HOE).
- A basis for setting environmental objectives based on significance which are realistically achievable.
- Brief statement of the role of the site's environmental personnel.
- A commitment to maintaining close liaison with regulatory bodies.
- A commitment to communicating throughout all levels of the site and to be available to the public.
- Regular review and co-ordination with other management policies.
- Commitment to applying the precautionary principle and to adopt best practice.

11. Some high level objectives relevant to the site, whether developmental or operational, might be included in the statement for example:

- Waste management, minimisation and recycling commitments.
- Energy management commitments.
- Conservation, public relations and community project commitments, as a 'Good Neighbour'.
- EMS commitments.

12. JSP 815, annex Q provides further information on what may be included in a policy statement

13. Notwithstanding the above list, it is important to sound a note of caution for those responsible for drafting environmental policy statements. In particular, it is important not to 'promise anything which can not be delivered'. It is better to have an appropriate, brief, clear and up to date policy statement against which the site can demonstrate specific achievements than to be overly optimistic. Similarly, a clear but brief statement is likely to have considerably more impact upon its audience and be more widely read than a very comprehensive but long document.

## **Stage 2 - Planning**

14. Planning is the first of the formal stages of the EMS "plan, do, check, review" cycle, and commonly includes the following elements;

- Environmental Aspects,
- Legal and Other Requirements and
- Objectives, Targets and Programmes

15. Whether you are in the process of implementing an EMS for the first time or reviewing a mature EMS the starting point is always to first establish within the predefined scope of the EMS the sites environmental aspects and impacts and legal responsibilities.

### Environmental Aspects

16. It is a requirement of an EMS that for each of the site’s activities the environmental aspects are recorded in a common format. The assessment and documenting of the aspects is normally the single largest element of completely new work associated with the implementation of an EMS but it is a basis for identifying controls and improvement programmes.

17. Aspects are the element of a sites activities, products and services that can interact with the environment; within this you should consider Direct Aspects which are those in which you have control over such as emissions to air, land or water and Indirect Aspects which are where you can have an influence, but no direct control such as contractor activities and supply chains, a simplified example is below.

Function	Activity	Environmental Aspect	Direct Impact	Indirect Impact
Office activities	Production of briefings and reports	Energy use from IT Equipment	Climate Change	Resource Depletion
		Production of Non Hazardous Waste	Waste Burden	Climate Change and Resource Depletion
	Office lighting and heating	Energy use	Climate Change	Resource Depletion

Figure 1 Identification of Aspects and Impacts

18. The results of an assessment process, which prioritises these aspects into significant environmental aspects, are to be recorded in the environmental aspects and impacts register.

19. The significant environmental aspects and impacts register provides the basis for:

- Setting objectives and targets and establish internal performance indicators (PIs) designed to measure and control environmental aspects.
- Establishing a management programme to support the EMS objectives.
- Reviewing and monitoring improvements.
- Revalidating the site’s policy statement.

20. The sites environmental aspects and impacts register should be reviewed periodically to ensure that it is still relevant and appropriate. In most cases an annual review is sufficient. More frequent review may be justified by, for example, due to adverse audit results, evidence of uncontrolled aspects, new processes or new activities. Records of superseded or amended environmental aspects should be maintained.

### **Legislation and other requirements**

21. Sites need to be aware of their legal and other obligations to which they are bound so that their environmental aspects are properly controlled. It is acceptable to summarise legislation and other requirements, relevant to significant aspects, or list applicable legislative and other requirements in a separate document often termed the Legislative Register. Further information on current UK and EU environmental legislation can be found at <http://www.environment-agency.gov.uk/netregs/>

### **Assessing environmental significance**

22. This process is a simple risk assessment. It describes how to identify and evaluate environmental significance for each of the site's aspects. It is intended to determine the site's compliance with environmental law, MOD policy and instructions and good management practices. The method is semi-quantitative and takes account of the local and global environmental impacts. This process has five stages:

- Identification of activities.
- Identification of aspects.
- Assessment of significance.
- Evaluation of priority.
- Documentation, management and review.

#### **Stage 1: Identifying environmental activities**

23. The site will identify all the activities that occur or arise within the scope of the EMS. On many sites the initial environmental review will describe these. Each activity should be captured on the aspects and impacts register

#### **Stage 2: Identifying environmental aspects**

24. For each activity the environmental aspects will be identified and entered on the register. Because the MOD EMS is based on ISO 14001, all aspects must be considered. The conditions under which MOD operates have to be taken into consideration, whether "normal", "abnormal" or "emergency". For example in a combustion process for space heating purposes the three following conditions may apply:



- Normal operation; Aspects generated by activities that take place during day-to-day operation. For example emissions of greenhouse gasses.
- Abnormal operation; Additional or more significant environmental aspects may occur under certain circumstances, for example closure of the boiler house while maintenance work is carried out.
- Accident or emergency; Scenarios associated with credible incidents not otherwise covered in the normal or planned routines will also add to the number and nature of potential aspects. Examples may include the aspects of flood, storm, spillage, explosion and malicious damage or the containment of fire fighting runoff water in the event of a fire.

25. Consideration must also be given in the analysis and documentation of environmental aspects to the following factors:

- Past Aspects; Consideration should be given to the consequences of all former activities. Examples might include the uncontrolled or undocumented disposal of waste materials at a particular site, persistent spillage around tanks, fuel depots and chemical storage areas.
- Current Aspects; Consideration should be given to ongoing aspects of MOD activities.
- Planned Aspects; Environmental aspects of any proposed or planned activities need to be considered.

26. Some aspects may not be obvious. Examples may relate to staff travel to work, policy and design work, visitor's behaviour, establishing a requirement for procurement, disposal of equipment at end of life and contractors' aspects when working on behalf of MOD. These "indirect" aspects can be influenced by good management but are generally more difficult to control or quantify. Aspects may be remote and also unpredictable. It is not acceptable, however, to dismiss indirect aspects as being totally beyond the control of the site. Evaluation of indirect environmental aspects and their associated impacts must be considered as part of MOD policy and procurement EMSs.

27. It is likely that some environmental aspects recorded by MOD sites will occur MOD-wide or across the whole HLB or TLB. Decisions on how to manage them should be taken at the appropriate level. Examples are:

- Environmental aspects attributable to joint public and private partnerships (commonly referred to as PFIs or PPPs) and other contractor and supplier actions.
- Office Services and Facilities Management.
- MOD-wide contracts for office based machinery (e.g. furniture, photocopiers).
- MOD-wide contracts for distribution/logistics companies provide, for example, hire cars, modes of transport, fuel usage, vehicle maintenance.

Stage 3: Assessment of significance

28. There are no firm answers to the question, “when are environmental aspects significant?” This will be a matter of judgement for those managing the site and with knowledge of the site and its activities using the following process. In general, if a breach of regulation might arise or the environmental aspect is already a business concern to the site, then an assessment of the aspect’s significance will be required.

29. Initially significance should be determined using the decision tree at Figure 2. Assessors should be aware that the identification of significant aspects can be subjective and be influenced by experience, local environmental sensitivity and management controls and procedures. Wherever insufficient information is available the aspect will be recorded as significant.

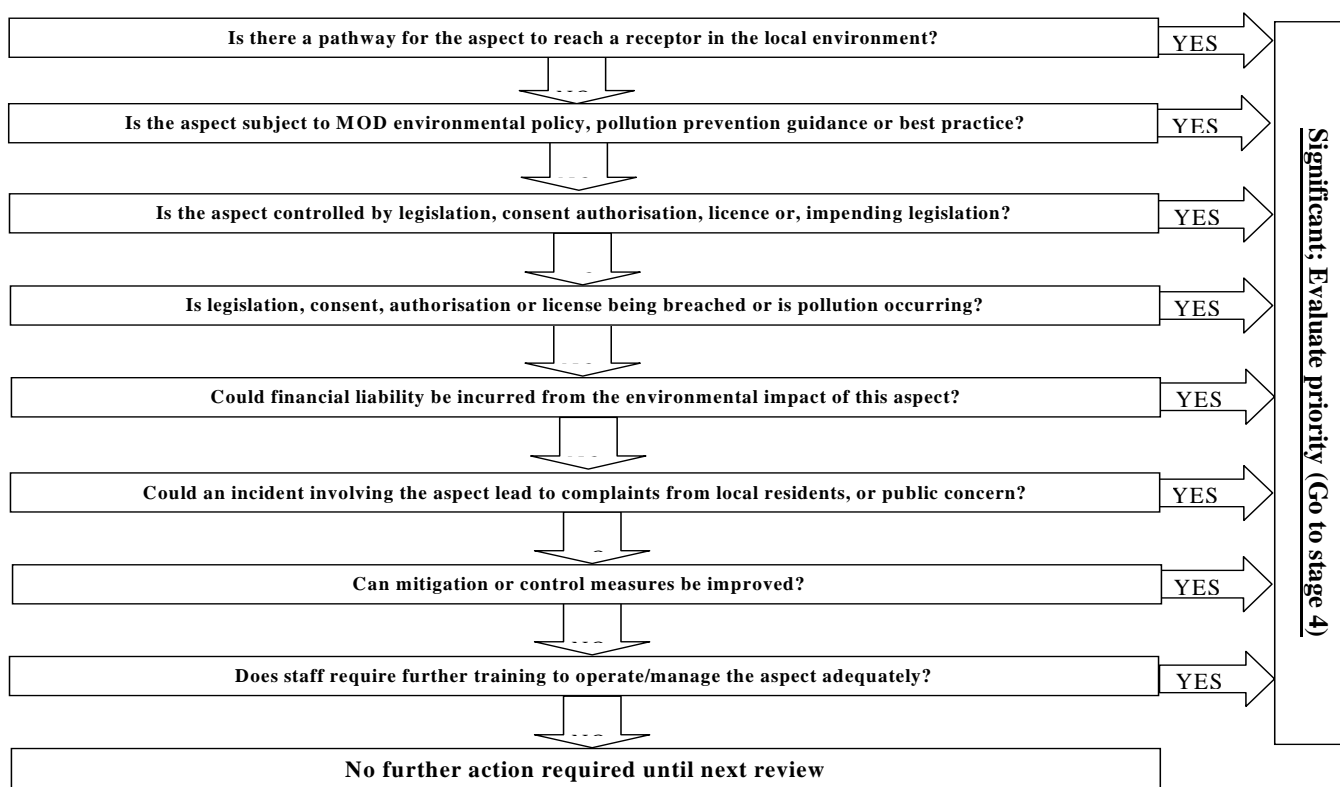


Figure 2 Identification of Significance

Stage 4: Evaluation of priority

30. The level of significance is a function of the likelihood of an aspect harming the environment and the scale of the consequences. It may be evaluated using the following:

$$Significance = Likelihood \times Consequence$$

*Likelihood is the probability of an environmental impact occurring*

*Consequence is the magnitude of the impact on the environment*

Likelihood and consequence can be determined using the scoring system in Figures 3 and 4. Likelihood described by Figure 3 derives scores for the probability of an aspect occurring considered under normal, abnormal and emergency operating conditions. Control measures such as bunding, work instructions and training are taken into account, as these may significantly limit the likelihood of an aspect occurring. The presence and record of control measures will also act as a permanent record of management action in the event of enquiry or interest by external parties such as auditors or the regulatory agencies. Figure 4 describes the scale of the consequence that could arise from an environmental aspect, scoring the most severe outcome as 4 and falling to 1. Scores should be determined by selecting the scenario that best describes each aspect.

Likelihood	Prompt	Score
Most Unlikely	Comprehensive control measures in place	1
Unlikely	Acceptable control measures in place	2
Likely	Minimal control measures in place	3
Most Likely	Ineffective control measures in place	4

Figure 3 Likelihood of an Environmental Aspect Occurring

Consequence	Prompt	Score
Negligible/Trivial	No noticeable environmental impact, contained within immediate area No nuisance to local inhabitants	1
Minor/Slight	Minor impact on the environment Minor nuisance to local inhabitants	2
Serious	Noticeable impact on the environment Creates public nuisance	3
Major	Major impact on the environment Media coverage, adverse public opinion	4

Figure 4 Scale of Environmental Consequence

31. Having assigned scores for both the likelihood and consequence associated with an environmental aspect, the level of significance is calculated by multiplying the two scores together. The rating will produce a range of values between 1 and 16 providing an indication of priorities for action. A table of four significance bands and suggested priorities for action is set out in Figure 4. The priority for action will vary from site to site. It will depend on the number of significant aspects and their relative priority. Typically a high priority requires immediate attention within the EMS. Line management or senior management should be appraised and the existing procedures or controls may need to be reconsidered or the activity altered or suspended. Once high priorities are addressed attention can be given to medium and low priorities to reduce significance still further and achieve continual improvement.

Value	Priority
1 or 2	Negligible
3 or 4	Low
6 or 8	Medium
9, 12 or 16	High

Figure 5 Environmental Significance Priority Levels

Stage 5: Documenting, management and review

32. All aspects that are evaluated must be recorded in the environmental aspects register. It will demonstrate that site is aware of and are managing their risks. It is also a valuable management tool prioritising expenditure and manpower resource allocation, proportionate to the level of risk.

33. Introductory data should include an appropriate file reference and the date when the register was created or last updated. The following data elements should be included:

- A reference or serial number to identify the environmental aspect which should be used in any cross reference within the EMS.
- Activity - very brief description of the activity that gives rise to the environmental aspect.
- A brief description of the environmental impact including positive environmental impacts (those that benefit the environment).
- The value for the significant aspect evaluated during the risk assessment.
- Assessment date - the aspect has not been identified by an assessment provide a date for the source, for example the date of the LQA report.
- Review date. Indicate on the significance assessment the date when the assessment is due for annual review.
- EP action plan reference.

**Objectives, Targets and Programmes**

34. Objectives, targets and programmes are required by ISO 14001 so that improvements in environmental performance can be planned and demonstrated as well as ensuring continuing improvement.

Objectives and Targets

35. Objectives and targets can be set for any environmental management activity, however as a minimum objectives should be developed for, at least, the most significant environmental aspects identified in the sites s significant environmental aspects register. The objective and targets should aim to eliminate (if possible and practicable), control or at least manage the environmental aspect. Objectives may also be driven due to business requirements or higher level objectives or targets such as; Central Government’s Sustainable Operations on the Government estate (SOG E), the MOD Sustainable Development Action Plan (SDAP) or TLB specific objectives and targets.

36. Where possible objectives and targets should be integrated into existing planning systems. The highest relevant authority at the site must agree them. Objectives and targets should be cross-referenced to the significant environmental assessments register and ensure that any additional control measures are addressed.

37. When setting objectives and targets specific commitments made in MOD SofS Policy Statement on Health etc policy or elsewhere are to be considered. These are likely to include the principles of the prevention of pollution, compliance with legislation, and continual improvement. Sites must include an objective 'to achieve 100% compliance with EP legislation and associated consents, permits, licences and regulatory requirements and MOD Policy throughout each Management Plan reporting period'.

38. Objectives and targets should be realistic, achievable and compatible with the overall objectives of the site. There should be no vague objectives, which are unsupported by programmes of work. Targets must be 'SMART'; Specific, Measurable, Achievable, Reasonable, and Time based.

39. Objectives and targets will be strengthened by the development of internal Performance Indicators (PIs). The development of management PIs for the environment is a long-term goal and should be developed selectively to support the sites' EMS and environmental performance evaluation. Energy use per unit area (kWh/m<sup>2</sup>), staff trained, weight of waste per person or the number of biodiversity action plans are examples of performance indicators. PIs may be national, local; or site specific but not all PIs will be appropriate to all sites. PIs aid the process of communicating performance and the operation of the EMS.

### Environmental Management Programmes

40. An environmental management programme is a framework for action. Programmes should be developed and planned to ensure the site's environmental objectives and targets are met. Programmes must take account of the significant environmental assessment register to ensure that priorities are addressed and controls identified are included in subsequent programmes of work. Environmental management programmes will also take into account Policy or O&A statements and legislative and other requirements. Environmental management programmes should be integrated into other existing management plans or programmes.

41. The environmental management programme will need clearly defined responsibilities and authority for implementation. The programme can include projects that vary from relatively straightforward information gathering through major feasibility, research and design studies to full scale trials potentially leading to changes in the way an site conducts its activities. Programmes should be reviewed for:

- New activities.
- Significant changes.
- Long-term projects.










42. Key objectives should be included in the site's Management Plan and progress reviewed at appropriate intervals. Any environmental project identified as having

significant capital, revenue or manpower implications should be reviewed by HLB or TLB focal points.

43. Management Programmes are often presented as Ghant charts, Project Plans or simple Excel spreadsheets so that there are clearly defined start and end dates to achieving the specific tasks which have been identified in the significant environmental aspects register as well as depicting who is responsible for ensuring that these actions are completed on time.

44. The environmental management programme should be documented; Items in the site’s environmental management programmes should be cross-referred to the significant environmental aspects register. It should indicate the objective and target, any PIs, identify the action or task necessary to meet the target and who is responsible, provide a reference number and set a date for completing the task.

45. The progress of objectives and targets in the Environmental management programme progress should be reviewed by site’s environmental groups or committees. A number of methods could be used:

Traffic Light Report	
Task is unlikely to meet or has missed the target	 Red
Task progress on target	 Yellow
Task is completed	 Green
Arrow Report	
Progress made	
No change in status	
Problems occurring	
Percentage Completion	
What proportion of the whole task has been completed	30%
Satisfaction Score	
Good progress	
OK progress	
Poor progress	

46. Individual actions should be assigned to a person with responsibility and resources for completion of the actions required to satisfy the objectives and their supporting targets. In some cases inclusion in performance appraisal review forms may be required.

**Stage 3 – Implementation and Operation “Doing”**

**Resources, Roles, Responsibility and Authority**

47. To make an EMS work in practice, the roles and responsibilities of those implementing the system have to be defined and the Management structure for the EMS should be an integral part of the existing management structure.

48. The site's management should ensure that appropriate resources (financial, equipment, people) are made available, considering both the current and future needs of the site.

49. The site's EMS requires a project team to be appointed to implement and to ensure the effective operation of the system. These personnel would be drawn from existing post holders in the site; only rarely would new, full time, EMS managers be justified. Personnel involved with the EMS may include the following:

- The senior management.
- EMS "management representative" or project manager.
- Internal auditors.
- Line management contributing specialist expertise as required and accepting "ownership" of the EMS.

50. To implement a corporate MOD EMS, sites are recommended to form an environmental committee or action group, where appropriate, such a group may combine SHE responsibilities. The committee/group may comprise the following representative(s) of the relevant processes within the EMS as appropriate:

- Senior management.
- CO/HOE
- EMS management representative.
- Environmental Adviser.
- Health and Safety Advisor.
- Fire Officer.
- HLB/TLB environmental protection focal point adviser as available and if appropriate.
- Waste Manager.
- Pollution Control Officer.
- Conservation Officer.
- Property Manager.
- Contractor representatives on sites.
- Representatives of main functional areas of the site.
- Energy Manager.
- Budget Manager.
- Facilities &/or Estates Manager

### Training, Awareness and Competence

51. Records and procedures of defined training needs and the required and attained competencies should be maintained. All levels within the site should be considered and prioritised:

- Senior managers.
- Line managers.
- EMS manager.
- Process staff.
- New staff.
- Visitors and contractors.

- All other staff.

52. Management should provide leadership and continually reinforce its commitment to the EMS. Staff should understand and accept the environmental values of each individual site. Training is a long-term activity and a 'sheep dip' approach, is not recommended. Training delivery must be appropriate to the person or post to:

- Stress the importance of conformance with the policy and EMS procedures.
- Raise awareness of significant environmental aspects arising from the site's activities and of individual roles in achieving conformance with the main objectives of the system i.e. training should be job related.
- Highlight the benefits of the EMS and potential consequence of departures from specified procedures.

53. The Specialist Training School (STS) at RAF Halton provides a variety of training covering EMS implementation, environmental audit and environmental protection training web link?.

### Communication

54. As part of the EMS, sites will be required to develop a procedure to report internally and externally on how its activities affect the environment. Communication should motivate personnel to continual improvements in environmental performance and promote public understanding and acceptance of MOD activities. Effective communication should:

- Demonstrate commitment;
- Deal with the concerns of staff and the public about issues related to the environmental aspects or the site's activities.

55. Internal Communications. Motivation of personnel towards proper regard for environmental concerns is vital and may be enhanced, for example, through positive recognition of good performance when environmental objectives and targets are achieved. It must be two-way. A mechanism should be established for communicating current environmental issues to all levels of the work force and debate should be encouraged to generate ideas in order to improve site environmental performance. This can be achieved through the large range of media available for effective communication ranging from internal memos to a full-scale annual environmental report, including regular meetings, notice boards, newsletters, emails, e-newsletters, suggestion schemes etc.

56. External Communications. Regular contact with regulatory authorities, local authorities, and where appropriate, pressure groups and Non Government Organisations (NGOs), using agreed communication channels, should be encouraged; see JSP 418 on Freedom of Access to Environmental Information. A system for recording and dealing rapidly with any complaints should be established. It is necessary to record the sites' decision to communicate its significant environmental aspects to the public.

### Documentation and Control

57. ISO 14001 requires and EMS to contain the following documentation;



- The Environmental Policy, objectives and targets,
- Description of the scope of the EMS,
- Description of the main elements of the EMS and their interaction, and reference to related documents,
- Documents, to include records, required by the international standard, and
- Documents, including records, determined by the site to be necessary to ensure the effective planning, operation and control of processes that relate to its significant environmental aspects.

58. Commonly the required documentation is contained within an environmental management manual, however sites should assess how best to contain their documents as to be most appropriate depending on their size, available resources and environmental risks. For some sites the EMS may form part of a wider Safety, Health and Environmental (SHE) Management system, other sites EMS manual may be an index listing the location of the required documentation, some may be hard copied manuals and others electronic. Overall documentation should be kept to the efficient minimum and meet the needs of the site and avoid duplication.

59. The Manual and any key supporting documentation should be properly controlled by:

- Maintaining a register of, and a procedure for the issue, control and review of documents.
- Records being easily identifiable and their location recorded.
- Recording the author or responsible person on relevant documents.
- Dating papers and suggesting review dates to check for continued adequacy.
- Weeding obsolete documents from the system and archiving.
- Controlled status should be assigned only to documents if they provide instruction for the implementation of the site's EMS. EMS document control should be based on existing MOD procedures.

### Operational Control

To ensure that the sites environmental policy (or O & A Statement) and its objectives and targets are met and ensure compliance with legal requirements, procedures or controls are to be documented or signposted in the appropriate document ( for example the EMS Manual). This will ensure that the EMS is conducted in a controlled manner under specified conditions. These procedures will include:

- Environmental Management System Procedures; These procedures ensure that the key requirements of the ISO14001 standard are met. For example, how the significant environmental aspects register is to be completed and reviewed.
- Documented Operational Control Procedures; These procedures control the identified significant environmental aspects, which might include, for example, oil storage, waste and energy management, purchasing, construction, strategic considerations, specific processes.
- Overarching Policy Commitment Procedures; these procedures ensure consistency of approach across MOD and government. For example procedures to carry out environmental appraisals or energy benchmarking.

- All procedures will be reviewed regularly, by an identified post-holder, and always after significant changes to the site, its activities or when new activities are undertaken.

60. Procedures may either be specially developed or adapted from existing practice or work instructions. If extant they should be cross-referenced to the aspect. Where possible, those involved day-to-day in the activity to be controlled should be involved in the drafting or revision of the procedures.

### Emergency Preparedness and Response

61. ISO 14001 requires a site to establish and maintain procedures to identify the potential for and respond to accidents and emergency situations, and for preventing or mitigating environmental impacts associated with them. Potential environmental incidents and abnormal operating conditions that could arise as a result of the sites activities will have been considered in producing the significant environmental aspects register. Plans and documented procedures should be established to ensure an appropriate response to such eventualities. It might include:

- Emergency management procedures that assigns responsibilities and lists key personnel.
- Availability of emergency services or contractors for clean ups etc.
- Procedures for communicating both internally within the site and externally to such parties as the Regulators, the public and the media.
- Potential environmental aspects that could have consequences beyond site boundaries.
- Hazard information such as safety data sheets and COSHH assessments.
- Training, monitoring and drills.
- Procedures for controlling incidents and undertaking remediation work. Internal and external responsibilities for the follow-up investigation and remediation.

62. The emphasis of an effective EMS should be on the prevention of avoidable harmful environmental aspects. Planning plays a key role to prepare for contingencies and accidents, as complete assurance of prevention is impossible. Existing site Incident Response Plans should be updated to include relevant environmental data and instructions. As a minimum this will require the review of current control and emergency procedures such as COSHH registers, site spill plans and physical protection arrangements. Examples of environmental operational controls include procedures dealing with spills and Major Accident Control Regulations (MACR) safety plans.

63. Where MOD activities lead to environmental emergency incidents beyond the boundaries of the MOD estate, the civilian authorities will assume direct control. The MOD will direct or control operations only where safety or security concerns take precedence, for example to cordon off and make safe damaged munitions. The MOD role in such situations should be to support the civilian emergency services with information and to provide direct assistance where requested.

64. An effective EMS will include the definition of all credible environmental emergencies and ensure that plans, control procedures, training and information sources are available and understood both within sites and across the wider organisational

structures. Links to all relevant external contacts such as TLB, MOD emergency support contractors and to the civil emergency services should also be reviewed for their adequacy.

65. Briefing and reporting to MOD senior management, Government, Parliament and where appropriate through the Defence Press Organisation to the general public and the media, will be through TLB's. These must be responsive and comprehensive when concerning any environmental incidents. Information usually has to be provided at short notice and often requires co-ordination or consolidation when presented there must be a mechanism for centralised collation.

66. IRIS has replaced the existing health and safety incident and claims' recording software packages (CHASP & RAPID) previously used within MoD and now provides a single system for recording and monitoring all reported safety and environmental incidents and all common law claims. Where TLBs have done so, incidents should be notified through their Chain of Command and then to the INC for each TLB where one exists. <http://defenceintranet.diiweb.r.mil.uk/DefenceIntranet/ApplicationsAndTools/BrowseApplicationAndToolCategories/SafetyEnvironmentAndFire/IncidentRecordingInformationSystemiris.htm>

#### **Stage 4 – Checking**

67. ISO 14001 states that checking is the measurement, monitoring and evaluation of an sites environmental performance. The purpose of this stage is to identify any areas of non-conformity, and arranging for action to be taken as required.

#### **Monitoring and Measurement**

68. Sites s should develop and maintain appropriate documented procedures to monitor and measure the key characteristics of its activities for each of the significant environmental aspects identified. For example recording information to track performance or to confirm that activities and controls are operating in accordance with legal limits and the sites environmental objectives and targets. Some points to note:

- Results should be documented and made available to the appropriate personnel and where appropriate external authorities.
- Methods to ensure the reliability of data must be devised and written into procedures. This might include instrument calibration, equipment testing and maintenance sampling etc.
- Monitoring must be frequent enough to ensure that any significant changes are captured.
- Internal performance indicators are a useful tool.

69. To ensure quality pollution control monitoring/measurement the following checklist of techniques should be considered:

- Predetermined specification of performance requirements.
- Sampling on a representative basis of outputs.
- Checking (visual observation of site activities).
- Monitoring at intervals over a period of time e.g. waste streams, utility consumption etc.

- Using maintenance routines and schedules to provide data.
- Setting environmental controls by the use of calibrated equipment such as effluent discharge flow meters and analysers.
- Monitor contractors.

### Evaluation of Compliance

70. ISO 14001 requires sites to establish, implement and maintain a procedure to periodically evaluate and record evidence of compliance with legal requirements. This will normally be done as part of the audit programme.

### Internal Audits

71. It is a requirement of ISO 14001 (4.5.5) that “the organisation should establish an audit programme to direct the planning and conduct of audits and to identify the audits needed to meet the programme objectives. ISO 14001 does not require each audit to cover the whole system, so long as the programme ensures the whole system is audited periodically.

72. The environmental element of SHEF audits, in accordance with the MOD SHEF Audit Manual, will satisfy the auditing requirement of ISO 14001, it is important that each organisation conducts its own self-assessments. The frequency and scope of the self-assessments will be documented in EMS procedures and the whole system should be examined on a periodic cycle.

Audits will help to ensure that:

- Environmental aspects associated with organisation’s activities are effectively controlled, managed and, where practicable, minimised.
- The management of significant environmental aspects by sites is consistent with MOD EMS procedures and MOD SHE policy.
- The organisation complies with legislation and can demonstrate continual improvement in performance.

73. Audits should bring significant benefits in improved efficiency, management control and environmental performance in terms of reduced costs, improved practice and lower risk of incidents. Self-assessment evaluation should; encourage conformity with MOD policy and external regulations and standards and reveal further opportunities to improve.

74. Procedures for audits including checklists and an assessment plan and programme should be documented. The organisation should institute a self-assessment programme to:

- Undertake periodic review of all significant environmental aspects in accordance with Section 4. To ensure that the significance priority remains appropriate and that the information contained on the significant environmental aspects register remains current.

- Undertake periodic reviews of each area of the site to ensure that no new significant environmental aspects have arisen.
- Check that documented procedures and other operational and management controls are being applied effectively.
- Check monitoring data against objectives and targets, consent limits, permits, authorisation and licence conditions where appropriate.
- Identify continual improvement and better practices.
- Help identify training needs amongst its employees.
- Review the causes of environmental incidents such as spills and compliance failures and ensure that any lessons are applied across the site and the organisation as a whole.
- Identify and communicate any major environmental priorities to senior management and to the MOD environmental focal point structure.
- In liaison with the appropriate contract monitoring office, assess the activities of contractors to ensure that they do not put the organisation at risk of non-compliance or in breach of consents, permits, authorisations or licences.

75. Where possible environmental audits should be undertaken at the same time as health, safety and fire audits and where feasible integrated to embrace SHE. In addition to management of SHE audits there is a range of other environmental audits including: due diligence audits to identify liabilities, functional audits addressing particular processes such as purchasing, emissions/discharges, training, waste management and utilities consumption, and environmental compliance audits.

Training for EMS Auditing is available from RAF Halton, STW or visit <http://www.raf.mod.uk/rafhalton/aboutus/environmentalprotection.cfm>

#### Non Conformance; Corrective and Preventative Action

76. The results arising from any audit, self-assessment, or from any other review, incident or activity within the EMS should be recorded and, if appropriate, corrective and preventive action plans produced. Corrective action should address management concerns by:

- Defining responsibility and authority for investigation.
- Establishing procedures for recording non-compliance.
- Identifying corrective and preventive actions.
- Assigning responsibility for implementation.
- Review.

#### Stage 5 - Management Review

77. Sites are required continually to review their EMS and to make any changes that might be necessary or beneficial. Senior management should evaluate the system for continuing suitability, adequacy and effectiveness. The results should be documented. The review should be undertaken at intervals determined by local management (according to need but typically annually). It should address business change and the potential impact of forthcoming regulations and other requirements.

78. Management Review reflects an ongoing commitment to improve the system and the attainment of continual improvement in environmental performance. The management review should culminate as a formal meeting requiring preparation of data and reports collated by the site's "management representative" or environmental adviser. Care in controlling the agenda, whilst allowing a meaningful debate of the issues and avoiding rubber stamping of pre-prepared material, will be required. The Review shall address the possible need for change and should verify that:

- Audit and other recommendations have been implemented;
- A review of the site's policy or O&A statement, has been carried out taking account of new or growing concerns, increased knowledge of EMS, legislative developments, stakeholder concerns, changes in the business and operating environment.
- There is an audit trail from aspects to objectives and procedures and this is reflected in the policy.
- Environmental management programmes remain effective and on time.
- EMS documentation and records are adequate and complete.
- The overall environmental performance is acceptable and the environmental management benefits are proportional to the effort and other priorities.
- That the EMS meets the site's (business) needs.

79. The review meeting should document the findings, conclusions and recommendations made available to the personnel responsible for corrective or follow up action, to identify areas to develop and improve to support the overall aim of continuous improvement.

**ANNEX A – APPENDIX 1**

The example/template documentation is currently being converted into word format to enable electronic usage and will be made available shortly. In the meantime PDF versions are still available through this [link](#)

## ANNEX B

### ASSURANCE QUESTIONS

The purpose of these question sets is not for delivery bodies to provide answers to each question. However, they should be useful for the delivery body in stating their assurance level. If full assurance cannot be given, a short explanation of the problem area/s and the actions which are being taken to improve the assurance level is required.

#### Questions

- 1 What percentage of sites has an EMS?
- 2 Are appropriate personnel encouraged to take specialist training in EMSs and in environmental auditing?
- 3 What is the review process for the internal performance indicators by the TLB/TFA CESO?
- 4 What process exists to review and update the overarching TLB/TFA EMS objectives, targets and programmes?.
- 5 Is an internal EMS audit review schedule in place? How are findings taken forward?.
- 6 What procedures are in place to enable issues and concerns to be reported throughout the TLB/TFA and DESB structure?
- 7 How are the TLB/TFA/sites engaging with contractors who work at MOD establishments to ensure they are aware of and comply with MOD corporate environmental protection policy?
- 8 How many sites during the last annual reporting audit period received either no assurance or limited assurance? How is this being remediated?
- 9 On the basis of your responses to the questions, and the guidance that is provided in JSP 418, what level of assurance do you believe applies for your compliance with this policy area?

#### DIA Assurance Classifications

- **Full assurance** - The frameworks of governance, risk management and control should ensure effective, efficient and economic achievement of the business objective. Risks that threaten the achievement of that objective are adequately managed.
- **Substantial Assurance** - Weaknesses identified in governance, risk management or control frameworks. Achievement of the business objective is threatened by inadequate management of medium or low category risks.
- **Limited Assurance** - Weaknesses identified in governance, risk management or control frameworks. Achievement of the business objective is threatened by inadequate management of high category risks.
- **No Assurance** - The frameworks of governance, risk management and control do not support effective, efficient and economic achievement of the business objective



