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### 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.

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## 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 (Sustainable Development and Environment Manual)
- 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.

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## 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	Testing and trials of vehicle
Trials/Normal	
Demonstration/Testing and	Road traffic accident, fire or explosion
Trials/Emergency	
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/Abnormal In-service/Operation/Emergency	Secondary use of vehicles Road traffic accident, fire or explosion
*	<u> </u>
In-service/Operation/Emergency	Road traffic accident, fire or explosion
In-service/Operation/Emergency In-service/Routine	Road traffic accident, fire or explosion Routine servicing and repair, waste,
In-service/Operation/Emergency In-service/Routine Maintenance/Normal	Road traffic accident, fire or explosion Routine servicing and repair, waste, components, oils etc
In-service/Operation/Emergency In-service/Routine Maintenance/Normal In-service/Deep Repair and	Road traffic accident, fire or explosion Routine servicing and repair, waste, components, oils etc Replacement of worn or obsolete parts,
In-service/Operation/Emergency In-service/Routine Maintenance/Normal In-service/Deep Repair and Modification/Normal	Road traffic accident, fire or explosion Routine servicing and repair, waste, components, oils etc Replacement of worn or obsolete parts, modifications
In-service/Operation/Emergency In-service/Routine Maintenance/Normal In-service/Deep Repair and Modification/Normal Disposal/Sale/Normal	Road traffic accident, fire or explosion Routine servicing and repair, waste, components, oils etc Replacement of worn or obsolete parts, modifications Selling on of redundant vehicles

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# 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 <u>aspects</u> 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 <u>impacts</u>. 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;

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- 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

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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.

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# 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 Information produced 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.

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# 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.

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# 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.

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