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4. Screening and Scoping

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Summary:

This procedure describes how to carry out a screening and scoping exercise that identifies the project's actual and potential environmental issues and directs the gathering of relevant environmental information for assessment later in the project level Environmental Management System.

4.1. Procedural Overview

4.1.0.1.

The purpose of this procedure is to identify and detail relevant aspects, impacts and potential risks of the acquisition. If completed at the same time as Procedure [EMP01](#) [1] it can indicate relevant impacts and indicate the key environmental issues. This provides an opportunity to influence procurement and design decisions.

4.2. The Procedure

4.2.1. Step 1: Identify activities

4.2.1.1.

Identify all normal, abnormal and emergency activities/situations that can be reasonably foreseen. This information shall be recorded in Form [\[2\]EMP04/F/01 - Environmental Feature Matrix \(EFM\)](#) [3].

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.

1. Normal Activity (N) - Planned and frequent activity;
2. Abnormal Activity (A) - Planned but one off or infrequent activity;
3. Emergency Situation (E) - An unplanned incident.

4.2.1.2.

Consideration shall be given to each of the CADMID/T stages to identify all likely activities/situations, although abnormal activities and emergency situations may not arise in all CADMID/T stages.

Screening and Scoping shall be proportionate and relative to anticipated environmental impacts. For example, it is entirely acceptable to discount an aspect where it is environmentally benign or its impacts and risks are small when compared to domestic household activity. This will allow appropriate attention to be given to significant environmental impacts where anticipated. For example, reductions of fuel use and emissions from an internal combustion engine or the management and reduction of embodied hazardous materials. ASEMS proportionality guidance will help Project Teams and Environmental Committees.

4.2.2. Step 2: Identify materials and energies

4.2.2.1.

Ascertain those materials and energies that will be either embodied or emitted by each of the activities/situations identified during step 1. This information shall be recorded in Form [EMP04/F/01 - Environmental Feature Matrix \(EFM\)](#). [4]

4.2.2.2.

See the Environmental Feature Matrix section within the Further Guidance section of this EMP for further assistance.

4.2.2.3.

The approximate quantities of materials and energy involved should be considered. 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 [EMP09 - Continuous Review](#) [5]. [6]

4.2.2.4.

Note: 'Embodied' means materials or energies incorporated or used by the project e.g. 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 e.g. exhaust emissions, waste.

4.2.2.5.

The materials and energies 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.

The Further Guidance section of this EMP can assist in identifying common embodied and emitted energies and materials along with further common environmental aspects.

4.2.3. Step 3: Other issues for consideration

4.2.3.1.

There are likely to be other considerations in addition to material and energy inputs and outputs. Upon completion of Step 2 consideration of further issues are necessary to check that any environmental impacts that could give rise to these concerns are included in the matrix. These other issues include:

1. Financial – unlimited fines can be imposed for some environmental transgressions and claims for clean-up, remediation or compensation can be considerable;
2. Public Relations – a hostile Public Relations campaign mounted by environmental pressure groups will consume unplanned resources;
3. Prosecution – custodial sentences of up to five years and unlimited fines can be awarded as a consequence of prosecution for environmental transgressions;
4. 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;
5. Cumulative impacts – one application of an adverse environmental impact may not be significant, but repeated applications may be more serious if the effect is cumulative.

4.2.3.2.

Issues (a) to (d) above should have been considered through following Procedure [EMP02](#) [7] and [EMP03](#) [8], and issue (e) will be dealt with later in Procedure [EMP07 – Environmental Reporting](#) [9].

4.2.3.3.

Where relevant and proportional to the PSS, a sustainable procurement risk and opportunity scoping exercise shall be undertaken. A risk and opportunity scoping exercise will be of most benefit during the Concept, Assessment and Design phases but can also be usefully employed through life at strategic points such as a refit, upgrade or service negotiation.

Where legislation relating to wider sustainability matters has been identified, it shall be included within the risk and opportunity scoping exercise.

4.2.3.4.

The [Sustainable Procurement Guide](#) [10] and [Toolkit](#) [11] provides guidance and support tools. Risk and Opportunity Scoping is Step 2 of the Sustainable Procurement Toolkit. The outputs of the Sustainable Procurement Toolkit shall be recorded within the EFM. The final section of the EFM is designed to accommodate the outputs of the Toolkit.

4.2.4. Step 4: Compile Environmental Feature Matrix

4.2.4.1.

The information gathered during steps 1 to 3 shall be recorded in the [Environmental Feature Matrix \(EFM\)](#) [4].

4.2.4.2.

It may be appropriate to segregate normal impacts from abnormal and emergency impacts within the EFM. This distinction may better enable the through life management of risks associated with abnormal and emergency aspects.

4.2.4.3.

Receptors which may be affected by the identified impacts shall be recorded in the matrix. Note that a receptor in this context is described as being any living thing (e.g. humans, animals, plants), inanimate object (e.g. buildings), social or environmental system (e.g. culture, climate) which can be adversely affected by changes in the environment.

4.2.4.4.

The EFM takes the form of a spreadsheet which has a separate sheet for each stage of CADMID/T. (Note that these sheets refer to the stage of CADMID/T in which the activities take place and not the stage of CADMID/T in which you are undertaking this exercise). It is only necessary to complete an Environmental Features Matrix to cover the current and future CADMID/T stages of the project, i.e. you do not need to complete for those stages that have already passed. Each of the sheets with the information that you currently have for each stage, even if this is estimated or incomplete, need to be recorded in the matrix.

4.2.4.5.

The matrix will be reviewed and updated in later procedures and as a part of continuous review.

Some stages of CADMID/T may need more than one sheet, for example you may want to consider the operational and maintenance activities of the In-service stage separately.

4.2.4.6.

At this stage it is only necessary to complete columns a-i of the EFM. The further guidance section will assist completion of the EFM. The other remaining columns will be completed in [EMP05 – Impact Priority Evaluation](#) [12]. [12]

4.2.5. Step 5: Streamlined Life Cycle Assessment (Optional)

4.2.5.1.

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 should 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 shall be excluded without a clear and documented justification for the exclusion.

4.2.5.2.

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 [EMP04/F/02: Streamlined Life Cycle Assessment](#) [13] Form, shall 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 [EMP09 – Continuous Review](#). [5]

4.2.6. Step 6: Reporting

4.2.6.1.

Once the screening and scoping has been completed, construct a draft Environmental Screening and Scoping (EISS) Report. This report will be based on the information captured in the EFM.

4.2.6.2.

The EISS Report shall include:

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

Depending upon the significance of outputs at [EMP05](#) [12], the EISS report will either directly inform a concise Environmental Case Report or form the basis of a more in depth Environmental Impact Management (EIM) study and report.

4.2.7. Method

4.2.7.1.

A Suitably Qualified and Experienced Personnel (SQEP) body shall be formed to conduct/validate/endorse environmental assessments and/or environmental reports.

4.2.7.2.

The SQEP body Chair/Facilitator should ensure that there are sufficient SQEP present to accurately assess the environmental risk/impact (to be recorded explicitly in the minutes). Where it is identified there is a lack of SQEP, or subject matter expertise is required, an action or open mitigation may be placed against the corresponding environmental aspect.

4.2.7.3.

A justification statement shall be included in any environmental assessment/Environmental Case Report in conjunction with SQEP evidence of competence. The statement shall justify that the SQEP body:

1. Believes it is representative and competent to conduct an environmental assessment;
2. Is proportionate to the environmental risk.

4.2.8. SQEP Body Guidance

4.2.8.1.

As stated, the SQEP Chair/Facilitator should determine that the persons present possess sufficient knowledge through their experience and qualifications, which is proportionate to the environmental risk or impact being considered.

4.2.8.2.

However, as a minimum, the following persons will be represented:

1. Environmental Practitioner;

2. Project Team personnel (Design Authority/responsible Desk Officer/environmental manager etc.);
3. Operator.

4.2.8.3.

In addition, the SQEP Body Chair/Facilitator shall consider inviting representation from the following:

1. Head of Capabilities;
2. Trials team;
3. Procurement and/or contract management;
4. Maintenance specialists;
5. Prime contractor/s;
6. Specialist advisors;
7. Relevant Defence Regulator;
8. Independent Environmental Auditor (IEA).

4.3. Responsibilities

4.3.0.1.

The Project Team Leader is accountable for environmental screening and scoping.

4.3.0.2.

The Project Team Leader may delegate to internal focal point(s) and subsequently to external advisors where specialist knowledge is not available internally.

4.4. When

4.4.1. Initial Application

4.4.1.1.

For new projects this procedure should be undertaken as early as possible in the Concept Stage, prior to Initial Gate approval. All projects submitted to the [Investment Approvals Committee](#) [14] (IAC) must take sustainability and environmental impacts into consideration.

4.4.1.2.

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

4.4.2. Review

4.4.2.1.

The Environmental Feature Matrix, which will be developed throughout this procedure, will be completed in Procedure [EMP05 – Impact Priority Evaluation](#) [12]. [12]

4.4.2.2.

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 [EMP09 – Continuous Review](#) [5].

4.5. Required Inputs

4.5.0.1.

The ‘Common Documents’

1. User Requirement Document;
2. [JSP 418](#); [14]
3. [DSA01.1 Defence Policy for Health, Safety and Environmental Protection](#) [14].

Outputs from Procedures [EMP01](#) [1], [EMP02](#) [7], [EMP03](#) [8].

4.6. Required Outputs

4.6.0.1.

Evidence of compliance is provided by the following outputs:

1. Completed [15]Form [4][EMP04/F/01 – Environmental Feature Matrix](#) [4] (columns a to i);
2. Completed Form [EMP04/F/02](#) [13][16]- [Streamlined Lifecycle Assessment Form](#) [13] (*optional*);
3. Supporting report (a draft Environmental Case Report) to explain the decisions for entries in the above form, what the key environmental issues are and why, and record evidence or references.

4.6.1. Records and Project Documentation

4.6.1.1.

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

1. System Requirement Document – for any specific environmental performance requirements;
2. Procurement process (design and contracting considerations);
3. Customer Supplier Agreement – to document agreements on environmental studies to be delivered by the Project Team;
4. Through Life Management Plan;
5. Investment Appraisal (commonly Initial and Main Gate).

Information produced shall be stored in the project’s Environmental Case.

4.7. Further Guidance

4.7.1. Aligning Safety and Environment

4.7.1.1.

The key alignment opportunity in EMP04 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 aspect is not overlooked.

4.7.2. Guidance for Different Acquisition Strategies

4.7.2.1.

The objectives for this procedure should apply to all acquisition strategies. It is MOD policy that the same standards are met, and that assurance that these standards have been met shall be demonstrated for all projects. Some elements of this procedure may be best completed by contractors and suppliers for some strategies such Commercial Off The Shelf (COTS) and Military Off The Shelf (MOTS) products systems and services.

4.7.3. Legacy Systems

4.7.3.1.

When applying this procedure to legacy systems, the following questions shall be asked.

1. What is the remaining length of time of the equipment’s or service’s projected service life?
2. Has the legislation and other standards review identified a need for mitigation that has not already been put in place?
3. Are there future plans for major modifications and capability enhancements, and if so when?
4. Is there historic evidence of actual environmental incidents and impacts, if so when, where and what?
5. Have there been any legal compliance problems to date or issues with regulators?
6. Has there been any stakeholder (particularly external to MOD) interest to date (for example Parliamentary Questions or enquiries regarding the equipment’s environmental performance)?

4.7.3.2.

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 is 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 shall reflect this.

4.7.4. Warnings and Potential Project Risks

4.7.4.1.

If this procedure is not completed, and reviewed (see Procedure [EMP09 – Continuous Review](#) [5]) in a timely manner there will be an increased risk that subsequent work will go ahead with unrecognised environmental liabilities. Any shortcomings in this could compromise Initial Gate or Main Gate procedures and approvals and could result in costly reworks, especially where opportunities to influence design decisions are missed.

4.7.4.2.

If the project fails to screen and scope adequately it is possible that the Project Team 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 Management will not improve the understanding of environmental issues or the improvement of environmental performance in a cost effective and efficient manner.

4.7.5. Environmental Feature Matrix

4.7.5.1.

Environmental Feature Matrix (Identifying Environmental Aspects and Impacts)	
Environmental Aspect	Direct and Indirect Environmental Impacts

Energy Inputs (Embodied)	
Electrical – Battery use	<ul style="list-style-type: none"> • Non-renewable resource use (battery production) • Non-renewable resource use (battery charging)
Mains electricity use	<ul style="list-style-type: none"> • Non-renewable resource use (during energy production)
Gas use	<ul style="list-style-type: none"> • Non-renewable resource use
Oil use	<ul style="list-style-type: none"> • Non-renewable resource use
Compressed air use	<ul style="list-style-type: none"> • Non-renewable resource use (during energy production)
Renewable energy use – fuel cell	<ul style="list-style-type: none"> • Renewable resource use
Material Inputs (Embodied)	
Use of animal or plant derived materials	<ul style="list-style-type: none"> • Natural resource use or non-renewable/scarce natural resource use
Use of minerals and mineral derivatives (ie concrete, metals, paint, plastics)	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Natural resource use or non-renewable/scarce natural resource use
Use of refrigerants	<ul style="list-style-type: none"> • Non-renewable natural resource use
Use of water	<ul style="list-style-type: none"> • Natural resource use (water) • Natural resource use or non-renewable natural resource during water treatment
Energy Outputs (Emitted)	
Acoustic	<ul style="list-style-type: none"> • Adverse health impact to humans, animals • Potential statutory nuisance liability
Electromagnetic	<ul style="list-style-type: none"> • Adverse health impact to humans, animals
Thermal – Radiation/Convection /Conduction	<ul style="list-style-type: none"> • Adverse health impact to humans, animals
Kinetic	<ul style="list-style-type: none"> • Adverse health impact to humans, animals
Chemical	<ul style="list-style-type: none"> • Adverse health impact to humans, animals
Environmental Aspect	Direct and Indirect Environmental Impacts
Material Outputs (Emitted)	

Emissions to land	<ul style="list-style-type: none"> • Potential land and groundwater contamination - (Threat to human health, biodiversity and ecosystems)
Emissions to water	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Air pollution (climate change, acid rain, ozone depletion, local air quality)
Waste production (including special waste)	<ul style="list-style-type: none"> • 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

4.7.5.2.

<p>Environmental Feature Matrix (Completing the Matrix Columns)</p>
<p>Column A - Internal reference</p>
<p>If you have any other internal references that will help you to identify your aspects and impacts you can enter it in this column.</p>
<p>Column B - Activity</p>
<p>Use this column to list all the activities you identified for your project in Step 1.</p>
<p>Column C - Normal/Abnormal/Emergency</p>
<p>This column can be used to record whether the activities are normal, abnormal or emergency.</p>
<p>Column D - Aspect</p>
<p>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, so these can now be entered into this column against the appropriate activities.</p>
<p>Column E - Environmental receptors</p>
<p>This column should be used to record the receptors that each environmental aspect may affect. The information should be entered as follows:</p> <ul style="list-style-type: none"> • 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). <p>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.</p>

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'. 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 i.e. 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 than 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.
Columns K to N - Priority Assessment
Columns K to N capture the outputs of EMP05 - Impact Priority Evaluation. Please refer to EMP05.
Columns O to R - Mitigation
Columns O to R capture environmental impact mitigations. It is not necessary to put in place mitigations for each line item. Commonly mitigations will occur as a result of working through EMP06 Objectives and Targets and EMP08 Operational Controls whilst undertaking EIM
Columns S to V - Post Mitigation Priority Assessment
Columns S to V allow delivery teams to record the effect that their mitigating activity has had. A priority assessment of the mitigated environmental aspect should be recorded here it can then be compared against the original non-mitigated environmental priority assessment

4.8. Version Control

4.8.1. Version 2.3 to 3.0 uplift

4.8.1.1.

Major uplift from the Acquisition System Guidance (ASG) to online version. POEMS has undergone major revision. Refer to the [POEMS Transition Document](#) [17] for details.

4.8.2. Version 3.0 to 3.01

4.8.2.1.

Link in 4.2.4.1 re-established.

4.8.3. Version 3.01 to 3.2 uplift

4.8.3.1.

Introduction of the following changes for this version

- Following the release of SP Tool, new SP content para 4.2.3.3. & 4.2.3.4
- Additional new guidance for completion of EFM Columns S to V following T45 trials see para 4.7.5.2

See [POEMS Transition](#) [17] document for further details.

Source URL: <https://www.asems.mod.uk/guidance/poems/emp04>

Links

- [1] <https://www.asems.mod.uk/guidance/poems/emp01>
- [2] http://www.asems.mod.uk/sites/default/files/documents/EMP/EMP04_F_01-SP_EFM.xlsx
- [3] https://www.asems.mod.uk/sites/default/files/documents/EMP/EMP04_F_01-SP_EFM_Ver_2.xlsx
- [4] http://www.asems.mod.uk/sites/default/files/documents/EMP/EMP04_F_01-SP_EFM_Ver_2.xlsx
- [5] <https://www.asems.mod.uk/guidance/poems/emp09>
- [6] <http://www.asems.mod.uk/guidance/poems/emp09>
- [7] <https://www.asems.mod.uk/guidance/poems/emp02>
- [8] <https://www.asems.mod.uk/guidance/poems/emp03>
- [9] <https://www.asems.mod.uk/guidance/poems/emp07>
- [10] http://www.asems.mod.uk/sites/default/files/documents/EMP/Sustainable_Procurement_Introductory_Guide.pdf
- [11] <http://www.asems.mod.uk/toolkit/sustainable-procurement-tool>
- [12] <https://www.asems.mod.uk/guidance/poems/emp05>
- [13] https://www.asems.mod.uk/sites/default/files/documents/EMP/EMP04_F_02%20-%20Streamlined%20Lifecycle%20Assessment%20Form.docx
- [14] <https://www.asems.mod.uk/ExtReferences>
- [15] <https://www.asems.mod.uk/sites/default/files/documents/Form%20EMP04F01.xlsx>
- [16] <https://www.asems.mod.uk/sites/default/files/documents/Form%20EMP04F02.doc>
- [17] <http://www.asems.mod.uk/sites/default/files/documents/POEMS%20Transition%20Document%20for%20ASEMS%20Web.docx>