

MOD	EMS Procedures	Procedure EMP03
EMP03: Impact Priority Evaluation		Page 1

0 SHOWING CONFORMANCE

0.1 Options

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

1 INTRODUCTION

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

2 PROCEDURE OBJECTIVES

- 2.1.1 To prioritise identified environmental impacts.

3 RESPONSIBILITIES

3.1 Accountability

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

3.2 Procedure Management

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

3.3 Procedure Completion

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

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DOCUMENT IS UNCONTROLLED IN PRINT			

MOD	EMS Procedures	Procedure EMP03
EMP03: Impact Priority Evaluation		Page 2

4 WHEN

4.1 Initial Application

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

4.2 Review

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

5 REQUIRED INPUTS

- a. The “Common Documents” (ie User Requirement Document (URD) and JSP 418 (Sustainable Development and Environment Manual)
- b. Outputs from:
 - EMP01 – Stakeholders and Standards Identification
 - EMP02 – Screening and Scoping

6 REQUIRED OUTPUTS

6.1 If using Recommended Forms and Guidance

- a. **Form EMP02/F/01** – Environmental Feature Matrix, which was started in EMP02 will now be completed.
- b. **Form EMP03/F/01** – Record of priority evaluation methodology.

OR

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

7 DESCRIPTION

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

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

DOCUMENT IS UNCONTROLLED IN PRINT	ISSUE LEVEL:	Release V2.2e
	DATE:	November 2007

MOD	EMS Procedures	Procedure EMP03
EMP03: Impact Priority Evaluation		Page 3

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

7.2 Step 1: Number of categories to be used

- 7.2.1 In order to give a reasonable degree of resolution between environmental impacts, it is recommended that 6 categories are used for both severity and frequency/duration. This should provide enough variation and resolution to prioritise the environmental impacts of most projects.
- 7.2.2 If the IPT strongly feels that this is too many categories it can choose to reduce this number to 5 or 4 for either issue, but no lower than 4 eg where there are very few environmental impacts to be prioritised or where it is obvious which of the impacts are high priority. In this case the maximum score for each category should still be retained as 6, as it would with a 6 category system, to retain the highest priority score of 36. See tables below.

Severity Category	d	6	12	24	36
	c	4	8	16	24
	b	2	4	8	12
	a	1	2	4	6
		1	2	3	4
Frequency Category					

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

Low priority

Medium priority (see Step 3)

High priority (see Step 3)

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

7.3 Step 2: Assign categories

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

Severity

- 7.3.2 The severity of an environmental impact is a measure of the degree of environmental damage that the impact represents. The lowest rating for severity is 'negligible' and the highest 'catastrophic'. However, the terminology for intermediate categories 2-5 may vary according to IPTs wishes but as a guide could include the terms: minor, noticeable, significant, serious or critical.
- 7.3.3 Next the IPT needs to assign definitions to all of these categories (including negligible and catastrophic) to make them applicable to their project. These can be based on factors such as resource use, energy use, air emissions, quantities and type of waste produced, scale of environmental impact or persistence of pollution in the

DOCUMENT IS UNCONTROLLED IN PRINT

ISSUE LEVEL:

Release V2.2e

DATE:

November 2007

MOD	EMS Procedures	Procedure EMP03
EMP03: Impact Priority Evaluation		Page 4

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

a. Negligible

Re-use of material, or negligible use of renewable or non-renewable resources. Produces inert waste.

Negligible environmental impact. For example, temporary disturbance of common species only.

b. Minor

Low to medium use of renewable resources or low use of non-renewable resources.

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

c. Noticeable

Notable to large use of renewable resources, notable use of non-renewable resources.

Notable non-special waste disposal, special waste recycled, small amounts of special waste disposal.

Environmental impact limited to a small area, or widespread impact with minimal lasting damage. For example, permanent damage to habitat of common species only.

d. Serious

Significant use of non-renewable resources, limited use of toxic substances.

Notable amount of special waste produced.

Notable lasting environmental damage. For example, destruction of habitat of common species or temporary damage to habitat of endangered species.

e. Critical

Large scale use of non-renewable resources, significant use of toxic substances. Large amount of special waste produced.

Large scale environmental damage with national significance, eg release of gases contributing to acid rain (NO_x, SO_x), or permanent damage to habitat of endangered species.

f. Catastrophic

Large scale use of very scarce resources or toxic resources eg use of heavy metals.

Very large amount of special waste produced.

Severe widespread irreversible environmental damage of international significance eg release of greenhouse gases, release of ozone depleting substances or destruction of habitat of endangered species.

Frequency/duration

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

DOCUMENT IS UNCONTROLLED IN PRINT	ISSUE LEVEL:	Release V2.2e
	DATE:	November 2007

MOD	EMS Procedures	Procedure EMP03
EMP03: Impact Priority Evaluation		Page 5

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

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

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

7.3.7 Some examples of category choices are:

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

7.4 Step 3: Threshold scores for priority action

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

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

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

DOCUMENT IS UNCONTROLLED IN PRINT	ISSUE LEVEL:	Release V2.2e
	DATE:	November 2007

MOD	EMS Procedures	Procedure EMP03
EMP03: Impact Priority Evaluation		Page 6

Any consultation or advice received by the IPT should be documented.									
7.5	Step 4: Undertake evaluation								
7.5.1	Once you have decided on the methodology for priority evaluation you can start to work through your list of environmental impacts, scoring each in turn against the categories you have chosen. These scores can be entered directly into Form EMP02/F/01 – Environmental Feature Matrix (from Procedure EMP02 – Screening and Scoping), which will then calculate the overall priority score by multiplying the score for severity by the score for frequency/duration.								
7.5.2	The default threshold score in the Environmental Feature Matrix is set at 12 for medium priority impacts and 24 for high priority impacts, so this will need to be changed if the IPT has chosen to alter it in Step 3.								
7.5.3	Those environmental impacts evaluated as low priority will require no further action at this point and should be recorded as Findings of No Significant Impact (FONSIs) although any straightforward mitigation should be implemented. Prioritisation of impacts may need to be reviewed as a result of project changes. The review of priority evaluation is covered in Procedure EMP08 – Continuous Review.								
7.5.4	Note that some projects may not have any environmental impacts above the threshold level (ie classed as medium or high priority). However, in these situations opportunities should still be considered for implementing straightforward mitigation measures. This initial evaluation does not mean that the priority of the environmental impacts could not change over time or if for instance new legislative or policy requirements are introduced. Again reviews of the priority evaluation are covered by following Procedure EMP08 – Continuous Review.								
7.5.5	Although medium and high priority impacts will be particularly targeted for further action, this will be in addition to any issues highlighted for action as a result of Procedure EMP01 – Stakeholder and Standards Identification.								
7.6	Step 5: Increase resolution between impacts (optional)								
7.6.1	<p>You may find that having applied your chosen methodology you have a cluster of environmental impacts with very similar scores close to the assigned threshold score. This can make it difficult to decide which should receive priority action and which should not. In this case you may choose to apply a further ‘filter’ to the results based on the scale of the environmental impact. Scale in this context is determined by the physical effect of the impact for example, the distance that noise travels or the area over which air emissions may disperse. The premise behind this additional step is that the larger the area affected by the environmental impact the higher the priority that impact should be given. For example, if your results are as follows:</p> <table> <tr> <td>Impact 1</td><td>Score 30</td></tr> <tr> <td>Impact 2</td><td>Score 18</td></tr> <tr> <td>Impact 3</td><td>Score 18</td></tr> <tr> <td>Impact 4</td><td>Score 18</td></tr> </table>	Impact 1	Score 30	Impact 2	Score 18	Impact 3	Score 18	Impact 4	Score 18
Impact 1	Score 30								
Impact 2	Score 18								
Impact 3	Score 18								
Impact 4	Score 18								

DOCUMENT IS UNCONTROLLED IN PRINT	ISSUE LEVEL:	Release V2.2e
	DATE:	November 2007

MOD	EMS Procedures	Procedure EMP03
EMP03: Impact Priority Evaluation		Page 7

	Impact 5	Score 18	
	Impact 6	Score 18	
	Impact 7	Score 18	
	Impact 8	Score 18	
7.6.2	Clearly Impact 1 will need further action but it will be difficult to choose which of Impacts 2-8 should be given priority. By considering the scale of the environmental harm that each impact produces, greater resolution may be gained, as follows:		
	Impact 2	Score 18	International (impact felt globally)
	Impact 3	Score 18	National (impact felt only in one country eg the UK and territorial waters)
	Impact 4	Score 18	Regional (impact felt only in one region eg the Midlands)
	Impact 5	Score 18	Local (impact felt locally eg the county of Staffordshire)
	Impact 6	Score 18	Local (impact felt locally eg the county of Staffordshire)
	Impact 7	Score 18	International (impact felt globally)
	Impact 8	Score 18	National (impact felt only in one country eg the UK and territorial waters)
7.6.3	Following this assessment it should be possible to re-organise the impacts in order of the scale of impact which should indicate which impacts require greater priority. Generally, the more widespread the effect of an environmental impact the higher priority it should be.		
7.7	Step 6: Record methodology		
7.7.1	The methodology in this procedure is purposefully flexible in order that IPTs can adapt it to the needs of their particular project. However, this means that IPTs must document and justify the actual methodology that they use. Form EMP03/F/01 - Record of Priority Evaluation Methodology, can be used for this purpose.		
7.7.2	It should be noted that the methodology that is determined at this stage should be used consistently throughout the project lifetime. Also, note that due to the use of different size matrices, the varying nature of projects and the ability to vary the definitions of category classes it is inadvisable to use the resulting priority scores to compare projects.		
7.7.3	This evaluation will periodically require review and revision throughout the project's lifetime. Following Procedure EMP08 – Continuous Review, will assist you to identify when, and if, the evaluation needs to be reviewed.		

DOCUMENT IS UNCONTROLLED IN PRINT	ISSUE LEVEL:	Release V2.2e
	DATE:	November 2007

MOD	EMS Procedures	Procedure EMP03
EMP03: Impact Priority Evaluation		Page 8

8 RECORDS AND PROJECT DOCUMENTATION

- 8.1.1 Where relevant, the outputs from this procedure should feed into the following:
- SRD (System Requirement Document) – for any specific environmental performance requirements;
 - CSA (Customer Supplier Agreement) – to document agreements on environmental studies to be delivered by the IPT;
 - TLMP (Through Life Management Plan);
 - Input report for Initial Gate.
- 8.1.2 A copy of the information produced from following this procedure should be stored in the project's Environmental Case.

9 RECOMMENDED TOOLS AND FORMS

- Form EMP02/F/01** – Environmental Feature Matrix, (partly completed in Procedure 2).
- Form EMP03/F/01** – Record of priority evaluation methodology.

10 GUIDANCE

10.1 Guidance for Different Acquisition Strategies

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

10.2 Aligning Safety and Environment

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

10.3 Legacy Systems

- 10.3.1 When applying this procedure to legacy systems it is important that the following questions are asked:
- What is the remaining length of time of the equipment's or service projected service life?
 - Has the legislation review highlighted a need for mitigation that has not already been put in place?
 - Are there future plans for major modifications and capability enhancements, and if so when?
 - Is there historic evidence of actual environmental incidents and impacts, if so

DOCUMENT IS UNCONTROLLED IN PRINT	ISSUE LEVEL:	Release V2.2e
	DATE:	November 2007

MOD	EMS Procedures	Procedure EMP03
EMP03: Impact Priority Evaluation		Page 9

when, where and what?

- e. Have there been any legal compliance problems to date or issues with regulators?
- f. Has there been any stakeholder (particularly external to MOD) interest to date (for example Parliamentary Questions or enquiries regarding the equipment's environmental performance)?

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

10.4 Warnings and Potential Project Risks

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

DOCUMENT IS UNCONTROLLED IN PRINT	ISSUE LEVEL:	Release V2.2e
	DATE:	November 2007