Environmental Performance Assessments for Defence Construction Projects

Aim

1. This note provides guidance to Project Managers on how they can comply with the mandatory requirement to carry out an environmental performance assessment on all defence construction projects.

<table>
<thead>
<tr>
<th>Quote from Common Minimum Standards for the Procurement of Built Environments in the Public Sector -</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;An appropriate environmental assessment process such as BREEAM or an equivalent (e.g. CEEQUAL, DREAM etc.) appropriate to the size, nature and impact of the project must be carried out on all projects&quot;.</td>
</tr>
<tr>
<td>OGC October 2005</td>
</tr>
</tbody>
</table>

Introduction

2. The built environment has a huge impact on both the environment and our lives. It makes heavy demands on our natural resources, is energy intensive and, if poorly managed, can have adverse effects on our communities and businesses. The MOD recognises these impacts and the need for effective management in this area. Environmental measures implemented at design, construction and through the whole life use of a facility will mitigate this damaging impact, reduce running costs and help create better working and living conditions.

3. Central Government has therefore made it a mandatory requirement that an environmental performance assessment appropriate to the size, nature and impact of the project must be carried out on all public sector construction projects.

4. Central Government has also set a performance target for public sector construction projects. Where the Defence Related Environmental Assessment Methodology (DREAM); the Building Research Establishment Environmental Assessment Methodology (BREEAM) or the Civil Engineering Environmental Quality Assessment (CEEQUAL) is used, all new projects are to achieve an “Excellent” rating and all refurbishment projects are to achieve at least “Very Good” rating, unless site constraints or project objectives mean that this requirement conflicts with the obligation to achieve value for money.

5. It is the responsibility of the MOD/DE Project Manager to ensure that this requirement is met, and that the results of the environmental performance assessment are recorded to the DE Project and Programme Management database (formerly known as the ‘Purple Programme’).
6. Essential information to be reported includes:

- The Target performance rating and assessment tool used
- The Predicted rating post design
- The Actual rating post construction and occupation

### Environmental Performance Assessments for Construction Projects within the Appraisal Tools Hierarchy

7. A hierarchy of appraisal tools is available to assess and manage sustainability and environmental impacts across the MOD business. Figure 1 (page 6) sets out the hierarchy of both sustainability and environmental appraisals. For further guidance on the tools see: JSP 418 Volume 1 Ch.14 Sustainability and Environmental Appraisals.

8. The MOD Sustainability and Environmental Appraisal Tools (SEAT) Handbook – (See: SEAT Handbook) is the MOD’s reference for Appraisal Tool methodologies used on the MOD estate related plans, programmes, projects and activities. It sets out guidance and methodologies for a suite of tools, such as Sustainability Appraisal, Strategic Environmental Assessment and Environmental Impact Assessment, that assess and manage the sustainable effects of development activities on or affecting the MOD Estate.

9. Section 6 of the SEAT Handbook provides information on the Defence Excellence Evaluation Process (DEEP) tool. This, as part of Better Defence Buildings, is the MOD design quality indication (DQI), which is an evaluation tool aimed at delivering well designed, functional, environmentally responsible, efficient, soundly constructed, and adaptable (over whole life) Defence construction projects. For further guidance on DEEP see: DEEP Link

10. Environmental performance assessments are one of the more detailed tools that should be identified by the Sustainability Appraisal process. Their application is a mandatory requirement at the project level.

11. Environmental performance assessment tools support clients, designers and contractors in dealing positively with environmental issues relevant to the project and to help integrate such thinking into the design, construction and facility management processes. The tools measure the performance of a project against a set of predetermined design, management and construction standards.

12. The DREAM tool follows four stages; Survey; Design; Construction and Operation. A predicted environmental performance assessment rating can be generated and maintained throughout the design process, with the objective of ensuring that environmental considerations are fully addressed. The Operation assessment is required to establish a final rating following the occupation and use of the building for one year.

13. The requirement to complete assessments is no longer linked to project/activity costs. DREAM (or equivalent environmental performance assessment) must be considered if the construction activity meets any of the following criteria:

- It is on a site, or adjacent to a site, protected under environmental legislation (eg. SSSI, SAC, SPA, RAMSAR etc)
- Planning permission is required
Building excavations will be undertaken (machine or hand digging)

The work is designed to improve energy efficiency

14. Where projects or elements of projects warrant the use of a formal performance assessment and the existing models are not suitable, advice should be sought from either the DE ES&P DREAM Manager or Administrator. Where the potential environmental impact of a project is low then a simplified approach based on a checklist developed from the criteria in the Sustainability Appraisal may be more appropriate (see Section 3 of the SEAT Handbook). For further guidance contact the DE ES&P Sustainable Development Team. See Table 1 for a summary of the application of environmental performance assessment methodologies.

Table 1. Environmental Performance Assessment Methodologies

<table>
<thead>
<tr>
<th>Environmental Performance Assessment Methodology</th>
<th>Projects under £0.5 M or with low potential environmental impact</th>
<th>Projects over £0.5 M with a significant potential environmental impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Checklist based on SA criteria (see Section 3 of SEAT Handbook) Other</td>
<td>DREAM BREEAM CEEQUAL Other equivalent</td>
<td></td>
</tr>
</tbody>
</table>

**DREAM**

14. **DREAM** is an environmental performance assessment tool developed by DE ES&P for defence building projects. It comprises of a series of modules for different defence building types and covers new construction and major refurbishments. Each module consists of a series of question sets, guidance notes, text areas to record assessor's notes and reporting templates. See Table 2 for details of the building types covered.

15. The methodology has been developed to support the long term strategy for the estate and MOD delivery of the Framework for Sustainable Development on the Government Estate targets linked to the performance of buildings and construction projects.

Table 2: Existing and Proposed DREAM Assessment Models

<table>
<thead>
<tr>
<th>Building Type (New Construction &amp; Refurbishment)</th>
<th>Function/Primary Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hangars and Workshops</td>
<td>Buildings with predominantly large open spaces for industrial use.</td>
</tr>
<tr>
<td>Kitchens and Dining Facilities</td>
<td>Buildings with a mixture of individual occupancy rooms and larger multi-occupancy rooms.</td>
</tr>
<tr>
<td>Commercial Space</td>
<td>Buildings with predominantly large open spaces for commercial/ leisure use.</td>
</tr>
<tr>
<td>Living Accommodation</td>
<td>Buildings predominantly for domestic use.</td>
</tr>
</tbody>
</table>
16. DREAM sets out the MOD’s preferred standards in relation to the design, construction management and construction standards for the building type. The assessment criteria are focused on the construction site, the building envelope and the building services. It has been developed in-house and therefore no licence fees are payable for its use. **DREAM should be the preferred tool for formal environmental performance assessments of defence building projects.**

17. The tool incorporates comprehensive guidance notes that support each of the individual module question sets; a DREAM Evaluation and Assessment Log (DEAL) which allows for the recording of evidence to support the achievement of each credit; also, the DREAM Final Assessment Report (FAR) which is automatically generated from the data recorded within the DEAL.

18. DREAM is a web based self assessment tool designed to be completed on-line. The guidance notes and assessment criteria are available to everybody. Assessors must obtain Log-On details from DE ES&P before an assessment can be started.

19. All four stages of an assessment; Survey, Design, Construction and Operation must be completed on-line. It is the responsibility of the Project Manager to ensure that the Survey, Design and Construction assessments are carried out thoroughly. The DREAM assessment will then be handed over to the building occupier; it is then the building occupier’s responsibility to ensure that the Operation assessment is carried out. To maintain quality standards DE ES&P will carry out a programme of quality control checks on assessments. ES&P may seek clarification and/or additional evidence from the assessor and depending on the information provided, may instruct the assessor to add or deduct credits from the assessment to ensure consistent application of the tool.

**BREEAM**

20. BREEAM covers the environmental performance of a range of building types which include BREEAM for:

- Offices
- Homes (known as EcoHomes)
- Industrial units
- Retail units
- Schools

21. Other building types such as leisure centres and laboratories can be assessed using a bespoke version of BREEAM.

22. BREEAM offers a fully certificated environmental assessment of every stage of a construction project from Design through to Post Construction and Occupation. Full details of the Building Research Establishments (BRE’s) services can be found at: [http://www.bre.co.uk/](http://www.bre.co.uk/) Assessments must be carried out by independent assessors who are trained and licensed by BRE. Recommended fee scales for assessors, BRE quality control and certificate fees are posted on their website.
**EcoHomes**

23. EcoHomes is a version of BREEAM and focuses on providing environmental performance assessments for new, converted or renovated homes and covers houses, flats and apartments. EcoHomes assessments are carried out by independent assessors who are trained and licensed by BRE. Guidance and assessors for EcoHomes can be found on the BREEAM website, see: [EcoHomes Link](#)

**CEEQUAL**

24. CEEQUAL is an award based assessment scheme for the environmental quality of civil engineering projects. It is applicable to all types and sizes of civil engineering projects and works.

25. When CEEQUAL is used on a MOD civil engineering project or the civil engineering elements of a development project, the question set which is applicable for the Whole Project Award should be used.

26. Two separate approaches can be taken in respect of using the CEEQUAL methodology. Firstly, Project Managers may wish to subject their particular project for a formal CEEQUAL award. Should they choose to do this, then they should secure the services of an accredited CEEQUAL assessor at the earliest opportunity. The Project Manager will be responsible for any fees incurred to do this.

27. Otherwise, the question set pertaining to the CEEQUAL Whole Project Award should be used on a self assessment basis. Project Managers who elect not to seek a formal CEEQUAL award but never the less still wish their projects to be subject of a CEEQUAL assessment, should appoint an appropriately trained person accordingly.

28. Full details relating to the CEEQUAL awards and accredited assessors can be found at: [http://www.ceequal.com](http://www.ceequal.com)

**Further Information**

29. Further details on the information in this guidance note can be obtained:

- Via the DREAM Website: [www.dreamassess.com](http://www.dreamassess.com)
- By emailing the DREAM Mailbox: [dream@de.mod.uk](mailto:dream@de.mod.uk)
Figure 1.

Obligations for Sustainability and Environmental Appraisals relating to Estate Change - Statutory and Non Statutory Policy

Non Statutory/Policy Obligation  |  Statutory Obligation
---|---
Policy  |  
  - Regulatory Impact Assessment
  
Plan/Programme  |  
  - Strategic Sustainability Appraisal
    - Regional Socio Economic Report
  
Project  |  
  - Full Sustainability Appraisal
    - DREAM or Equivalent as required for Construction Projects
    - Specialist Studies as required
  
  - Environmental Impact Assessment
    - Appropriate Assessment
    - Land Quality Assessment

Appraisal Mitigation and Monitoring measures fed into operational EMS/IRMP

Steady State  |  
  - EMS  |  IRMP/ILMP