Environmental Management System:
Construction, Refurbishment, Conversion and Fit-Out
Procedure

qmul.ac.uk                                                    March 2021
## Approval Page

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<tr>
<th>Version</th>
<th>Governance Group</th>
<th>Date Approved</th>
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<tbody>
<tr>
<td>1.0</td>
<td>Sustainability Committee</td>
<td>15 March 2021</td>
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</table>
Construction, Refurbishment, Conversion and Fit-Out Procedure

<table>
<thead>
<tr>
<th>Lead:</th>
<th>Assistant Director Capital Development, Estates and Facilities</th>
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<tr>
<td>Reviewed by:</td>
<td>Head of Sustainability</td>
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<td>Date due for Review:</td>
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**Purpose**

This procedure details how construction, refurbishment, conversion and fit-out projects are managed across our UK campuses for the purpose of:

- Reducing the risks and optimise the opportunities associated with our construction, refurbishment, conversion and fit-out projects
- Minimising negative environmental impacts associated with our construction, refurbishment, conversion and fit-out projects
- Ensuring that appropriate consideration of environmental issues, including procurement of materials for construction, refurbishment, conversion and fit-out projects
- Ensuring compliance with relevant environmental legislation.

**Scope**

This procedure covers all construction, refurbishment, conversion and fit-out projects across our UK campuses.

**Definitions (ISO14001:2015)**

*Risks and Opportunities*: potential adverse effects (threats) and potential beneficial effects (opportunities)

*Procedure*: Set of interrelated or interactive activities, which transforms inputs into outputs.

**Responsibilities**

<table>
<thead>
<tr>
<th>Role / Position</th>
<th>Responsibilities</th>
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</thead>
<tbody>
<tr>
<td>Director of Estates and</td>
<td>Strategic responsibility for all capital development projects.</td>
</tr>
<tr>
<td>Role / Position</td>
<td>Responsibilities</td>
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<tr>
<td>Facilities (EAF)</td>
<td></td>
</tr>
<tr>
<td>Assistant Director Capital Projects EAF</td>
<td>Responsible for ensuring sustainability is considered during design, demolition and construction phases of all construction, refurbishment, conversion and fit-out projects.</td>
</tr>
<tr>
<td>Head of Sustainability</td>
<td>Responsible for coordinating embedding relevant environmental priorities into all aspects of construction, refurbishment, conversion and fit-out projects. Responsible for coordinating Queen Mary’s Display Energy Certificates and compliance with relevant energy regulation. Act as a consultant on environmental sustainability considerations during the planning stages of construction, refurbishment, conversion and fit-out projects.</td>
</tr>
<tr>
<td>Sustainability and Environment Manager</td>
<td>Responsible for coordinating the auditing of all construction, refurbishment, conversion and fit-out projects against expected environmental outcomes.</td>
</tr>
<tr>
<td>Sustainability and Energy Manager</td>
<td>Responsible for monitor the energy efficiency of new-builds, refurbishment, conversion and fit-out projects against expected energy performances.</td>
</tr>
<tr>
<td>BREEAM / Ska Assessor</td>
<td>Provides advice and guidance to the Capital Projects Team and conducts sustainability assessments.</td>
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</tbody>
</table>

**Related Documents**

This procedure is linked to:

- Queen Mary’s Environmental Sustainability Policy 2020
- Queen Mary’s Environmental Sustainability Action Plan (2020-23)
- Queen Mary’s Environmental Aspects and Impacts Register.

**Process and Procedure**

The Capital Projects Team (CPT) consider and explore the opportunities of embedding good environmental practices into the design, demolition and construction phases of all construction and refurbishment projects across Queen Mary. For each project the CPT are responsible for:

- Detailing project specifications
- Inviting tenders
- Agreeing contract terms
- Selecting contractors
• Checking any relevant environmental or other licences and permits for all construction and refurbishment projects
• Ensuring environmental considerations are included at the project design stage (including reuse of existing materials and purchase of sustainable goods and materials)
• Identifying legally protected animal species and advising on necessary actions
• Ensuring legal compliance during all phases of the project.

**Sustainability Assessments and Design Specifications**

The CPT determines and uses the most appropriate environmental sustainability assessment methodology for each project. The typical assessment methodologies considered are:

- Building Research Establishment Environmental Assessment Method (BREEAM) for New Construction / Build
- BREEAM Refurbishment for all major refurbishment / conversion projects
- RICS – Ska Rating for fit-outs and minor refurbishment and conversion projects.

In addition, the CPT determine key priority areas for each project in relation to energy and water consumption, waste management, pollution prevention and biodiversity preservation and enhancement. Environmental sustainability targets are set for each project, which take into account the assessment methodology and key priority areas identified.

Design briefs are developed for each project; these briefs details the expected outcomes for all capital project including the sustainability objectives.

**Energy and Water**

The CPT, in conjunction with the Head of Sustainability set minimum energy standards for each project. These standards covers the areas below:

- Insulation
- Ventilation efficiency
- Air flow
- Plant energy efficiency
- Equipment and appliances energy and water consumption
- Lighting – artificial and natural
- Heating
- Energy generation or CHP
- Water re-use or rain / grey water harvesting
• Building use
• Monitoring

Waste

The CPT, in conjunction with the Head of Sustainability include appropriate waste minimisation strategy into all capital projects. These strategies generally details how all waste generated throughout the demolition and construction stages are managed and to ensure that these are aligned with Queen Mary’s reuse / recycling priorities.

Queen Mary expects all relevant contractors for major construction and refurbishment projects to have site waste management plans.

The CPT consider and where practicable explore the use of recycled materials.

Construction Materials

Generally, material selection will be based on the Green Guide to the specification of construction materials developed by the Building Research Establishment (BRE). The selection of these components are carried out between the CPT, design teams and the Head of Sustainability and on the basis of balancing the environmental impact, whole life cost, maintenance regime, viability, fire safety, thermal mass, durability, aesthetics and the expected outcomes associated with these projects.

Pollution Prevention

The CPT, in conjunction with the Head of Sustainability actively explore opportunities to reduce and mitigate pollution to the air, land and water including noise and dust during the demolition, construction and use of new buildings. Consideration are given to:

• Carbon emissions from equipment and machinery during the project
• Low emissions technology
• Dust minimisation
• Noise and vibration levels
• Water pollution
• Refrigeration (HCFC’s)
• Emergency preparedness and response.
Biodiversity Preservation and Enhancement

The CPT, in conjunction with the Head of Sustainability explore opportunities to preserve or enhance biodiversity.

Below are some of the biodiversity issues considered:

- Using the existing footprints of buildings if practicable
- Avoiding the removal of trees, hedges or water courses where possible
- Planting native tree/plants species
- Building green spaces for biodiversity
- Including green or brown roofs where practicable
- Relocation or re-provision of species if removal cannot be avoided.

Contractor Control

Contractors are managed in accordance with the Contractor Control and Management Procedure. The CPT are responsible for ensuring that contractors operate in conformance with relevant environmental regulations and Queen Mary’s environmental priorities.

Copies of method statements, operational control processes, emergency response procedures and incident reports are to be assessed for suitability by the CPT prior to work commencing. Where required the Head of Sustainability is consulted.

In the event of a non-conformance with the operational control processes or an incident, the CPT will work with the contractors to ensure that the non-compliances are addressed and any environmental harm addressed.

Monitoring and Reporting

Objectives, targets and relevant key performance indicators (KPIs) identified associated with each projects monitored by the CPT throughout each project. The performance against targets is reviewed by the CPT and reported into the Sustainability Committee (SC), Estates Strategy Board (ESB) and Senior Executive Team (SET).

Effects and Actions on Non-Conformance

Failure to comply with this procedure may result in:

- Non-conformance with the requirements of the ISO 14001:2015 standard
- Criminal and/or civil prosecution
Departure from this procedure is addressed in the Non-Conformance, Corrective and Preventive Action Section of our Environmental Management System.

**Version Control**

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Document Lead: Assistant Director Capital Development, Estates and Facilities
Document Owner: Director of Estates, Facilities and Capital Development
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