



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

Approval Page

Version	Governance Group	Date Approved
1.0	Sustainability Committee	15 March 2021
2.0	Sustainability Committee	1 April 2022

Construction, Refurbishment, Conversion and Fit-Out Procedure

Lead:	Assistant Director Capital Development, Estates and Facilities
Reviewed by:	Head of Sustainability
Approved by:	Sustainability Committee
Date Approved:	1 April 2022
Date due for Review:	31 March 2023
ISO14001(2015) Clause:	8.1

Purpose

This procedure details how construction, refurbishment, conversion and fit-out projects are managed across our UK and Malta 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 and Malta 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

Role / Position	Responsibilities
Director of Estates and	Strategic responsibility for all capital development projects.

Role / Position	Responsibilities
Facilities (EAF)	
Director of Strategic Projects EAF	Responsible for ensuring that all relevant environmental sustainability are considered during design and construction phases of Plot C (Whitechapel Campus)
Assistant Director Capital Projects EAF	Responsible for ensuring that all relevant environmental sustainability are considered during design, demolition and construction phases of all construction, refurbishment, conversion and fit-out projects across our UK campuses.
Facilities and Resources Manager (Malta Campus)	Responsible for ensuring that all relevant environmental sustainability is considered during design, demolition and construction phases of all construction, refurbishment, conversion and fit-out projects across our Malta campus.
Head of Sustainability	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.
Sustainability and Environment Manager	Responsible for the periodic audit of this procedure and associated activities against relevant regulations and ISO 14001:2015 EMS clauses and ensure that corrective actions are put in place to address any non-conformance(s).
Sustainability and Energy Manager	Responsible for monitor the energy efficiency of new-builds, refurbishment, conversion and fit-out projects against expected energy performances.
BREEAM / Ska Assessor	Provides advice and guidance to the Capital Projects Team and conducts sustainability assessments.

Related Documents

This procedure is linked to:

- Queen Mary's Environmental Policy 2021
- Queen Mary's Environmental Sustainability Action Plan (2020-23)
- Queen Mary's Environmental Aspects and Impacts Register 2022

Process and Procedure

The Capital Projects Team (CPT) – UK Campuses and the Facilities and Resources Manager (Malta Campus) consider and explore opportunities of including good environmental practices into the design, demolition and construction phases of all construction and refurbishment projects across our campuses. Environmental specification are consider during:

- 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 (UK Campuses) and the Facilities and Resources Manager (Malta Campus), 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 (UK Campuses) and the Facilities and Resources Manager (Malta Campus), 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 (UK Campuses)

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.

Construction Materials (Malta Campus)

Currently not applicable to the Malta Campus

Pollution Prevention

The CPT (UK Campuses) and the Facilities and Resources Manager (Malta Campus), 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.

Currently not applicable to our Malta campus.

Contractor Control

Contractors are managed in accordance with the [Contractor Control and Management Procedure](#). The CPT (UK Campuses) and the Facilities and Resources Manager (Malta

Campus) 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 (UK Campuses) and Facilities and Resources Manager (Malta Campus) 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 (UK Campuses) and Facilities and Resources Manager (Malta Campus) 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

Date	Version	Lead	Due for Review
15 March 2021	1.0	Assistant Director Capital Development, EAF	14 March 2022
1 April 2022	2.0	Assistant Director Capital Development, EAF	31 March 2023

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