



Environmental Management System

ISO 14001:2015 (EcoCampus Phase 3)

Approval Page

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Overview

Queen Mary, University of London (Queen Mary) is a Russell Group University and one of UK's leading research-focused higher education institutions. We offer our students a stimulating, supporting and high-quality learning experience and we are committed to supporting world-leading education and research.

This Environmental Management System (EMS) was developed based on the EcoCampus phased approach to implementing ISO 14001:2015 Environmental Management System (EMS). Attaining ISO 14001:2015 certification is one of our priorities to embed good environmental practices across all areas of our operations.

This EMS is being used as a flexible and adaptive framework to support the delivery of our objective to:

- Comply with all relevant regulations
- Fulfil our compliance obligations
- Continue to improve our environmental performance
- Environmental protection, including pollution prevention
- Continually improve our EMS for the purpose of enhancing our environmental performance

The procedures below have been developed to support the implementation of our EMS:

- Non-Hazardous Management Procedure
- Hazardous Waste Management Procedure
- Grounds Management Procedure
- Construction, Refurbishment, Conversion and Fit-Out Procedure
- Discharges to Water Management Procedure
- Discharges to Air Management Procedure
- Emergency Spill Management Procedure
- Contractor Control and Management Procedure
- Energy Monitoring and Management Procedure
- Emergency Preparedness and Response Procedure

Related Documents and Tools

This EMS is linked to:

- Queen Mary's Environmental Sustainability Policy (2020)
- Queen Mary's Environmental Sustainability Action Plan (2020-23)
- Environmental Compliance (Toolkit)
- EMS Competence and Training (Toolkit)
- EMS Roles, Responsibilities and Training Schedule (Toolkit)
- Environmental Scope and Context (Toolkit)
- PESTLE (Political, Economic, Sociological, Technological, Legal and Environmental) Analysis (Toolkit)
- Log of Interested Parties (Toolkit)

Scope and Context

Currently all functions, processes and operations delivered from our UK campuses are included in the scope of our EMS.

The environmental aspects and compliance requirements that are associated with the activities are integrated into our EMS:

- Emissions to air
- Transport and travel (Fleet and business travel)
- Use and storage of chemical and oils
- Energy use
- Water use
- Construction, refurbishment and demolition
- Waste (hazardous and non-hazardous)
- Grounds and gardens
- Procurement and commissioning

Definitions and Terminologies

The definitions below were adapted from ISO 14001:2015 EMS Standard. These definitions gives insight into the terminologies associated with implementing an EMS.

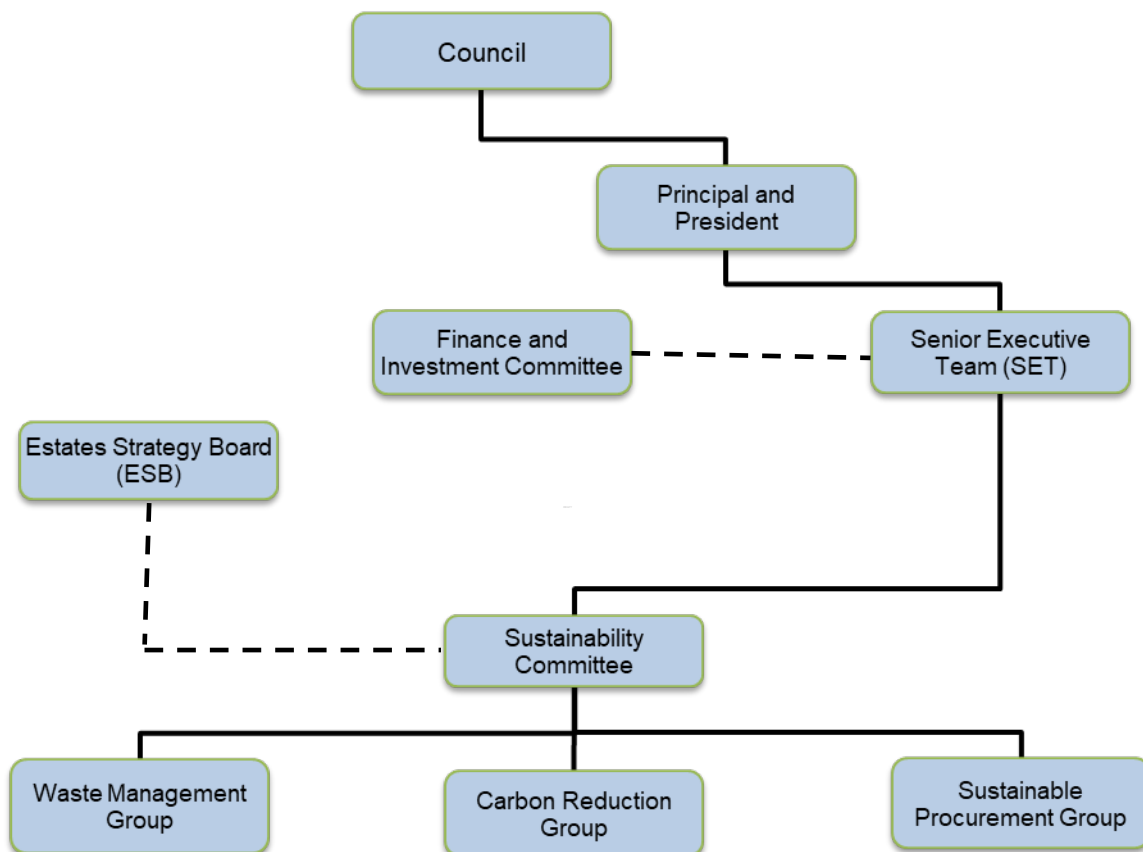
- **Audit:** systematic, independent and documented process of obtaining audit evidence and evaluating it objectively to determine the extent to which the audit criteria are fulfilled.
- **Compliance Obligations:** legal requirements that an organisation has to comply with and other requirements that an organisation has to or chooses to comply with.
- **Corrective Action:** action to eliminate the cause of a nonconformity and to prevent recurrence.
- **Documented Information:** information required to be controlled and maintained by an organisation and the medium on which it is contained.
- **Effectiveness:** extent to which planned activities are realised and planned results achieved.
- **Environmental Aspect:** element of an organisation's activities, products or services that interacts or can interact with the environment.
- **Environmental Impact:** change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's environmental aspects.
- **Environmental Indicator:** measurable representation of the condition or status of operations, management or conditions.
- **Environmental Information Act (EIR):** legislation governing the release of public sector information relating to the environment. Environmental information includes information about air, water, soil, land, flora and fauna, energy, noise, waste and emissions. Environmental Information also includes information about decisions, policies and activities that affect the environment.
- **Environmental Objective:** result to be achieved, set by the organisation, consistent with its environmental policy
- **Environmental Performance:** performance related to the management of environmental aspects.
- **Environmental Policy:** intentions and direction of an organisation related to environmental performance, as formally expressed by its top management
- **Freedom of Information Act (FOI):** legislation governing the release of public sector information.

- Indicator: measurable representation of the condition or status of operations, management or conditions
- Interested Party: person or organisation that can affect, be affected by, or perceive itself to be affected by a decision or activity
- Life Cycle: consecutive and interlinked stages of a product (or service) system, from raw material acquisition or generation from natural resources to final disposal.
- Measurement: Process to determine a value
- Monitoring: determining the status of a system, a process or an activity
- Out-source: make an arrangement where an external organisation performs part of an organisation's function or process
- Process and procedure: Set of interrelated or interactive activities, which transforms inputs into outputs.
- Non-conformity: non-fulfilment of a requirement of the Standard (need or expectation) that is stated, generally implied or obligatory.
- Risks and Opportunities: potential adverse effects (threats) and potential beneficial effects (opportunities).
- Top management: person or group of people who directs and controls an organisation at the highest level. Queen Mary's Senior Executive Team (SET) is its Top Management Group

Leadership and Governance

Our Principal and President is the Chair of the Senior Executive Team (SET) and is the duty holder accountable for the delivery of Queen Mary's environmental sustainability commitments. The Figure 1 show an overview of our environmental governance structure:

Figure 1: Queen Mary's Environmental Governance Structure



Our SET:

- Maintain strategic overview of our performance in the aspect of climate change adaptation and embedding good environmental practices into the way we deliver teaching, learning and associated activities
- Ensure that resources are available across our University to enhance our resilience to extreme weather conditions as well as current and emerging environmental challenges

- Oversight and ownership of our environmental performance and compliance with all relevant regulations.

Queen Mary's Sustainability Committee (SC) is responsible for the assurance of our environmental sustainability performance and regulatory compliance. This committee meets at least four times every academic year. The SC reports to SET and to the Estates Strategy Board (ESB) when required.

The Vice Principal Policy and Strategic Partnerships (a member of our SET) provides oversight of our environmental sustainability delivery approach and Chairs the SC. The Vice Chair of our SC is our Director of Estates, Facilities and Capital Development.

The membership of our SC is drawn from leaders and senior managers across our University. The membership of our SC is aligned with our commitment to embed good environmental practices across all areas of our operation. Currently, our SC have members from:

- Academic Faculties
- Human Resources
- Student Services
- Student Representative
- Staff Unions
- Finance
- Procurement
- Information Technology Services
- Marketing and Communications
- Health and Safety
- All Service Areas within the Estates and Facility Directorate
- Sustainability

Roles, Responsibilities and Competence

Internal and external assignment and allocation of responsibilities are fundamental to the implementation of our EMS. Therefore, the membership of our SC will continue to reflect our significant environmental aspects.

The Head of Sustainability in conjunction with the Chair, Vice Chair and members of the SC are responsible for:

- Determining individuals, whose responsibilities have the potential to affect its environmental performance and fulfilment of its compliance obligations, are competent on the basis of appropriate education, training or experience,
- Identifying training needs required to support the delivery of its environmental objectives
- Raising awareness about the benefits of good environmental practices
- Establishing, implementing and maintaining the EMS in accordance with the requirements of ISO 14001:2015 standard
- Identifying individuals (both internal and external) whose roles have, or could have, a significant impact on the environment and communicating the description of these roles and responsibilities within the EMS
- Coordinating the implementation of initiatives that support the delivery of Queen Mary's commitments to continually improve its environmental performance and comply with all relevant environmental regulations and compliance obligations.

Communication, Information and Record Management

Our environmental communication, information and record management process will continually be reviewed to ensure that it robustly meet the demands associated with:

- Incoming enquiries and complaints
- Requests for information
- Information on its intranet and extranet sites

Process

Communication Channels

Queen Mary's directory <https://dir.qmul.ac.uk> is available to members of the public to access details of individual and departments and <https://www.qmul.ac.uk/about/sustainability> for specific information about its environmental sustainability performances and activities.

Other communications channels being used by Queen Mary are:

- **Email:** sustainability@qmul.ac.uk
- **Twitter:** @QMULSustain
- **Instagram:** @QMULSustain
- **Facebook:** @QMULSustainability
- **Phone:** 020 7882 5555

Enquiries and Complaints

Enquiries and complaints can be made using any of the above channels or directly to the Sustainability Team. Whenever a formal record is required, these enquiries and responses are maintained by the Sustainability Team.

Requests for Environmental Information

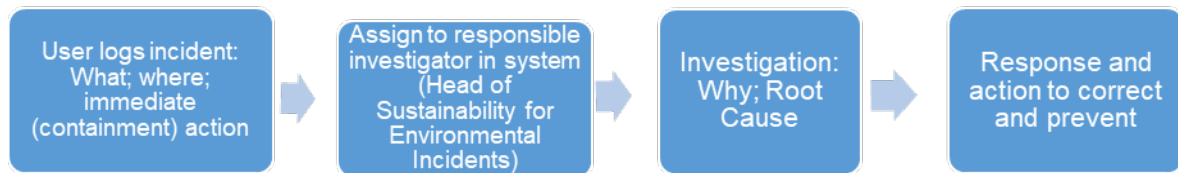
Public requests for environmental information are handled in accordance with the Environmental Information Regulations (EIR), a regulatory function of the Freedom of Information Act (FOI).

Such requests can be made directly to the Sustainability Team via foi-enquiries@qmul.ac.uk

Incidents

All environmental incidents must be recorded on the **Environmental Incident Report Form** and this completed form return to Head of Sustainability via sustainability@qmul.ac.uk this form can be found at [Environmental Management System Procedure](#) or requested by emailing sustainability@qmul.ac.uk

This process flow explains the process



Further information about reporting environmental incident can be found within the **Emergency Preparedness and Response Procedure**.

Document Control and Management

As part of our commitment to attain and maintain ISO 14001:2015 certification, we will continue to ensure that all EMS document, records, reports, toolkit and templates contain adequate and up to date information, suitable for use, protected from loss or damage, easily accessible and distributed as well as retained in usable formats.

All our EMS documents and associated reports are electronically stored and in a consistent version control format.

Below are expected standards of all our EMS documents:

- Documented information, where relevant, are stored electronically within the Sustainability SharePoint folder
- These electronic versions are stored in a version control system
- Relevant staff are informed of changes to documented information and provided with access to the most updated versions
- Documented information remains legible and readily identifiable and produced in the correct format
- Documented information is reviewed and revised (if necessary) as part of the internal audit process and Management Review
- Documents originating from outside Queen Mary, which are important for the planning and operation of the EMS, are identified and their distribution controlled.

Environmental Aspects and Impacts

Our environmental aspects and impacts register that accompany this report aligns with the ISO 14001:2015's Clause 6.1.2. This section:

- Determines the environmental aspects of all our activities within the scope of this EMS, which we can control and influence and associated environmental impacts
- Determines how compliance obligations apply to our environmental aspects
- Considers the life cycle perspective when assessing the significance of our aspects in terms of impacts on the environment under normal, abnormal and foreseeable emergency conditions
- Identifies risks (adverse impacts) and opportunities (beneficial impacts) resulting from significant aspects of our operations

Process: Significant Aspects Criteria

Queen Mary used the environmental criteria outlined in our [Environmental Aspects and Impacts Register](#). This Register is used to monitor, manage and report our environmental performances. The assumptions used in developing this register are explained in the succeeding sub-sections.

Operating Conditions

Environmental aspects and its associated impacts are entered, together with type of activity and activity area. Scores are then assessed against normal and abnormal scenarios, as well as foreseeable emergency situations.

Type of Environmental Impact

The aspects are categorised on their potential impacts: positive (beneficial) or a negative (adverse) environmental impact, or not applicable as appropriate, under the different operating conditions.

Impacts Scores (Severity)

The severity of the environmental aspects are scored using a five-point scale depending of the severity of the environmental impact. The score of used for least impact and five representing the highest impact.

Scoring of Likelihood / Frequency of Impact

The likelihood or frequency of impacts are categorised based on the probability of the occurrence of the impacts or the frequency of the occurrence of the impacts.

Compliance Risk

A “Yes” or “No” can be selected in the ‘Compliance Risk’ column, to highlight whether the aspect is governed by legal or other requirements. Aspects with an associated compliance risk are automatically deemed as significant and the cell automatically turns red.

The aspects register calculates the significance of each aspect. The scores for ‘Severity’ and ‘Likelihood / Frequency of Impact’ are multiplied to give rise to significance ratings of between 1 and 25. These scores are used to ranked significance.

The cell colour within the ‘Significance’ column of the register indicates the level of significance. The Table 1 below summarise our significance-scoring guide.

Table 1: Environmental Aspects Significance Guide

Score	Level of Significance	Risk	Action
1 to 3	Very Low	Acceptable Risk	Continue to monitor and review
4 to 9	Low	No Immediate Risk	Continue to monitor and operational control may be required
10 to 19	Medium	Immediate	Concern, continue to monitor and operational control must be put in place
20 to 25	High	High Risk	Urgent action required as well as monitoring and operational control must be put in place

Environmental Objectives, Targets and KPIs

Our environmental objectives, targets and key performance indicators (KPIs) action planner aligns with the ISO 14001:2015's Clauses 6.2.1 and 6.2.2. This section:

- Establishes environmental objectives at relevant functions and levels, ensuring compatibility with strategic direction and consistency with commitments made in the environmental policy, including the commitment to continual improvement
- Takes into account Queen Mary's significant environmental aspects and compliance obligations
- Considers risks and opportunities
- Ensures environmental objectives are measurable (where practicable) and monitored via establishment environmental indicators

Our Environmental Sustainability Action Plan (ESAP 2020-23), contain an overview of all relevant KPIs used to monitor our environmental performances.

Objective Setting

The Head of Sustainability in conjunction with relevant stakeholders and interested parties prepared the [Aspects and Impacts Register](#), [Compliance Register](#) and [Interested Parties Log](#). The above reference documents underpinned our ESAP 2020-2023 as well as our current environmental objectives, targets and KPIs.

Operational Planning and Control Procedure

Our planning and control procedure aligns with the ISO 14001:2015's Clause 8.1. This section set out how we:

- Establish, implement, control and maintain the processes associated with identified significant environmental aspects, compliance obligations and risks and opportunities associated with Queen Mary's operations
- Identify the type and extent to which outsourced processes can be controlled or influenced

Process

The Head of Sustainability in conjunction with the Chair, Vice Chair and members of the SC ensures that:

- Relevant departments and personnel contribute to developing appropriate management and control procedures. This includes collaboration with external providers regarding outsourced services
- Actions are implemented to achieve the Queen Mary's environmental objectives, address current and emerging risks and optimise all relevant opportunities
- Control of the procedures so that deviations from operating criteria are prevented
- Relevant processes and operating requirements are communicated to those involved, including suppliers and contractors
- Documented information, such as operating criteria and communications with internal staff and external providers is stored electronically in the Environmental Management System sub-folder and via the Sustainability web site
- Operational procedures and associated criteria are appropriately reviewed and revised as part of the Internal Audit and annual Management Review processes

Monitoring, Measuring, Analysis and Evaluation

Queen Mary's monitoring, measuring, analysis and evaluation procedure aligns with the ISO 14001:2015's 9.1.1. This procedure is also used to demonstrate how we:

- Monitors, measures and evaluates its environmental performance and the effectiveness of the EMS
- Sets environmental performance criteria and indicators

Process

The Head of Sustainability in conjunction with the Chair, Vice Chair and members of the SC:

- Determines how significant aspects and impacts within operational controls are monitored and measured, as well as, compliance with relevant environmental legislation and regulations and conformance to Queen Mary's objectives and targets
- Ensures the method and timing of monitoring and measurement is co-ordinated through **Operation Control Documented Information**. This also outlines who is responsible for collating and analysing the results
- Ensures any monitoring and equipment involved are regularly calibrated and maintained and records generated and filed appropriately
- Sets relevant environmental performance indicators
- Conducts an annual evaluation, including the reporting of trends, via the SC

Environmental Compliance Obligations

Our environmental compliance checklist and register aligns with the ISO 14001:2015's Clauses 4.2 and 6.1.3 and captures all relevant regulations and compliance obligations that are applicable to activities across Queen Mary UK's campuses.

Related Documents

All compliance obligations are detailed within Queen Mary's **Environmental Compliance Checklist** and **Environmental Compliance Register**.

Environmental Compliance and Assurance Process

The two types of environmental compliance requirements that underpin our **Environmental Compliance Register** are:

- Mandatory and
- Other requirements

Mandatory Legal Requirements

Queen Mary, currently subscribes to the Comprehensive European Directory of Regulation on the Environment with Commentary (CEDREC) and it is a current Corporate Partner of the Institute of Environmental Management Assessment (IEMA).

CEDREC provides monthly environmental legislation updates via email and a section of IEMA's monthly Transform Magazine contains a review of environmental regulations.

In summary, Queen Mary uses CEDREC and IEMA to identify and review mandatory legal requirements related to its environmental aspects.

Other Compliance Requirements

Queen Mary maintains a log of all interested parties and stakeholders. This log is regularly reviewed to ensure that it is meeting all our environmental commitments and obligations.

Evaluation of Compliance

We will continue to use our evaluation of compliance procedure to demonstrate how we:

- Establish, implement and maintain the procedure for periodically evaluating compliance with applicable legal and other compliance obligations
- Record documented evidence of the periodic evaluation activities

Related Documents

The **Compliance Obligation Register** details all Queen Mary's current environmental compliance requirements. This register is stored in the EMS sub-folder within the Sustainability SharePoint Folder.

Process

The Head of Sustainability in conjunction with the Chair, Vice Chair and members of the SC:

- Maintains knowledge of compliance through appropriate compliance management processes
- Co-ordinates a team to periodically audit (**Internal Audit Programme**) areas where the legal and other compliance obligations apply to ensure that all those involved are complying with these requirements
- Ensures corrective actions following compliance audits are periodically reviewed, and appropriately revised.

The **Internal Audit Report Form** is used during compliance audits and previous audits reports can be viewed within the Internal Audit subfolder, within the EMS subfolder within the Sustainability SharePoint folder.

Internal Environmental Assurance Audit

Queen Mary's internal environmental assurance audit programme aligns with the ISO 14001:2015's Clauses 9.1.2 and 9.2.2. This programme is also used to demonstrate how it:

- Conduct internal audits of its Environmental Management System (EMS) at planned intervals to determine whether it conforms or meet the requirements of the ISO14001:2015 standard and compliance obligations
- Retains documented information of the audit programme and findings.

Related Documents

Internal Audit Report Forms and the **Internal Audit Programme and Checklist** can be accessed by emailing sustainability@gmul.ac.uk

Process

The Sustainability and Environment Manager, in collaboration with the Head of Sustainability:

- Determines the audit criteria, scope, frequency and the methods to be used. This information is recorded on the **Internal Audit Programme**. It is based on the relevant environmental issues and the results of previous audits
- Ensures that all internal Auditors are trained and competent to conduct internal environmental audits and are able to appropriately record and communicate audit findings
- Assign each Auditor specific clauses to audit within the audit programme, audit scope, with the expectation of timely documentation of audit findings, including details of any opportunities for improvement (OFIs) or non-conformances using the **Internal Audit Report Form** template

All the documented information associated with the internal audit programme are stored in the Internal Environmental Audit Folder in the Sustainability SharePoint folder.

Effects and Actions on Non Conformance

We are aware that failure to comply with relevant regulations, compliance obligations and our EMS and associated procedures may result in:

- Non-conformity with the requirements of the ISO 14001:2015 standard
- Civil and / or criminal prosecution

Therefore, the Sustainability and Environment Manager in conjunction with the Head of Sustainability will ensure that robust systems are in place to respond and manage all environmental non-conformances and regulatory breaches as well as avoid environmental harm via the non-conformity and corrective actions.

Non-Conformity and Corrective Action

This section aligns with the ISO 14001:2015's Clause 4.3. This section of our EMS is used to demonstrate how we define the responsibility and authority for investigating and addressing non-conformances. The purpose of this section are for the purpose of:

- Identifying the cause(s) of the non-conformance(s)
- Analysing of the cause(s) of the non-conformance(s) to avoid recurrence(s)
- Exploring and implementing corrective action(s)
- Assessing the effectiveness of the corrective action(s)

Related Documents

The **Non Conformity Log** is used to log all non-conformances and can be accessed via the Internal Audit sub-folder, within the EMS sub-folder within the Sustainability SharePoint folder.

Process

The Sustainability and Environment Manager is responsible for ensuring that:

- Details of any non-conformity identified, usually as a result of internal and external audits, are sent to sustainability@qmul.ac.uk and are recorded on the Nonconformity Log
- The corrective actions and the time-scales required for the implementation of these actions
- The actions taken are appropriate to the magnitude of the non-conformity and the resultant environmental impacts
- The analyses of the effectiveness of corrective actions and determines the root causes of the non-conformities and takes necessary action to prevent recurrences
- After an environmental incident, non-conformance information is provided in the **Environmental Incident Report Form**
- Completed forms are adequately documented and appropriate action to control, correct and deal with the consequences of non-conformities are implemented

Environmental Management Review

This section of our EMS aligns with the ISO 14001:2015's Clause 9.3 and it is used to demonstrate how we:

- Ensures the continuing suitability, adequacy and effectiveness of our EMS and associated procedures
- Reviews key elements of the EMS
- Identifies opportunities for environmental performance improvement

Process

The Head of Sustainability and the Chair and Vice Chair of the SC ensures:

- The Management Review is the main agenda of at least one SC meetings during each anaemic year usually following internal and external audits
- The Management Review takes into consideration the following:
 - The status of actions from previous management reviews
 - Changing circumstances regarding external and internal issues relevant to the EMS, such as the needs and expectations of interested parties, compliance obligations, significant environmental aspects as well as risks and opportunities
 - Evaluation of the performance of Queen Mary against its environmental sustainability objectives
 - Environmental performance information, such as the findings of recent internal audits and compliance evaluation
 - The status of nonconformities and corrective actions;
 - Relevant internal and external communications from interested parties.
- The Management Review addresses the continuing suitability, adequacy and effectiveness of the EMS and makes recommendations for improvement.
- Expected outputs from these meeting include decisions and actions related to improvements and change in the EMS and Environmental Objectives, as well as opportunities to integrate the EMS with other internal processes and in line with the strategic direction of Queen Mary.

Version Control

Date	Version	Lead	Due for Review:
7 May 2021	1.0	Head of Sustainability	6 May 2022

Environmental Management System

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