University of Roehampton – Environmental Sustainability Consultancy Project

22 May 2023

<u>Environmental Sustainability Implementation Plan Report</u>

1. Introduction

The university of Roehampton (UoR) has a strong commitment to sustainability and dedication to creating an environmental sustainability operational plan. UoR recognizes that sustainability is not just an aspiration but an essential guiding principle in addressing the complex environmental challenges we face today.

The university aims to demonstrate its commitment to sustainability by embedding sustainable practices in its core values, strategic objectives, and daily operations. It understands the importance of integrating sustainability into all aspects of its activities, from teaching and research to campus operations and community engagement. By fostering a culture of sustainability, the university seeks to inspire and empower its students, staff, and wider community to become active agents of positive change.

The main drivers behind the development of an environmental sustainability operational plan at the University of Roehampton are twofold: responsibility and opportunity. Firstly, as a responsible institution, the university recognizes its duty to minimize its environmental impact and contribute to the global efforts to mitigate climate change and preserve biodiversity. By adopting sustainable practices, reducing carbon emissions, and conserving resources, the university demonstrates its commitment to environmental stewardship and ensures a sustainable future for generations to come.

Secondly, the university sees sustainability as an opportunity for innovation, differentiation, and long-term success. It understands that by integrating sustainability into its operations, it can enhance its reputation, attract, and retain top talent, and create a more resilient and efficient campus. The university recognizes that sustainability is not just an environmental imperative but also a social and economic necessity, offering numerous benefits and opportunities for growth and leadership and contributing to the sustainable development goals that are set out by the United Nations.

The University of Roehampton's commitment to sustainability and the development of an environmental sustainability operational plan reflects its dedication to responsible and forward-thinking practices. By integrating sustainability into all aspects of its operations, the university strives to reduce its environmental impact, enhance its resilience, and create a sustainable campus that serves as a model for the wider community. Through education, innovation, and collaboration, the university aims to inspire and empower its students and staff to become sustainability leaders and contribute to a more sustainable and equitable future.

Following this commitment to sustainability, the University has appointed LCMB to support its endeavours to identify the gaps in its sustainability approach, streamline its environmental sustainability activities, and identify the opportunities therein to improve its environmental sustainability practises. This report will provide an outline of the background of the previous environmental sustainability activities that UoR implemented so far, recognise the current gaps in the existing approach, and provide an introduction of the main areas of the environmental sustainability plans that needs to be assembled, detailed, updated, and integrated in the forthcoming reports that form the outputs of this consultancy project.

2. Background:

In September 2021 the University undertook an internal sustainability audit that identified the following areas of improvement:

- **Environmental sustainability statements –** The University's published high-level environmental sustainability policy statements do not align and contain no indication of how environmental sustainability initiatives will be enacted and monitored.
- **Environmental sustainability implementation plans –** The University does not currently have a detailed plan in place to implement the environmental sustainability strategy and take it to an operational level.
- **Carbon Management Plan –** The CMP is out of date and there has been a lack of detailed reporting against CMP targets and objectives which may preclude effective management of carbon reduction and the University may not meet its targets.
- **Environmental sustainability reporting –** There has been limited reporting of progress against environmental sustainability targets and insufficient promotion of sustainability initiatives.
- **Environmental management system –** The implementation of an EMS has not progressed and key facets of an EMS, including a legal register and aspects and impacts register, have either not been kept up to date or do not exist.
- **ISO14001 accreditation-**Work with the in-house Environmental Sustainability and Energy Management Team to apply for and provide input into the application process and supporting documentation required to gain the accreditation.

Brief history of prior sustainability activities

- In the previous year, UoR has undertaken several activities to improve environmental sustainability in the following areas:
  - Carbon management plan.
  - Sustainable procurement strategy.
  - Biodiversity and sustainable travel
  - Work with RSU in promoting sustainability.
  - Introducing paperless.
  - Sustainable food supply across campus.
  - Eliminate single use plastic and promote recycling.

While these activities and documents are all targeting the improvement of environmental sustainability, our review concluded that the activities were not consistent, and dos does not provide a coherent roadmap to environmental sustainability at the university. The following

section will outline the data we gathered, and the gaps identified in the current environmental sustainability practises at UoR.

Gathering relevant data and benchmarking against HE peers

To date our team have completed an initial desktop review of the available building information on "Invida" (an estates electronic platform), reviewed the available energy and carbon data and completed a walk around and review of the estate and buildings.

In addition, we've reviewed the Internal audit of Environmental Sustainability report and met with the estates team to review the findings.

We've also reviewed the current enabling strategies and plans and undertook due diligence to identify the extent of the previous work on the Environmental Management System.

- The UoR scope 1 and 2 energy, utility and carbon data emissions are well captured and detailed.
- There appears to be limited UoR scope 3 data available.
- Limited work was done to review the buildings energy performance and carbon footprint in the last 3 years.
- The priorities for energy management going forward are likely to be, invest to save projects to reduce energy use (e.g., more efficient fans and motors, introduce LED lighting and the optimisation of the use of Building Management Systems), the decarbonisation of heat (i.e., replacing gas boilers with heat pumps, or low carbon heat networks) and the use of low carbon energy (i.e., PV and renewables).
- There is an outdated previous Environmental Management System (EMS) in place and limited Environmental Planning and co-ordinated activity across UoR.
- The current Carbon Management Plan is outdated and needs to be fully reviewed and updated to link and support the current environmental sustainability plans.
- The data does not show enough consideration being given to the use of green energy, solar PV.

Furthermore, our team undertook a literature review of the best practice guidelines of sustainability in higher education institutes and reviewed sustainability plans for 20 universities, out of which about 60% has put in place a target date for net zero carbon. This research has informed the activities required to integrate the environmental sustainability action plan in section 3 of this document.

Gaps in UoR Environmental sustainability approach

The development of an environmental sustainability operational plan involves a comprehensive approach that addresses various key areas of focus. Energy management and reduction of greenhouse gas emissions are critical components. The university is committed to implementing energy-efficient technologies, adopting renewable energy sources, and promoting energy conservation practices across its campuses. By reducing energy consumption and transitioning to clean energy, the university aims to achieve significant carbon emissions reductions and contribute to the global fight against climate change.

From the initial analysis of the sustainability related data gathered, there are several activities were undertaken to tackle different areas of environmental sustainability in the last 3-5 years. However, these activities are segregated in nature, and lacks coordination and consolidation to serve a coherent set of sustainability strategic goals for the UoR. To tackle that, section 3 will present a set of updated sustainability goals for UoR with their associated importance and impact for each goal. Then section 4 will outline a proposed restructure of the EMS. Section 5

will then conclude with a link of the future activities of this project's schedule with the proposed sustainability goals to provide a connected and integrated view of the environmental sustainability activities for UoR in the short and medium (3 years) term.

3. Sustainability goals and objectives:

This section includes a list of environmental sustainability goals along with their drivers, importance, and potential impact. These goals will help guide the university towards a more sustainable future, demonstrate its commitment to environmental stewardship and bridge the gaps identified in the KCG report. Figure 1 provides an outline of the environmental sustainability goals.
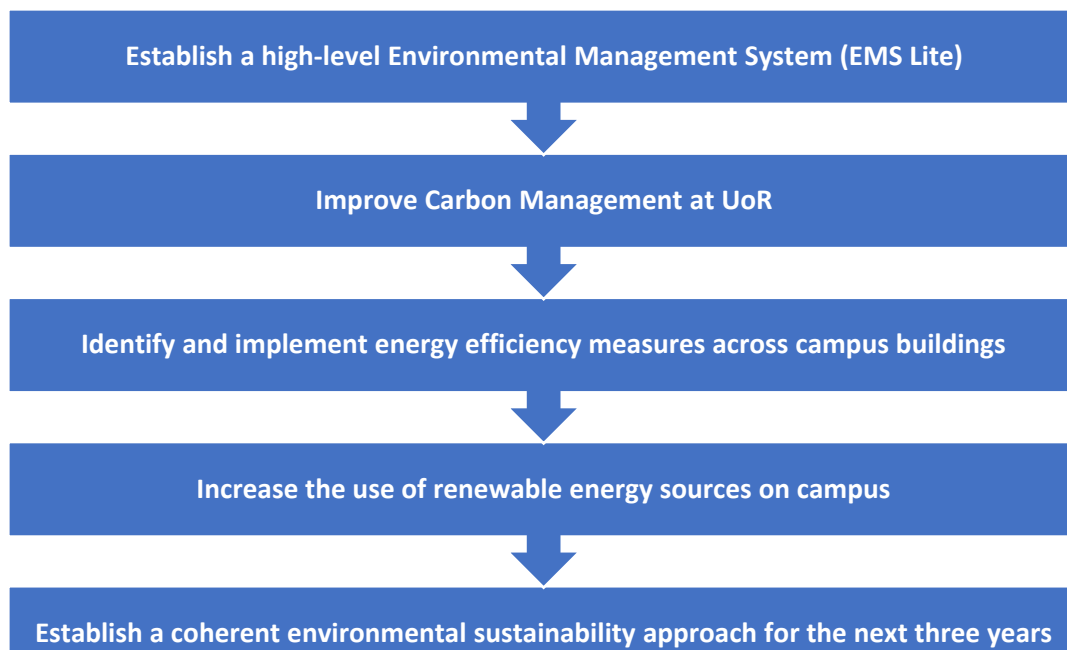
Establish a high-level Environmental Management System (EMS Lite)

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Improve Carbon Management at UoR

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Identify and implement energy efficiency measures across campus buildings

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Increase the use of renewable energy sources on campus

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Establish a coherent environmental sustainability approach for the next three years

Figure 1: Environmental Sustainability Strategic Goals at UoR

Strategic Objective 1: **Goal: Establish a high-level Environmental Management System (EMS Lite).**

- **Driver:** Improve governance and provide an integrated approach for environmental sustainability reporting to UoR.
- **Importance:** consolidate, update, and integrate the various activities of environmental sustainability into a coherent and consistent EMS.
- **Impact:** Improved overall management of environmental sustainability of UoR and provide an effective, standardised, and consistent mechanism to manage current and future sustainability endeavours in the university.

Strategic Objective 2: Improve Carbon Management at UoR.
- **Driver:** The urgent need to mitigate climate change and reduce greenhouse gas emissions.
- **Importance:** By striving for carbon neutrality, the university demonstrates its commitment to combatting climate change, aligns with global climate goals, and serves as a role model for students, staff, and the wider community.

- **Impact:** Working towards achieving carbon neutrality by establishing a CMP will significantly reduce the university's carbon footprint and contribute to a more sustainable and resilient campus. It will inspire and educate the campus community about the importance of carbon reduction and encourage sustainable practices beyond the university.

Strategic Objective 3: Identify and implement energy efficiency measures across campus buildings.

- **Driver:** The desire to reduce energy consumption, lower operational costs, and enhance resource efficiency.
- **Importance:** Energy efficiency is crucial for reducing greenhouse gas emissions, conserving resources, and improving the overall sustainability of the campus. It also helps the university save money on energy bills, freeing up funds for other sustainability initiatives.
- **Impact:** Implementing energy efficiency measures can lead to substantial reductions in energy consumption, lowering the university's environmental impact. It also creates a comfortable and healthy learning and working environment for students and staff, enhancing their overall well-being.

Strategic Objective 4: Increase the use of renewable energy sources on campus.

- **Driver:** The need to transition away from fossil fuels and promote clean energy solutions.
- **Importance:** Renewable energy sources reduce greenhouse gas emissions, promote energy independence, and support the development of a low-carbon economy. By increasing their use on campus, the university showcases its commitment to clean energy and inspires the campus community to embrace renewable energy in their own lives.
- **Impact:** Expanding the use of renewable energy sources, such as solar panels will significantly reduce the university's reliance on fossil fuels and decrease its carbon footprint. It will also serve as an educational tool, demonstrating the viability and benefits of renewable energy technologies.

Strategic Objective 5: Establish a coherent environmental sustainability approach for the next three years.

- **Driver:** the need to improve governance, reporting, integration, and continuous improvement of UoR sustainability activities for the next 3 years.
- **Importance:** It is important to have an integrated plan in the medium term that consolidates the outputs of all the environmental sustainability initiatives and give UoR clear targets to monitor sustainability performance. It is also important to align these plans with the ISO 14001 standard to ensure integration of the approach and recognise other sustainability activities such as water management, recycling, and waste management.

- **Impact:** Improve sustainability governance and reporting in general and provide a roadmap and clear targets to measure against for UoR environmental sustainability for the next three years.

In conclusion, these environmental sustainability goals for the University of Roehampton, driven by the urgent need for climate action, resource conservation, and responsible practices, are of utmost importance. By actively pursuing these goals, the university can make a tangible and positive impact on the environment, inspire, and educate its community, and contribute to a more sustainable and resilient future.

The following implementation activities will contribute to meeting the outlined goals:

- **Energy optimisation and Carbon Reduction**
  - Decrease the consumption of energy in the campus, by reviewing the energy performance data of the buildings and plan and implement energy optimisation measures.
  - Set clear carbon reduction objectives with planned target dates.
  - Optimise the use of energy in operations, consider using energy storage and managing usage and distribution in ways that can reduce total energy demands and reliance on surrounding infrastructure.
  - Set clear targets for heating and cooling and its associated environment quality standards.
  - Assess, and plan the potential use of Combined heat and power (CHP) engines. These save the equivalent of around 5,000 tonnes of carbon per year and the electricity produced is 17 % cleaner.
  - Decarbonise heating, cooling, and electrical energy supplies, by transitioning away from fossil fuel to renewable sources.
  - Optimise energy use in university labs – particularly in the use of ultra-low temperature freezers (ULTs). ULTs typically account for 66 % of the energy used by all lab appliances.
  - Review the current lighting systems, and plan and consider installing LED lights which have a lifespan of up to 20 years.
  - Asses building insulation and plan to undertake refurbishment of the campus buildings, with energy reduction in mind.

- **Waste management and Recycling**
  - Set out clear recycling targets. For example, set and progress against a 50% target increase in recycling by 2025 and 65% by 2035.
  - Remove single use plastics unless needed for medical or research purposes to reduce waste by 50% by 2025.

- **Renewables and clean energy:**
  - Review the campus estates buildings and consider installing on-site renewable energy and buying grid electricity from renewable providers.

o Conducting energy retrofitting of buildings to make them more efficient and allow them to be powered by green energy.

- **Water Management**
  o Setting clear targets of water management, including to consider the introduction of rainwater harvesting systems.

- **Sustainable Procurement:**
  o Manage purchasing, waste management and commuting/travel decisions with sustainability in mind.
  o Set and implement plans to enable a low carbon supply chain – For example, 75% of spend on companies with 2025 science-based carbon reduction plans.
  o Monitor purchasing and procurement of food, travel (business trips/commuting/student travel) with the aim to reduce carbon footprint.
  o Support low-carbon travel and digital alternatives for non-essential travel.

- **Engagement:**
  o Set out clear engagement plans for students' staff and local community.
  o Community engagement – support local communities with local climate and sustainability initiatives, collaborate with other universities and making climate and sustainability events accessible to the public.
  o Offer carbon literacy training to all students and staff as part of orientation. Carbon literacy training equips people with a basic understanding of the science behind climate change and the things they can do to reduce their environmental impact.

4. Structure of the EMS light

Review of the current EMS manual shows that the manual is outdated, contains broken link with the wider sustainability documents, missing information and does not comply with ISO 14001. The following is a proposed restructure of the EMS that will be further developed in the next output of the project.

1. Introduction
- Explanation of the purpose and benefits of implementing an EMS based on ISO 14001.
- Statement of the university's commitment to environmental management and sustainability.
- Overview of the EMS structure and its integration within the university's operations.

2. Scope and Applicability
- Define the scope of the EMS, including the boundaries and departments covered.
- Explain how the EMS aligns with the university's overall goals and objectives.

3. Environmental Policy
- Review and update the environmental policy statement that reflects the university's commitment to sustainability.

- Ensure the policy is aligned with ISO 14001 requirements and relevant to the university's activities.
- Communicate the policy to all stakeholders and ensure their understanding and support.

4. Planning

4.1 Environmental Aspects and Impacts
- Identify and evaluate the environmental aspects associated with the university's operations, activities, and services.
- Assess the significance of each aspect in terms of its impact on the environment.
- Establish procedures to document and regularly review aspects and impacts.

4.2 Legal and Other Requirements
- Identify and understand relevant environmental laws, regulations, permits, and other requirements.
- Establish a process to monitor and ensure compliance with these requirements.
- Develop procedures to address any non-compliance and track corrective actions.

4.3 Objectives, Targets, and Programs
- Establish measurable environmental objectives and targets based on the identified aspects and impacts.
- Develop action plans and programs to achieve these objectives and targets.
- Assign responsibilities and timelines for implementing the programs.

5. Implementation and Operation

5.1 Structure and Responsibility
- Define the roles, responsibilities, and authorities within the EMS.
- Appoint an environmental management representative to coordinate and manage the EMS.
- Establish communication channels and ensure effective internal and external communication.

5.2 Competence, Training, and Awareness
- Assess the competence requirements for employees involved in significant environmental aspects.
- Provide training and awareness programs to enhance environmental awareness and understanding.
- Maintain records of training activities and competence assessments.

5.3 Communication
- Develop procedures for internal and external communication related to environmental aspects.
- Engage stakeholders and encourage their involvement in the EMS.
- Maintain records of communication activities, including feedback and responses.

5.4 Documentation
- Establish a documented information management system to control EMS-related documents and records.
- Develop procedures for document control, recordkeeping, and version control.
- Ensure accessibility and availability of relevant documents to authorized personnel.

5.5 Operational Control
- Develop procedures to manage and control activities that may have significant environmental impacts.
- Implement measures to prevent pollution, conserve resources, and minimize environmental risks.
- Monitor and measure operational processes to ensure compliance with planned controls.

6.Checking and Corrective Action
6.1 Monitoring and Measurement
- Establish procedures for monitoring and measuring key environmental performance indicators.
- Conduct regular inspections, audits, and assessments to evaluate compliance and effectiveness.
- Maintain records of monitoring and measurement results.

6.2 Non-Conformance and Corrective and Preventive Action
- Establish procedures for identifying, documenting, and addressing non-conformances and incidents.
- Investigate the root causes of non-conformances and implement corrective and preventive actions.
- Monitor the effectiveness of actions taken and review their outcomes.

6.3 Records Management
- Develop procedures to control and maintain records related to the EMS.

5. Next steps of the project:

The next step on this project is to link the identified goals with the next steps of the project schedule. This section is providing a list of the upcoming outputs from the project and the link to the identified environmental sustainability goals in section 3.

- **Output 2: Develop the implementation plans and procedure to implement and monitor progress of the EMS. (Strategic goal 1 - Due date 9 June 2023)**
    - Break down the strategic objectives from the sustainability strategy into key elements to inform the EMS.
    - Review the previous documentation of the existing EMS and identify the gaps.
    - Provide a report expanding on the outlined structure of the EMS Lite.

- **Output 3: Submit an outline 3-year plan to the UoR Sustainability committee to improve the University environmental performance that joins up the activity and way forward including recommendations for ISO 14001 implementation. (Strategic goal 5 - due date 15 June 2023)**

      o   Draft a linked plan that outlines options for energy performance optimisation, reducing carbon footprint and improved sustainability performance. The following table presents a high-level plan that will be further developed in the next phases of the project.

Year 1	Implement the procedure developed for the EMS light at organisational level
Year 2	Undertake several energy saving and carbon reduction projects to maximise the People and Planet score of the UoR
Year 3	Further develop the EMS to be fully ISO 14001 accredited.

      o   Present the plan and refine it with input from UoR team.

- **Output 4: Provide an update for the Carbon Management plan for current carbon footprint. (Strategic goal 2 - Due date 23 June 2023)**
    - o Undertake interviews with Estates team and UoR Stakeholders to collect data about the current sustainability practises, processes, and systems.
    - o Analyse the collected carbon management data for scope 1,2 for UoR.
    - o Set out areas to be reviewed and projects to reduce energy use, carbon emissions and operational cost in discussion with UoR.

- **Output 5: Present options to UoR team and finalise and submit a report with clean/green energy plans. (Strategic goals 3&4 - due date 31 June 2023)**
    - o Plan and undertake two site visits to collect data about building fabric and systems including lighting, HVAC, BMS, insulation, windows glazing ... Etc.
    - o Draft an option appraisal report for clean energy initiatives for the university including Solar PV, Carbon Offsetting, and renewables options.