



Environmental Sustainability update

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| Outcome requested: | Council is asked to consider the Environmental Sustainability update and to feedback any comments from discussion. |
| Executive Summary: | This paper provides Council with <ul style="list-style-type: none"> • an annual update of summary of progress over the past year against the Environmental Sustainability Action Plan 2020-23 • overview of sector sustainability rankings • insight into the next steps which will be considered in the development of a 5 year sustainability, and which will include development of science-based carbon reduction targets and interim milestones |
| QMUL Strategy: strategic aim reference and sub-strategies [e.g., SA1.1] | |
| Internal/External regulatory/statutory reference points: | <ul style="list-style-type: none"> • Queen Mary's Environmental Policy • Queen Mary's Environmental Sustainability Action Plan (2020-23) • Queen Mary's accredited ISO14001:2015 environmental management system |
| Strategic Risks: | <ul style="list-style-type: none"> • Regulatory compliance • Reputation |
| Equality Impact Assessment: | An equality impact assessment will be completed as part of the process whilst developing the new sustainability strategy and action plan to ensure that potential impacts are considered and Inclusion and sustainability are inextricably linked, and social justice would be an important consideration for the strategy. |
| Subject to prior and onward consideration by: | |
| Confidential paper under FOIA/DPA | Non-restricted |
| Timing: | |
| Author: | Kat Thorne, Interim Director of Sustainability Sara Tome, Head of Sustainability |
| Date: | 29 June 2023 |
| Senior Management/External Sponsor | Philippa Lloyd, Vice Principal (Policy and Strategy Partnerships) Sharon Ellis, Chief Operations Officer Ian McManus, Director of Estates and Facilities and Capital Development |

Environmental Sustainability update - June 2023

1. Introduction

Context

In an era of climate change, a time of rising global temperatures and biodiversity loss, intersected and intensified by social and economic inequalities, it is recognised that universities have an important contribution to make, not only in researching and teaching about the social, political and scientific aspects of climate change, but in addressing these fundamental and underlying challenges at a whole institution level.

This paper provides Council with an update on progress against Queen Mary's Environmental Sustainability Action Plan (2020-23) and, following on from the presentation at the Council Away Day in May, highlights areas for consideration in the development of the next iteration of the sustainability strategy, targets, and action plans.

Progress is to be noted against the 2020-23 action plan and feedback is welcomed from Council prior to commencing the development of the sustainability strategy - for instance, any thoughts on levels of ambition, ways in which Council would like to engage with the strategy development, and any key considerations in the members of Council would like to see.

Resourcing

Over the past year the sustainability team has been significantly reduced in capacity to 1FTE due to vacancies but as of May 2023 some strategic hires which include a new Head of Sustainability, additional capacity of an Interim Director for Sustainability, and an Interim Sustainability and Environmental Manager mean that the team is nearly back to planned capacity with 3.6FTE. The university fund a Sustainability Engagement Officer role (1FTE) in the Student Union who works closely with the sustainability team.

The sustainability team is part of the Estates and Facilities Directorate led by Ian McManus and alongside senior sponsor Philippa Lloyd, Vice-Principal (Policy and Strategic Partnerships) and Fraser Burt, Executive Officer they have ensured continued support in delivering the sustainability action plan over the past year. The sustainability team collaborates closely with colleagues across the university to deliver on developing and actioning the sustainability strategy. The baseline review underway will identify clearer roles and responsibilities and gaps in resource requirements to support delivery of sustainability activities across the university.

2. Environmental Sustainability Action Plan (2020-23) progress update

The [Environmental Sustainability Action Plan \(2020-23\)](#) sets out the university's response to global environmental risks across different areas of activity with specified actions and targets. The new Director of Sustainability and Head of Sustainability have reviewed progress to date and highlights of findings are presented as (A) targets/ actions that are 'on track' to be achieved, (B) targets/actions 'not on track' to be achieved and (C) other targets/ actions where it has not been possible to yet fully review progress.

SET reviewed options for further actions and investment related to energy reduction measures in September 2022 that are being taken forward.

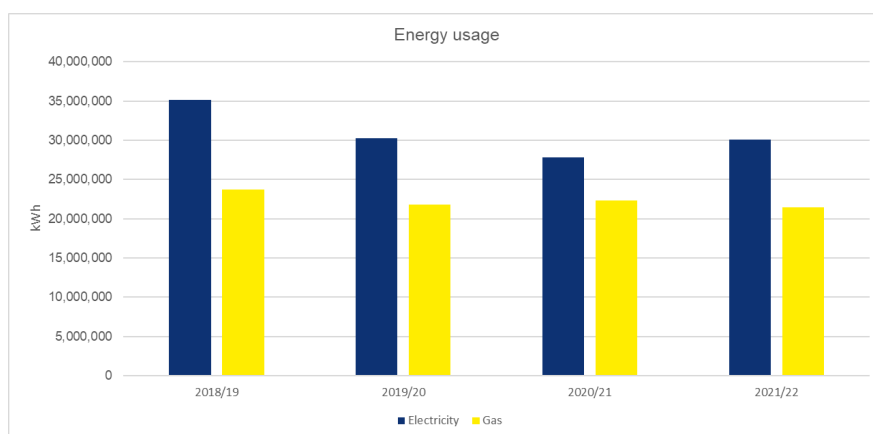
A. Targets/ actions on track to achieve

- **Reduce carbon footprint by 30% over six years against a 2018/19 baseline:**
 - There has been a 27% reduction in scope 1 and 2 carbon footprint (related to energy/fuel use in our directly managed buildings and campus vehicles) by 2021/22 against the 2018/19 baseline as shown in Table 1.

Table 1. Carbon footprint year on year by source since 2018/19 baseline (in tonnes CO₂e)

| | tCO ₂ e 2018/19 | tCO ₂ e 2019/20 | tCO ₂ e 2020/21 | tCO ₂ e 2021/22 | % reduction against 2018/19 baseline |
|--------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|---|
| Scope 1: Natural gas | 4359 | 4010 | 4121 | 3934 | -10% |
| Scope 1: Heating oil | 28 | 28 | 32 | 22 | -20% |
| Scope 1: Campus vehicles | 6 | 5 | 9 | 13 | +106% |
| Scope 2: Electricity | 9883 | 7744 | 6495 | 6385 | -35% |
| Total Scope 1 & 2 | 14276 | 11787 | 10657 | 10353 | -27% |
| Scope 3: Business travel | 6229 | 3008 | 128 | 901 | -86% |
| Total Scope 1, 2 and 3 | 20505 | 14795 | 10785 | 11254 | -45% |

Figure 1. Graph showing electricity and gas consumption (kWh) since 2018/19



- The carbon reduction is as a result of reductions in energy consumption achieved through Building Management System (BMS) improvements, submetering and targeted energy reduction projects such as LED installations that have resulted in visible energy savings despite increased staff and student numbers. In addition, decarbonisation of the electricity grid has supported achieving our carbon targets.
- In 2022/23 there has been ongoing investment in energy and carbon reduction initiatives which have resulted in further energy and carbon savings and importantly reduced the impact of significantly increased energy costs.
- The scope 3 carbon emissions associated with business travel also decreased but 2021/22 was still affected by travel restrictions due to the pandemic and continues to rise in 2022/23 but not to the same level as in 2018/19.
- Scope of data: It is important to note that the current scope of carbon footprint data is not in line with standard practice, and this is being reviewed. We are collating relevant scope 3 indirect emissions to have a more representative picture of our carbon impact and to be in line with the recently developed sector [Standardised Carbon Emissions Framework](#) guidance.
 - Sources such as emissions from refrigerants, fuel used in generators, purchased goods and services, waste, water and fuels and energy scope 3 emissions will be included going forward and will be back calculated where possible. Scope 3 carbon emissions from purchased goods and services are expected to be in the region of up to 100,000 tonnes per year.

- Next steps to include
 - Establishing a more accurate and comprehensive baseline and then develop a long-term carbon reduction target with milestones in line with science-based targets that includes all relevant emissions sources.
 - Set up an Energy and Carbon Reduction projects working group to support governance of identification, funding and delivery of future energy and carbon reduction projects.
- **Development of heat decarbonisation plan:** In 2022 the university used grant funding to produce a strategic decarbonisation framework (Heat Decarbonisation Plan). The plan will need to be translated into executable and monitored projects of work and integrated into the Estates Masterplan. One of the six facets of the Estates Masterplan and supporting investment programme will be environmental performance.
- **Implement and maintain an ISO14001 certified environmental management system:** the university achieved ISO 14001:2015 certification in June 2022. The annual surveillance audit conducted by an external auditor in early June 2023 confirmed that our Environmental Management System is still suitable and effective.
 - The [Environmental Policy](#) is updated annually and the new policy was approved in May 2023 and is available on the website. It outlines overarching commitments and objectives and includes four SMART targets with KPIs related to estates for 2023/24:
 - Waste: We aim to reduce our total waste by 10%
 - Energy: We aim to reduce our energy consumption by 8%.
 - Greenhouse gases from Energy: We aim to reduce our carbon dioxide equivalent emissions from energy by 5%
 - Water: We aim to reduce our total water consumption by 4%.
- **Reduce waste:**
 - Food waste: the Catering Team has continued to implement initiatives that reduce food waste. We use the app Too-Good-to-go to minimise the number of unsold meals, offer discounts on hot food after 2pm at Dept W, and donate leftover food from events to the Whitechapel Mission charity where possible. We also buy imperfect vegetables and fruit from Angry Monk, therefore helping to prevent food waste upstream in the supply chain.
 - End of term clear outs: the Student Union and the University collaborate twice a year to ensure that waste at end of term from student residences is reduced through donation of items for reuse - either for resale to students (e.g. kitchen goods, stationery) or donated to appropriate charities (e.g. unopened food)
 - Zero waste store: the university has opened a Zero Waste store that is open to the public to help reduce packaging waste.

B. Progress has been made but targets/ actions not on track to achieve

• Increase waste recycling rate to 50%:

- Waste recycling rates have increased from 31% to 42% but are still lower than expected compared to rates of 60-70% that other universities achieve. Improving recycling rates also reduces the cost of waste disposal.

Table 2. Annual waste data showing how much general waste in tonnes is disposed of from directly managed estate to Energy from Waste (EfW) or Recycled and the annual % recycling rate. Data excludes construction, clinical and chemical waste streams.

| | 2018/19 | | 2019/20 | | 2020/21 | | 2021/22 | |
|-----------------------|---------|----------|---------|----------|---------|----------|---------|----------|
| Waste disposal method | EfW | Recycled | EfW | Recycled | EfW | Recycled | EfW | Recycled |
| Total waste in tonnes | 582.2 | 259.8 | 428.7 | 202.5 | 303.4 | 129.4 | 403.7 | 294.6 |
| % Recycling rate | | 31% | | 32% | | 30% | | 42% |

○ Next steps:

- Development of waste as a resource action plan to include a strategic approach across campuses to standardise bin designs, labelling and waste streams being collected which will require investment but can also bring cost savings by reducing the collection costs. Review of waste data to ensure good practice- that all waste streams are covered and buildings outside of direct management where possible. Targeted approach to waste reduction with focus areas likely to be labs, residences, delivery packaging and catering. Introduction and expansion of waste recycling streams starting with interventions that are cost neutral or better– e.g., cardboard and food waste.

• Travel

- New cycle storage facilities have been installed and facilities improved to encourage active travel where buildings are being refurbished.
- A sustainable travel policy has not yet been developed and improved monitoring and reporting of business travel has not yet been achieved.
- Next steps: Development of sustainable travel policy and action plan with the aim of reducing non-essential business travel, improving facilities and infrastructure to support active travel, staff and students, improve air quality around the campus, review car parking provision to reduce vehicle movements to site and provide EV charging, move to low carbon vehicle fleet.

• Water reduction

- Having data year to year that is accurately comparable has not been possible for a number of reasons outside of the university's control, but the data does show a decrease, but this is likely due to the impact of lower occupancy rates during covid. A move to a new water supplier has and installation of automatic water meters will improve data availability and aide water management.
- Next steps: complete installation of water metering, develop water management plan which includes targets and invest in water efficiency to reduce water consumption- this has the potential to also reduce hot water consumption and associated carbon and energy.
- There have been actions taken to support biodiversity and engagement on campus, but there is currently no biodiversity action plan. This should be develop aligned with the Mile End Campus Supplementary Planning Document – there is an opportunity to develop with relevant academic staff and grounds staff and to develop a plan with students that incorporates health and wellbeing.

C. Progress update on other targets/ actions

The action plan and environmental policy also covers other areas such as Ethical Investment, Sustainable procurement, Education and Research activities and staff and student engagement. Progress in these areas has not been fully reviewed yet as there has not been time for the new team to meet with all staff concerned to accurately reflect progress that colleagues have made in these areas. Highlights include:

- **Student engagement**- the Sustainability Engagement Officer in the Student Union has worked hard to provide a comprehensive programme for students across the year giving them the opportunity to engage with sustainability on campus and in the local community and a survey is currently being undertaken to get feedback from students to feed into next year's activities. Opportunities for students to fully engage in the development and delivery of the strategy will be important.
- **Staff engagement**- there is a staff environmental champions group that meet once a month- there is no centrally supported champions group, and this support will be reviewed. Opportunities for staff to fully engage in the development and delivery of the strategy will be important.
- **Education**- a group led by Stephanie Fuller, QM Academy has been set up to bring together a network to support embedding sustainability into the curriculum. There are examples over the past year where academics have worked to embed opportunities for students to engage with real world sustainability challenges on campus or in the community as part of a student's educational experience. The sustainability team and estates colleagues have supported academics with identifying opportunities on campus and working with students. Collating these examples and being able to share them is just one action that the network will facilitate.
- **Research**- colleagues across Queen Mary have continued to identify opportunities and deliver sustainability related research. The Environmental Sustainability Committee offers an opportunity for academics to present their projects but there is no central coordinated approach to harness the power of collaboration and partnership in this area. This will be looked at as part of wider plans supporting the Research Highways of which 'Sustainability, environment and energy' is one of five Highways.
- **Procurement**- the Sustainable Procurement policy is in place and procurement colleagues minimise the environmental impact and maximise the social value of tenders which are under their control. The sustainability team will be working closely with procurement, and it will form an important part of the strategy as the impact of procuring goods and services is our largest contributor to our carbon footprint.
- **Civic engagement**- sustainability forms part of the Civic University agreement and examples include:
 - Collaborating with local partners such as charities to provide volunteering or educational opportunities for staff and students e.g., Trees for Cities, Canal River Trust.
 - Working with Tower Hamlets – the university is part of the Climate partnership and subgroups.
 - The university has adopted part of the canal at Mile end and organises regular canal clean ups
 - At the recent Festival of Communities, the staff environmental champions group ran an engagement activity on waste.

3. Conclusion and next steps

Benchmarking sustainability impact and performance against the sector

The university has made noteworthy progress on its sustainability objectives over the past three years and has now got a good foundation in place. Governance has been established for sustainability with a supportive, active senior sponsor, regular meetings of the Environmental Sustainability committee and the system underpinned by an ISO14001 accredited environmental management system.

A baseline review will include benchmarking against other institutions and will be completed as part of the strategy development but based on prior experience of the sector and using the Sustainability Leadership

Scorecard (a tool developed for use by the HE and FE sector based around four priority areas: Leadership & Governance, Partnerships & Engagement, Learning, Teaching & Research, and Estates & Operations) there are some strengths for Queen Mary compared to the sector as well as areas where the university has the opportunity to significantly improve practice in line with the sector.

Sector rankings

There are three main annual sustainability rankings for the sector currently: People and Planet University ranking (QMUL Score 56.9%, position 36 out of 150 UK universities), THE Impact Ranking (QMUL does not participate), QS Sustainability Ranking (Environmental rank– 382 out of 700). More detail is provided in the appendix about each of the rankings. The People and Planet University ranking has always been viewed as an important indicator for students who care about sustainability issues and QMUL has continued to improve its performance year on year having been ranked in 83rd position in 2019.

Next steps for development sustainability strategy

The following next steps are to be discussed by the sustainability team and an approach agreed with SET.

- Development of a five year sustainability and climate strategy with supporting objectives, targets and action plans, and clear commitment to communications and transparent monitoring and reporting. To include as part of process:
 - Cocreation with staff and students - the approach suggested will be one which allows a group of staff and students to be engaged and part of a team involved in the development of the strategy. Given the amount of sustainability activity that is not centrally coordinated this will be important to consider to ensure buy in and to capture activities across the university and to set the university up for delivering on the action plans.
 - Governance
 - reviewing risk register- is climate change articulated as risk for the organisation in the risk register – not just as an operational estates risk.
 - Review of sustainability governance to include review of Environmental Sustainability committee – establish a model that supports evolving strategy covering education, research, operations and partnerships and to consider what working groups or task and finish groups are required to help oversee the strategy development and implementation
 - Strategy 2030- does not currently have sustainability as one of the priorities, this is being considered as part of the Strategy 2030 review
 - Data- establishing improved and comprehensive data collection and KPIs and targets that are in line with good practice
 - Decarbonisation of operations- not just estates but establishing an approach to an integrated decarbonisation plan – estates, IT, supply chain, finance, business travel
 - Business cases prepared for future investments required
 - Consideration of new KPI post review and business case

Appendix

A. University Sustainability Rankings

There are three main rankings currently that are specifically related to sustainability in universities:

1. [People and Planet University Ranking](#)
 - Queen Mary scored 56.9% (2:1) in the 2022 ranking and is position 36 in the UK and 7th in the Russell Group. The top ranked university scores 82.3%.
 - A well-established annual ranking of UK universities carried out by student-led campaign group People and Planet. Student volunteers audit our activities through the website and via our HESA Estates Management Record data return. Universities do not have a choice on whether they are included.
 - The ranking covers social and environmental issues related to policy, governance, strategy, ethical investment, ethical careers, education, staff and student engagement, sustainability team resourcing, as well as operational carbon, energy and water and waste. It does not cover research activities.

2. [Times Higher Education \(THE\) Impact Rankings](#)
 - Universities can choose to enter the rankings by submitting data annually. Queen Mary entered data into the first year of the rankings 2019 and was ranked in position 'range of 100-200' out of 450 universities. 1591 universities took part in 2023.
 - Universities are assessed against the United Nations' Sustainable Development Goals (SDGs) using a large set of indicators across the 17 SDGs as they relate to research, stewardship, outreach, and teaching activities.
 - A decision was made after piloting participation in the first year for Queen Mary to not participate and submit data for these rankings. A strategic decision would need to be made and sufficient resourcing to support the data submission alongside the work to coordinate the alignment of the university activities with the SDGs to improve performance.

3. [QS Sustainability Rankings](#)
 - Produced for the first time in Oct 2022 and without most universities being aware that they were being ranked so many like Queen Mary were not able to submit the extra supporting data and evidence to improve their scoring.
 - Queen Mary had an overall rank of 221-240 and an environmental rank of 382 and Social Impact Rank of 156 out of 700 in the 2023 rankings. The data for the 2024 rankings is currently being prepared for submission.
 - The QS Sustainability Rankings are weighted at 5% of the overall QS World University Ranking.
 - Indicators are split into environmental measures (including sustainable institutions, sustainable education, and sustainable research) and social impact measures (including equality, knowledge exchange, educational impact, employability and opportunities). The methodology is not yet very comprehensive but is expected to evolve year on year.