



# Environmental Sustainability Annual Report

## 2020/21

## Approval Page

| Version | Governance Group              | Date Approved |
|---------|-------------------------------|---------------|
| 1.0     | Sustainability Committee (SC) | 1 April 2022  |
| 1.0     | Senior Executive Team (SET)   | 26 April 2022 |
| 1.0     | Council                       | 19 May 2022   |

## Overview

Our 2020/21 environmental sustainability report summarises our performance against our environmental objectives and commitments, and shows our progress towards embedding good environmental practices across all areas of our operations.

This report details our recent performance and provides insight into proposed initiatives that would be implemented during the 2021/22 academic year to support the delivery of our Environmental Sustainability Action Plan 2020-23 (ESAP 2020-23).

The highlights of our performance during the year under review are:

- **Environmental Sustainability Performance:** The approval of our environmental sustainability action plan (ESAP 2020-23) and Environmental Sustainability Policy 2020 by our Senior Executive Team (SET) are part of our immediate responses to the current environmental challenges. Our Environmental Sustainability Policy sets our environmental vision and the ESAP 2020-23 is the framework against which we are delivering our environmental commitments and objectives. We moved up 47 places from being ranked 83 (Second Class Lower) in 2019 to 36 (Second Class Upper) in the 2021 People & Planet's League Sustainability League Table. The People & Planet League Table is the only comprehensive and independent assessment of the environmental and ethical performance of UK universities and colleges.
- **Environmental Management System (ISO 14001:2015 EMS):** We are currently using the EcoCampus phased approach to implementing ISO 14001:2015 environmental management system (EMS) and to monitor and report our environmental performance. We are pleased to report that we were awarded EcoCampus Gold award during the year under review and we working towards attaining ISO 14001:2015 EMS and EcoCampus Platinum certification by July 2022.
- **Environmental Sustainability Leadership and Research:** We were ranked 5th in the UK for quality of research outputs (REF 2014) and the impact of our pioneering research, innovation and partnerships is helping to address the world's greatest challenges and to transform the lives of people across the globe. We have also continued to use our Graduate Attributes programme to empower our students to become active citizens and leaders who will contribute to addressing the current and emerging environmental challenges.
- **Civic University and UN Sustainable Development Goals:** We are currently actively involved and collaborating with local, sectoral and wider partners to deliver evidence-based good environmental outcomes, optimise resources as well as share good

practices. We are also using the EAUC's sustainability leadership scorecard (SLS) to monitor our performance towards embedding the principles of the UN SDGs into all areas of our operations. During the year under review, we attained Gold SLS status for most areas, and we will continue to work towards maintaining this performance and improving in areas where we attained Silver.

- **Students' Union:** The Students' Union has been classified as excellent for three years running in the Green Impact audit and during the year under review it has also now established a Sustainability Board.
- **Carbon Reduction and Responding to Climate Change:** The national and international restrictions associated with the COVID-19 pandemic significantly skewed our current performance. Our 2020/21 business travel carbon footprint reduced by 96% compared to our 2018/19 baseline. Our carbon footprint (CO<sub>2</sub>e) reduced by 47.4% from 26,857 tCO<sub>2</sub>e during the 2018/19 academic year to 14,138 tCO<sub>2</sub>e at the end of the year under review
- **Building Energy Use:** We are pleased to report that projects implemented from the £2.46 million energy efficiency loan from Salix (at 0% interest rate) are at advanced completion and commissioning stages. We also successfully attracted a £124,399.20 grant to develop our heat decarbonisation plan (HDP). This HDP will be fundamental to developing our net zero strategy.
- **Water Use:** We recorded a 39.8% reduction (from 345,588 m<sup>3</sup> to 208,032 m<sup>3</sup>) in water used across our residential and non-residential buildings compared to our 2018/19 based. This reduction could be attributed to the partial operation of our campuses, again because of the pandemic.
- **Waste Management and Resource Efficiency:** Most of the data used to generate our waste management and recycling performances were based on standard industry benchmark. The total waste reported to have been generated from our three main campuses reduced by 52%.
- **Construction and Refurbishment:** During the year under review, we secured an investment of £152,692 to install photovoltaic panels and improve the roof of the Queens' building (one of the buildings that was refurbished during the 2020/21 academic year). We are pleased to report the fit-out of our Department W building achieved the Ska rating of Gold.
- **Biodiversity:** During the year under review, our Grounds and Gardens Team delivered a suite of gardening workshops with staff and students and initiated the creation of an orchard across our Mile End Campus. As part of our response to the UN Decade on

Ecosystem Restoration, we planted six Black Poplar trees. Black Poplars are among Britain's rarest tree species.

- **Sustainable Procurement:** We are pleased to report that 98% of our contractors and suppliers (total spend of £59.29 million) currently have an Environmental Management System (EMS), and that 80.7% of these 49 contractors and suppliers had certified ISO 14001:2015 EMS.
- **Embedding Environmental Sustainability:** We have continued to promote the benefits of embedding education for sustainable development (ESD) into all our academic offering. We are pleased to report that 62% of the 138 undergraduate programmes we offer have some elements of ESD and the principles of sustainable development. Our online module on sustainable development had 454 updates during the year under review and 109 professional services and academic staff attended the Institute of Environmental Management and Assessment (IEMA) environmental sustainability skills for the workforce. Furthermore, our Environmental Sustainability Champion group that we launched during the 2020/21 academic have continued to be actively involved in promoting the benefits of good environmental practices.

## Environmental Sustainability Performance

Our Environmental Sustainability Action Plan (ESAP) 2020-23 and Environmental Sustainability Policy was developed and approved by our Senior Executive Team (SET) as part of our immediate response to these global environmental risks and commitment to embed good environmental practices across all areas of our operation. Our Environmental Sustainability Policy set out our environmental vision and our ESAP 2020-23 is the framework on which we are delivering our environmental objectives and our compliance responsibilities.

Specifically, our six-year 30% carbon reduction target against our 2018/19 baseline is one of our immediate responses to the global risks associated with climate change.

To support the delivery of our ESAP 2020-23 and our Environmental Sustainability Policy 2020, we recruited a Sustainability and Energy Manager and Sustainability and Environment Manager. These two staff are, among other responsibilities, actively involved in our journey to attain our ISO 14001:2015 by July 2022 and the delivery our six-year 30% carbon reduction target.

We are pleased that the coordinated initiatives that we implemented over the last two years to support the delivery of our commitment to respond to current and emerging environmental

challenges and integrate the principles of sustainable development into all aspects of our operations contributed to our current position in the People & Planet University League Table.

We moved up 47 places from ranked 83 (Second Class Lower) in 2019 to 36 (Second Class Upper) in the 2021 Sustainability League Table (no assessment was conducted in 2020).

The People & Planet League Table is the only comprehensive and independent assessment of the environmental and ethical performances of UK universities and colleges.

## Environmental Sustainability Leadership and Research

We were ranked 5<sup>th</sup> in the UK for quality of research outputs (REF 2014) and the impact of our pioneering research, innovation and partnerships is helping to address the world's greatest challenges and to transform the lives of people across the globe.

We have numerous and ever increasing research outputs in the area of environment and sustainability across our three faculties. This expertise is recognised in the selection of "Sustainability, Energy, Environment" as one of our current Research Highways, which represent broad interdisciplinary themes that pulls together and optimises our extensive research expertise.

We have many outstanding examples of thought leadership and research impact that we could choose to highlight our leadership in the area of environment and sustainability research, but we have selected three different areas of research to provide a snapshot of the many ways that research conducted across our University is contributing towards a more sustainable future within the UK and the world:

- Research by the **River Communities Group**, headed by Professor Iwan Jones, has led to a new land management scheme in Wales designed to reduce pollution of waterways from agriculture. Known as Glastir, the scheme has informed the distribution of £125 million funding from the Welsh government to Welsh farmers to support environmentally friendly farming practices. The scheme has benefitted both the biodiversity and the wider economy of Wales and has influenced the development of the Agri-Environment Climate and Environment Stewardship schemes in Scotland and England.
- Queen Mary Professors Jonathan Grigg and Christopher Griffiths are prominent advocates of the **adverse effects of pollution on paediatric health**. Their work has had widespread influence on public health policy in the UK, including in the introduction of London's Ultra-Low Emission Zone, the adoption of diesel discouragement policies by the UK government, and the introduction of Public Health England's 2019 Clean Air

Strategy. More recently, Grigg has shown that exposure to air pollution increases vulnerability to infection by the COVID-19 virus. Based on his work, the All Party Parliamentary Group for Air Pollution produced an Air Quality Strategy to reduce COVID-19 infection, protect the NHS from future infection peaks and foster greater resilience against future pandemics.

- During the academic year under review, the School of Law launched a new **Centre for Climate Crime and Justice** to produce cutting-edge research on the most pressing environmental issues of our time, emphasising legal but also sociological and civil society approaches to the criminalisation of environmental harms underpinning the climate emergency. Through collaborative relationships with civil society and activists on the ground, research at the new centre will expose ecocidal practices and harmful industrial activities and propose new solutions for justice and environmental sustainability.

We are currently using our Graduate Attributes programme to effectively embed sustainability into our educational offerings. Our Graduate Attributes focus on qualities and competencies that prepare graduates to succeed in an ever-changing global job market and become active global citizens. In addition, this programme is underpinned by our commitment to enhance the knowledge, skills and behaviours that our students acquire and develop during their period of study with us. These attributes are closely linked to but are not limited to core disciplinary or programme of study.

The Graduate Attributes will embed Queen Mary values: Inclusive, Proud, Ambitious, Collegial and Ethical, as well as elements linked to citizenship, sustainability, social justice and professionalism. Sustainability is one of the key themes for this area of work and through the Graduate Attributes work-stream. Therefore, all our departments, schools and faculties will be supported and encouraged to embed attributes related to sustainability and the Sustainable Development Goals into all our academic programmes.

We are optimistic that offering our students the opportunities to be involved in this programme as well as explore opportunities to engage and contribute to their communities, our graduates would be well equipped to become responsible global citizens that could tackle global and local challenges by applying holistic and sustainable strategies. Thereby providing the platform for our graduates to become future leaders that contributes to addressing current and emerging environmental challenges as well as optimise environmental opportunities.

## **Environmental Management System: ISO 14001:2015 EMS**

One of our current environmental commitments is to attain ISO 14001:2015 Environmental Management System (EMS) certification by July 2022. We are using the EcoCampus phased EMS approach to attain this objective.

We are pleased to report that we were awarded EcoCampus EMS Gold Certification Certificate in July 2021. The Gold EcoCampus EMS award is one-step from ISO 14001:2015 EMS certification. This award also aligns with our commitment to continue to improve our environmental performance, comply with all relevant regulations and embed good environmental practices across all areas of our operation.

## **Civic University and United Nations SDGs**

We have made significant progress towards developing our Civic University Agreement. During this process, we have listened to local residents, third sector organisations and businesses for the purpose of engaging with these stakeholders to understand the most effective way in which we can play a positive role across East London now and in the future. Over 300 people who live, work or study in across East London participated in our consultation, co-analysis and prioritisation workshops, which is the basis on which our Civic University Agreement is developed. This Agreement will be launched during the 2021/22 academic year.

Our Community Connections Grant scheme that was launched by our Centre for Public Engagement has continued to be very popular. The scheme support staff and student-led initiatives as well as opportunities for our staff and students to connect and engage with our local communities. During the academic year under review 20 projects were funded including a project focused on discussing sustainable food choices and systems with residents of the Hackney area.

We have continued to actively integrate corporate social responsibility (CSR) and the fundamental of the UN SDGs into relevant aspects of our operations.

We have continued to maintain our memberships of the Environmental Association for Universities and Colleges (EAUC), the Institute of Environmental Management and Assessment (IEMA) and EcoCampus. We have continued to use these memberships to engage and collaborate with like-minded organisations for the purpose of promoting the benefits of good

environmental practices, responding to current environmental risks as well as optimising current and emerging environmental opportunities.

We are also an active participant in the Russell Group Sustainability Network, Universities Climate Network, Chair of Party-26 (COP26) University Group and London Borough of Tower Hamlets Carbon and Climate Taskforce. Our participation in these Groups are for the purpose of sharing good practices and engaging with partner organisation.

As part of our participation in the London Borough of Tower Hamlets Carbon and Climate Taskforce, we have provided academic and professional carbon accounting support (from the School of Business and Management to this taskforce and we have actively participated in the Borough’s Net Zero journey.

Some of the highlights of our collaboration during the 2020/21 academic year are that our Vice Chair Policy and Strategic Partnerships shared our approach to net zero and possible collaboration with strategic stakeholders across the London Borough of Tower Hamlets. In addition, our Head of Sustainability gave a presentation on our approach on environmental sustainability training and development for the purpose of empowering staff to make a difference at IEMA inaugural lunch and learn session.

We have continued to use the EAUC’s Sustainability Leadership Scorecard (SLS) to monitor and report our performance in integrating the fundamentals of the UN SDGs into all areas of our operations.

We are pleased to report that our overall SLS status improved from Silver in 2019/20 to Gold at the end of the 2020/21 academic year. As seen in Table 1, we are aware that we require improvement in the areas of Travel and Transport, Business and Industry Interface and Learning and Teaching.

**Table 1: Queen Mary, 2020/21 Sustainable Leadership Score (Self-Assessment)**

| Category                  | Status | Priority Areas                       | Score (%) |         |
|---------------------------|--------|--------------------------------------|-----------|---------|
|                           |        |                                      | 2019/20   | 2020/21 |
| Leadership and Governance | Gold   | Staff Engagement and Human Resources | 78.1%     | 82.5%   |
|                           |        | Leadership                           | 78.1%     | 87.5%   |
|                           |        | Health and Wellbeing                 | 68.7%     | 68.7%   |
|                           |        | Risk                                 | 59.4%     | 78.1%   |

| Category                      | Status | Priority Areas                      | Score (%) |         |
|-------------------------------|--------|-------------------------------------|-----------|---------|
|                               |        |                                     | 2019/20   | 2020/21 |
| Estates and Operations        | Gold   | Resource Efficiency and Waste       | 71.9%     | 78.1%   |
|                               |        | Biodiversity                        | 75.0%     | 90.6%   |
|                               |        | Construction and Innovation         | 62.5%     | 81.2%   |
|                               |        | Water                               | 62.5%     | 75.0%   |
|                               |        | Travel and Transport                | 59.4%     | 59.4%   |
|                               |        | Climate Change Adaptation           | 71.9%     | 75.0%   |
|                               |        | Energy Management                   | 93.7%     | 93.7%   |
| Partnership and Engagement    | Gold   | Community and Public Engagement     | 46.9%     | 84.4%   |
|                               |        | Business and Industry Interface     | 68.7%     | 58.4%   |
|                               |        | Procurement and Supplier Engagement | 75.0%     | 75.0%   |
|                               |        | Food and Drink (Catering)           | 37.5%     | 75.0%   |
| Learning, Teaching & Research | Silver | Student Engagement                  | 81.2%     | 81.2%   |
|                               |        | Research                            | 62.5%     | 62.5%   |
|                               |        | Learning and Teaching               | 56.2%     | 56.2%   |

## Students' Union

Queen Mary Students' Union offered a range of environmental sustainability opportunities for students during 2020/21 despite the disruptions caused by the COVID-19 pandemic. These initiatives contributed to the Students' Union maintaining excellent classification for three consecutive years in the Green Impact audit. The Green Impact is national students' accreditation sustainability assessment scheme.

During the 2020/21 academic year, the Students' Union launched its Sustainability Board. The Sustainability Board is an elected group of students, working to represent students on sustainability and environmental issues within the Students' Union and across the University. The committee is a subcommittee of Student Council, reporting back to Student Council. At quarterly meetings, the Board discusses sustainability issues and ideas, opportunities to lobby the University and approve policies that are within the remit of the Board.

During the year under review, The Students' Union Sustainability Board ran an appeal collecting 400 donations and raising £400 for Bow Foodbank and developed an Environmental Policy for the Students' Union as well as exploring issues such as sustainable menus, recycling, and

ethical investment. Student representatives worked with the University's finance department to draft a revised and improved ethical investment policy to be signed of in 2022.

We have also continued to support the Students' Union (SU) led ReUse campaign aimed at encouraging our students and staff to donate all unused materials at the end of each semester. 126 participated in the 2020/21 ReUse campaign donating 516 kg of materials. The volume of materials donated during the 2020/21 academic was 56% lower than our 2018/19 baseline. This implies that there is the need to actively promote this scheme.

## Carbon Reduction and Responding to Climate Change

The six-year 30% carbon reduction target we adopted against our 2018/19 carbon footprint is one of our immediate responses to the risks associated with climate change and our commitment to support the delivery of the UK's 2050 net-zero carbon commitment. Our carbon footprint (CO<sub>2</sub>e) is represented by the emissions associated with the energy and water used across our UK campuses, fuel used by our vehicles and business travel<sup>1</sup>.

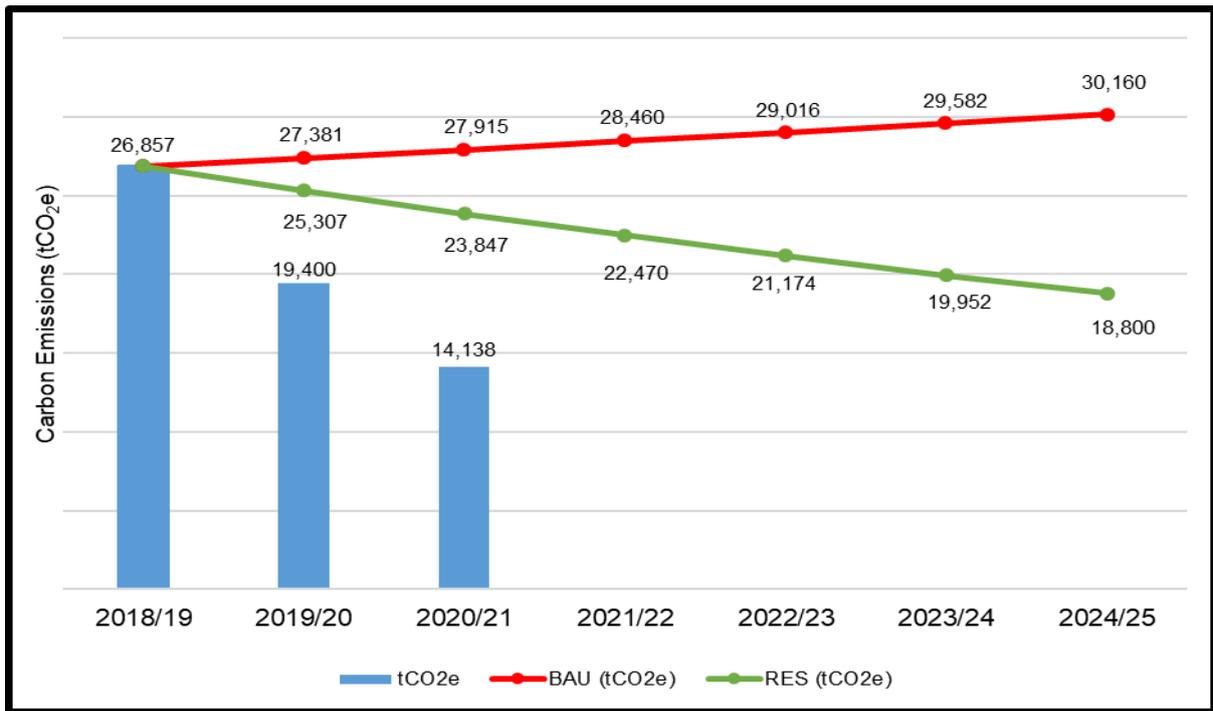
During the 2020/21 academic year, we emitted 14,138 tCO<sub>2</sub>e, which is 47.4% lower than our 2018/19 carbon footprint. To put our current carbon footprint into context, on average the carbon we emit per student reduced from 1.37 tCO<sub>2</sub>e in 2018/19 to 0.63 tCO<sub>2</sub>e (53.9% reduction).

Figure 1 shows our 2018/19, 2019/20 and 2020/21 carbon footprints compared to our business as usual (BAU) and modelled reduced emission scenario (RES) trajectory based on our six-year 30% carbon reduction target.

### Figure 1: Our Carbon Reduction Performance against BAU and Target Emissions

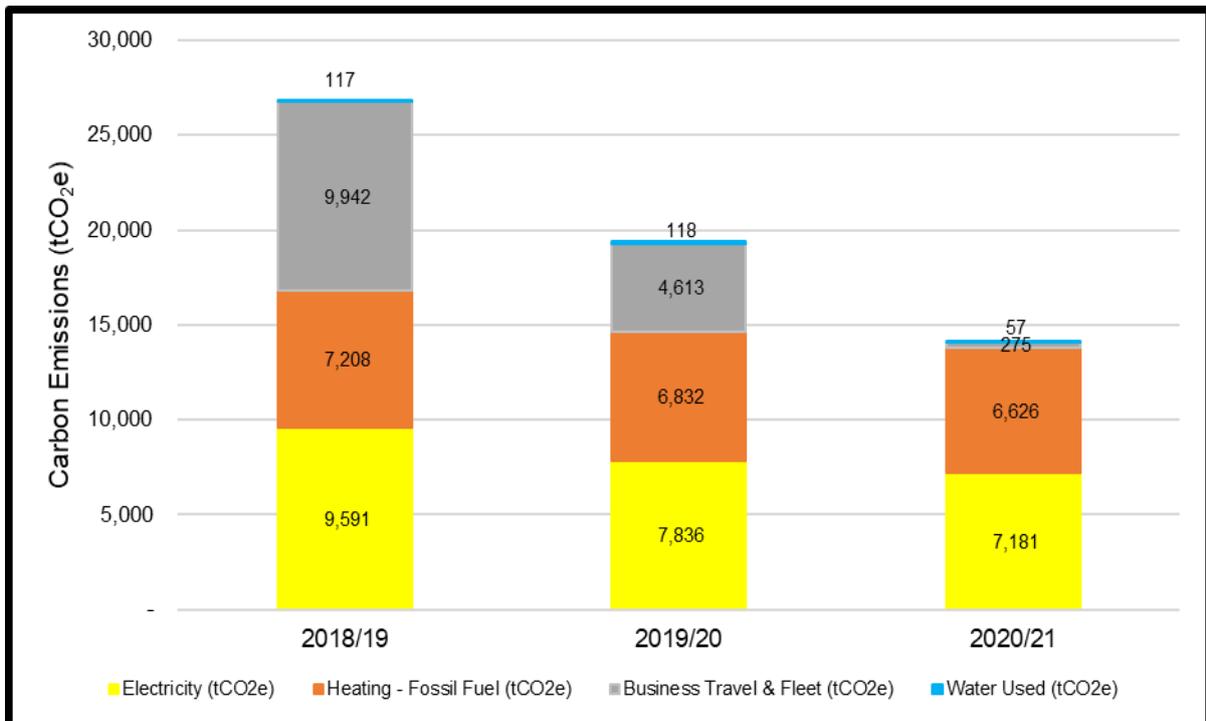
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<sup>1</sup> Distances our Staff and Researchers travel to carry out academic and operational responsibilities (excluding those via Oyster Cards)



This significant reduction in our carbon footprint (particularly our business travel) is attributed to the national and international restriction and lock-downs associated with COVID-19 pandemic from March 2020. Figure 2 show the breakdown of the trend of our carbon footprint.

**Figure 2: Trend in our Carbon Footprint**



Further comparison of our current carbon footprint and associated indicators against our 2018/19 baseline show that:

- Our student number increased by 14.1% from 19,595 to 22,363
- The water we used across our UK reduced by 38.6% from 338,772 m<sup>3</sup> to 208,032 m<sup>3</sup>
- Our business travel reduced by 96% from 31.9 Million km to 1.3 Million km
- The natural gas used for heating our UK campuses reduced by 8.2% from 35,427 MWh to 32,521 MWh
- The heating oil used at our Chislehurst Sports Ground reduced by 14.6% from 96,307 kWh to 82,251 kWh Litres
- The electricity used across our UK campuses reduced by 12.2% from 38,270 MWh to 33,592 MWh
- We achieved 53.9% carbon intensity reduction (Carbon / Student) from 1.35 to 0.63 tCO<sub>2</sub>e/Student

## Building Energy Performance

The Display Energy Certificates (DECs) and Energy Performance Certificates (EPCs) are the main parameters that we currently use to benchmark and monitor the performance of our buildings. The energy performances of our buildings are skewed by the closure or partial opening of our campuses due to the COVID-19 pandemic.

The average DECs and EPCs scores of buildings across our UK campuses reduced by 15.4% from 124.7 (2018/19) to 105.4 (2020/21). Figure 3 shows the breakdown of our DECs and EPCs (over the last three years).

### Figure 3: Queen Mary's DEC and EPC Profile

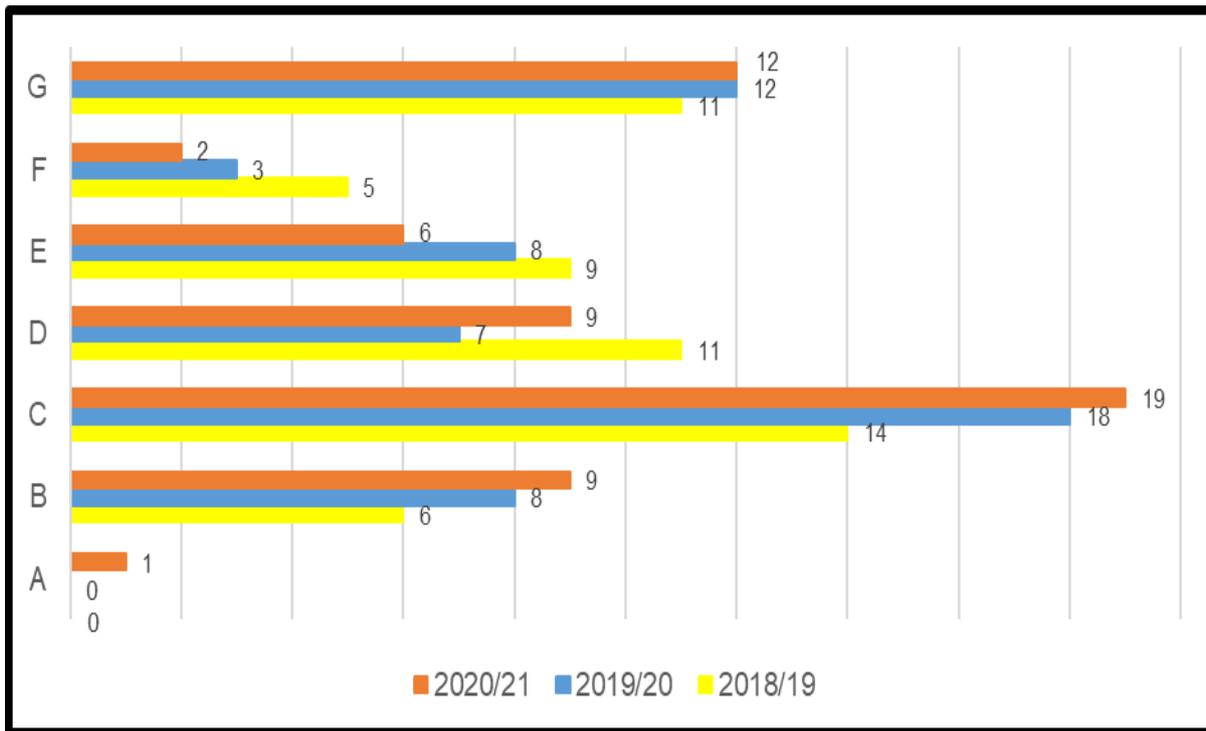


Table 2 contain the energy used across our UK campuses. An overview of the energy used across our estates between 2018/19 and 2020/21 show that we recorded:

- 18.6% reduction in electricity used across our Non-Residential Buildings compared to 10.2% reduction for our Residential Buildings
- 2.7% increase in gas used across our Non-Residential Buildings compared to 26.6% reduction for our Residential Buildings

**Table 2: Energy Used across our Residential and Non-Residential Buildings**

| Year    |                   | Residential | Non-Residential | Total      |
|---------|-------------------|-------------|-----------------|------------|
| 2018/19 | Electricity (kWh) | 8,103,874   | 30,165,952      | 38,269,826 |
|         | Gas (kWh)         | 10,206,644  | 25,219,919      | 35,426,563 |
|         | Heating Oil (kWh) | 0           | 96,307          | 96,307     |
| 2019/20 | Electricity (kWh) | 6,122,814   | 27,264,588      | 33,387,402 |
|         | Gas (kWh)         | 7,496,094   | 25,910,816      | 33,406,910 |
|         | Heating Oil (kWh) | 0           | 100,416         | 100,416    |
| 2020/21 | Electricity (kWh) | 7,279,728   | 26,312,438      | 33,592,166 |
|         | Gas (kWh)         | 7,952,138   | 24,568,433      | 32,520,571 |
|         | Heating Oil (kWh) | 0           | 82,251          | 82,251     |

At the end of the 2020/21, academic year we have almost completed the commissioning of the lighting upgrade, building management system (BMS) and boiler optimisation projects funded from the £2.46 Million energy efficiency loan we secured from Salix. We have also secured a £511,251 energy efficiency recycling funds to support the installation of 12.24 kWp photovoltaic panels on the roof of the Queens' Building, the insulation of the roof of the Queens' Building as well as upgrading the IT Server Room located at the Joseph Priestley Building.

As part of our commitment to attain our net zero aspiration, we attracted a £124,399.20 grant to develop our heat decarbonisation plan (HDP). This HDP is aligned with our commitment to optimise current opportunities as well as deliver evidence based carbon reduction and net zero initiatives.

## Water Used

The COVID-19 pandemic significantly stalled the implementation of any water efficiency initiatives. However, we recorded a 39.8% reduction in the water used across our UK campuses during the 2020/21 academic year compared to our 2018/19 levels. This achievement is attributed to the partial closure of our campuses as a result of the restrictions associated with the COVID-19 pandemic.

Table 3 show the comparative summaries of the water used across our Residential and Non-Residential Buildings.

**Table 3: Water Used across our UK Campuses**

| Year    | Residential (m <sup>3</sup> ) | Non-Residential (m <sup>3</sup> ) | Total (m <sup>3</sup> ) |
|---------|-------------------------------|-----------------------------------|-------------------------|
| 2018/19 | 213,996                       | 131,592                           | 345,588                 |
| 2019/20 | 141,484                       | 200,013                           | 341,497                 |
| 2020/21 | 126,720                       | 81,313                            | 208,032                 |

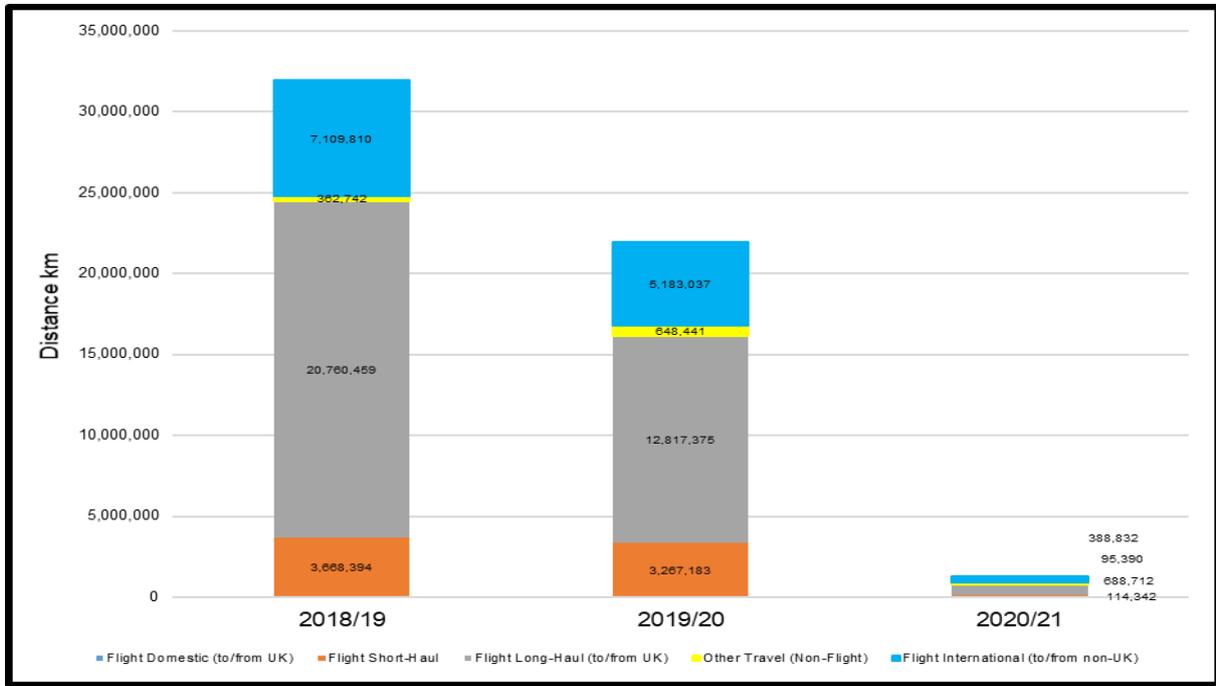
As our campuses returns to normal operations during the 2021/22 academic year, we would be exploring and implementing appropriate water efficiency measures across our estates.

## Travel and Transportation

Our business travel contributed 37% of our 2018/19 baseline, but this proportion reduced to 2% during the 2020/21 academic year. Our business travel reduced by 96% from 31,931,324 km to

1,287,643 km. As seen in Figure 4, the flight restrictions associated with the COVID-19 pandemic significantly contributed to the reduction of our local, short-haul and long haul flights.

**Figure 4: Trend in Queen Mary’s Business Travel**



As part of our commitment to encourage sustainable travel, we currently have 858 bicycle storage facilities across our three main UK campuses and sustainable travel and transportation will continue to be an integral priority of all our construction and refurbishment projects. In addition to these cycle storage facilities, we offered two free bicycle maintenance, advice and repair sessions on 27 September 2020 and during the Clean Air Day in June 2021 to all our staff and students.

As we look forward to normal operations after the removal all COVID-19 restrictions, we would continue to monitor the trend and patterns of our business travels. We will also be reviewing and adapting remote working and remote/virtual teaching, networking and working approaches that were common practices during restrictions associated with the COVID-19 pandemic.

## Waste Management and Resource Efficiency

During the year under review, the total volume of general wastes generated across our three main campuses reduced by 52% (most of which were estimated), while the proportion of recyclable materials collected from these campuses reduced from 33% to 21% between the

2018/19 and 2020/21 academic years. Table 4 show the breakdown of the residual wastes and recyclable materials collected over the last three years from our main UK campuses.

**Table 4: General Wastes and Recyclable Materials Collected from our Campuses**

|                        | Year    | Charterhouse Square | Whitechapel | Mile End | Total |
|------------------------|---------|---------------------|-------------|----------|-------|
| Recycling (tons)       | 2018/19 | 104                 | 41          | 382      | 527   |
|                        | 2019/20 | 73                  | 25          | 133      | 231   |
|                        | 2020/21 | 73                  | 26          | 63       | 162   |
| Residual Wastes (tons) | 2018/19 | 282                 | 213         | 566      | 1,061 |
|                        | 2019/20 | 78                  | 215         | 277      | 570   |
|                        | 2020/21 | 78                  | 215         | 310      | 603   |
| Total (tons)           | 2018/19 | 386                 | 254         | 948      | 1,588 |
|                        | 2019/20 | 151                 | 240         | 410      | 801   |
|                        | 2020/21 | 151                 | 240         | 374      | 764   |

We are aware that waste generation and disposal contribute to climate change and we would continue to promote the benefits of waste segregation and recycling. We have continued to sponsor the ReUse programme, support the used book collection service at our Mile End campus and the British Heart Foundation (BHF) Pack for Good campaign. These three initiatives are implemented to contribute to waste avoidance.

In spite of the restrictions associated with COVID-19, 3,095 used books were donated during the 2020/21 academic year. The 3,095 books was 79% lower than the number of books donated during the 2018/19 academic. As normal operations return to our campuses, we will promote this scheme to all staff and students. See Table 5 for a summary of the environmental benefits of this scheme.

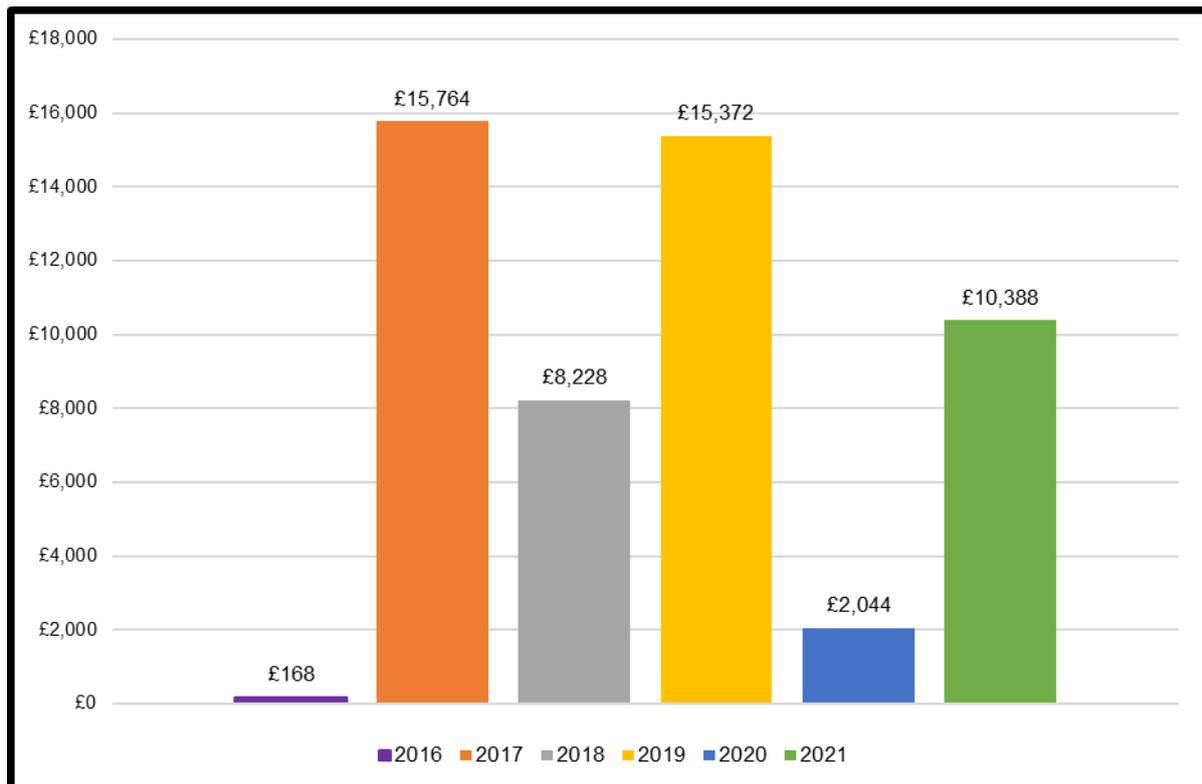
**Table 5: Environmental Benefits of Donated Books**

| Year    | Books Donated | Books (kg) | Trees | GHG <sup>2</sup> (kgCO <sub>2</sub> e) | Electricity kWh |
|---------|---------------|------------|-------|--|-----------------|
| 2018/19 | 14,766        | 9,166      | 237   | 14,265                                 | 48,583          |
| 2019/20 | 6,958         | 4,319      | 111   | 14,749                                 | 22,785          |
| 2020/21 | 3,095         | 1,921      | 49    | 2,989                                  | 10,181          |
| Total   | 24,819        | 15,406     | 397   | 32,003                                 | 81,549          |

<sup>2</sup> Greenhouse Gas

We have over the last six-years donated items towards the BHF Pack for Good campaign. This campaign is aimed at reducing waste disposal, preventing unnecessary waste and carbon emissions, while supporting the funding of heart disease, stroke, vascular dementia and diabetes research. The total amount raised from the items we donated to this campaign over the last six-year was £51,964 (see Figure 5).

**Figure 5: British Heart Foundation Pack for Good**



## Construction and Refurbishment

Our long-term ambition is to integrate innovative energy efficiency technologies and good environmental approaches into all our new builds and refurbishment projects.

Attaining 'Excellent' and 'Very Good' ratings from the Building Research Establishment Environmental Assessment Method (BREEAM) for all our major new builds and refurbishment projects respectively would contribute to improving the environmental performance of our estate. In addition, we use the Royal Institution of Chartered Surveyors' SKA rating assessment for all applicable major fit-out and applicable minor and small refurbishment and reconfiguration projects.

The refurbishment of the Queens' Building is our major on-going refurbishment project. Therefore, to improve the energy performance of this building, we will be investing £152,692 on installing 12.24 kWp photovoltaic panels on the roof of this building as well as to insulate the roof of this iconic building.

We are pleased to report that the recent fit-out of our Department W building achieved the Ska rating of Gold.

## **Biodiversity**

As part of commitment to biodiversity enhance, we have reduced the frequency at which we mow our lawns as well as the use of chemicals. We are also currently manually removing weeds (unwanted plants). These approaches have the potential of improving wildlife and biodiversity.

During the 2021/22 academic year, the Grounds and Gardens Team delivered numerous biodiversity enhancement activities such as: foraging walk; four gardening workshops; three Seed Giveaway workshops and two garden therapy sessions. Approximately 80 students and 15 members of staff attended these activities. One of the highlights of these initiatives is that 60 apple and pear trees and 190 gooseberry and wild raspberry trees were planted creating an orchard and soft fruit garden at our Mile End campus.

Specifically, a community orchard and wildflower meadows were created across our Mile End campus. In addition, the Bronze Hedgehog Friendly Campus Award is one of the recognition of our commitment to biodiversity enhancement.

Our Green Mary Garden is an important area of our Mile End Campus. This garden and allotment plots were constructed to provide opportunities for students, staff, and the wider community (including local schools) to engage with and learn more about the biodiversity and ecological systems. Our Grounds and Gardens Team have continued to manage this allotment and it has been used to cultivate a variety of fruit and vegetables, which were harvested and used by staff and students.

The highlight of our 2020/21 is the planting of six Black Poplar Trees across our Mile End and Charterhouse Square campuses. Black Polar is currently one of Britain's rarest tree species and these trees were planted as part of the celebration of the 2021 World Environment Day. The planting of these trees is also aligned with the London Borough of Tower Hamlets commitment to biodiversity enhancement across the Borough and the UN Decade on Ecosystem Restoration.

## **Sustainable Procurement**

We have continued to include environmental and social value specifications into relevant aspects of our procurement and commissioning processes as part of our commitment to influence our supply chain to reduce the environmental impacts of their operations as well as to embed good environmental practices into their operations. Specifically, we have continued to challenge our major contractors and suppliers to actively reduce their environmental and carbon footprints.

Queen Mary's Procurement Team on behalf of London-based members of the United Kingdom Universities Purchasing Consortia (UKUPC) collaborated with other member organisations in identifying, quantifying and optimising the financial benefits associated with the integration of social value into the procurement process.

We have continued to assess the number of our suppliers and contractors that have environmental management system (EMS). During the 2019/20 academic year, 11 of our 12 top suppliers and contractors (total spend £24.82 million) had EMS and nine of these suppliers and contractors have certified ISO 14001:2015 EMS. During the year under review, we reduced the threshold for EMS certification to spends that are greater than £200,000 / annum and 49 contractors of total spends of £59.29 million fall into this scope. 47 (£52.33 million) 98% of these contractors had an EMS and 33 (£43.02 million) 80.7% of these contractors had certified ISO 14001:2015 EMS.

Being a Founding Partner of the London Living Wage Foundation and our current Modern Slavery statement are two indications of our commitment to decent work, economic growth, peace, justice and strong institutions.

## **Embedding Environmental Sustainability**

We are committed to embedding education for sustainable development (ESD) into our academic offering. A review of the current 138 undergraduate courses that we offer show that 62% of these courses / programme have varied proportion of ESD and the principles and application of sustainable development.

In line with our ESD commitment, we are also offering all our students a certified continue professional development (CPD) course on sustainable development. Two of the intended outcomes of this course is that the participating students would become more aware of practical actions that they can take to reduce their environmental footprint as well as the benefits of good

environmental practices. During the year under review, 454 students across 19 departments / schools registered for this optional online module.

Furthermore, we are an approved IEMA's Training Centre and we offer all professional services and academic staff the IEMA Environmental Sustainability Skills for the Workforce (ESSW) course and the Foundation Certificate in Environmental Management (FCEM). The ESSW course have been successfully completed by 109 staff across 29 departments / service areas as well as our Malta Campus. This course gives participants an opportunity to gain practical knowledge of environmental risks and opportunities as well as tools that could be used to deliver evidence-based good environmental outcomes.

Our inaugural five-day IEMA Foundation Certificate in Environmental Management (FCEM) was attended by 9 professional services staff, 1 Post-Doctoral Researcher, 2 PhD Research Scholar and 1 Undergraduate. The 12 participants that successfully completed the FCEM are currently Associate Members of IEMA and are applying the knowledge gained from this course into the way they deliver their responsibilities and are actively involved in the implementation of our environmental management system.

As part of our commitment to embed good environmental practices across our laboratories, we have introduced the Laboratory Efficiency Assessment Framework (LEAF) programme. The LEAF tool is being used to improve the environmental performance of our laboratories as well as assist users to appropriately explore opportunities to reduce the environmental impacts of laboratory activities. One of our current Environmental Associates coordinates the LEAF programme. We are pleased to report that during the year under review, 10 laboratory teams participated in the LEAF programme.

One of the highlights of embedding good environmental sustainability across all areas of operations is that we commissioned an Environmental Sustainability Champion group. The Coordinators of this group are currently Associate Members of IEMA and members of our SC. The Environmental Sustainability Champions commissioned are currently promoting good and responsible environmental practices across their areas of work.

## Looking Ahead

Over the last two years, most of our environmental performance was skewed by international and local restrictions and lock-downs associated with the COVID-19 pandemic. Irrespective of this reality, we will have continued to adapt our environmental sustainability delivery approaches to

ensure that we effectively respond to the current and emerging environmental opportunities and challenges.

Below are some immediate and short-term initiatives that we will be implementing as part of our environmental sustainability commitments:

- Review and update our environmental sustainability policy to reflect our environmental objectives and vision.
- Continue to use our Environmental Sustainability Action Plan (ESAP) and Environmental policy as the frameworks on which we deliver our commitment to embed good environmental practices into all aspects of our operations as well as comply with all environmental standards and regulations.
- Attain the Platinum Engage Watermark for Public Engagement from the National Coordinating Centre for Public Engagement (NCCPE).
- As part of our commitment to promote the benefits of green skills, we will be offering the IEMA environmental sustainability skills for the workforce CPD course to all members of the London Borough of Tower Hamlets Climate Partnerships and Corporate Members of IEMA.
- Develop environmental sustainability induction programmes for all staff and students.
- As restrictions associated with COVID-19 are eased and lifted, we will run environmental sustainability awareness campaigns.
- Develop our HDP and ensure that we are prepared for all subsequent Public Sector Decarbonisation Scheme and government's carbon reduction incentives.
- Develop our concept and model of the Living Laboratory by July 2022.
- Carry out a mini-competition for the waste collection services across our three main UK campuses. Enhanced waste collection data quality will be one of the specifications of this competition.
- Continue to use the SLS' framework to monitor and report our performance against the UN SDGs.
- Attain ISO 14001:2015 Environmental Management System certification by July 2022.

We will continue to implement initiatives to improve our environmental performance as well as monitor our performance against commitments within our ESAP 2020-23 and the UN SDGs.



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