



Environmental Sustainability Policy 2020

Outcome requested:	That the Sustainability Committee should: <ul style="list-style-type: none"> • Consider the environmental sustainability policy • Endorse the environmental sustainability policy • Approve the presentation of the environmental sustainability policy to the Senior Executive Team (SET)
Executive Summary:	The environmental sustainability policy details the current environmental objective of the Queen Mary, University of London (QMUL). This policy will be reviewed annually to ensure that it is fit for purpose, reflects all significant environmental aspects of QMUL, ensure that it continue to improve its environmental performance and complies with all relevant environmental regulations.
Alignment with: <ul style="list-style-type: none"> • QMUL Strategy • Internal Policies/Regulations • External Statutory Requirements 	<ul style="list-style-type: none"> • The Environmental Protection Act 1990 • Clean Air Act 1993 • The Climate Change Act 2008 • The Waste (England and Wales) Regulations 2011 • Water Framework Directive 2015 • The Energy Act 2016 • Clean Air Framework 2017 • Clean Air Strategy 2019
Consideration of Strategic Risks:	This policy will be the framework on which QMUL's environmental management strategy will be developed and on which its environmental sustainability performance will be monitored and reported.
Subject to Prior and Onward Approval by:	Senior Executive Team (SET)
Confidentiality and Distribution:	<i>Non-restricted</i>
Equality Impact Assessment:	<i>Not Applicable</i>
Author(s) :	Philip Tamuno & Garry Pritchard
Date:	<i>29 April 2020</i>

Environmental Sustainability Policy

Queen Mary University of London (QMUL) is a Russell Group University and one of UK's leading research-focused higher education institutions. We offer our students a stimulating, supportive and high quality learning experience and we aspire to be the most inclusive research-intensive university in the world by 2030.

We are aware that current and emerging environmental changes and risks affect all aspects of our operations. In responses to these risks, we are actively exploring opportunities and implementing initiatives that will continue to enhance our resilience to these environmental risks and challenges.

We also know that our teaching, research and other operational activities directly and indirectly have environmental consequences. We are committed to continue to improve our environmental performance and reduce our environmental impact. We will continue to:

- Integrating the principles of sustainable development across all areas of our operations and our academic programmes
- Integrating climate change mitigation and adaptation into all aspects of our operations
- Reducing our carbon footprint and the environmental impacts of our operations
- Exploring and implementing initiatives that reduces the environmental and public health impacts of our travel and transportation
- Implementing energy efficiency measures across our Campuses as well as explore all relevant sources of renewable and decentralised energy generation
- Embedding environmental and climate change specifications into all relevant aspects of our procurement and commissioning processes
- Promoting the benefits of sustainable catering services across our Campuses
- Embedding biodiversity enhancement and ecological conservation into all refurbishment and new build projects as well as our grounds management
- Reducing the wastes generated across our Campuses as well as divert all general wastes we generate from landfill
- Using quantitative and qualitative indicators to monitor and report our environmental performances to all relevant stakeholders
- Complying with all relevant environmental regulations
- Ensuring that we have adequate resources to coordinate and support the delivery of our environmental sustainability objectives.

Our environmental sustainability policy was developed through active engagement with the Students' Union and approved by our Senior Executive Team (SET)



Professor Colin Bailey (President and Principal)



Lord Clement-Jones (Chair of Council)



Environmental Sustainability Strategy

Outcome requested:	<p>That the Sustainability Committee should:</p> <ul style="list-style-type: none"> • Consider our environmental sustainability strategy (ESS) • Endorse this strategy • Approve the presentation of the environmental sustainability strategy to the Senior Executive Team (SET)
Executive Summary:	<p>This report contain an overview of our environmental sustainability strategy. This strategy will serve as the framework / system on which we deliver our environmental objectives, continue to comply with all relevant environmental regulations and enhance our resilience to the adverse impacts of climate change.</p> <p>Monitoring, managing and reporting all significant areas in which we interact with the environment will be an integral aspect of our environmental strategy. We will continue to promote the benefits of embedding good environmental practices across all areas of our operations and academic activities.</p> <p>Our 2018/19 environmental footprint and performances will be used as the baseline on which our environmental sustainability strategy has been developed. This strategy will support our commitment to continue to:</p> <ul style="list-style-type: none"> • Reduce our environmental footprint • Reduce costs in energy, water and waste • Embed good environmental practices into all areas of our operations • Improve our environmental and corporate image • Comply with all relevant environmental regulations
Alignment with: <ul style="list-style-type: none"> • QMUL Strategy • Internal Policies/Regulations • External Statutory Requirements 	<ul style="list-style-type: none"> • The Environmental Protection Act 1990 • Clean Air Act 1993 • The Climate Change Act 2008 • The Waste (England and Wales) Regulations 2011 • Water Framework Directive 2015 • The Energy Act 2016 • Clean Air Framework 2017 • Clean Air Strategy 2019

Consideration of Strategic Risks:	The environmental sustainability strategy will serve as the framework on which QMUL's environmental objectives and commitment to continue to comply with all relevant regulations will be delivered.
Subject to Prior and Onward Approval by:	Not Applicable
Confidentiality and Distribution:	<i>Non-restricted</i>
Equality Impact Assessment:	<i>Not Applicable</i>
Author(s) :	Philip Tamuno & Garry Pritchard
Date:	<i>29 April 2020</i>



Queen Mary
University of London

Environmental Sustainability Strategy

April 2020



Version 1.0

Approval Page

Version	Governance Group	Date Approved
1.0	Senior Executive Team (SET)	

DRAFT

Foreword



Professor Colin Bailey
President and Principal



Lord Clement-Jones
Chair of Council

Executive Summary

DRAFT

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Abbreviation and Acronyms

Academic Registry and Council Secretariat	ARCS
Building Management System	BMS
Building Research Establishment Environmental and Assessment Method	BREEAM
Business as Usual	BAU
Carbon	CO ₂ e
Centre for Academic and Professional Development	CAPD
Continue Professional Development	CPD
Corporate Social Responsibility	CSR
Display Energy Certificate	DEC
Electric Vehicle	EV
Environmental Management System	EMS
Environmental Sustainability Strategy	ESS
Estates Strategy Board	ESB
Full-Time Equivalent	FTE
Information Technology	IT
Institute of Environmental Management and Assessment	IEMA
Kaplan International College London	KICL
Key Performance Indicator	KPI
Low-Emission-Vehicle	LEV
Queen Mary, University of London	QMUL
Queen Mary E-learning Platform	QMPlus
Reduced Emission Scenario	RES
Salix Energy Efficiency Loan	SEEL
Senior Executive Team	SET
Service Level Agreement	SLA
School of Languages, Linguistics and Film	SLLF
School Legal Advice Centre	LAC
Sustainable Development Goals	SDGs
Sustainability Committee	SC
Times Higher Education	THE
Ultra-Low-Emission Vehicle	ULEV
United Nations	UN
Value at Stake	VAS
Vice Principal	VP

Introduction

Queen Mary University of London (QMUL) is a Russell Group University and one of UK's leading research-focused higher education institutions. We offer our students a stimulating, supportive and high quality learning experience and we aspire to be the most inclusive research-intensive university in the world by 2030.

We are aware that current and emerging environmental changes and risks affect all aspects of our operations. In responses to these risks, we are actively exploring opportunities and implementing initiatives that will continue to enhance our resilience to these environmental risks and challenges.

Our environmental sustainability strategy (ESS) is aligned with the UK's 2050 net zero carbon target and de-carbonisation prioritisation as well as to support the delivery of our environmental objectives. Our ESS will continue to be used as a framework on which we will continue to monitor and managing all environmental aspects associated with our operations.

In addition, our ESS has been developed in consultation with relevant stakeholders. This strategy will serve as the framework on which we deliver our environmental objectives, continue to comply with all relevant environmental regulations and enhance our resilience to the adverse impacts of climate change. This strategy is aligned to our strategic vision to *'offer outstanding students a stimulating, supportive and high-quality learning experience, with teaching inspired by our world-leading research'*.

Scope: Environmental Sustainability Strategy

This strategy has been developed as the framework on which we deliver our commitment to continue to reduce the impacts of our operation on the environment as well as explore and all relevant opportunities to improve our environmental performance.

We are aware that current and emerging environmental changes and risks affect and will impact our operations. In responses to these risks, we are actively exploring opportunities and implementing initiatives that will continue to enhance our resilience to these environmental risks and challenges.

The significant areas in which the teaching, research, consultancy and other operational activities from our London campuses interact with the environment underpins our ESS. To ensure that this strategy to continue to be relevant, it will be updated whenever required in line with our strategic priorities, partnerships and corporate social responsibility (CSR).

Our carbon footprint¹, proportion of waste disposed on landfill and our waste segregation performances are the quantitative indicators of our environmental sustainability performance. In addition, our ESS has been developed to support the delivery of our six-year 30% carbon reduction target against our 2018/19 baseline. During the 2018/19 academic year, we emitted 25,823 tCO₂e. This baseline encompasses the Carbon (CO₂e) emitted from the energy used across our estate, fuel used by our fleet, our business travels and water used across our campuses.

This strategy is also aligned with our objective to actively contribute to supporting the delivery of the United Nations Sustainable Development Goals (UN SDGs). These 17 interconnected goals are aimed at achieving a better and more sustainable future and address the global challenges we face. Figure 1 contain an overview of these SDGs.

Figure 1: United Nations Sustainable Development Goals



Our 2018/19 environmental footprint and performances is the baseline on which our environmental sustainability strategy has been developed. The quantitative and qualitative key

¹ From building energy use, travel and transportation and water used across our UK Campuses

performance indicators (KPIs) that will be used to monitor our environmental performances are summarised in Appendix 1.

The main strands of our ESS are:

- Carbon management and reduction
 - Building energy use
 - Travel and transportation
- Construction (New build, refurbishment and maintenance)
- Climate change adaptation and emergency
- Water management
- Waste management
 - Recycling and waste segregation
 - Hazardous waste management and compliance
- Biodiversity and ecological enhancement
- Sustainable procurement and commissioning
- Sustainable food and catering
- Embedding sustainable development
 - Awareness and engagement
 - Education for sustainable development
- Environmental compliance (as well as pollution and emission management)

The involvement of all relevant stakeholders across Our University will be fundamental to the delivery of our environmental objectives. Appendix 2 contain an overview of the strands of our ESS as well as details the responsibilities of key stakeholders.

Our ESS will be used as the framework on which we respond to environmental, socio-economic and regulatory challenges we face as well as deliver our six-year 30% carbon reduction target against our 2018/19 baseline as well as enhance our resilience to adverse weather conditions.

Environmental Sustainability Drivers and Opportunities

As our student population and research activities increase; the distance we travel, the energy and utility used across our premises, the volume of wastes generated from our operations, our catering and our procurement and commissioning activities would invariably rise.

Volatile energy prices and continuing increase in utility and other services we procure would invariably impact on the resources available to deliver and support the delivery of stimulating, high quality and supportive learning experiences as well as innovative and inspiring teaching and research. Hence, embedding resources efficiencies and good environmental practices into all aspects of our operation will contribute to reducing our environmental footprint and optimise our resources.

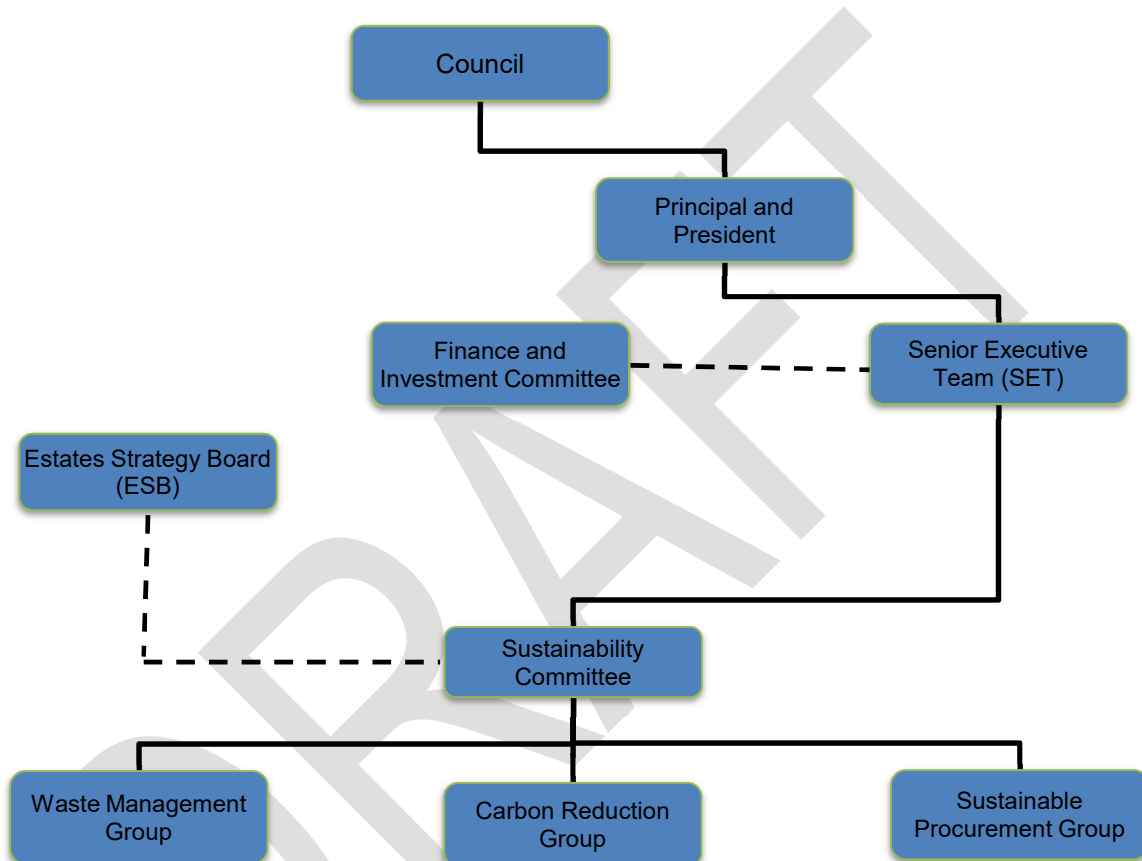
Therefore, our ESS will be used to support our commitment to continue to comply with all relevant requirements, deliver our environmental objectives and appropriately manage all current and emerging environmental risks associated with our operations.

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Environmental Sustainability Governance

Our Principal and President is the Chair of the Senior Executive Team (SET) is the duty holder accountable for the delivery of QMUL's environmental sustainability commitment. Figure 2 contain an overview of our environmental sustainability governance structure.

Figure 2: QMUL's Environmental Sustainability Governance Structure



Our SET will continue to:

- Maintain strategic overview of our performance in the aspect of climate change adaptation and embedding good environmental practices into the way we deliver teaching, learning and associated activities
- Support teaching, research and innovation that are aligned with the tenets of sustainable development and the UN SDGs
- Ensure that resources are optimised across QMUL to enhance our resilience to extreme weather conditions as well as current and emerging environmental challenges

- Oversight and ownership of QMUL's environmental performance and compliance with all relevant regulations

Our Sustainability Committee (SC) meets at least four times every academic year and more frequently where necessary. This committee reports to our SET or to our Estates Strategy Board (ESB) whenever required.

Our Vice Principal Policy and Strategic Partnership (a member of our SET) provides oversight of our environmental sustainability delivery approach as well as chairs our SC. The Vice Chair of our SC is our Director of Estate and Facility.

Our SC has representation of leaders and senior managers across our University. Below are the current service areas represented at this governance group:

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

The membership of our SC reflects our commitment to embed good environmental practices across all areas of our operation. In addition, Appendix 2 details key stakeholders and their respective responsibilities to support the delivery of our environmental sustainability objectives.

Carbon Management

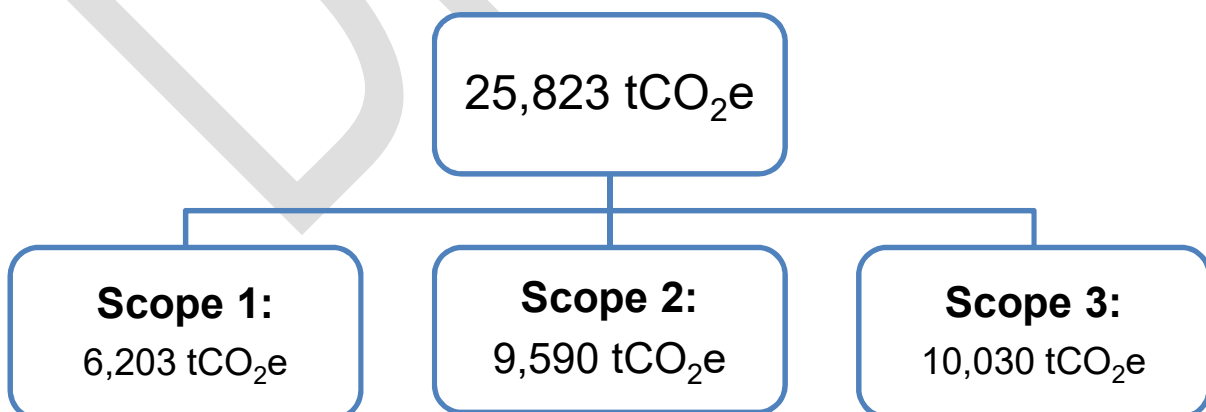
Carbon footprint is the total amount of greenhouse gas (GHG) caused by an event, product, individual, an organisation or nation expressed as carbon dioxide equivalent (CO₂e).

The scope and description of our carbon footprint are as follows:

- The fossil fuel used to heat our buildings across our campuses. This emission are from activities that we directly control and represent a significant proportion of Scope 1 of our carbon footprint
- The emissions associated with grid electricity we buy and used across our estates. This emission represent our Scope 2 carbon footprint
- The emissions associated with the fuel (petrol and diesel) used by our own vehicles. These emissions are component of Scope 1 of our carbon footprint.
- The emissions associated with our business travel². These emissions represent a significant proportion of Scope 3 of our carbon footprint
- The emissions associated with the water used across our Campuses. These emissions are component of our Scope 3 carbon footprint

During the 2018/19 academic year we emitted a total of 25,823 tCO₂e (see Appendix 3 for the breakdown this carbon footprint). Figure 3 show the distribution of the Scopes of our 2018/19 carbon footprint.

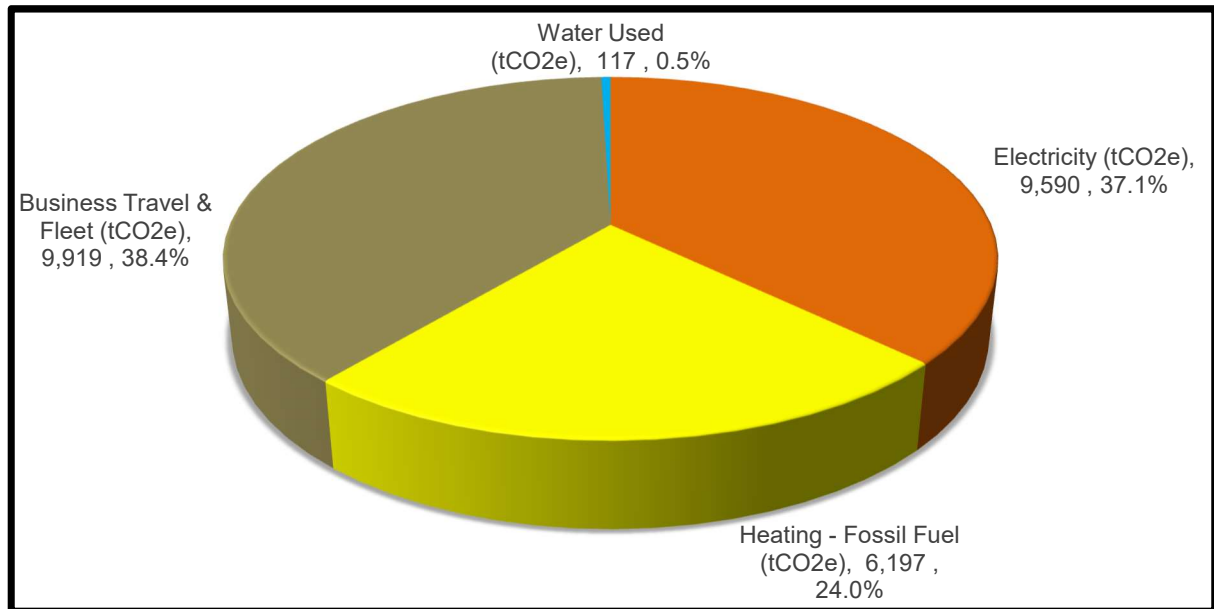
Figure 3: QMUL's 2018/19 Carbon Footprint (Scopes 1, 2 and 3)



² Excluding those via Oyster Cards

Figure 5 show the profile of our 2018/19 carbon footprint. Our business travel of 31.9 Million km accounts for 38% of our carbon footprint, while 62% of this footprint were from the energy and water services we used during the 2018/19 academic year. Our 2018/19 carbon footprint is the baseline against which our six-year 30% carbon reduction target has been developed.

Figure 5: QMUL's 2018/19 Carbon Footprint



Six-Year 30% Carbon Reduction Target

We are aware of the social, environmental and public health impacts of GHG emissions. Our six-year 30% carbon reduction target against our 2018/19 carbon footprint is aligned with our commitment to respond to the challenges associated with climate change as well as our commitment to contribute to the UK's net zero GHG emissions by 2050.

Figure 6 and Figure 7 show the respective trend of the carbon and financial value at stake (VAS) of achieving our six-year 30% carbon reduction target. These scenarios were developed based on the following assumptions:

- The cost of our 2018/19 business travel was collated from our finance ledger
- The Business as Usual (BAU) scenario that has been used to calculate the carbon and financial values of reducing our carbon footprint by 30% by 2024/15 are that:
 - Our student numbers will increase by 5.8%³ between the 2018/19 and 2024/25 academic year

³ The average increase in the total number of QMUL's students between 2015/16 and 2018/19

- Our water use will increase by 5.8% up to 2024/15 in line with the average rise of our student numbers
- Our energy use and business travel will increase at a third the percentage rise in the population of our students (1.9%)
- Our water and energy services cost will increase by 5% per annum over the next six years
- Our business travel cost will increase by 1.7% per annum over the next five years
- Our carbon footprint reduced emission scenario (RES) will occur at a linear rate of 5.8% per year between 2018/19 and 2024/25 academic years in line with our six-year 30% carbon reduction target
- The carbon reduction and financial value at stake (VAS) is the difference between the BAU and its associated RES. The respective annual sum of carbon and financial savings and avoidance
- The cumulative VAS is the sum of the VAS between 2019/20 and 2024/25 academic year
- That the greenhouse gas (GHG) conversion factors will remain unchanged between 2018/19 and 2024/25 academic years

Figure 6: QMUL's Six-Year 30% Carbon Reduction Value at Stake (VAS)

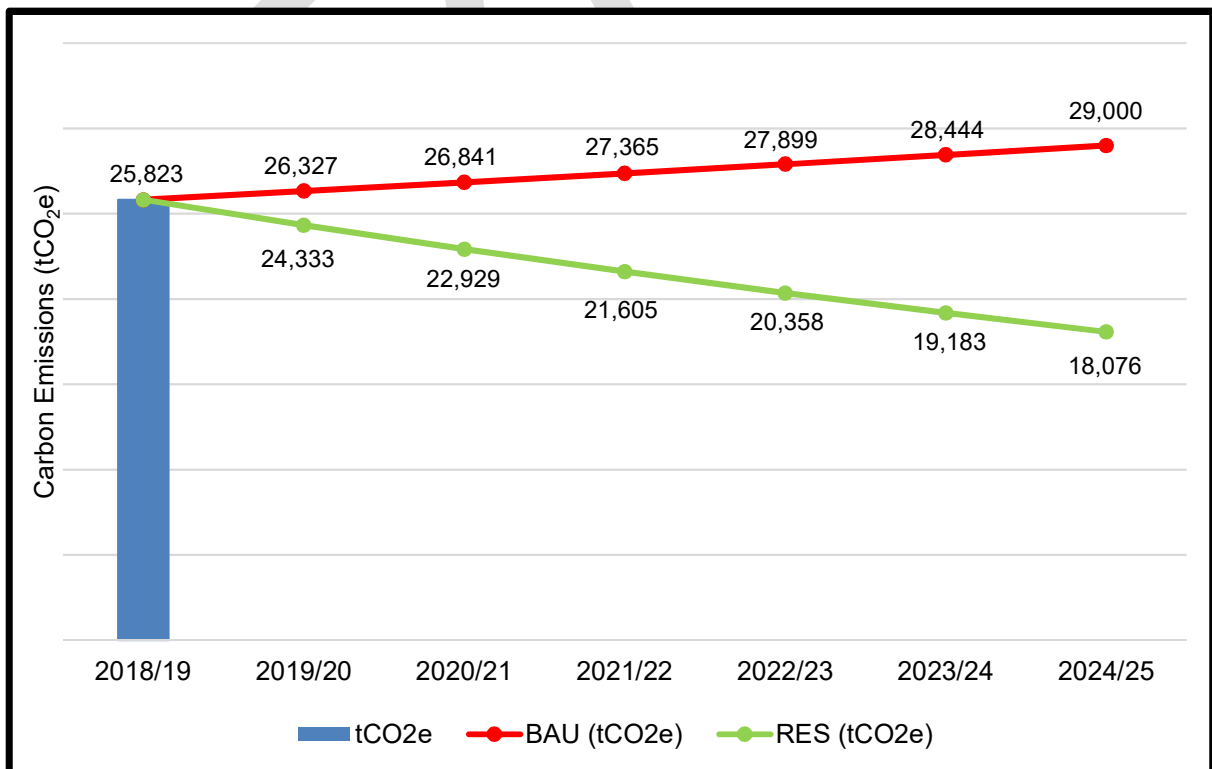
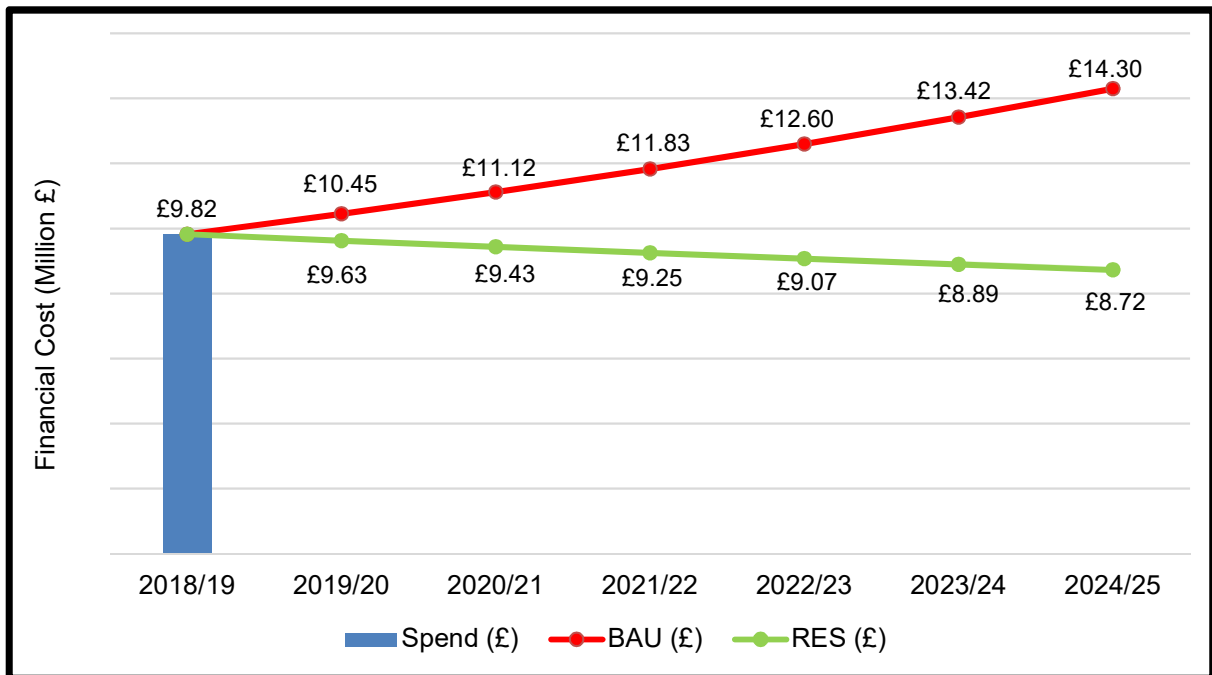


Figure 7: QMUL's Six-Year 30% Financial Value at Stake (VAS)



A detailed analysis of the carbon and financial benefits of achieving our six-year 30% carbon reduction targets are shown on Appendix 4 and Appendix 5 respectively. The cumulative VAS⁴ of achieving this target are 39,488 tCO₂e and £18,589,303. In addition to these cumulative VAS, achieving our carbon reduction target by reducing our GHG emissions have public health, environmental and reputational benefits.

The next two sections of our ESS contain further descriptions of the sources of our carbon footprint, opportunities and indicative investment required to achieve our six-year 30% carbon reduction target by July 2025.

⁴ The difference between the business as usual (BAU) and reduced emission (RES) scenarios

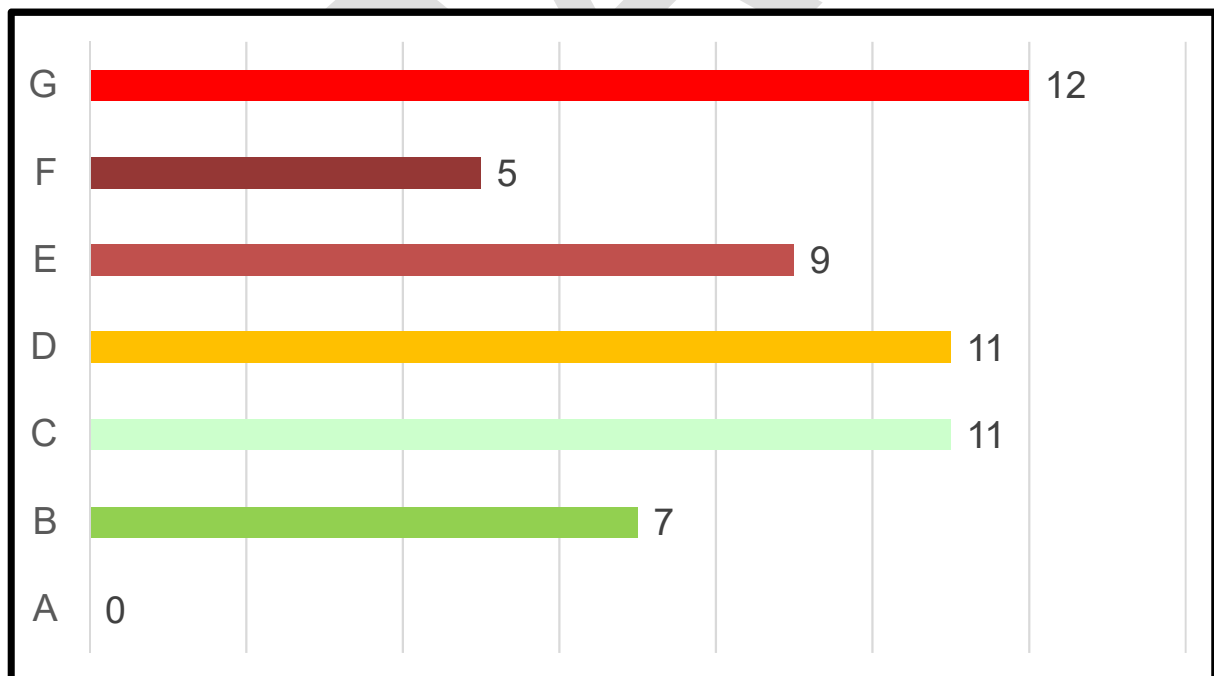
Building Energy Efficiency

Reducing the energy used across our estate will enhance our resilience to rising energy prices, reduce the impact of our operation on the environment and support the delivery of our six-year 30% carbon reduction target. Our six-year 30% carbon reduction target is aligned to the UK's 2050 net zero target.

The current display energy certificates (DECs) of our buildings were generated based on our 2018/19 energy data. The DEC scores and ratings of these 55 qualifying buildings are indication of their respective energy efficiency performances.

Approximately 33% of our buildings attained DEC scores of C and above (see Figure 8). This implies that there are significant energy efficiency opportunities across our campuses. The identification, prioritisation and quantification these energy efficiency opportunities will continue to be used to develop business cases aimed at reducing the energy used across our estates. Appendix 6 contain the full profile of all our DEC qualifying buildings.

Figure 8: 2018/19: Display Energy Certificates Profile of QMUL's Buildings



The 37,516,010 kWh of electricity we used during the baseline year cost us £5.57 Million and as seen in Table 1 our Mile End Campus accounts for 56.2% of the electricity we used during the 2018/19 academic year. Therefore, as part of the delivery of our six-year 30% carbon

reduction target, we will explore opportunities to reduce the grid electricity used at our main campus.

Table 1: Electricity used across QMUL's Campuses (2018/19)

Campus	Electricity (kWh)	Percentage
Charterhouse	6,904,126	18.4%
Whitechapel	7,940,688	21.2%
Mile End	21,078,376	56.2%
West Smithfield	319,650	0.9%
Lincoln's Inn Field	284,944	0.8%
Chislehurst Sports Ground	50,234	0.1%
Other Premises	937,993	2.5%
	37,516,010	

We spent £0.97 Million on 29,197,851 kWh of natural gas that was used to heat our buildings. As seen in Table 2, there are opportunities to reduce the gas used to heat our three main campuses.

Table 2: Natural Gas used across QMUL's Campuses (2018/19)

Campus	Gas (kWh)	Percentage
Charterhouse	6,281,653	21.5%
Whitechapel	7,330,551	25.0%
Mile End	14,464,487	49.4%
West Smithfield	147,317	0.5%
Other Premises	1,051,814	3.6%
	29,197,851	

In addition, we use burning oil to heat our Chislehurst Sport Centre. During the 2018/19, we used 7,660 litres of burning oil to heat this Sport Ground. Exploring alternative and less carbon intense heating source will be explored in support of our decarbonisation objective.

One of our current environmental sustainability priorities is investment in energy efficiency measures. The projects and initiatives detailed in Appendix 7 show some of the energy

efficiency projects that have been recently completed and commissioned across our campuses. These projects were collectively projected to reduce our electricity and gas use by 6,907,417 kWh and 1,710,999 kWh respectively.

Furthermore, we have recently secured a £2,465,508 Salix energy efficiency loan (SEEL⁵). The anticipated electricity and gas reduction from this investment are 2,321,808 kWh and 4,157,720 kWh respectively (See Appendix 8 for an overview of these projects).

We have used the projected carbon reduction that will be delivered from this SEEL's loan to extrapolate the capital required to deliver our carbon reduction target. We would require a minimum investment of £7,624,438 to reduce our energy in line with our six-year 30% carbon reduction target.

The above implies that we will require a further £5,158,930 to deliver this 30% carbon reduction target. This fund will be used to implement energy efficiency projects as well as renewable energy technologies across our campuses. Therefore, these investments will significantly contribute to achieving the respective cumulative carbon and financial VAS associated with our 30% carbon reduction target of 39,488 tCO₂e and £18,589,303 by July 2025.

In addition to the above, we will periodically promote the benefits of good energy practices across our campuses via energy efficiency campaigns, staff induction programmes, at departmental levels and across our residences. Therefore, we will be relying on all colleagues and students to support our commitment to respond to the challenges associated with climate emergency.

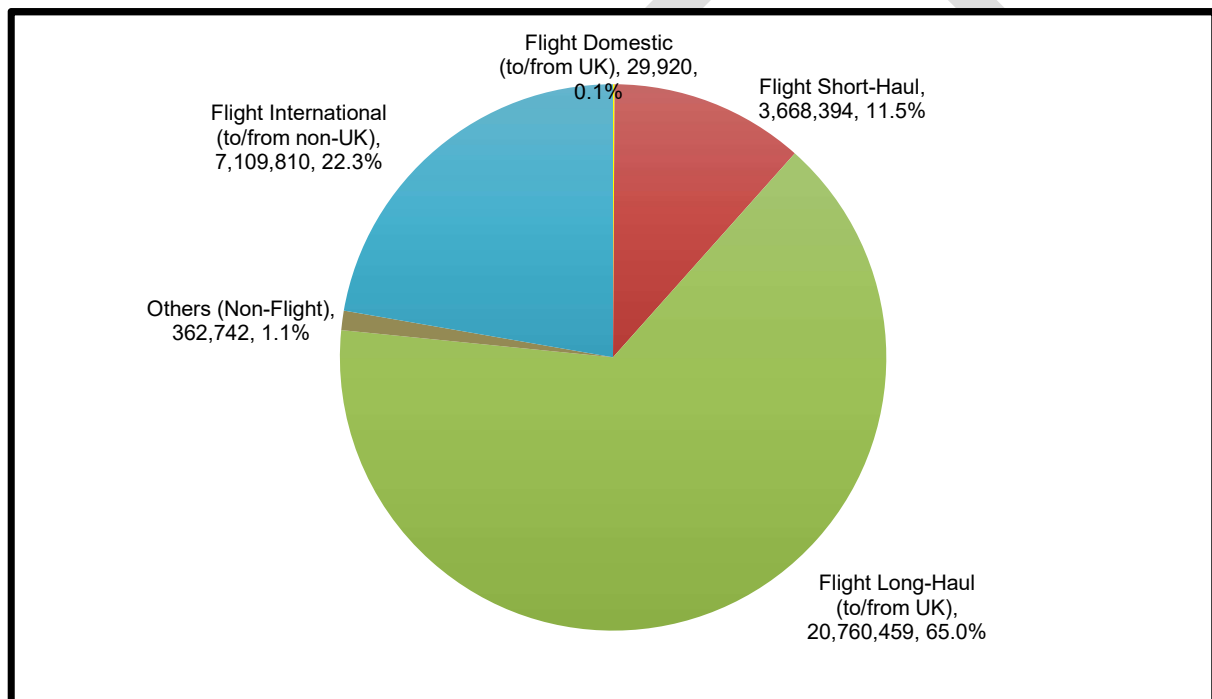
⁵ 0% energy efficiency loan available to public sector organisations. SEELs are repaid over a five year period

Travel and Transportation

The 19.84 Million miles (31.93 Million km) we travelled between August 2018 and July 2019 and the 2,385 Litres of fuel we used in our own vehicles account for 9,919 tCO₂e of our 2018/19 carbon footprint (38.4%). Our business travel cost us £2,936,251 and the cost of off-setting this aspects GHG emissions would have been £223,039⁶.

As seen in Figure 9, long-haul flights that started from the UK and non-UK locations accounts for 87.3% of our business travel footprint. This implies that a significant proportion of our business travel have international and global environmental impacts.

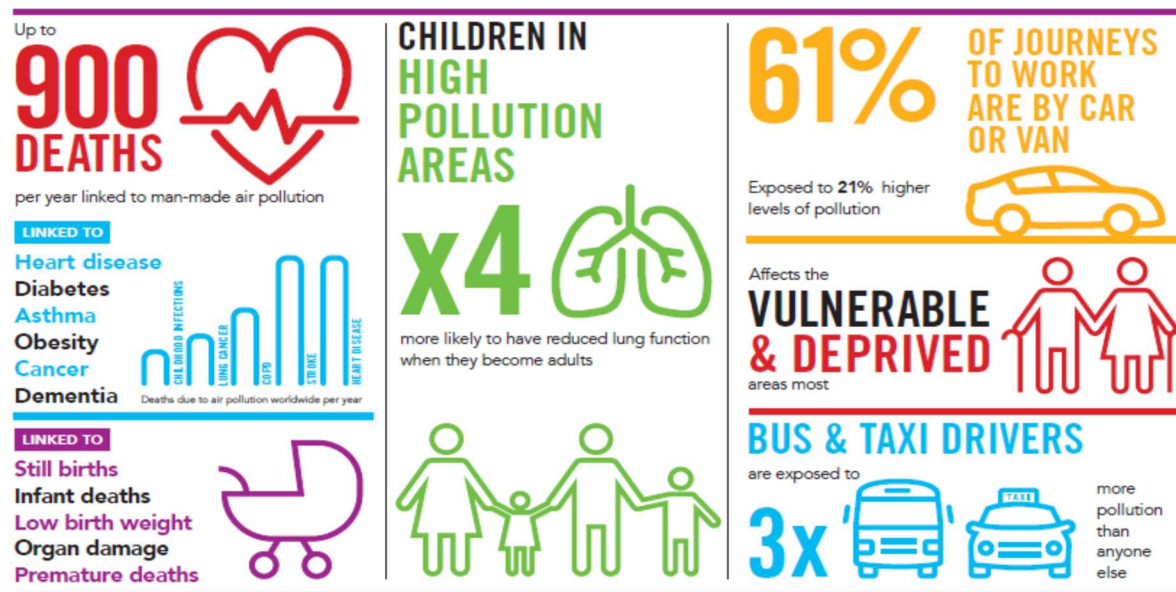
Figure 9: QMUL's Business Travel 2018/19



We are also aware of the relationship between exposure to traffic-related air pollution and health. Some of these established impacts are exacerbation of asthma, non-asthma respiratory symptoms, impaired lung function and cardiovascular mortality and morbidity. Figure 10 (adapted from a Birmingham City Council's air quality report) summarises the public health effects of air pollution. Therefore, reducing our business travel will contribute to improving local, regional and global air quality as well as reduce the public health impacts of poor quality.

⁶ £22.5/tCO₂e

Figure 10: The Public Health Effects of Air Pollution



We currently have 858 bicycle storage facilities across our three main campuses. This implies that there are on average a bicycle storage facility for 27.5 students and full-time equivalent (FTE) staff. Appendix 9, Appendix 10 and Appendix 11 show the locations of bicycle storage facilities at our Mile End, Whitechapel and Charterhouse Campuses respectively.

In addition, to these bicycle storage facilities, we also currently offer our staff cycle to work scheme as well as annual free bicycle repair. These facilities and associated initiatives are aimed at promoting the environmental and health benefits of cycling for commuting and travelling between our Mile End and Whitechapel campuses. In addition to these facilities, we have introduced a template that will be used to easily capture our business travels (see Appendix 12).

We currently deliver some of our induction and mandatory courses via our online e-learning platform (QMPlus). Delivering these e-learning courses is consistent with our commitment to reduce GHG emissions from our operations and embed good environmental practices across all areas of our operations.

For us to reduce emissions from our business travel in line with our six-year, 30% carbon reduction target implies that we would have to significantly change the way we carry out research, engage and collaborate with our national and international partners.

We will as a priority implement a “no vehicle idling” policy across all our campuses and we will therefore continue to:

- Invest in infrastructure and facilities that support cycling and sustainable travel options
- Invest in remote collaboration and conferencing facilities
- Promote the public health and environmental benefits of sustainable travel
- Promote and share good practices of optimisation of international travel
- Carry out research and disseminate evidences of sustainable travel and international collaboration
- Disseminate evidences of the public health and environmental impacts and consequences associated with transport emission
- Actively engage with individuals, departments and research groups whose research, training, consultancy and other associated activities entails long-haul international flights
- Influence our partners, stakeholders and funding organisations on the benefits on embedding sustainable travel and remote collaboration
- Implement a car park charging levy for vehicles that do not meet the ultra-low vehicle (ULEV)⁷ status. Funds from this charging scheme should be used to invest in sustainable travel options and promote biodiversity enhancement across our campuses
- Install electric vehicle (EV) charging units across our campuses
- Engage with our contractors and suppliers to ensure that as a minimum that their vehicles and delivery vehicles meet low-emission vehicle (LEV⁸) status
- Explore and invest on carbon off-set (current cost of £22.5/tCO₂e) for all our long-haul business flights. This fund should be used to invest in installing renewable energy generation technologies and energy efficiency measures across our campuses

The delivery of our six-year, 30% carbon reduction target require we change the way we engage with our stakeholders as well as investment to support our commitment to de-carbonise our operation. Implementing the above changes will significantly contribute to achieving the respective cumulative carbon and financial VAS associated with our 30% carbon reduction target of 39,488 tCO₂e and £18,589,303 by July 2025.

⁷ These are vehicles that emits less than 75g of CO₂/km from the tailpipe.

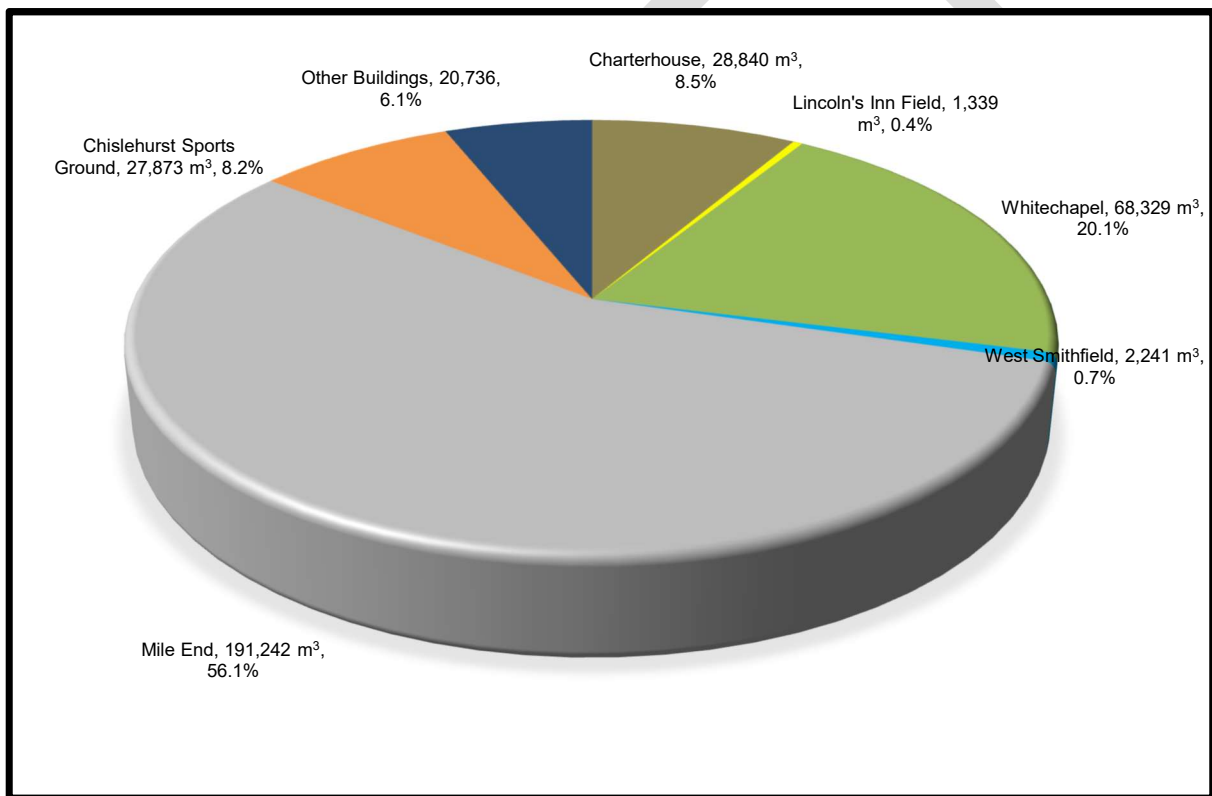
⁸ Motor vehicles that emits relatively low levels of GHGs

Water Management and Efficiency

We used 320,275 m³ of water across our campuses during the 2018/19 academic year. This volume of water contributed 117 tCO₂e (0.5%) of our carbon footprint. To put our water use into context, we used on average 17.6 m³ of water per student.

Figure 11 show the profile of our water use during the 2018/19 academic year. We are committed to reducing the pressure our operations may have on local water resources as well as implementing water efficiency measures in line with our commitment to reduce our environmental impact.

Figure 11: Water Use Profile across QMUL's Campuses (2018/19)

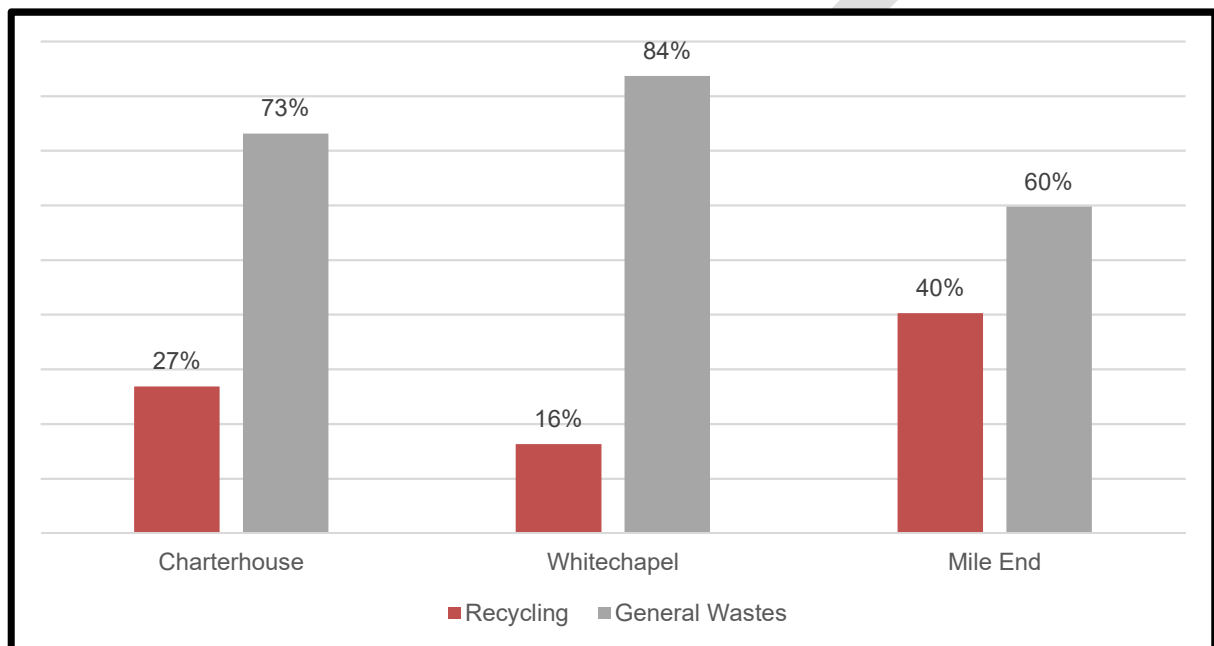


Our six-year 30% carbon reduction target will be integrated into all our refurbishment and new builds projects. We will also be exploring opportunities to integrate greywater and rainwater harvesting into all our new-builds and major refurbishment projects.

Recycling and Waste Management

We generated 1,588 tonnes of waste across our three main campuses costing us £242,538 during the 2018/19 academic year. Recyclable materials represented 33% of the total general waste collected across campuses. As seen in Figure 12, there are opportunities to improve recycling across our Campuses.

Figure 12: Recycling Performances across QMUL's Campuses (2018/19)



The economic and environmental benefits of waste minimisation and appropriately segregating recyclable materials from general wastes generated at our premises will continue to be promoted. We will continue to implement environmental assurance systems, which ensure that we comply with all relevant waste management regulations and support improving our waste segregation performances.

We are committed to waste reduction and we currently run a reuse campaigns aimed at encouraging our students to donate any unused materials at the end of each semester. 231 kg of materials were recovered during our 2018/19 reuse campaign. These materials would have been removed as waste with associated economic and environmental impacts.

In addition, as part of our waste re-use strategy we are currently engaging with BetterWorldBooks. BetterWorldBooks collect donated books from our Mile End Campus. During the 2018/19 academic year 14,930 books were donated by staff and students.

The reused books is part of our contribution to reducing the volume of wastes and minimising our environmental impact. The unsalable books that were not appropriate for donation by BetterWorldBooks were recycled. Table 3 show the breakdown of the environmental benefits of the books collected from our Mile End Campus.

Table 3: Environmental Benefits of the Recycled and ReUsed Books

End destination of Book	Total	Recycled	ReUsed
Total Books ReUsed or Recycled	14,766	8,575	6,191
Books (kg)	9,166	5,323	3,843
Trees	237	136	101
Water (g)	130,626	49,808	80,818
Green-house Gases	14,265	8,178	6,087
Landfill space (m ³)	24	14	10
Electricity kWh	48,583	27,852	20,731

We will actively continue to promote the benefits of waste avoidance, recycling and re-use across our campuses as part of our commitment to reduce our environmental footprint.

Construction: New Builds and Refurbishment

The materials and the processes associated with construction and refurbishment projects have the potentials to adversely impact on our local environment. However, embedding good environmental practices into construction, new build and refurbishment projects could positively contribute to:

- Biodiversity and ecological enhancement
- Reduction of pollution (water, dust and noise) and emissions (carbon emissions from machinery and refrigeration (HCFC's))
- Waste minimisation and material re-use
- Enhanced energy and water efficiency
- Increase electricity generated from renewable sources
- Water efficiency from grey water and rainwater harvesting

As part of the delivery of our environmental objectives, all our major new builds and refurbishment projects⁹ will target the attainment of Building Research Establishment Environmental Assessment Method (BREEAM) Excellent and Very Good ratings respectively.

In addition, two of the indicators that will be used to monitor the performances all prospective refurbishment projects will be their contribution towards supporting the delivery of our six-year, 30% carbon reduction target as well as our de-carbonisation objective.

⁹ Those projects generally over 1,000 m² in floor area

Sustainable Procurement and Commissioning

The goods and services we procure have varying level of impacts on the environment. Therefore, including environmental specifications into relevant aspects of our procurement and commissioning processes will influence our supply chain, suppliers and contractors to reduce the environmental impacts of their operations.

Integrating relevant environmental sustainability and climate change adaptation specifications into all relevant aspects of our procurement processes as well as include sustainability performance reporting into all service level agreements (SLAs) with our major contractors will be an integral aspect of our procurement and commissioning processes. Below are our five main procurement and commissioning:

- Construction and buildings refurbishment
- Food and Catering
- Uniforms, Workwear and Textiles
- Cleaning Supplies and Services
- Information Technology (IT) Hardware and Equipment

We will continually integrate environmental specifications into all relevant aspects of our procurement and commissioning processes to encourage our suppliers and contractors to embed sustainability and good ethical standards into the way they do their businesses. For example, all our building contractors and facility management partners would be expected to demonstrate that they are embedding climate change adaptation, CRS and energy efficiency into the projects and services they implement across our campuses.

We are aware that as our student population and research activities rises, there would be pressure on us to increase investment in goods and services. We will invariable use this opportunity to influence our supply chain on the benefits of good environmental management practices and resource efficiency.

Therefore, we will be developing a sustainable procurement guide, which will support the delivery of our commitment to embed the principles of sustainable development and CSR into all relevant aspects of our procurement processes.

Sustainable Food and Catering

We are aware that embedding good environmental practices into the way we source, prepare and process food have the potential of enhancing our environmental performance and reducing the environment impacts of the food we serve across our campuses. Further benefits associated with sustainable food and catering are waste minimisation and water and energy reduction.

As part of our commitment to reduce the carbon and environmental footprint of our catering services, one of the restaurants at our Mile End Campus (Mucci's) serve vegetarian and vegan meals all year round. We are also pleased that a wide range of staff and students commended us for the Vegetarian and Vegan meals only campaign throughout January 2020. We will continue to promote the environmental benefits of meat-free meals.

We currently give 10p discount for every cup of hot drink in which the customer use their keep-cup or personal hot drink cups. This approach has contributed to reducing wastes generated from our catering outlets. Furthermore, the water dispensers and fountains installed across our campuses (including our restaurants) are part of our commitment to reduce single use plastics. Appendix 13 show location of these water dispensers and water fountains.

We currently use Too-Good-To-Go app to reduce the food waste from our catering outlets. We are pleased that we saved 797 meals that would have gone into a bin (with associated carbon avoidance of 1,600 kCO₂e).

Our sustainable food and catering policy details our commitment within this area of our operation. Three of these commitments are that:











- All major catering and food suppliers have certified environmental management system (EMS)
- We will exclude fish species classified as at risk by the Marine Conservation Society and specifying fish from sustainable sources
- Increasing the proportion of meals rich in fruit, vegetables, pulses and nuts, while reducing foods of animal origin (meat, dairy products and eggs), as livestock farming is one of the most significant contributors to climate change
- We will continue to specify food and services from responsible ethical sources.

Biodiversity and Ecological Enhancement

The Green Mary Garden is an important area of our Mile End Campus. This garden and associated 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.

Figure 13 show an overview of the variety of native plants that are available within our medicinal and sensory garden. These sensory plant species appeal to the five senses of: touch, sight, taste, smell and sound. The medicinal plants that are grown across this garden have historically been used in medicine. These medicinal plants were cultivated to give our students, staff and visitors an insight into the medicinal value of some plants.

Figure 13: Overview of QMUL's Medicinal and Sensory Garden

The Plants	
Sensory	Medicinal
 <p>Sight: Swiss chard 'Bright Lights'; the brightly-coloured stems and foliage.</p>	 <p>Chamomile, <i>Matricaria chamomilla</i> Used to reduce anxiety and promote sleep.</p>
 <p>Sound: Love-in-a-mist, <i>Nigella damascena</i>; Puffy seed-heads that rattle when shaken</p>	 <p>Horseradish, <i>Armoracia Rusticana</i>. Anti-bacterial properties. High vitamin C content.</p>
 <p>Touch: Lamb's ears, <i>Stachys byzantine</i> silky foliage.</p>	 <p>Garlic, <i>Allium sativum</i> Used for a wide range of conditions including skin conditions, colds, blood pressure and blood sugar problems.</p>
 <p>Smell: Curry plant, <i>Helichrysum italicum</i>; curry-scented leaves give a spicy aroma on a warm, sunny day.</p>	 <p>Fennel, <i>Foeniculum vulgare</i> Relief of wind and bronchial spasms.</p>
 <p>Taste: Strawberry, <i>Fragaria vesca</i></p>	 <p>Comfrey, <i>Symphytum x uplandicum</i> Oil is used to treat skin conditions.</p>

One of the plots within our allotment has been designated to our Nursery for educational purposes and the other plots are currently being used by 40 staff members, 10 students and one student group (Faith-2-Faith). Appendix 14 contain a summary of the profile of the

designated users of our allotment as well as crops that were grown across these allotments during the 2018/19 academic year.

We will continue to engage with and support the objective of London Borough of Tower Hamlets to enhance biodiversity across the Borough as well as increase native species such as the Black Poplars. Over the next five-years, we will actively explore opportunities to increase the number of Black Poplars across our Mile End Campus.

The Regent Canal is an integral aspect of our Mile End campus and we will continue to improve the visual and biodiversity of this canal. As part of this commitment, our Students' Union currently coordinate clean-up events around this canal.

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Climate Change Adaptation and Emergency

The impacts of adverse climate change are becoming obvious. Therefore, we will actively integrate climate change risks, adaptation and management into all aspects of our operations. Therefore, we will actively implement projects and initiatives that support the delivery of our six-year 30% carbon reduction target and de-carbonisation priorities.

Identifying, managing and mitigating the potential risks and challenges associated with extreme weather conditions will continue to be integrated into our estates strategy. This approach will ensure that our buildings are resilient to the impacts of extreme weather conditions and that these buildings continue to be fit for purpose to support learning, research and all associated activities.

Climate change preparedness and adaptation will be one of the specifications of relevant procurement and commissioning processes. We will also be collaborating with relevant stakeholders in responding to the risks associated with climate change.

We will also be embedding climate change risks and management into our curriculum and as well as conducting and disseminating research in the areas of climate change and emergency. In addition, we will continue to use our position and expertise to provide evidence to support policies and strategies in the area of climate change and the risks and challenges associated with climate emergency.

Embedding Environmental Sustainability

The delivery of our environmental objectives as well as appropriately respond to current and emerging environmental challenges implies that we will have to ensure that all students and staff members are involved in our environmental sustainability journey.

As part of our commitment to embed good environmental practices across QMUL, we will be delivery workshops (Environmental Sustainability Skills for the Workforce) designed and accredited by the Institute for Environmental Management and Assessment (IEMA). This workshop will be delivered on Campus and the main content of this course are:

- The main environmental risks and opportunities we face
- The importance of resource efficiency
- The impacts of pollution, prevention, control and legislation
- The role each individual can play in supporting the delivery of sustainable development

We are also using our participation in the EcoCampus programme, to offer all our students the opportunity to access a webinar designed for students who want to gain more insight about environmental management and how they can be involved in supporting the delivery of the principles of sustainable development.

Furthermore, as part of our commitment to embed the principles of sustainable development and good environmental practices into all aspects of our operations, we will continue to:

- Include an overview of the benefits of good environmental practices into our staff welcome events. This session will also be used to encourage these new colleagues to join our environmental sustainability journey
- Use our e-bulletins to engage with our staff members and students on how they can embed good environmental practices into the way they carry out their everyday life
- Use our website, events and other opportunities to promote the benefits of environmental sustainability and climate change adaptation
- Participate in national and international environmental campaigns

In addition to the above initiatives, we currently use our GreenMary Workbook. This is staff-led continual improvement framework, which gives groups of staff a structured approach to improve their awareness of the opportunities to improve the environmental performances within their work areas as well as support our commitment to continue to improve our environmental performances. The evidences collated by participating staff groups are audited

against expected outcomes and these staff groups are presented with awards that range from Bronze to Platinum statuses. See Appendix 15 for the status of the award statuses of current GreenMary staff groups.

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Social Corporate Responsibility & UN SDGs

Our corporate social responsibility (CSR) priorities have continued to underpin the way we engage with all stakeholders, add values to our communities and support the delivery of the UN SDGs.

Below are some examples of our CSR credentials:

- A London Living Wage Employer since 2006 and a Founding Partner of the Living Wage Foundation. Being a London Living Wage Employer has supported improving the quality of life of our employees
- We are a proud recipient of the Athena Swan silver award for our ongoing commitment to advancing women's careers in Science and Medicine
- Our WHRI Work Experience Programme for sixth form students that are interested in studying Medicine or Biological/Biomedical related degree at the University or are considering a career in a similar field. In addition, these students will have the opportunity to learn about alternative careers within government health-related initiatives and fundraising for healthcare and research
- Our Centre for Public Engagement work to embedding public engagement within our university by providing advice and support, reward and recognition, and funding for the benefits of our local communities.
- Our School Legal Advice Centre (LAC) offers free legal advice to the local community. Our law students work alongside solicitors from the City to advise our clients on the strength of their case, and provide them with an understanding of the legal issues and processes that need following.
- We are the first Russell Group University in London to partner with Kaplan. This partnership gives students the opportunity to build on their existing knowledge, skills and English language ability at Kaplan International College London (KICL) in London Bridge for a year before progressing to a degree programme at Queen Mary.
- We organise annual Festival of Communities to celebrate our local East London community. This festival gives members of our community the opportunity to explore a wide range of staff, family activities and demonstrations of local research and services

In addition, to the above initiatives and programmes, we will continue to carry out and disseminate research that supports the local and global benefits of delivering all 17 aspects of

the UN SDGs. Furthermore, as part of the delivery of our ESS we will be embedding relevant aspects of the UN SDGs across our curriculum.

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Environmental Management and Assurance

We are aware of the benefits of monitoring, managing and reporting all significant areas in which we interact with the environment will be an integral aspect of our environmental sustainability strategy. Therefore, our current participation in the EcoCampus programme will be used as the framework on which we implement a robust system to manage our environmental performance and provide assurance that we are complying we all relevant environmental regulations.

We are committed to attain and maintain ISO 14001:2015 environmental management system (EMS) within the next two years. We will be using our ISO 14001:2015 to demonstrate compliance with current and future statutory and regulatory requirements, deliver our environmental objectives, optimise all relevant environmental opportunities and enhance our resilience to current emerging environmental challenges.

We have selected a suit of established environmental indicators that will be used to monitor and report all aspects of our environmental footprints. These key performance indicators (KPIs) will underpin our sustainability performance appraisal and reporting. Appendix 1 contain the KPIs that will be used to monitor our performance against our environmental sustainability objectives. These KPIs will be updated to reflect: the main environmental aspects of our operation; our environmental priorities; regulatory requirements; and emerging environmental sustainability challenges.

Our environmental auditing programme will be used to provide assurance of our performance. The outcome of our audit programme and all aspects of our EMS will be reported during the quarterly meetings of our Sustainability Committee (SC) meetings.

Appendices

Appendix 1: QMUL's Environmental Sustainability KPIs

Aspects	Key Performance Indicator(s) – KPIs
Building Energy Use	<ul style="list-style-type: none"> • Percentage reduction of kWh of electricity used • Percentage reduction of kWh of gas used • Percentage reduction of kWh / Litres of heating oil used • Percentage improvement in DEC scores • Percentage increase in renewable energy generated • Proportion of electricity used from renewable sources
Travel and Transportation	<ul style="list-style-type: none"> • Percentage reduction in litres of fuel used • Percentage reduction (km / miles) of Domestic flights • Percentage reduction (km / miles) of Short-haul flights • Percentage reduction (km / miles) of Long-haul flights • Percentage reduction (km / miles) of International flights • Percentage reduction (km / miles) of non-flight travel • Proportion of bicycle storage per total students
Water	<ul style="list-style-type: none"> • Percentage reduction of water used • Percentage reduction of water used / total students
Carbon Management	<ul style="list-style-type: none"> • Percentage reduction in tCO₂e emitted • Performance against our five-year 30% carbon reduction target • Carbon tCO₂e per total number of students (carbon intensity) • Percentage reduction in Scope 1 tCO₂e

Aspects	Key Performance Indicator(s) – KPIs
	<ul style="list-style-type: none"> • Percentage Reduction in Scope 2 tCO₂e • Percentage reduction in Scope 3 tCO₂e
Waste	<ul style="list-style-type: none"> • Percentage of general wastes disposed on landfill • Percentage increase in recyclable materials collected • Percentage reduction in food waste • Percentage increases in materials collected (ReUse events) • Percentage increase in materials collected and recovered
Sustainable catering	<ul style="list-style-type: none"> • Availability of Vegetarian and Vegan meal options • Availability of free water across all catering outlets • Percentage reduction in food wastes • Achieve and maintain coffee and tea Fair Trade status • Compliance with MCS standards and specifications • Compliance with relevant ethical food and catering standards • Percentage reduction in single use water bottles • Percentage reduction in single use beverage cups • Proportion of major suppliers with certified EMS
Sustainable Procurement	<ul style="list-style-type: none"> • Proportion of major suppliers / contractors with certified EMS • Percentage of major contracts that sustainability has been included as one of the SLAs • Proportion of major contracts with environmental specifications • Proportion of major contract with CSR specifications
Refurbishment and New-builds	<ul style="list-style-type: none"> • Proportion of refurbishment that attain BREEAM Very Good

Aspects	Key Performance Indicator(s) – KPIs
	<ul style="list-style-type: none"> • Proportion of New-builds that attain BREEAM Excellent • Percentage improvement in energy efficiency • Percentage improvement in DEC score • Percentage increase in renewable energy generated and used • kWh of renewable energy generated • Volume (m³) of rainwater / greywater harvested / reused • Percentage reduction in water (m³) usage • Proportion of materials from certified environmental sources
Climate change adaptation	<ul style="list-style-type: none"> • Climate change and emergency risks included in QMUL's risk register • Proportion of refurbishment and new-builds in which resilience to adverse weather conditions is one of the design and implementation criteria • Research outputs in the area of climate change
Environmental Governance	<ul style="list-style-type: none"> • Active investment in good environmental initiatives • Environmental Sustainability Senior Executive Team Lead • Students' Union representation: Sustainability Committee • Staff Union representation: Sustainability Committee • Relevant stakeholders representation: Sustainability Committee
Environmental Compliance	<ul style="list-style-type: none"> • Up to date environmental risk register • Up to date environmental legal register • Number of completed environmental with zero non-compliance
Engagement / awareness	<ul style="list-style-type: none"> • Number of environmental engagement events / sessions

Aspects	Key Performance Indicator(s) – KPIs
	<ul style="list-style-type: none"> • Number of coordinated national / international environmental campaigns
Curriculum	<ul style="list-style-type: none"> • Proportion of courses / departments that environmental sustainability / sustainability has been integrated.
Management System	<ul style="list-style-type: none"> • Maintain certified environmental management system

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Appendix 2: Strands of QMUL's Environmental Sustainability Strategy

Aspects	Lead	Scopes	Frequency
Leadership and Strategic Commitment	Colin Bailey	<ul style="list-style-type: none"> Board approved and up to date environmental sustainability policy 	Quarterly
Leadership and Strategic Commitment	Philippa Lloyd	<ul style="list-style-type: none"> Designated SET Environmental Sustainability Lead Environmental assurance and governance Environmental sustainability performance as part of QMUL's annual report 	Quarterly Quarterly Annual
Environmental Sustainability Management Review	Ian McManus	<ul style="list-style-type: none"> Environmental compliance and performance review 	Quarterly
Institutional Roles, Responsibilities and Authorities	Ian McManus	<ul style="list-style-type: none"> Coordinated and integrated resources to support and coordinate the delivery of QMUL's environmental objectives 	Quarterly
Operational Planning and Control	Garry Pritchard	<ul style="list-style-type: none"> Adequate resources and systems to support and coordinate the delivery of QMUL environmental objectives 	Quarterly
Emergency preparedness and Response	Steven Exley	<ul style="list-style-type: none"> Assurance and systems that enhances QMUL's resilience to the adverse impacts of climate change 	Quarterly
Environmental Policy	Philip Tamuno	<ul style="list-style-type: none"> Up to date environmental sustainability policy 	Annual

Aspects	Lead	Scopes	Frequency
Environmental Objectives	Philip Tamuno	<ul style="list-style-type: none"> Up to date SMART (Qualitative and Quantitative) indicators used to monitor and report QMUL's environmental performance 	Quarterly
Organisation Context (Environmental Aspects)	Philip Tamuno	<ul style="list-style-type: none"> Updated environmental aspects register that addresses all relevant regulations and standards 	Monthly
Compliance and Obligations	Philip Tamuno	<ul style="list-style-type: none"> Updated environmental legal register 	Quarterly
Environmental Management Actions	Philip Tamuno	<ul style="list-style-type: none"> Environmental sustainability strategy and management system 	Quarterly
Environmental sustainability competence and awareness	Philip Tamuno	<ul style="list-style-type: none"> Year round environmental awareness campaigns linked to National and International Campaigns Environmental sustainability, sustainable development and environmental compliance educational programme 	Quarterly Quarterly
Sustainable Development and Curriculum	Philip Tamuno, VP Research & VP Education	<ul style="list-style-type: none"> Embed sustainable development into research and innovation activities Embed sustainable development into academic curriculum 	Annual Annual
Sustainable Development and Our Workforce	Philip Tamuno	<ul style="list-style-type: none"> Advertise relevant courses and workshops Delivery of environmental sustainability workshops 	Quarterly Quarterly
Communication and Engagement	Philip Tamuno	<ul style="list-style-type: none"> Promotion of good environmental sustainability practices 	Monthly

Aspects	Lead	Scopes	Frequency
		<ul style="list-style-type: none"> Participate in National and International Campaigns 	Quarterly
Environmental Performance Review	Philip Tamuno	<ul style="list-style-type: none"> Updates presented to the Sustainability Committee Annual environmental sustainability Report 	Quarterly Annual
Monitoring, Measuring, Analysis and Evaluation	Philip Tamuno	<ul style="list-style-type: none"> Energy and water management Review of environmental KPIs Management review and escalation 	Monthly Monthly Quarterly
Internal Audit, Evaluation and Compliance	Philip Tamuno	<ul style="list-style-type: none"> Internal audit programme Environmental assurance Internal environmental audit 	Quarterly Quarterly Monthly
Procurement and Commissioning	Bahar Shahin	<ul style="list-style-type: none"> Up to date sustainable procurement guide Influencing supply chain Environmental sustainability specifications included in all relevant procurement and commissioning processes 	Quarterly Monthly Monthly
Air Conditioning	Garry Pritchard	<ul style="list-style-type: none"> Compliance with relevant environmental, energy and emission regulations 	Quarterly
Boilers and Chillers (including maintenance)	Timothy Lee	<ul style="list-style-type: none"> Energy efficiency ratings and performances of boilers and chillers across all Campuses 	Quarterly
Sustainable Food and Catering	James Cornwall-Walker	<ul style="list-style-type: none"> Up to date sustainable food and catering policy Energy use 	Annually Monthly

Aspects	Lead	Scopes	Frequency
		<ul style="list-style-type: none"> • Water use • Recycling and waste segregation • Embedding sustainable development • Environmental compliance • Management, storage and disposal of food waste 	Monthly Monthly Monthly Monthly Monthly
Carbon Management Plan	Philip Tamuno	<ul style="list-style-type: none"> • Up to date carbon management plan • Review of QMUL's carbon reduction performance • Carbon reduction performance 	Quarterly Quarterly Quarterly
Utilities – energy and water management	Philip Tamuno	<ul style="list-style-type: none"> • Review of QMUL's energy and water performance • Identify, prioritise and implement low-cost energy and water efficiency measures • Energy and water budget performance 	Monthly Monthly Quarterly
Building Design and Construction	Project Managers	<ul style="list-style-type: none"> • Embed relevant environmental specifications into all new builds, refurbishment and construction project • Environmental assurance and compliance • BREEAM assessment and target 	Quarterly Quarterly Quarterly
Asbestos Management	Andrew Cumming	<ul style="list-style-type: none"> • Up to date Asbestos register • Assurance of compliance with relevant waste management regulations 	Monthly Quarterly

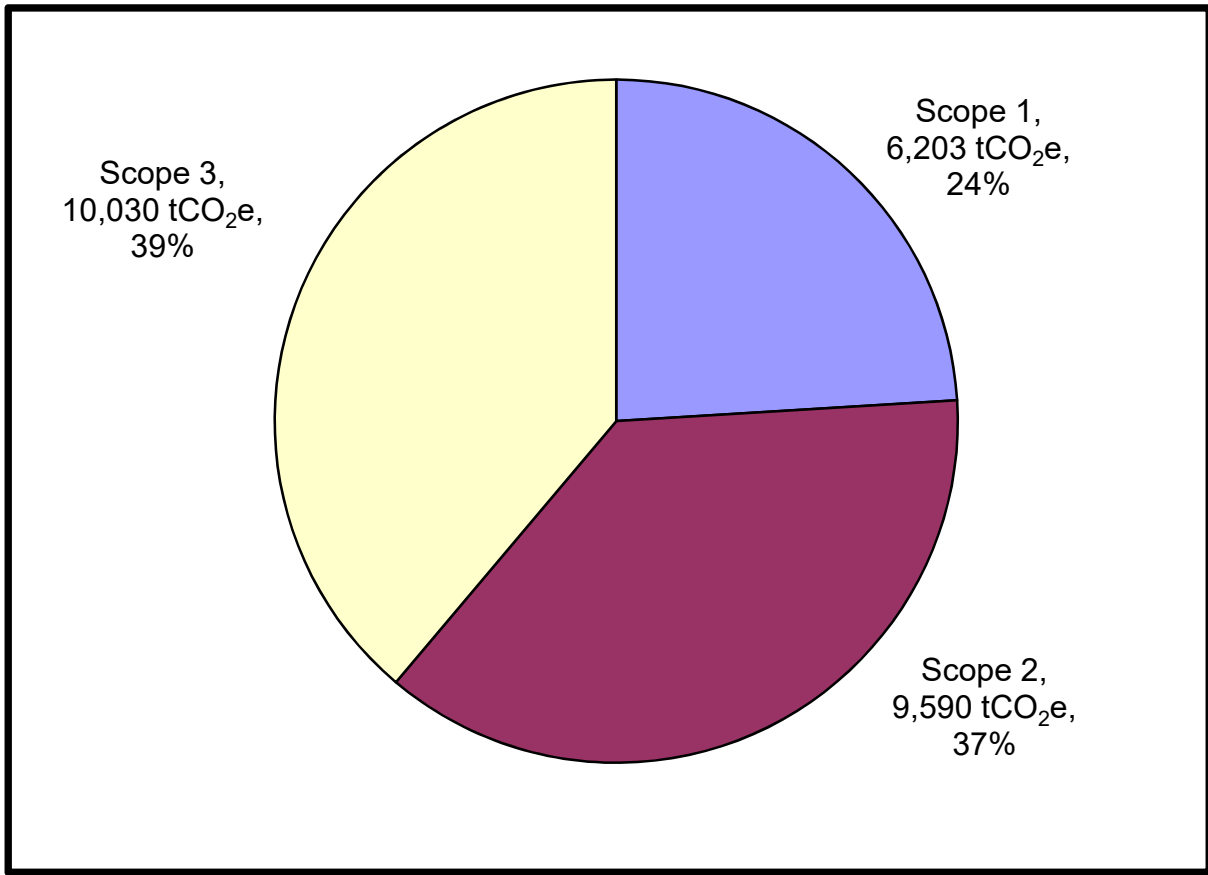
Aspects	Lead	Scopes	Frequency
Information and Waste Electrical Equipment	IT Department	<ul style="list-style-type: none"> • Safe storage and disposal of all waste electrical and electronic equipment (WEEE) • Compliance with hazardous waste regulations 	Quarterly Quarterly
Recycling and Waste Management	Waste Manager (Vacant)	<ul style="list-style-type: none"> • Recycling and waste segregation performance • Waste management and compliance audits • Weight of each waste streams • Assurance of compliance with waste duty of care • Recycling and waste segregation awareness campaigns / events 	Monthly Monthly Monthly Quarterly Quarterly
Grounds Maintenance	Waste Manager (Vacant)	<ul style="list-style-type: none"> • Biodiversity and ecological enhancement • Embedding good environmental practices • Green regeneration activities • Awareness and training for all Grounds Staff 	Monthly Monthly Quarterly Quarterly
Clinical Waste Management and Compliance	Suzanne Mason	<ul style="list-style-type: none"> • Clinical waste segregation performance • Hazardous waste compliance and audits • Weight of each waste streams • Assurance of compliance with hazardous waste regulation • Hazardous waste handling awareness 	Monthly Monthly Monthly Quarterly Quarterly

Aspects	Lead	Scopes	Frequency
Chemical & hazardous Wastes Management and Compliance	Mark Ariyanayagam Robert Haigh and Mihaela Stevar	<ul style="list-style-type: none"> Chemicals and waste handling storage and disposal Hazardous waste compliance and audits Weight of each waste streams Assurance of compliance with hazardous waste regulation Hazardous waste handling awareness 	Monthly Monthly Monthly Quarterly Quarterly
Drainage and Emissions (Mile End)	Andrew Megennis	<ul style="list-style-type: none"> Compliance with Trade Effluent Regulations 1989 Assurance of safe storage and disposal of all hazardous materials Designated of surface water and wastewater drains 	Monthly Quarterly Quarterly
Drainage and Emissions (Whitechapel)	Valeriy Hnachuk	<ul style="list-style-type: none"> Compliance with Trade Effluent Regulations 1989 Assurance of safe storage and disposal of all hazardous materials Designated of surface water and wastewater drains 	Monthly Quarterly Quarterly
Drainage and Emissions (Charterhouse)	Ian Wiser	<ul style="list-style-type: none"> Compliance with Trade Effluent Regulations 1989 Assurance of safe storage and disposal of all hazardous materials Designated of surface water and wastewater drains 	Monthly Quarterly Quarterly
Laboratories and Workshops	Relevant Managers	<ul style="list-style-type: none"> Energy Use Water use 	Monthly Monthly Monthly

Aspects	Lead	Scopes	Frequency
		<ul style="list-style-type: none"> • Embedding sustainable development • Recycling and waste segregation • Assurance of compliance with relevant hazardous materials and waste storage and disposal regulations 	Monthly Monthly
Nursery	Linda Happe	<ul style="list-style-type: none"> • Energy Use • Water use • Embedding sustainable development • Recycling and waste segregation • Non-infectious waste segregation • Waste management compliance 	Monthly Monthly Monthly Monthly Monthly
Residences	Suzanne Cantelo	<ul style="list-style-type: none"> • Energy Use • Water use • Embedding sustainable development • Recycling and waste segregation • Waste management compliance 	Monthly Monthly Monthly Monthly Monthly
Student Union	Mike Wojcik	<ul style="list-style-type: none"> • Energy Use • Water use • Embedding sustainable development • Recycling and waste segregation • Waste management compliance 	Monthly Monthly Monthly Monthly Monthly

Aspects	Lead	Scopes	Frequency
Humanities and Social Sciences	Marta Timoncini	<ul style="list-style-type: none"> • Energy Use • Water use • Embedding sustainable development • Recycling and waste segregation • Waste management including food waste • Business travel data (Not captured by Key Travel) 	Monthly Monthly Monthly Monthly Monthly Monthly
Medicine and Dentistry	Robert Bennett	<ul style="list-style-type: none"> • Energy Use • Water use • Embedding sustainable development • Recycling and waste segregation • Waste management including food waste • Business travel data (Not captured by Key Travel) 	Monthly Monthly Monthly Monthly Monthly Monthly
Science and Engineering	Anne Parry	<ul style="list-style-type: none"> • Energy Use • Water use • Embedding sustainable development • Recycling and waste segregation • Waste management including food waste • Business travel data (Not captured by Key Travel) 	Monthly Monthly Monthly Monthly Monthly Monthly

Appendix 3: Scopes of QMUL's Carbon Baseline



Appendix 4: Six-Year 30% Carbon Reduction – Value at State

Scenarios	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
BAU (tCO ₂ e)	25,823	26,327	26,841	27,365	27,899	28,444	29,000
RES (tCO ₂ e)	25,823	24,350	22,945	21,620	20,373	19,197	18,089
VAS (tCO ₂ e)	0	2,019	3,933	5,777	7,555	9,272	10,932
C-VAS (tCO ₂ e)	0	2,019	5,952	11,729	19,285	28,556	39,488

Appendix 5: Six-Year 30% Financial – Value at State

Scenarios	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
BAU (£)	£9,823,809	£10,447,716	£11,115,619	£11,830,900	£12,597,224	£13,418,560	£14,299,210
RES (£)	£9,823,809	£9,625,898	£9,433,995	£9,247,873	£9,067,315	£8,892,112	£8,722,065
VAS (£)	0	£821,819	£1,681,624	£2,583,027	£3,529,909	£4,526,448	£5,577,145
C-VAS (£)	0	£821,819	£2,503,443	£5,086,470	£8,616,379	£13,142,826	£18,719,971

Appendix 6: DEC Scores of QMUL's Buildings (2018/19)

Building	Rating
Geography (Mile End Campus)	B
Mathematics (Mile End Campus)	B
Engineering (Mile End Campus)	B
Centre for Commercial Law (Lincoln's Inn Fields)	B
Athletics Ground (Chislehurst Sports Ground)	B
Creed Court (Mile End Campus)	B
Aspire Point (Halls of Residence)	B
Computer Science (Mile End Campus)	C
Arts Two (Mile End Campus)	C
Arts One (Mile End Campus)	C
Arts Research Annexe (Mile End Campus)	C
Scape East (Mile End Campus)	C
Ifor Evans Place (Halls of Residence)	C
Maurice Court (Halls of Residence)	C
Beaumont Court (Halls of Residence)	C
France House (Mile End Campus)	C
Pooley House (Halls of Residence)	C
Lynden Court (Halls of Residence)	C
Laws (Mile End Campus)	D
FOGG Building (Mile End Campus)	D
Queens' Building (Mile End Campus)	D
John Vane Science Centre (Charterhouse Square Campus)	D
Yvonne Carter (Whitechapel Campus)	D
Garrod (Whitechapel Campus)	D
Lindop House (Halls of Residence)	D
Stocks Court (Halls of Residence)	D
Floyer House (Halls of Residence)	D
Richard Feilden House (Halls of Residence)	D
Varden Street Flats (Halls of Residences)	D
Informatics Teaching Laboratories (Mile End Campus)	E
Library (Mile End Campus)	E
Francis Bancroft (Mile End Campus)	E
Engineering (Mile End Campus)	E

Building	Rating
Graduate Centre (Mile End Campus)	E
Student Union (Whitechapel Campus)	E
Lock Keepers Cottage (Mile End Campus)	E
Nursery (Mile End Campus)	E
Maynard House (Mile End Campus)	E
Varey House (Mile End Campus)	E
People's Palace (Mile End Campus)	F
G. O. Jones (Mile End Campus)	F
St Augustine Library (Whitechapel Campus)	F
Hatton House (Mile End Campus)	F
Albert Stern House (Mile End Campus)	F
Catering Building (Mile End Campus)	G
Students Union (Mile End Campus)	G
Joseph Priestley (Mile End Campus)	G
Old Anatomy (Charterhouse Square Campus)	G
Joseph Rotblat (Charterhouse Square Campus)	G
Wolfson (Charterhouse Square Campus)	G
William Harvey (Charterhouse Square Campus)	G
Innovation Centre (Whitechapel Campus)	G
Wingate (Whitechapel Campus)	G
Abernethy (Whitechapel Campus)	G
Blizzard (Whitechapel Campus)	G
Dawson Hall (Charterhouse Square Campus)	G

Appendix 7: Recently Commissioned Energy Efficiency Projects

Project Title / Description	Campus	Projected Savings / Increase (-)	
		Electricity (kWh)	Gas (kWh)
Graduate School Combine Heat and Power (CHP). Cogeneration Plant	Mile End	621,601	-2,683,245
Arts 2 - Ground Source Heat Pump (GSHP)	Mile End	34,533	133,200
Francis Bancroft Building Refurbishment	Mile End	484,039	181,680
Abernethy Building Refurbishment	Whitechapel	80,330	79,639
Maynard House BMS and Lighting Upgrade	Mile End	98,752	34,919
Varey House BMS and Lighting Upgrade	Mile End	95,500	34,919
Computer Science Building Management System (BMS)	Mile End	99,972	124,740
Richard Feilden House BMS and Lighting Upgrade	Mile End	41,977	34,919
Lindop House BMS and Lighting Upgrade	Mile End	35,726	52,113
Pooley House BMS and Lighting Upgrade	Mile End	48,772	317,998
Beaumont Court BMS and Lighting Upgrade	Mile End	33,949	79,665
Drapers Hall & Qmotion Lighting Upgrade	Mile End	78,262	NA
Geography Pipework Insulation	Mile End	NA	53,626
Charterhouse Building Management System (BMS) Upgrade	Charterhouse	1,612,604	6,904,126
Dawson Hall Combine Heat and Power (CHP). Cogeneration Plant	Charterhouse	1,770,700	-1,818,650
John Vane Combine Heat and Power (CHP) Cogeneration Plant	Charterhouse	1,770,700	-1,818,650
Total Savings (kWh)		6,907,417	1,710,999

Appendix 8: Secured and Funded Energy Efficiency Projects (£2,465,509)

Project Title / Description	Campus	Project Cost (£)	Projected Savings	
			Electricity (kWh)	Gas (kWh)
Joseph Priestley: Plate Heat Exchanger	Mile End	£397,907	105,780	1,763,680
BMS Upgrade: Whitechapel Campus	Whitechapel	£602,946	727,382	1,358,785
BMS Upgrade: Arts Two Building	Mile End	£32,573	34,526	39,742
BMS Upgrade: Computer Science Building	Mile End	£16,629	56,325	100,627
BMS Upgrade: Engineering Building	Mile End	£83,025	201,279	400,434
BMS Upgrade: G. E. Fogg Building	Mile End	£48,783	164,607	37,477
BMS Upgrade: G. O. Jones Building	Mile End	£8,629	31,010	21,069
BMS Upgrade: Peoples Palace Building	Mile End	£105,017	85,970	435,906
Lighting Upgrade and Controls: Whitechapel Campus	Whitechapel	£1,170,000	914,929	NA
Total		£2,465,509	2,321,808	4,157,720

Appendix 9: Mile End Campus: Bicycle Storage Locations

Location (Building Number)	Capacity	Type of Facility
Queens' Building and Octagon (1)	16	Uncovered
G. O Jones Building (2)	8	Uncovered
Library (3)	12	Uncovered
St. Benet's Chapel (4)	8	Uncovered
Students' Union Pub (5)	10	Sheltered
Laws Building (6)	16	Sheltered (under building cover)
Arts One Building (7)	8	Sheltered (under building cover)
East Gate – Westfield Way (8)	32	Wall Mount
Arts Research Centre (9)	6	Secure Bike Lockers
Residence – Hatton House (10)	30	Uncovered
Residence – Maynard House (11)	20	Uncovered
Residence – Chapman House (12)	18	4 Uncovered and 14 Sheltered
Residence – Chesney House (13)	12	Uncovered
Residence – Lodge House (14)	10	Secure Bike Lockers
Residence – Varey House (15)	52	Uncovered
Residence – Selincourt House (16)	12	Uncovered
Car Parking (17)	18	Uncovered
Bancroft Building (18)	10	Uncovered
Geography, Advice & Counselling Service (19)	12	Uncovered
Temporary Building (20)	12	Sheltered
Residence – Lindop House (21)	56	Sheltered
Fogg Building (22)	34	14 Uncovered & 20 Sheltered
Student Union & Qmotion (23)	10	Uncovered
Computer Science (24)	46	Uncovered
Total	468	

Appendix 10: Whitechapel Campus: Bicycle Storage Locations

Location (Building Number)	Capacity	Type of Facility
Royal London Hospital (1)	8	Uncovered
Royal London Hospital (2)	34	Uncovered
Residence – Floyer House (3)	8	Sheltered
Residence – Floyer House (4)	8	Sheltered
Walden Street (5)	10	Uncovered
John Harrison House (6)	4	Uncovered
Abernethy Building (7)	10	Uncovered
Queen Mary Innovation Centre (8)	12	Uncovered
Residences (9)	42	Uncovered
Residences (10)	32	Uncovered
Library (11)	60	Uncovered
Royal London Hospital (12)	52	Uncovered
Total	280	

Appendix 11: Charterhouse Campus: Bicycle Storage Locations

Location (Building Number)	Capacity	Type of Facility
Residence – Dawson Hall (1)	20	Uncovered
Dawson Hall (2)	10	Uncovered
John Vane Science Centre (3)	30	Uncovered
Wolfson Institute (4)	50	Uncovered
Total	110	

Appendix 12: Business Travel Template

1	Date Travel Booked	DD/MM/YYYY
2	Date of Travel	DD/MM/YYYY
3	Date of Return	DD/MM/YYYY
4	Travel Description	
5	Number of Passengers	
6	Mode of Travel	Train/EuroStar/EuroRail/Flight/Road/Coach/Taxi
7	Flight (If No go to 13)	Y/N
8	Flight (Domestic)	Y/N
9	Flight (Economy)	Y/N
10	Flight (Premium Economy)	Y/N
11	Flight (Business)	Y/N
12	Flight (First Class)	Y/N
13	Return	Y/N
14	Start / From	
15	Through / Via	
16	To / Destination	
17	Comment	

Appendix 13: Location of Communal Water Fountains / Dispensers

Campus	Building	Location	Quantity
Mile End	Student Hub	Ground Floor	1
Mile End	The Nest	1 st Floor	1
Mile End	Qmotion	1 st Floor	2
Mile End	Laws Building	Ground Floor	1
Mile End	Peoples Palace	Ground Floor	1
Mile End	Engineering Building	Ground Floor	1
Mile End	Graduate Centre	1 st Floor	1
Mile End	Graduate Centre	2 nd Floor	1
Mile End	Graduate Centre	3 rd Floor	1
Mile End	Graduate Centre	4 th Floor	1
Mile End	Graduate Centre	5 th Floor	1
Mile End	Arts One	Ground Floor	1
Mile End	Arts One	1 st Floor	1
Mile End	Fogg Building	Ground Floor	1
Mile End	The Curve	Ground Floor	1
Mile End	Francis Bancroft Building	Ground Floor	1
Mile End	Francis Bancroft Building	4 th Floor	1
Mile End	Library	Ground Floor	1
Mile End	Library	1 st Floor	1
Mile End	Library	2 nd Floor	1
Mile End	Arts Two	Ground Floor	1
Mile End	Mathematics Building	Basement	1
Charterhouse Square	John Vane Science Centre	Ground Floor	1
Charterhouse Square	John Vane Science Centre	3 rd Floor	1
Charterhouse Square	Dawson Hall (Shield Res.)	Ground Floor	1
Whitechapel	Garrod Building	Behind Café	1
Whitechapel	Garrod Building	Mess Room	1
Whitechapel	Garrod Building	Nucleus Café	1
Whitechapel	Library	Restricted Area	1

Appendix 14: Designated Users of Queen Mary Gardens / Allotments

Plot	Department / Service Area	Crops Grown (2018/19)	Staff / Students
1.	Nursery	Educational Purpose	Nursery Staff & Students
2.	Information Technology Services, QMI, and Strategic Planning Office	Tomatoes, radishes, beetroot, lettuce, onions, garlic, spinach	3 Staff
3.	Advice and Counselling	Three different varieties of tomatoes, carrots, broccoli and leeks which are still growing	3 Staff
4.	ARCS Geography Physics Estates and Facility	Tomatoes, onions, carrots, beetroot, lettuce and leeks.	5 Staff
5.	Biology Blizzard Estates	Potatoes, tomatoes, runner beans and chillies.	2 Staff and 2 Students
6.	CAPD	Awaiting information	1 Staff

Plot	Department / Service Area	Crops Grown (2018/19)	Staff / Students
7.	Student	Awaiting information	2 Students
8.	Electronic Engineering and Computer Science	Beetroot, carrot, swede, onions	2 Staff
9.	Housing Hub / Residential Support	Peas, Onions, Horseradish, Beetroot and Carrots	5 Staff
10.	Communication and Marketing	Swiss chard, runner beans, lettuce, herb, tomatoes	2 Staff
11.	Global Opportunities School of Economics and Finance	Tomatoes and radish	2 Staff
12.	Residential Support	Spuds, spring onions, beetroot, onions	4 Staff
13.	Faith 2 Faith (Student led group)	Awaiting response	Student Group
14.	IT Business Support	Purple broccoli, carrots and lots of tomatoes.	3 Staff
15.	Central Print Services	Awaiting information	1 Staff
16.	Finance, Health and Safety, and SLLF	Awaiting information	3 Staff 3 Students
17.	IT Services and Law	Awaiting information	2 Staff
18.	Health and Safety	Awaiting information	2 Staff

Plot	Department / Service Area	Crops Grown (2018/19)	Staff / Students
19.	Students	Cherry tomatoes, onions, radishes, and several varieties of salad.	3 Students

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Appendix 15: GreenMary Workbook Groups

Department / Service Area	Status Attained
Finance	Gold
Residential Support	Gold
Geography	Gold
Development and Alumni	Silver
Student Services (Disability and Dyslexia Services)	Silver
Catering	Silver
Estates and Facilities	Bronze
Science and Engineering	Bronze
Copy Shop	Bronze
Bart's Research Centre for Women's Health	Bronze
Languages, Linguistics and Film	Bronze
The Department of Law	Bronze
Wolfson Institute	Bronze
Information Technology (IT)	Bronze
Bart's Cancer Institute	Bronze



QMUL Canal Adoption

Outcome requested:	That the Sustainability Committee should: <ul style="list-style-type: none"> • Consider the adoption agreement and associated activity • Endorse the adoption agreement and associated activity • Approve the presentation of the adoption agreement to the Senior Executive Team (SET)
Executive Summary:	The committee is asked to approve in principle the attached proposals for QMUL to adopt a stretch of the Regent's Canal alongside Mile End Campus under the Canal and River Trust (CRT) Adoption Programme. Subject to the completion of the attached adoption agreement and approval by SET, it is proposed that an action plan for adoption related activities will be drawn up and delivered by a working group comprising representatives from across QMUL.
Alignment with: <ul style="list-style-type: none"> • QMUL Strategy • Internal Policies/Regulations • External Statutory Requirements 	QMUL Environmental Sustainability Strategy (<i>in development</i>) QMUL Strategy 2030 <ul style="list-style-type: none"> • Excellence in the Learning Environment: "Work closely with our Students' Union, to ensure that our campuses are vibrant and promote students' health and wellbeing, engagement and sense of community." • Excellence in student employability: "Opportunities for students to engage with our local communities, through volunteering and working in partnership with local organisations. "
Consideration of Strategic Risks:	Minimal financial risk - the agreement is not legally binding. Reputational risk if after the adoption the relationships and physical estate are not maintained.
Subject to Prior and Onward Consideration by:	Senior Executive Team

Confidentiality and Distribution:	<i>Non-restricted</i>
Equality Impact Assessment:	<i>Not applicable</i>
Author(s) :	Thomas Stockton, Sustainability Coordinator, Queen Mary Student's Union
Date:	<i>29.04.2020</i>

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QMUL Canal Adoption

Background: Formally adopting a stretch of the Regent's Canal alongside Mile End Campus has been a long-term ambition for QMUL and discussions between CRT and QMUL started over 5 years ago when Geraldene Wharton (School of Geography) was a member of the CRT London Waterways Board.

Local organisations nearby, notably Bloomberg to the north and the Lower Regents Coalition have been able to establish adoptions and deliver regular cleaning activities through volunteers (litter picks, removal of graffiti etc.) as well as enhancement activities such as reed planting.

QMUL context: In the 2019/20 academic year, the Students' Union sustainability coordinator has built on historical volunteering efforts on the canal to organise and lead monthly canal clean-up lunchtime activities for QMUL staff and students promoted via the Students' Union volunteering service and staff e-bulletin. There has been good uptake in these activities with approximately 15 students and staff joining each month from December to March. From February the sessions were led by trained student volunteering champions who received the new volunteer of the year award for their efforts.

Aims: Based on discussion between staff in the Students' Union, Centre for Public Engagement, Estates and Facilities and the School of Geography and the School of Business and Management. It is hoped that these clean-up activities could be delivered formally as part of an adoption of the stretch of the canal alongside Mile End campus. An adoption has the potential to facilitate widening QMUL's engagement with the local community, enhancing local biodiversity, further volunteering opportunities for students and staff as well as contributing to planning applications for future developments. Further possibilities have been identified to link the canal with research and academic programmes through field teaching, widening participation activities and events to emphasise canal-side living in halls.

Governance: Subject to the completion of an adoption agreement (**see below**) it is proposed that an action plan for adoption related activities will be drawn up and delivered by a steering group comprising representatives from across QMUL to meet bimonthly. The role of this steering group would be to develop activities, monitor these and respond

to new opportunities e.g. with local groups as neighbouring adopters. The Students' Union Sustainability Coordinator will function as overall coordinator between schools and main point of contact with CRT.

Suggested steering group representatives are:

- Estates and Facilities
- Students' Union
- Centre for Public Engagement
- School of Geography
- School of Business Management

Funding: CRT make no charges for adoption and can provide support such as Health & Safety training for volunteers and there is potential for in kind support from CRT in the form of help with student projects and our public engagement activities. The Students' Union will continue to deliver monthly volunteering clean-ups to meet the minimum adoption requirements. The costs for delivering regular clean-up activities are minimal and can be performed using already owned equipment.

For additional activities the steering group would seek to identify sources of funding if required and seek approval from the Sustainability Committee and SET if further financial contribution is required before proceeding.

Potential funding sources of funding are identified below;

- Sticky Campus fund
- Sustainability budget within Estates
- Contributions from schools (where activities link to academic programmes)
- External grants
- Contributions from alumni and SBM corporate partners

Please see the proposed adoption agreement below.



Partner Group or Organisation Volunteer Registration Form

Please complete part 1 & 3 to register your group and part 1,2 & 3 if you are registering to adopt a section of Canal or River.

Group Name Queen Mary, University of London		<i>Canal & River Trust to complete - ThankQ number</i>
Location where your group will mainly volunteer: Mile End, London		
Canal or River: Regents' Canal		
Region (please circle): North West - North East - East Midlands - West Midlands - South East & London - Wales & South West		
Brief description of your group: Queen Mary, University of London		
Are you an open or closed group? Would the group be happy for other volunteers to join tasks? Do you want your opportunities promoting on the Trust's website? (If yes we will put a basic opportunity on the Trust site with you webpage)		Open / Closed Yes / No
Organisation's address: Queen Mary University of London, Mile End Road, London		
Post code: E1 4NS		
Phone number: 020 7882 8030		Website:
Twitter name (for us to follow you): @QMULSustain		Email: t.stockton@qmul.ac.uk sustainability@qmul.ac.uk
Lead Contact – For communications Role in the group: Group Coordinator Mr Thomas Stockton		
Address (if different from primary address above):		

Telephone – Home: 020 7882 3347	Mobile: 07527 300630
Email: t.stockton@qmul.ac.uk	

Part 2 – For groups adopting a section of Canal or River only (Please also sign and complete section 3)

What area will your group be adopting exactly? These should be the words for your certificate		
<i>Canal & River Trust to complete - Functional Location start and end points</i> <p style="text-align: center;">Bridge 57, Mile End Road Bridge (A11) (functional location: RE-013-004) to Bridge 56 (Railway) (functional location: RE-013-001)</p>		
Which type of adoption you will your group be undertaking? Please circle one and the length of time		
Community Adoption Agreement	1 year — 2 years	Start date
Helping Hands Adoption Agreement	1 year	Start date: xx 2020
Pocket Adoption Agreement	6 months — 1 year short term	Start date

Part 3 - Completed by all

<p><i>General Data Protection Regulations</i></p> <p><i>At The Canal & River Trust we take the safety and security of your personal information seriously and comply with the General Data Protection Regulations. The Trust are the data controller for the information which you are providing on this form. We hold and process your details to ensure that your group have the best, more effective, most enjoyable volunteering experience possible, contacting you by post, email and SMS as</i></p>
--

Partner Volunteer Group Agreement

We ask that on behalf of your group you agree the following principles. This is not legally binding and is done in a spirit of working in partnership.

The Trust want to work in partnership and as such we agree to:

1. Explain the Trust’s aims and objectives and how your volunteering benefits the waterways
2. Agree activities and the support, training and supervision as jointly agreed and prioritised
3. Treat volunteers from partner groups with respect and courtesy

4. Ensuring clear lines of communication with your representative
5. Try to resolve fairly any problems, complaints and difficulties that may arise
6. Be open to the ideas and plans of your group
7. Inform your group of health and safety requirements and guidance
8. Inform your group of any known safety hazards connected to volunteering activities or area
9. Work with you to promote your project via our media channels

The Partner volunteer group agrees to:

1. Support the Trust's aims and objectives
2. Celebrate the waterways in your community
3. Give as much warning as possible whenever your group are unable honour a commitment
4. Talk to your Trust representative if you have any problems
5. Work with the Trust to manage your activity in accordance with agreed procedures and legislative practice, including health and safety, equal opportunities, environment, heritage and confidentiality
6. Have due regard for your own safety and the safety of others outside your group
7. Follow any reasonable instructions given by Trust staff and volunteers
8. Manage the safeguarding responsibilities for your volunteers including any young people and adults at risk involved in your volunteering
9. Agree any media or promotion of your project with your Trust representative prior to release
10. Talk to your Trust representative before working with any additional third party on Trust land including developing any corporate relationships

Adoption Period:

1. Adoption will commence xx 2020 and run for one calendar year
2. After the year, the agreement will be reviewed and may be amended if both the Trust and the Adopter are in agreement
3. An adoption review may be valuable to both organisations in the final month of the existing adoption period

Activities:

1. An annual adoption activities plan will be developed between representatives of Queen Mary and the Trust to accompany the partnership.

2. Volunteer events will take place at least once every quarter and will be supervised either on site or with agreement by a trained leader who will have a Method Statement and Risk Assessment in place which has been agreed by the Trust.

Partner Group representatives

Name: Philippa Lloyd, VP Policy & Strategic Partnerships, Queen Mary University of London	Signed: complete	Dated: complete
Name: Tom Stockton, Sustainability Coordinator, Queen Mary Students' Union	Signed: complete	Dated: complete

Trust Representative

Name:	Signed:	Dated:
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Please complete and send to your local Canal & River Trust Contact or Volunteer@canalrivertrust.org.uk

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Energy Performance Report

Outcome requested:	That the Sustainability Committee: <ul style="list-style-type: none"> • Consider our energy efficiency performance compared to budget • Consider issues that should be escalated
Executive Summary:	This report details our energy efficiency performance against our budget and contain an overview of projects that have been implemented via the Salix energy efficiency loan.
Alignment with: <ul style="list-style-type: none"> • QMUL Strategy • Internal Policies/Regulations • External Statutory Requirements 	<ul style="list-style-type: none"> • The Environmental Protection Act 1990 • Clean Air Act 1993 • The Climate Change Act 2008 • The Energy Act 2016
Consideration of Strategic Risks:	Reducing the energy used across our Campuses will reduce our exposure to volatile energy prices and reduce our carbon footprint.
Subject to Prior and Onward Approval by:	Based on the Sustainability Committee recommendation
Confidentiality and Distribution:	<i>Non-restricted</i>
Equality Impact Assessment:	<i>Not Applicable</i>
Author(s) :	Philip Tamuno & Garry Pritchard
Date:	<i>29 April 2020</i>

Electricity and Gas Consumption Performance Report: YTD Month 7

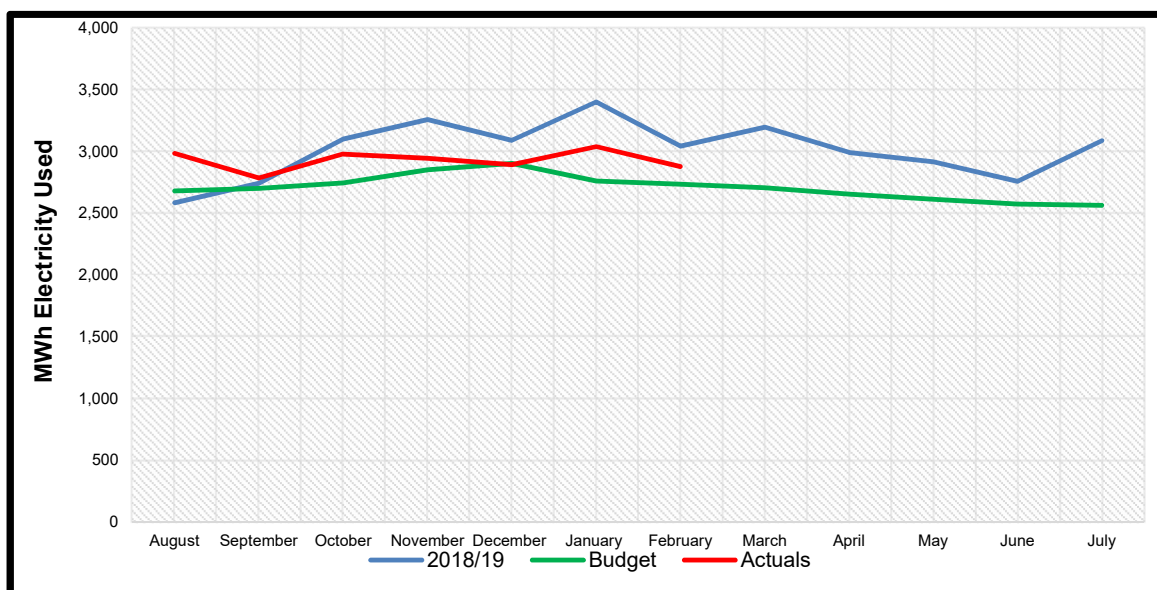
This report details our electricity and gas consumption performances against our 2019/20 energy budget. Our 2019/20 budget was based on the performances of energy efficiency projects that were scheduled to be completed during the 2018/19 academic year.

During the 2018/19 academic year, we used 36,184,249 kWh (36,184 MWh) and 29,135,032 kWh (29,135 MWh) of electricity and gas respectively. Our 2019/20 academic year energy budget were set to deliver 10.2% reduction in electricity and 10.9% increase in gas used across our Campuses.

Based on the electricity and gas used across our Campuses between August 2019 and February 2020, we are in line to use 2,437,034 kWh (7.5% higher) more electricity than projected and 783,163 kWh (2.4% lower) more gas than budgeted by the end of the current academic year. This is based on the assumption that we will continue to maintain our energy consumption profile throughout the current financial year¹⁰.

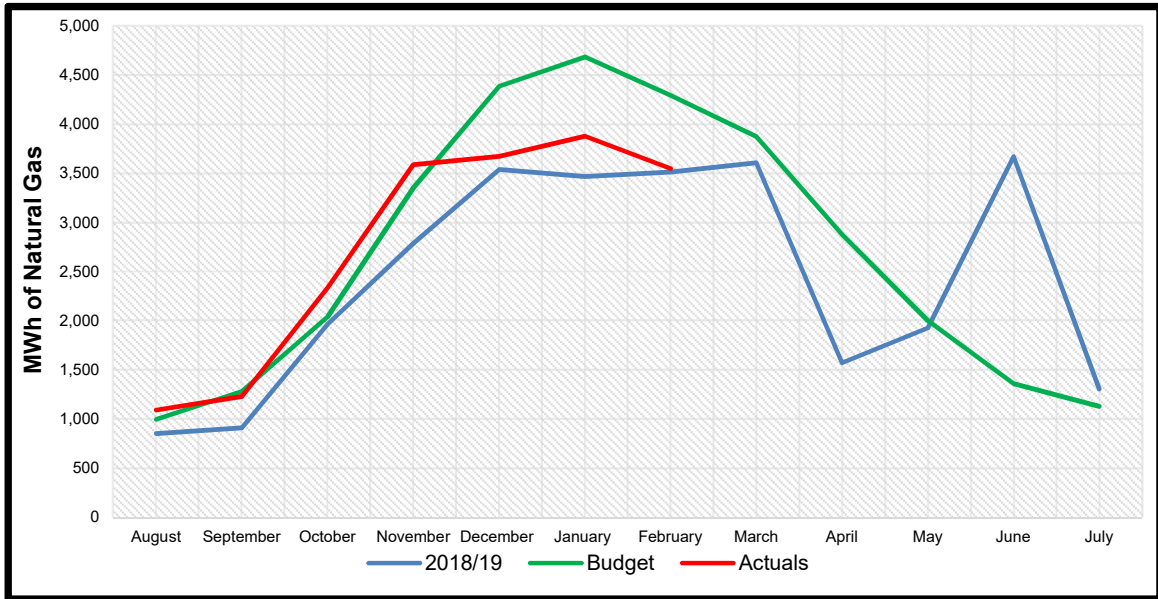
The Figures 1 and 2 show the below gives an overview of the current trend of our electricity and gas budget (MWh) performances.

Figure 1: Trend in Electricity Consumption Performance Compared to Budget



¹⁰ The current lock-down implies our end of year performance will be significantly better than our current position.

Figure 2: Trend in 2019/20 Gas Consumption Performance Compared to Budget



Appendix 1 show that compared to our 2018/19 energy use profile; we are in line to reduce the electricity used across our campuses by 1,238,638 kWh (1,238 MWh), but a 3,945,445 (3,945 MWh) projected year end increase in gas.

As part of our commitment to continue to reduce our carbon footprint, we recently secured a £2.46 Million energy efficiency funding from the Salix (see Appendix 2 for details of these projects). The projected 2,321,808 kWh (electricity) and 4,157,720 kWh (gas) savings from the implementation of these projects has been guaranteed by our Building Management Service (BMS) contractor.

We will continue to monitor the energy used across our premises and continue to identify opportunities to reduce electricity and gas used across our campuses.

Conclusions and Recommendations

That the Sustainability Committee should consider:

- This report for information and assurance purpose
- Issues that should be escalated

Author (Position): Philip Tamuno (Head of Sustainability)

Appendix 1: Trend of Energy Performance Performances

Campus	Electricity (kWh) 2018/19	Electricity (kWh) 2019/20	Difference (kWh)	Gas (kWh) 2018/19	Gas (kWh) 2019/20	Difference (kWh)
Charterhouse	6,904,126	6,339,743	564,383	6,281,653	7,334,584	1,052,931
Whitechapel	7,940,688	7,846,527	94,162	7,330,551	7,759,335	428,784
Mile End	21,208,363	20,642,496	565,867	15,449,170	17,753,589	2,304,419
West Smithfield	0	0	0	73,658	232,968	159,310
Lincoln's Inn Field	80,838	74,354	6,484	0	0	0
Chislehurst Sports Ground	50,234	42,491	7,743	0	0	0
Total	36,184,249	34,945,611	1,238,638	29,135,032	33,193,627	3,945,445

Appendix 2: Secured and Funded Salix Energy Efficiency Projects (£2,465,509)

Project Title / Description	Campus	Project Cost (£)	Projected Savings	
			Electricity (kWh)	Gas (kWh)
Joseph Priestley: Plate Heat Exchanger	Mile End	£397,907	105,780	1,763,680
BMS Upgrade: Whitechapel Campus	Whitechapel	£602,946	727,382	1,358,785
BMS Upgrade: Arts Two Building	Mile End	£32,573	34,526	39,742
BMS Upgrade: Computer Science Building	Mile End	£16,629	56,325	100,627
BMS Upgrade: Engineering Building	Mile End	£83,025	201,279	400,434
BMS Upgrade: G. E. Fogg Building	Mile End	£48,783	164,607	37,477
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BMS Upgrade: Peoples Palace Building	Mile End	£105,017	85,970	435,906
Lighting Upgrade and Controls: Whitechapel Campus	Whitechapel	£1,170,000	914,929	NA
Total		£2,465,509	2,321,808	4,157,720



Sustainability Committee Terms of Reference

Outcome requested:	That the Sustainability Committee should: <ul style="list-style-type: none"> • Consider the environmental sustainability policy • Endorse the environmental sustainability policy • Approve the presentation of the environmental sustainability policy to the Senior Executive Team (SET)
Executive Summary:	The environmental sustainability policy details the current environmental objective of the Queen Mary, University of London (QMUL). This policy will be reviewed annually to ensure that it is fit for purpose, reflects all significant environmental aspects of QMUL, ensure that it continue to improve its environmental performance and complies with all relevant environmental regulations.
Alignment with: <ul style="list-style-type: none"> • QMUL Strategy • Internal Policies/Regulations • External Statutory Requirements 	<ul style="list-style-type: none"> • The Environmental Protection Act 1990 • Clean Air Act 1993 • The Climate Change Act 2008 • The Waste (England and Wales) Regulations 2011 • Water Framework Directive 2015 • The Energy Act 2016 • Clean Air Framework 2017 • Clean Air Strategy 2019
Consideration of Strategic Risks:	This policy will be the framework on which QMUL's environmental management strategy will be developed and on which its environmental sustainability performance will be monitored and reported.
Subject to Prior and Onward Approval by:	Senior Executive Team
Confidentiality and Distribution:	<i>Non-restricted</i>

Equality Impact Assessment:	<i>Not Applicable</i>
Author(s) :	Philip Tamuno
Date:	<i>29 April 2020</i>

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Sustainability Committee

Terms of Reference

Version 4, January 2020

Aim

Queen Mary University of London (QMUL) is committed to embed the principle of sustainable development and good environmental practices across all areas of its operations. The Sustainability Committee is responsible for leadership and governance of all environmental sustainability initiatives across all our campuses.

Purpose

The Sustainability Committee:

1. Oversee the delivery of QMUL's environmental sustainability policy.
2. Review and approve all initiatives that support the delivery of QMUL's environmental objectives and its commitment to comply with all relevant environmental regulations.
3. Review assurance of QMUL's environmental performances and ensure that appropriate indicators are used to monitor and report QMUL's environmental sustainability performance.
4. Consider and prioritise projects, which contribute to the achievement of QMUL's sustainability objectives and targets. This includes making recommendations in respect of necessary funding of initiatives for environmental/energy/carbon reduction improvements for discussion and agreement at Estates Strategy Board (ESB) and Queen Mary Senior Executive Team (SET) as appropriate.
5. Oversee the activities of, and review the activities of all relevant working groups (see reporting structure).
6. Co-ordinate the monitoring, management and reporting of QMUL's environmental performance (including endorsement of the annual QMUL's Sustainability report) .
7. Report to the ESB and/or SET on the status of QMUL's environmental sustainability performance, including its compliance with relevant regulations, external commitments and obligations.
8. Promote the benefits of embedding the principles of sustainable development into all QMUL's curriculum, research and all associated operations.

Membership Roles

Senior Managers and Leaders across the following areas will be represented in this governance group:

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

This governance group will be chaired by the Vice Principal (Policy and Strategic Partnerships) and the Director Estates, Facilities and Capital Development will serve as the Vice Chair of the Sustainability Committee.

Membership Responsibilities

Members of the Sustainability Committee will:

1. Attend all scheduled meetings. A nominated deputy must represent the substantive member whenever it is not possible for the substantive member to attend.
2. Have the required mandate or delegated responsibility to act and make decisions on behalf of their service areas.
3. Monitor the implementation of sustainability initiatives in their portfolios/service areas and provide advice, observations and/or recommendations to the Committee about such initiatives.
4. Ensure their departments/service area are informed about the outcomes of the Sustainability Committee discussions and decisions.
5. Consider the resource implications of all proposals presented to the committee

Meeting Schedule

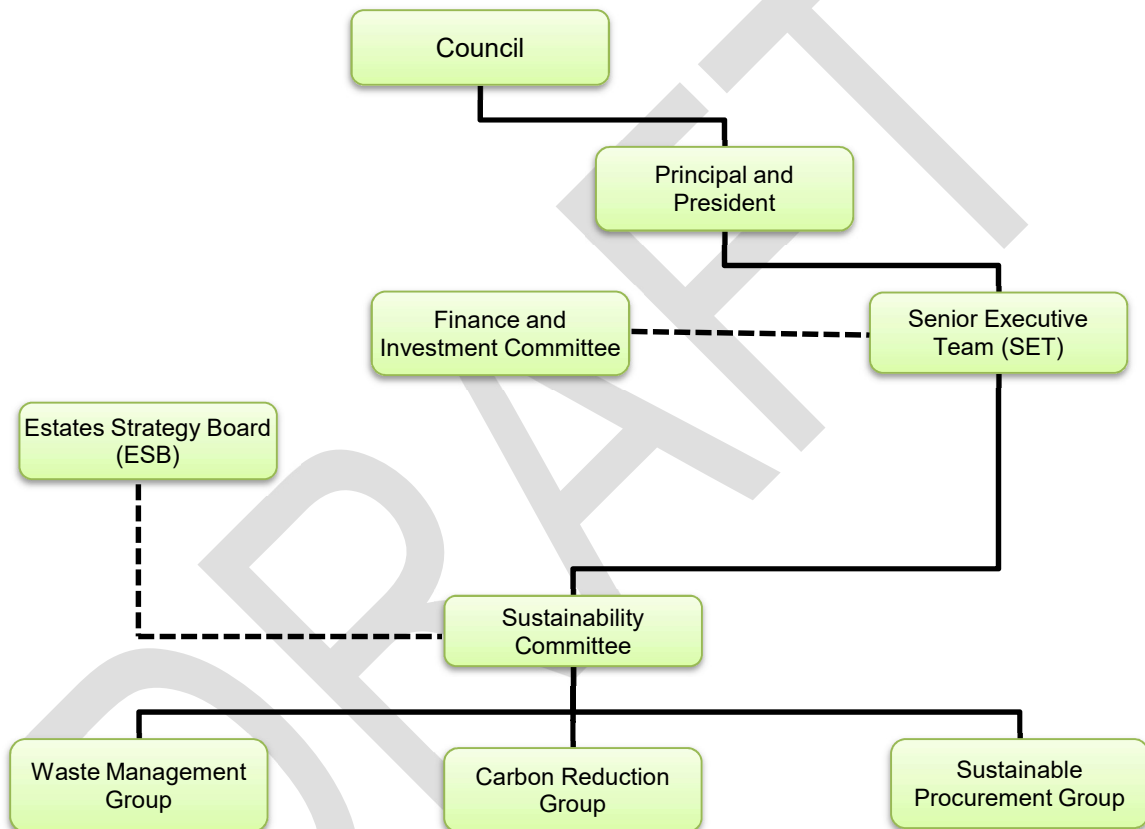
The Sustainability Committee meets every quarter. Whenever necessary, these meetings will be rotated across the main QMUL's campuses.

Secretariat and Reporting

The Sustainability Team will provide administrative support to the Chair of the Sustainability Committee.

The Sustainability Committee will report, via the Chair, to the Estates Strategy Board (ESB) and Senior Executive Team (SET) as appropriate.

Reporting Structure



Drafted by The Head of Sustainability
QMUL Sustainability Team
Estates & Facilities Directorate
9th January 2020

Approved By
Sustainability Committee
9th January 2020

Approved by Estates Strategy Board
27 January 2020

To be reviewed annually or as business requires for suitability.

Everything discussed within the committee is confidential and cannot be shared without prior consent.