

Carbon Management Plan 2014 – 2017



Contents

Foi	eword from Vice Chancellor Professor John Raftery	1
Su	mmary	2
1	Introduction	4
2	Carbon management strategy	5
2.1	Drivers for carbon management	5
2.2	Strategic themes	5
3	Emissions baseline	7
3.1	Scope	7
3.2	Baseline	7
5	Progress towards 2014 Target	10
5.1	Current Scope 1 and 2 Emissions (2013/14)	11
6	Planned carbon management projects	16
6.1	Planned/funded projects	16
7	Carbon management plan financing	24
8	Programme management of the carbon management plan	25
8.1	The Programme Board – strategic ownership and oversight	25
8.2	The Environmental Sustainability Management Team – delivering the projects	26
8.3	Annual progress review to Senior Management Team	26

Foreword from Vice Chancellor Professor John Raftery

I am proud that London Metropolitan University has made significant progress in reducing our carbon footprint by 43% by the end of 2014 and keen to expand upon this success. I am pleased to introduce London Metropolitan University's Carbon Management Plan and it is a reflection of our ongoing commitment to reduce our carbon emissions and environmental impact.

The University recognises its role in leading carbon reduction both through the management of our University and through our education, research and our wider role within society. Minimising our environmental impact delivers benefits not only for our institution but also the local community and wider society.

The plan sets us some challenging targets particularly reducing our Scope 3 emissions, but this is a challenge we are ready to take with enthusiasm and commitment. The plan also presents us with opportunities to develop a culture of environmental awareness and realise long term energy savings.

I give my full support to this plan and encourage all members of the University community to become involved in making the University a more sustainable place. The involvement of staff and students is essential in this process as they are our biggest asset.

Professor John Raftery

Vice Chancellor, London Metropolitan University

Summary

London Metropolitan University is committed to reducing its carbon emissions. A joint consultation between HEFCE, Universities UK and GuildHE on developing carbon reduction targets and strategy for higher education in England was published in 2010 with carbon reduction aims. These were:

- Commit to a reduction in scope 1 and 2 emissions of 34% by 2020 and 80% by 2050 against a 1990 baseline
- Commit to reducing scope 3 emissions in-line with Scope 1 and 2 emissions

This document sets out London Metropolitan University's strategy for reducing its carbon emissions by a target of 50% by 2020. Due to the changes to the University estate, this target will be reviewed in 2017. In 2011, London Metropolitan University set a reduction target of 46% by the end of 2020. At the end of 2014, the University exceeded its carbon reduction target by reducing carbon emissions by 43% based on 2009 levels. Due to this achievement, the University has set itself a challenging target of a 50% reduction by 2020.



London Metropolitan University will reduce its annual Scope 1 and 2 carbon emissions by 50% by end of 2020 and 80% by 2050¹,

The University will ensure procedures are in place to allow an accurate baseline of Scope 3 emissions to be measured by 2017.

The University has set a baseline from 2009 emissions (Scope 1 and 2) of 13,499 tonnes of CO₂. Scope 3 emissions were recorded for the first time in 2013/14. The carbon footprint for all Scopes was 28,070 tonnes of CO₂. The University is refining data collection procedures to allow a more accurate assessment of Scope 3 emissions.

¹ Compared to the 2009 baseline emissions level of 13,499 tonnes of CO₂.

Implementation of the Carbon Management Plan will cost the University £2,713,158 over the next two years. The total financial saving the CMP is anticipated to deliver is £427,596 per annum by 2017.

The University has identified 35 measures that will contribute to a reduction in carbon emissions and a series of enabling activities to embed carbon management within the University. These cover the following areas:

- Optimising existing systems
- Engaging stakeholders
- Invest to save
- Improve the ways we work
- · Policy alignment.

The University has developed this Carbon Management Plan to:

- Assign roles and responsibilities for implementing projects
- Reduce energy costs
- Set reduction targets
- Establish an effective system of monitoring consumption
- Encourage environmentally aware behaviour in staff and students
- Improve the corporate image of the University
- Recognise the University's role and responsibilities to act to reduce its impact on global climate change

The Carbon Management Plan is owned and governed by the University's Environmental Sustainability Programme Board. The Environmental Management Team is responsible for delivery of the projects and initiatives within this Plan.

1 Introduction

London Metropolitan University has over the past four years, undertaken steps to reduce its environmental impact and be more active in energy saving and carbon reduction.

Institutional sustainability is one of the three strategic priorities of the University as defined in the 2013 – 2015 Strategic Plan. One of the aims of the Strategic Plan is to increase the University's People and Planet Green League score year on year. Implementing a robust Carbon Management Plan which includes Scope 3 emissions will go some way to achieving this.

This Carbon Management Plan documents the background and motivations for undertaking this programme, as well as detailing the scope of work and projects needed to meet tough targets. This plan aims to lay out in-depth technical and behavioural solutions designed to meet sector carbon reduction targets. These solutions have been identified as technically feasible and financially viable, and sources of funding considered.

Since the initial Carbon Management Plan (2011 - 2014), the University has made significant progress in reducing its carbon footprint, as shown in Figure 1. The University hopes to build on this success to meet carbon reduction targets and monitor and set targets for Scope 3 emissions.



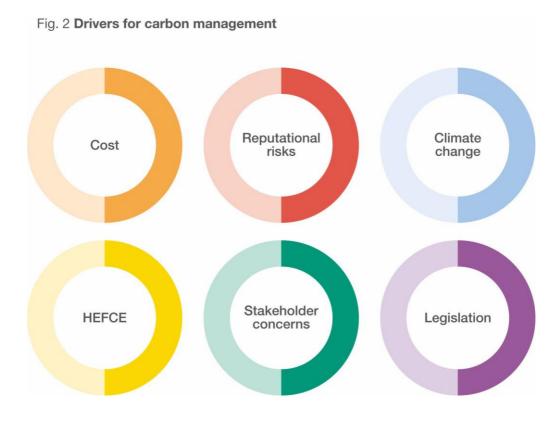
2 Carbon management strategy

The UK Climate Change Act 2008 set legally binding targets for a reduction in greenhouse gas emissions of 80% by 2050 and at least 34% by 2020 against a 1990 baseline. The Higher Education sector is required to assist in meeting these targets. The Higher Education Funding Council for England (HEFCE) has set out a target for the sector of 43% by 2020.

The Carbon Management Programme provides an impetus for London Metropolitan University to put climate change into context for its community of staff and students. The programme aims to bring the issue of carbon emissions reduction to the forefront and use the opportunity to progress the University's environmental management in a comprehensive and discernible manner.

2.1 Drivers for carbon management

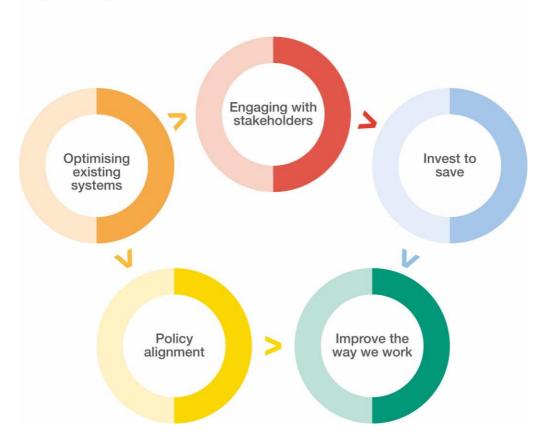
We envisage that adopting procedures to significantly reduce London Metropolitan University's carbon emissions has a number of strategic benefits for the environment and the financial status of the University. These have been critical in committing to the Carbon Management Programme, and are vital for continued support during its implementation. The key drivers for implementing a Carbon Management Plan are outlined in Figure 2.



2.2 Strategic themes

The strategic themes that the Carbon Management Plan will meet is shown in Figure 3. The University is in the process of reviewing and rewriting its Strategic Plan therefore the themes may change once this is published.

Fig. 3 Strategic themes



3 Emissions baseline

3.1 Scope

Scope 1 emissions are defined as direct emissions that occur from sources that are owned or controlled by the organisation, for example, emissions from gas combustion in boilers. Scope 2 emissions are defined as emissions from the generation of purchased electricity consumed by the University. Scope 3 emissions are all other indirect emissions that are consequences of the activities of the University but occur from sources that are not owned or controlled by the University, for example, staff and student commuting.

This plan includes all Scope 1, 2 and 3 emissions. During 2013/14 the University began to ascertain how it would measure Scope 3 emissions. This process is still ongoing and will form a target of the Carbon Management Plan. The table below shows the measurements included in London Metropolitan University's Carbon Management Plan.

Scope 1	Gas	Company Vehicles	Fugitive emissions
Scope 2	Grid electricity		
	Water	Waste	Business travel
	Leased Business Travel	Procurement	Commuting
Scope 3	Travel between campuses	Student end of term travel	Accommodation not maintained by the University
	Students living in private accommodation	Food	Commercial activities falling outside of the University operating accounts

Key

Included 2009
Included 2013
Included 2013 limited data
Data unavailable

Table 1: Scope of Carbon Emissions

3.2 Baseline

3.2.1 Scope 1 and 2

HEFCE commissioned SQW Consulting to calculate 1990 and 2005 carbon emission baselines for each Higher Education Institute. To recognise growth in the Higher

Education sector since 1990, the sector level reduction target was set by HEFCE against a 2005 baseline.

Scope 1 and 2 emissions are used as a baseline for the Carbon Management Plan in line with HEFCE guidelines.

The 2005 baseline for London Metropolitan University was 12,810 tonnes of CO₂ with a 2009 emission level of 13,499. The targets set out in the Carbon Management Plan 2011 – 2014 related to a 2009 emission level.

3.2.2 Scope 3

The University is working to establish robust processes to capture Scope 3 emissions. Data collected is limited and therefore it is difficult to set targets and establish a baseline at this time. Work has been undertaken to calculate an initial baseline to identify data gaps and assist in developing procedures for capturing data. This baseline will be revised once accurate data has been collated.

The University uses two main suppliers of travel agency which staff and students are required to book travel from. The data from the travel agencies has formed the basis of the business travel Scope 3 emissions. However, this method does not capture business travel which is booked by individuals and claimed for via the expense system. Currently, the expense system does not record details of method of transport, distance etc.

The University has begun to record procurement emissions. Currently, the only information available is for the contracts purchased through the LUPC frameworks. Finance and Estates are working together to establish a system to assign a carbon value to every item that is procured.

Commuting, student end of term travel and travel between campuses is not measured currently. The Safety and Environment Department will run a travel survey by the end of 2015 to establish a baseline.

As the University does not have residential halls and our students do not stay in just one building, this information is not captured.

Food emissions are not measured currently.

An initial baseline of carbon emissions was produced in 2014 for the first time for Scope 3 emissions. The baseline of emissions is shown in the table 2 below.

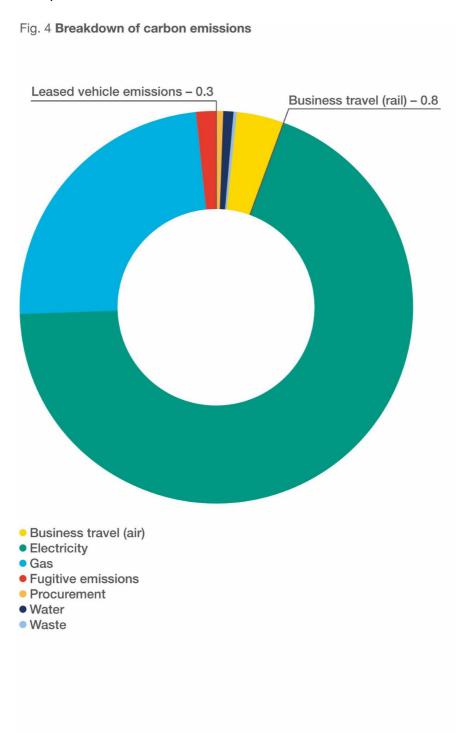
Туре	CO ₂ emissions (tonnes)
Leased vehicle emissions	0.3
Procurement	20,459
Water	29
Waste water	59
Waste	21
Business travel (air)	301

Business travel (rail)	0.8
Total	20,870

Table 2: Scope 3 Emissions

3.2.2 All scopes

Based on data from 2013/14, the University's carbon footprint is 28,070 tonnes of CO_2 . Figure 4 shows that nearly 75% of the University's carbon emissions are due to the products and services we purchase.



4 Targets and objectives

London Metropolitan University will reduce its carbon emissions by 50% by 2020 from the 2009 baseline (Scope 1 and 2).

This is based on carrying out all of the actions provided in the implementation plan. This target is challenging yet achievable.

In order to meet the sector targets, the University must contribute significant investment and effort towards the projects as set out in this plan, and in doing so will act as a leader amongst the students and wider community to encourage others to follow suit.

The Carbon Management Plan is also expected to deliver the aims set out in Table 3.

Aim	Target date
Reduce water carbon emissions by 15%	2020
Undertake a travel survey to capture Scope 3 emissions from	2015
staff/student commuting	
Develop a methodology to capture all Scope 3 emissions	2016
from procurement	
Develop a methodology to capture all business travel	2016
emissions including from expense claims	
Utilise waste contractor portal to accurately measure Scope 3	2015
emissions	
Set reduction targets for Scope 3 emissions once an	2016
accurate baseline has been established	
Increased level of energy awareness amongst staff and	2017 (events held
students.	annually)
Regular reporting of energy consumption and carbon	2017 (reported
emissions	annually)

Table 3: Aims of Carbon Management Plan

The Carbon Management Plan requires a management framework that ensures effective delivery of a number of carbon saving projects. This will include:

- Annual monitoring and annual reporting of the Carbon Management Plan to the Environmental Sustainability Board
- · Annual review of the implementation of energy efficiency projects
- · Consideration of carbon within all procurement decisions
- Development of energy efficiency specifications for capital projects
- Procedures and management to comply with the Carbon Reduction Commitment Energy Efficiency Scheme.

5 Progress towards 2014 Target

5.1 Current Scope 1 and 2 Emissions (2013/14)

The targets set out in the 2011 Carbon Management Plan were a reduction in Scope 1 and 2 emissions of 33% by the end of 2014 and 46% by the end of 2020 compared to a 2009 baseline of 13,499 tonnes. The Carbon Footprint for 2013/14 for Scope 1 and 2 emissions is shown in Table 4. This is a reduction of 43% on the 2009 baseline and a reduction of 5,771 tonnes of carbon. Table 5 shows the savings that have been made through the implementation of energy efficiency projects from 2009/10 to 2013/14.

	Tonnes of CO ₂
Gas	1,829
Electricity	5,790
Transport	0 (all vehicles are leased)
Fugitive Emissions	109
Total	7,728

Table 4: Scope 1 and 2 Emissions for 2013/14

Electricity saved	10,504,559 kWh
Electricity saved ²	£1,260,552
Gas Saved	6,317,201 kWh
Gas saved ³	£252,688
Carbon reduction	5,771 tonnes
Total costs saved	£1,513,240

Table 5: Summary of savings

_

² Based on £0.12/kWh

³ Based on £0.04/kWh

Figure 5 shows the annual progress to reaching the reduction targets of electricity and gas consumption (as transport accounts for a minimal proportion of the total emissions). In addition to energy reduction projects implemented, 2012-2014 has mild winters which accounts for some of the gas savings. Electricity is the largest cost at the University and has the highest carbon emission factor therefore electricity reduction is targeted in the implementation plan.

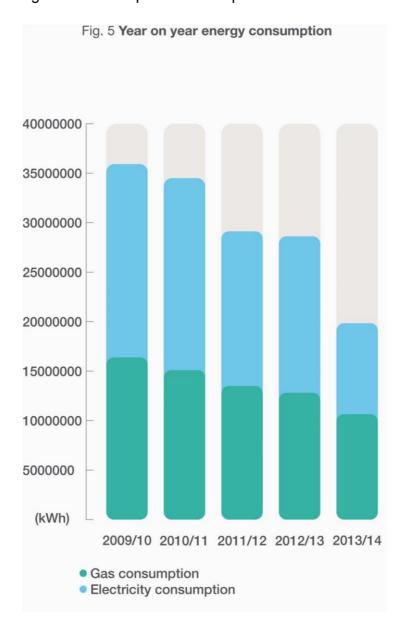
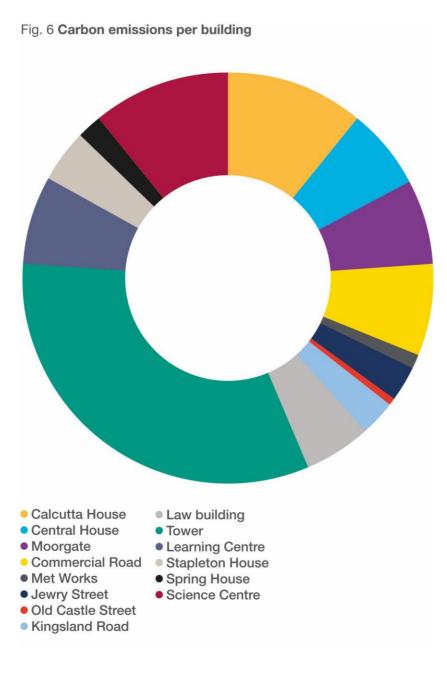
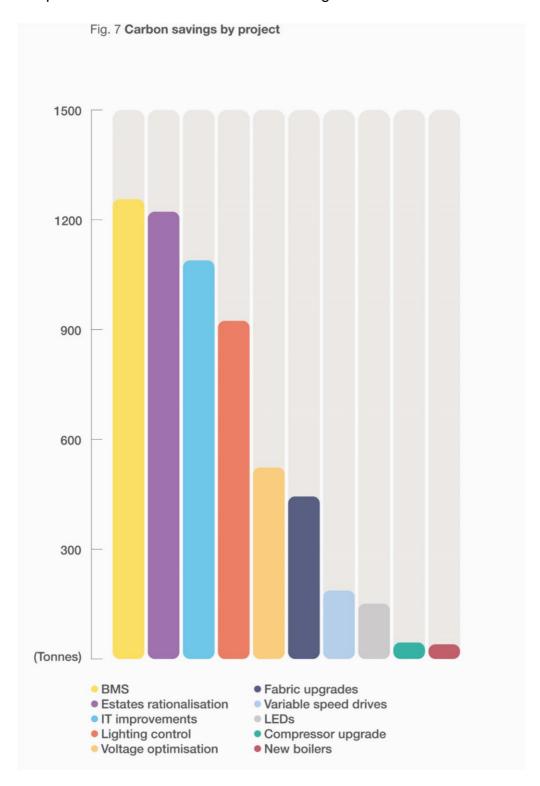


Figure 6 shows the carbon emissions from electricity and gas usage per building to demonstrate where the largest users are which has been used to target projects. The Tower building is the University's largest building and consumes the most energy. It costs approximately £180 per hour to run. The second largest energy user is the Science Centre; this is also the building with the lowest Display Energy Certificate rating.



5.1 Carbon management projects implemented

A number of projects that were identified in the Carbon Management plan 2011 have been implemented to reduce the University's carbon footprint. Figure 7 shows the projects implemented and estimated carbon savings.



Automatic Meter Reading equipment was installed during 2011/12 with a monitoring and targeting dashboard completed in 2012/13. This allows gas, electricity, gas and water consumption to be measured and large users of utilities to be identified to help scope future projects and identify any out of hours use which can be reduced. This also enables the results of implementing energy saving technologies to be measured.

An example of the data available is shown in Figure 8. During 2014/15, the system will be expanded to include submetering.



Figure 8: Example of energy data collection

Work has been undertaken to reduce Scope 3 emissions:

- Leasing an electric van
- Implementing Site Waste Management Plans for all large projects
- Purchasing recycled paper
- Increased cycle parking and offering free cycle training to all staff/students
- Reduction of staff/student car parking
- Installing video conferencing
- Installing percussion taps, low flush toilets and urinal control
- Implementing Ska rating system for capital projects
- Improved recycling bins in heavily used areas
- Upgrading drinking water facilities

6 Planned carbon management projects

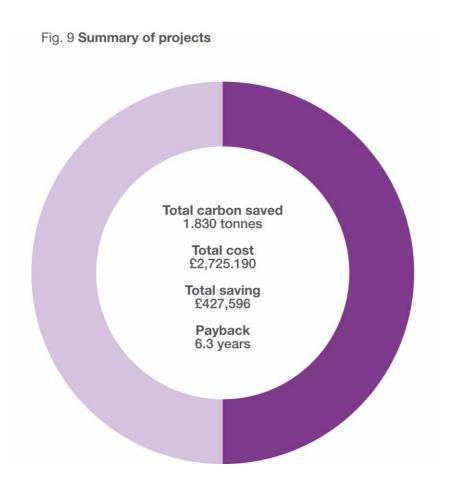
6.1 Planned/funded projects

To meet the 2020 carbon reduction target, 978 tonnes of CO₂ needs to be saved. As the University has not yet reached steady state in terms of what the future Estate will consist of, it is difficult to identify long term projects. The projects listed are those that will be undertaken from 2015-2017 when the Carbon Management Plan will be reviewed and reduction targets revisited to include Scope 3 emissions.

Projects identified will produce a reduction in carbon emissions by 56%. A summary of savings and costs is provided in Figure 9. Carbon management projects have been identified to exceed the carbon reduction target as it is expected that energy consumption in buildings may increase due to:

- Increasing utilisation of physical assets
- Higher energy demand from IT equipment
- Increased installation of air conditioning units due to Climate Change Adaptation

Work will be undertaken during project specification to minimise the energy impact.



Audits of the estate have been undertaken to identify a number of projects to reduce carbon emissions throughout the University. The Estates Department are responsible for implementing building specific projects. Calcutta House has been omitted from the Carbon Management Plan project list as it is undergoing extensive refurbishment planned for 2015-16. All refurbishment will be undertaken using the Ska methodology to minimise the environmental impact of the work.

5.2.1 Optimising energy systems

The University has undertaken extensive work to review Building Management System (BMS) controls and time zones for each building. TM 44 surveys were undertaken to help identify any plant items that were not connected to the BMS. Ensuring all plant is connected to the BMS allows HVAC to be matched to occupancy times. The BMS is altered on a weekly basis to match timetables provided by Room Bookings. Work will be undertaken to determine whether this can be undertaken by an automated process linking the BMS to the room bookings system, CMIS.

The University is undertaking an extensive programme of building refurbishment until 2020 which will result in more air conditioning units being installed which will increase the annual energy consumption in these buildings. It is therefore essential that all new plant installed is connected to the BMS.

5.2.2 Engaging with stakeholders

In addition to the building related projects, a programme of staff and student engagement will take place. In 2015, environmental inductions for new staff and students will be rolled out. An annual "Green Week" will be held by the University to disseminate information to staff and students how they can reduce their carbon footprint both at work and at home.

The Safety and Environment Department are responsible for the running of an Environmental Champions scheme for staff and students.

5.2.3 Invest to save

The University has a ring fenced fund to implement carbon reduction measures. During 2014/15, the University is trialling the use of the Mayor of London's Re:Fit framework. This is a guaranteed savings model. Initially three buildings will be targeted; Tower, Science and Law Building. This allows the University to specify the savings to be made and contractors propose projects to achieve the energy reduction target.

5.2.4 Improve the way we work

There is potential to further reduce the out of hours energy consumption by training front of house staff to be more energy aware. Simple procedures such as checking windows are closed and lights turned off will reduce wasted energy. Further work is

required on the building opening procedure to ensure only essential items are turned on.

A standard specification has been developed in conjunction with Sustainability, Development and Hard Services to ensure that all refurbishment work undertaken will include water and energy saving measures. The standard specification is updated at least annually. Ska rating will be used for all larger scale refurbishments to reduce carbon emissions including Scope 3.

5.2.5 Policy alignment

The Safety and Environment Department will develop an Environmental Management Strategy in 2014/15 to work towards implementation of an Environmental Management System. The Carbon Management Plan will feed in to this plan to deliver carbon reduction targets.

5.2.6 Implementation plan

All buildings

Project	Cost	Savings (£) ⁴	Savings (kWH)	Savings (tonnes of carbon) ⁵	Source of funding	Year of implementation ⁶
Engaging with stakeholders	TBC	TBC	TBC	TBC	TBC	2014-2017
Improving the way we work	TBC	TBC	TBC	TBC	TBC	2014-2017
Vending timers	£3,800	£1,461	12,178	6	RGF3 ⁷	2014/15
Estates rationalisation	N/A ⁸	£293,555	4,067,779	1,258	Capital	2015-2017
Submeter catering outlets	£12,032	N/A	N/A	N/A	RGF4 ⁹	2015/16

All buildings - Scope 3

Туре	Actions	Year of implementation	Responsible party
Business travel	Amend travel policy to prohibit flights within the UK.	2015/16	HR
Staff commuting	Implement no car parking policy. Promote safer cycling. Upgrade cycle facilities. Possible flexible working policy.	2014-2016	Campus Operations Sustainability Manager HR
Student commuting	Implement no car parking policy. Promote safer cycling. Upgrade cycle facilities. Promote discounted travel card	2014-2016	Campus Operations Sustainability Manager HR
Procurement	Implement sustainable procurement policy to ensure that every supplier that the University engages with minimises their carbon footprint	2014-2016	Strategic Procurement Office
Water	Utilise Ska criteria when toilets are being refurbished to minimise water consumption. Use M & T dashboard to identify leaks.	2014/15	Sustainability Manager
Waste	A new waste contract was awarded in 2014/15 with the aim of increasing the recycling rate to 75% depending on the recycling method. Site waste management plans are requested from all larger scale refurbishment projects,	2014-2016	Campus Operations Development

⁴ £0.12 per kWh electricity £0.04 per kWh

gas ⁵ 0.49426 kgCO_{2e} electricity 0.184973 kgCO_{2e} gas

6 Academic year

7 Revolving Green Fund

3

8 Estates Budget 9 Revolving Green Fund 4

Moorgate



Project	Cost	Savings (£)	Savings (kWH)	Savings (tonnes of carbon)	Source of funding	Year of implementation
Voltage optimisation	£32,390	£5,714	47,613	24	RGF4	2015/16
Submetering	£3,410	N/A	N/A	N/A	RGF4	2014/15
Hot water rationalisation	£93,391	£8,358	208,944	39	RGF3	2014/15

Law building



Project	Cost	Savings (£)	Savings (kWH)	Savings (tonnes of carbon)	Source of funding	Year of implementation
Voltage optimisation	£27,331	£4,582	38,182	19	RGF4	2014/15
RE:FIT	£113,130	£4,280	44,048	18	Capital	2014-16

Central House



Project	Cost	Savings (£)	Savings (kWH)	Savings (tonnes of carbon)	Source of funding	Year of implementation
Voltage Optimisation	£42,775	£4,102	34,187	17	RGF4	2015/16
Window Replacement	£1,400,000	£15,429	385,730	71	RGF3 & University capital	2014-16
Submetering	£3,410	N/A	N/A	N/A	RGF4	2014/15

Science Centre



Project	Cost	Savings (£)	Savings (kWH)	Savings (tonnes of carbon)	Source of funding	Year of implementation
Replace 250W metal halide fittings in Sports Hall	£18,706	£4,320	36,002	18	RGF3	2014/15
Boiler Optimisation	£8,274	£3,064	76,590	14	RGF4	2014/15
Replace 36W T8 lamps	£1,882	£1,809	5,688	3	RGF4	2014/15
RE:FIT Programme	£270,068	£14,277	159,823	60	Capital	2014-2016

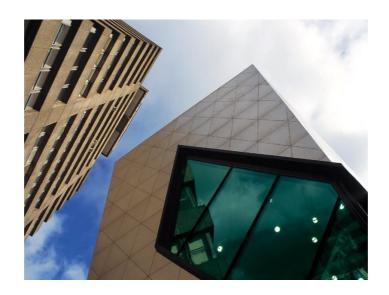
Submetering	£4,460	N/A	N/A	N/A	RGF4	2014/15
BMS	£1,642	£2,025	16,878	8	RGF4	2014-16

Learning Centre



Project	Cost	Savings (£)	Savings (kWH)	Savings (tonnes of carbon)	Source of funding	Year of implementation
BMS Controls	£8,542	2,608	21734	11	RGF4	2014-15
TUC Library light replacement	£687	161	1,344	1	RGF4	2014-16
Lighting controls staircase	£15,600	9,364	78034	39	RGF3	2014-15
Solar PV	£96,900	11,437	50095	25	Capital	2016/17

Tower Building



Project	Cost	Savings (£)	Savings (kWH)	Savings (tonnes of carbon)	Source of funding	Year of implementation
BMS Controls	£26,389	£4,004	33,366	16	RGF4	2014/15
Submetering	£4,582	N/A	N/A	N/A	RGF4	2014/15
Change lights from T8 to T5 Admissions & Benwell Road extension	£24,808	£3,260	27,163	13	RGF4	2014/15
Lighting control Benwell Extension, G, C and Admin Block	£19,342	£7,919	65,992	33	Capital	2014-15
CHP	TBC	TBC	TBC	TBC	TBC	Feasibility to be undertaken 2015/16. Implementation by 2020
RE:FIT	£499,561	£27,005	336,550	115	Capital	2014-16

7 Carbon management plan financing

The investment required to implement all of these projects totals £2,713,158 by the end of 2017 and will deliver annual savings of £427,596.

There are a number of funding sources available to the University:

- Annual block capital budget
- HEFCE Funding through Revolving Green Fund
- External Funding schemes such as Salix.

Funding sources have been allocated to ensure the projects are implemented. The funding has been allocated as follows:

- £786,559 from RGF3
- £212,766 from RGF4
- Capital from University £1,713,833

The annual cost and CO₂ savings are summarised below.

	2014/15	2015/16	2016/17
Annual cost saving	£34,430	£88,174	£304,992
Annual capital cost	£193,248	£2,435,042	£96,900
Annual CO ₂ saving	171	376	1,283
% Carbon Reduction	44%	47%	57%

In addition to the quantified 'technical' projects various other projects have been identified for which quantified costs and savings cannot be determined. These have been included for reference purposes only but without any detail on costs or savings do not contribute to the overall savings.

Unquantified projects may deliver financial savings to the university which cannot be identified at present such as those identified to reduce Scope 3 emissions. The projects will however also deliver non-financial benefits by reducing carbon emissions, improving the corporate image and reputation of the University.

Capital and Revenue budgets will be compiled annually by the Estates Department and submitted to the Director of Finance for approval. A business case for investment will be provided against each defined project within this Plan. Key criteria will include a benefits appraisal, ROI information, annual CO₂ savings and percentage of the target.

All projects will be assessed on their individual merits which will be considered in the context of the key drivers identified. As such there are no pre-determined weightings against which the business case will be considered. It should be noted however that reduction of CO₂ emissions is a key driver for London Metropolitan University and therefore carbon reduction would generally take priority over financial considerations.

8 Programme management of the carbon management plan

It is recognised that strong governance of the London Metropolitan University's Carbon Management Plan will be key to delivering a successful outcome. The governance of the programme, as well as the strategic ownership of the carbon reduction target, rests with the Environmental Sustainability Programme Board. The Programme Board is composed of appropriate members of senior staff from across the University and also includes representation from the student community.

The members of the Environmental Sustainability Programme Board will have oversight of the programme and will encourage and facilitate delivery by ensuring the coherence and coordination of the carbon reduction activity, acting as champions for the programme and ensuring obstacles and blockages which may otherwise hinder delivery are removed.

8.1 The Programme Board – strategic ownership and oversight

The Environmental Sustainability Programme Board is sponsored by the Deputy Chief Executive and includes representation from the various key functions within the University.

Meetings are held every four months to provide support, guidance and direction to the University in the management of its environmental sustainability agenda.

The Environmental Sustainability Programme Board:

- Takes the lead role in development of the University's strategies and policies related to environmental sustainability
- Is the 'owner' of the university's Environment Management System (EMS) and Carbon Management Plan (CMP)
- Acts as the lead body for the development and approval of the environmental sustainability arrangements and supporting standards
- Acts as the standards approval body for the University
- Takes the lead role in actively monitoring the CMP, EMS and associated standards using formal audit and other monitoring tools so that the committee is able to assure itself and the Executive Group of the status of environmental management
- Monitors environmental and carbon management performance against polices and plans
- Identifies and addresses issues as they arise
- Sets the Terms of Reference for the subordinate Environmental Sustainability Team
- Provides periodic reports outlining progress etc. to the Executive Group

- Escalates unresolved issues (or those outside of its decision making remit) to the Executive Group for action
- Addresses those issues/actions etc. delegated to it from the Executive Group
- Reviews and actions those issues escalated to it from the Environmental Sustainability Team meeting
- Considers reports received from enforcing authorities
- Has the power to form and disband sub-committees, as required, to address specific environmental issues.

The Programme Board will meet once quarterly to ensure the continued momentum of the implementation of the Carbon Management Programme and will report annually to the University Executive by means of a summary report.

8.2 The Environmental Sustainability Management Team – delivering the projects

The Environmental Sustainability Management Team is accountable to the Environmental Sustainability Programme Board. It is chaired by the Head of Safety and Environment and includes representation from the various key Functions within the University.

Meetings are held every two months to progress delivery of initiatives identified in the Environmental Management System and the Carbon Management Programme. The Environmental Sustainability Management Team:

- Co-ordinates and manages delivery of projects on the ground level by relevant departments
- Ensures the stated objectives of the Environmental Management System and the Carbon Management Programme are actively pursued and delivered
- Ensures delivery of communications with stakeholders
- Provides a forum for co-ordinating cross functional activities, removing obstacles and resolving issues
- Identifies environmental projects and initiatives and recommends decisions throughout the duration of the Programme
- Monitors and manages change control process
- Monitors and manages risk
- Escalates issues to Environmental Sustainability Programme Board as necessary
- Delivers all projects satisfactorily and ensures acceptance criteria have been met.

The Environmental Sustainability Management Team will meet bimonthly to ensure the continued momentum of the implementation of the Carbon Management Programme and will report monthly to the Programme Board by means of circulating minutes of the meeting to the Board.

8.3 Annual progress review to Senior Management Team

A formal review will be undertaken by the Programme Board annually (led by the Deputy Chief Executive) in September of each year, in order to review the progress against the plan for that academic year.

The review will:

- identify and review cost and benefits from the Programme
- quantify financial savings, either cashable or returned to "rotating fund"
- Identify % CO₂ savings against the target
- Detail any unquantifiable benefits, such as influencing the student body/local community
- Report to the University Executive
- · Address the coming year's plan regarding projects and funding.

The review will form the basis of the University's commitment to monitor progress towards targets and to report publicly on an annual basis.