Committee:	University Steering Group (USG)
Considered by:	N/A
Title of paper:	Sustainability Sub-Strategy, 2016-2019 2017-18 Annual Update
Action required:	For information
Sponsor(s):	Professor Jules Pretty, Deputy Vice-Chancellor Bryn Morris, Registrar and Secretary
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Date of paper:	08 January 2018

1.	Purpose of the report

To provide an update on progress with the Sustainability Sub-Strategy and information on future targets.

2.	Recommendations

USG are requested to note the findings in the Sustainability Sub-Strategy annual update.

3.	Summary of key issues

- Part 1. Overall summary
- Part 2. Action Plan update

4.	Resource implications (financial and staffing)

Resource considerations have been examined as part of the University's Carbon Management Plan. Where there are additional needs for capital resource, a business case will be progressed to CPG.

5.	Legal and regulatory considerations

None

6.	Effect of the proposal(s) on equality

No negative impact. The paper will consider the health and well-being impacts of improved campus sustainability. An Equalities Impact Assessment has been prepared.

7.	Consultation undertaken/required

University of Essex Students' Union; Energy Manager; Transport Policy Manager; Grounds Manager; Head of Procurement; Catering Operations Manager; Learning Environments and Technology Systems Manager; Sustainability Engagement Group; Head of Workplace Health and Wellbeing.

8.	Analysis of risk

As per the minutes of the USG meeting on 6 July 2015, minute Nos. 749/15-755/15.

Sustainability Sub-Strategy: 2016-19

Introduction

1. The Sustainability Sub-Strategy is a sub-strategy of the Estates and Equipment Supporting Strategy, and thus is designed to support our core values and aims. Staff and students striving for excellence in research and education require and deserve sustainable campuses that are comfortable, beautiful and inspiring places to work and live.

2. The Sustainability Sub-Strategy received approval from Council on 28th November 2016. This paper covers progress since then and future sustainability plans for the University.

Overview

3. The University continues to focus its response to the environmental agenda on its direct and indirect impact on carbon emissions. The University aims to meet a target of reducing by 2020 total carbon emissions (in the form of carbon dioxide equivalent) by 43% from a 2005 emissions baseline. The UK government's Climate Change Act (2008) mandates the UK to reduce its national carbon emissions by 80% by 2050.

4. There are two aims of the Sustainability Sub-Strategy (SSS):

   4.1 To identify policies and actions that will reduce the impact of the University on the natural environment whilst at the same time reducing its cost-base;

   4.2 To identify policies and actions that will improve the living, learning and working environments for all the University's students and staff.

5. Progress on the nine objectives to the SSS, have been evaluated, with highlights and issues discussed below:

   5.1 To optimise energy management to reduce net carbon emissions;

   5.2 To reduce waste production and maximise waste recycled;

   5.3 To support sustainable forms of transport;

   5.4 To maximise the quality of the grounds, biodiversity and landscapes within the University estate;

   5.5 To use information technology sustainably.

   5.6 To embed sustainability into procurement processes;

   5.7 To reduce water use;

   5.8 To maximise the amount of food offered at catering outlets derived from sustainable and local sources;

   5.9 To maximise engagement of staff and students in sustainability issues through the Green Impact and Student Switch Off projects.

Objective 1: To optimise energy management to reduce net carbon emissions

6. Since UK financial year 2016, CO_2 emissions, reported to the Government's Carbon Reduction Commitment, have fallen by more than 1,000 tonnes from 15,571 tCO_2 to 14,556 tCO_2.[1] Emissions for academic year 2016-17 were 14,100 tCO_2.

7. The projects that have helped drive this reduction include:

   7.1 Sustainability Engagement: working with staff and students emphasising the importance of energy conservation and providing stakeholders with the skills and knowledge to reduce their demand for energy.

   7.2 Building Management Systems: infrastructure has been installed that allows improved building management, allowing greater control of heating and lighting ensuring that energy is not wasted.

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[1] The University derives its CO_2 emissions calculations from Defra carbon intensity metrics relating to kWh of gas and electricity.

7.3 Roof insulation: it has been necessary to upgrade roofs on campus that are now over 50 years old. As part of this refurbishment insulation has been installed, improving thermal comfort within buildings and reducing heating demand.

7.4 Boiler replacement: this is a further maintenance project that improves energy efficiency. We replaced 12 boilers in 2016-17, increasing efficiency by more than 15%.

7.5 The University continues with its programme of installing solar PV panels on roofs. Solar PV panels are now installed on the Knowledge Gateway, the Essex Business School, the Network Centre, the Library, the Kimmy Eldridge Building and the multi-deck car park. The newly built Corbett Theatre in Loughton, the STEM building and new Sports Centre in Colchester will also benefit from PV panels, with the STEM building also containing a CHP unit.

8. The University has made efficiency gains in relation to carbon emissions and costs per student and per unit of gross internal area (Table 1).

Table 1. Measures of carbon efficiencies per unit built area and per student, 2005-2016[2]

Measure	2005-06	2012-13	2013-14	2014-15	2015-16	2016-17	2016-17 (Academic)
Carbon emissions (t CO_2e per year)	17,210	18,850	17,304	16,619	15,571	14,556	14,100
Gross internal area (m^2)	181,186	224,134	228,500	236,605	238,805	240,000	240,000
Student headcount	7,311	10,656	10,429	13,179	14,775	15,668	15,668
Carbon emissions per unit area (t CO_2e per m^2)	0.094	0.084	0.075	0.073	0.069	0.060	0.058
Carbon emission per student (CO_2e per FTE)	2.35	1.80	1.65	1.44	1.05	0.93	0.90

Objective 2: To reduce waste production and maximise waste recycled

9. The University currently produces 80 tonnes of waste per month. 31 tonnes of waste is separated for recycling on our three campuses with an additional 40 tonnes removed from the waste stream at the contractor's Materials Recovery Facility (MRF). The remaining waste is used as Refuse Derived Fuel (RDF) at an 'energy from waste' plant.

10. Total waste production continues to decline, falling in recent years from 1757 tonnes in 2009-10 to 1215 tonnes in 2014-15 and 1176 tonnes in 2016-17. When assessing the entire waste management chain from rubbish in bins, through to our contractors processing the University's waste and recycling, less than 1% of waste ends up in landfill.

11. The University, the Students' Union and British Heart Foundation work together on an annual *No Waste Graduation* programme. The graduation period of 2016-17 was the biggest campaign ever. Students living in residences are able to donate goods to British Heart Foundation at the end of Summer Term. During the 2016-17 graduation, over 24 tonnes of materials were collected, from more than 3000 bags, raising over £42,000 for British Heart Foundation. The money raised will be put towards a variety of BHF supported good causes; a donation of 10 bags pays a day's wages for a Heart Nurse, 100 bags provides the funding for a heart scientist for 7 days and 1000 bags helps 40 young heart patients to gain independence, new skills and confidence whilst meeting other young heart patients.

12. The University is reviewing and trialling (with the aim to fully implement) a new furniture re-use programme, Warp-it. The online tool works as a re-use *eBay* for furniture following office moves

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[2] CRC reporting year given until 2016-17 for CO_2 tonnage, which corresponds with financial year. University reports will in future include both UK financial and academic year figures.

and upgrades, allowing new homes to be found for furniture that previously would have been disposed of.

Objective 3: To support sustainable forms of transport

13. Work has begun on identifying routes onto campus and their connectivity to existing cycle paths as part of the External Estate Master Plan. The University is reviewing its Cycle Maintenance service and will be re-tendering for Spring 2018. A number of employees have been trained to Bikeability level 3 with the aim to have them engage with other cyclists.

14. Engagement work has taken place with local authorities across the county including Colchester's Travel Plan Club and Southend's Ideas in Motion project.

15. The University has recently begun work improving changing facilities on campus, in order to encourage walking / cycling to work.

16. The vehicle fleet policy aims to support the Sustainability Sub-Strategy and Travel Plans by reducing CO_2 emissions generated by our vehicle fleet by at least 50% by 2022. The University (excluding SU) currently has 31 fleet vehicles. 84% are diesel, 10% petrol and 6% electric. 45% of all UoE vehicles are owned and used by Estates.

17. The environmental impact of the university's fleet vehicles will be reduced year on year by the use of low or zero emission vehicles. This will be achieved by:

    ▪ Purchasing only electric or hybrid replacement vehicles where suitable EV options are available and the specification meets the needs of the business.

    ▪ Reducing the number of fleet vehicles and implementing pooling arrangements where use patterns allow.

    ▪ Reducing the number of journeys made using fleet vehicles where practical.

18. Initial targets have been developed, these are:

    ▪ For cars purchased or leased, the environmental impact should not exceed 100g CO_2/Km (tax band A).

    ▪ For light vans, the environmental impact should not exceed 120g CO_2/Km (tax band B).

Objective 4: To maximise the quality of the grounds, biodiversity and landscapes

19. During 2017 the University won a prestigious Green Flag award for its Colchester Campus, garnering substantial press attention in local papers and on TV. The judges' report praised our investment in "equipment and infrastructure to enable this site to be maintained at a very high standard" as well as "being one of the best sites for environmental principles" and having "staff who are fully engaged in their role, and understand the benefits of their work."

20. The University continues to develop its External Estate Master Plan, enhancing open spaces across our 3 campuses. Recently, planting at Southend's London Road accommodation was invigorated with over 1,000 new plants, and at our Colchester Campus accommodation areas there has been exciting redevelopment works enhancing areas at South Courts residences with hundreds of new plants. During the 3rd quarter of 2017 the Lower Lake works brought further planting to the lake edges along with space and facilities for students to sit, entertain and circulate around the lake. In late 2017 there were further plants installed, with dozens of trees, over 1,000 plants and over 10,000 bulbs planted as part of the new tennis courts and sports hall projects, along with hundreds of metres of new hedging during the winter of 17-18 as part of the Campus Entrance and Boundary projects.

21. Space has also been allocated to the Freshwater Mesocosm research project being run by Biological Sciences (funded by NERC), enabling world leading research to be hosted within our beautiful parkland. Overall more than 10,000m^2 of landscaping improvements have been undertaken.

Objective 5: To use information technology sustainably

22. Improving sustainability resources has become a priority task of the IT Services. Priorities for action have been identified and the following actions have been undertaken:

    22.1 Purchase of energy efficient PCs/Screens.

    22.2 Sleep timeout for professional services PCs/Screens (combined with wake-up for VPN access)

22.3 Promotion of online academic learning resources (Moodle, Lynda, etc) that may contribute to reduced travel between campuses. We have also increased the use of video and onsite training for IT staff.

22.4 Power down of teaching space AV after close of teaching day.

22.5 Power down of digital signage at 7pm (most screens).

22.6 Migration to laser projectors/or LED screens – lower energy consumption and longer life – in AV replacement programmes.

22.7 Improvement to collaborative tools (including group and individual video-conferencing)

22.8 Continuing programme of server virtualisation (virtual is the norm/default). This means that we have dozens of physical servers rather than hundreds.

22.9 Migration away from individual printers to group multi-function devices (MFDs) with print release, which reduces waste. MFDs also allow scanning, which facilitates electronic rather than paper distribution. IT Services are a significant stakeholder in the print/copy/scan proposals to centralise printing.

22.10 Advocate and endorse the use of systems such as Faser by departments for digital coursework submission rather than paper.

22.11 Design and build systems for electronic document management and workflow (e.g. a recent component of the admissions system has reduced print demand).

Objective 6: To embed sustainability into procurement processes

23. The University recognises that its supply chain is a significant contributor to its environmental footprint and has several projects underway aimed at mitigating this aspect of its environmental impact. The projects below are anticipated to complete by August 2018.

24. The University is currently undertaking a project to rationalise stationary use. The aim is to reduce the amount of stationary used and to ensure products made from environmentally materials are purchased. It is estimated the project will save the University £30,000 per annum.

25. Trials have been undertaken to increase the recycled content of paper used by the University. The University will run down existing paper stocks before switching to 100% post-consumer waste recycled paper.

26. The University has begun investigating the purchase of products derived from waste materials produced by the University. Currently under review are paint and washing liquid for vehicles. A cost comparison is being undertaken to enable trials in 2018.

27. The University has measured its scope 3 emissions[3] to be in the region of 23,000 tCO_2. The methodology only provides an estimate of emissions based on University revenue. Whilst this does give some indication of the environmental footprint of our supply chain it does not take into account decision making that has promoted more sustainable products and materials. In future the University will engage more closely with key suppliers to monitor environmental performance in order to get a more accurate picture of their emissions footprint.

28. The University has set up a Green Impact scheme for suppliers with the first participants recruited from maintenance contractors. The project is an expansion to the successful Green Impact programme aimed at University staff. Environmental actions were devised after consultation with several contractors and a review of industry best practice. Contractors are required to implement 10 actions to achieve Green Impact accreditation. Following the pilot year the programme will be expanded to cover more areas of our supply chain and cover more challenging actions.

Objective 7: To reduce water use

29. During early 2017 the Grounds Section went live with its new machinery wash pad facility. This new facility allows grounds machinery to be cleaned using a closed water system and does not require mains water or a pressure washer. The system saves in the region of 100,000 litres of water per year.

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[3] Scope 3 emissions are indirect emissions, such as the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, electricity-related activities (e.g. Transmission & Distribution losses) not covered in Scope 2, such as outsourced activities and waste disposal.

30. The University has embarked on a programme of replacing bottled water coolers with plumbed in water cooler units. This has yielded significant financial savings as well as sustainability benefits including a reduction in the transportation of bottled water onto campus and a reduction in plastic used on our three campuses.

31. In 2015-16 the university spent £24,000 on bottled water and water cooler rentals. The cost for bottled water and water coolers for 2016-17 was £15,000. There are now 45 mains fed water coolers across our 3 campuses. Water coolers have been installed to replace bottle-fed water coolers where there is a suitable location near water and electrical services. Water coolers have also been installed in areas of high footfall, including in the Library and in lobbies adjacent to the squares on Colchester Campus. In addition UECS provides water in jugs for free at all catering outlets. The final stage of the water cooler programme, to be completed in Spring term 2018, is to provide a map of plumbed water coolers across our campuses and to remove any remaining bottled water coolers. Our final objective will be for no water will be transported to our campuses in large plastic bottles for coolers.

32. Water consumption at the University for 2016-17 was 143,257m^3 down from 159,000m^3 the previous year. This has been predominantly achieved as a result of leak detection and repair work in South Courts and University Square student accommodation, and through the use of new water efficient equipment by the Grounds team.

Objective 8: To maximise the amount of food offered at catering outlets derived from sustainable and local sources

33. The University's food offering has seen continued improvement, thus enhancing sustainability, variety and health for staff and students dining on campus.

34. Our catering outlets continue to grow, serving more customers than ever before. A concerted effort has been made to ensure that food is not only delicious but meets high environmental and welfare standards as well as being varied and healthy. Vegetarian options are available in all outlets, meat is sourced locally and achieves the Red Tractor standard and all fish is certified by the Marine Stewardship Council.

35. The University has opened its latest coffee outlet, Union coffee. The coffee sold is sourced directly from plantations from around the world, paying them directly so they receive much higher rates than Fairtrade. All coffee sold by University catering outlets is now produced to at least Fairtrade or higher standard, for example the Direct Trade[4] scheme where coffee sold at the Union Coffee outlet is bought direct from growers.

36. Catering outlets are being reconfigured to improve their environmental performance. Some of the key projects have included investing in new more energy efficient equipment, working with Estates on waste management to increase dry recycling and composting of food waste, the production of schedules and plans of equipment to ensure lights, fridges etc. are turned off when not in use.

37. The University continues to trial different packaging options with the objective of finding the most sustainable and easily recycled packaging for take away food. It is also promoting reusable packing with discounts offered for customers using reusable coffee cups across all outlets. The University promotes reusable crockery and offers a discount to customers using their own tea/coffee cup.

Objective 9: To maximise engagement of staff and students in sustainability issues through the Green Impact project.

38. The University has substantially increased the amount of stakeholder engagement around sustainability since 2015-16. Engagement focuses around working with staff, students and visitors of our campuses to promote environmentally-positive behaviours. There are now 35 Green Impact teams improving sustainability in departments and sections, up from 4 in 2014-15. Over 40 students participated as Green Impact Assistants and Auditors, receiving valuable work experience and training accredited by the Institute of Environmental Management and Assessment. A total of 1,145 sustainable actions were completed in 2016-17. A future development of the Green Impact scheme will be to include a Health Mandate in conjunction with the University's Workplace Health and Wellbeing team.

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[4] Union Coffee Direct Trade: https://www.unionroasted.com/union_direct_trade.html

39. The Student Switch-Off programme, run in conjunction with Estates and Accommodation staff, supported by the NUS, aims to reduce energy use in student accommodation. In 2016-17, electricity use fell an average of 8.5% compared with the average use between 2011-12 and 2013-14. Feedback from the NUS highlighted the programme as one of the leading campus engagement projects run in student accommodation.

40. The University ran a Sustainability Summer School, during June 2017, with 18 students attending classes, overseen by Jane Hindley from SPAH. Students gained insights into the latest academic thinking on sustainability, carried out field work at the Essex Wildlife Trust and Bennison's farm, and undertook practical environmental projects assisting sustainability practitioners in the University's Estates Management Section.

41. The University is reviewing its sustainability engagement work to deepen its engagement with stakeholders. Groups to target will include students living off campus and the University's supply chain. The University will revamp its Green Impact and Student Switch Off campaigns to ensure they remain relevant and appealing including broadening its social media to include YouTube videos.

42. The University's engagement work is overseen by our Sustainability Engagement Group. The membership is comprised of staff and students from across our three campuses. The group works collaboratively to support Green Impact, Student Switch Off and ad-hoc events by knowledge sharing and leveraging the expertise and enthusiasm found across the University of Essex.

43. The University will review its position in relation to existing national league tables that seek to measure environmental performance. The University has made many efficiency gains, and will consider whether its performance is being accurately reflected in national league tables.

Sustainability Sub-Strategy: Plan of Action 2016-2019

44. The Sustainability Sub Strategy covers actions over the next three years of this Strategic Plan period to ensure improvements are made to each of the 9 objectives.

45. The University has made substantial progress towards its sustainability goals and has put in place additional measures to make additional progress. A sustainability team has been recruited with staff that previously covered carbon management, sustainable transport and grounds management in one team under a Head of Sustainability and Grounds. The currently vacant role of energy manager will be filled during the first quarter of 2018 which will further bolster the University's ability to fulfil its goals.

46. The University is now able to leverage £300,000 per annum from Salix/RGF for carbon reduction projects. Recently completed Salix/RGF projects have included energy optimisation infrastructure and lighting upgrades. The University's sustainability team are in the process of identifying new projects suitable for Salix/RGF funding.

47. The University previously set aside £1.9 million for capital projects with sustainability benefits. This has funded projects including a new cycle park and energy optimisation. £500,000 remains which will be managed alongside the Salix/RGF funds to achieve further energy efficiencies.

48. The University's key priority is to reduce CO_2 emissions in line with our 43% target. This is important as it is closely linked with the University's financial success and its ability to deploy resources to teaching and research excellence. The figure below shows the University's emissions pathway to its 43% target. The University needs to reduce emissions by a further 4700 tCO_2 by 2020. The University is currently identifying what projects and engagement are required to allow it to meet its targets. A clearer understanding of this should be in place by the end of the first quarter of 2018.

University of Essex Annual Carbon Emissions (tCO₂)
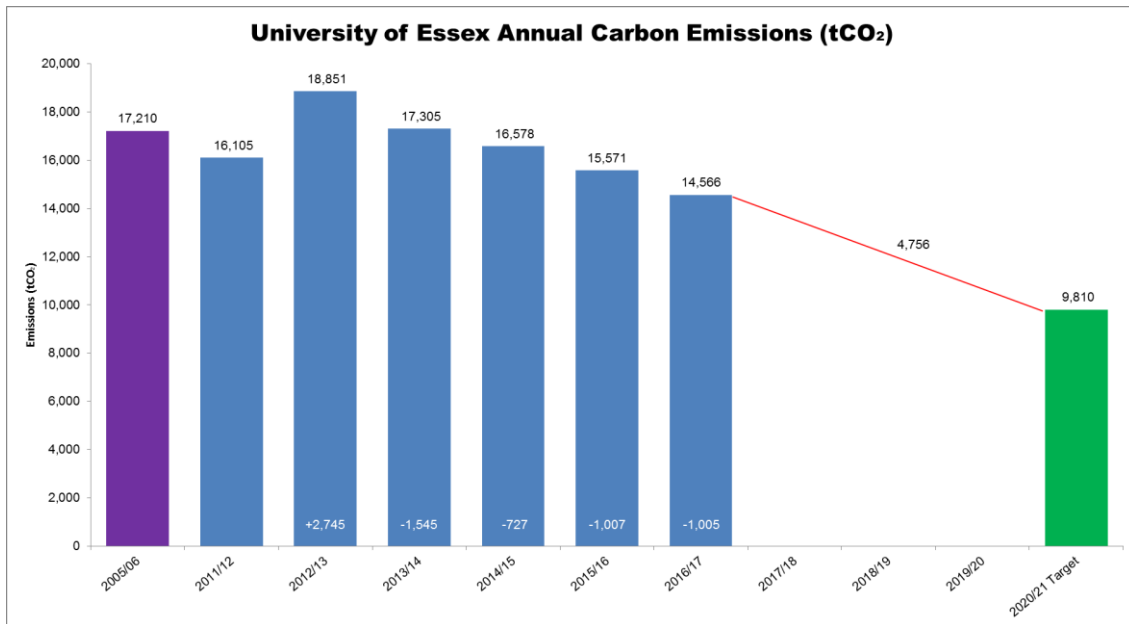
49. The Plan of Action section contains Specific, Measurable, Attainable, Relevant and Time-bound actions for implementing sustainability across our campuses and beyond. The action plan details progress on each action. Where an action has been achieved the University will continue to monitor progress in that area over the course of the period to 2019. In some areas it has been necessary to amend an action, where this has occurred the new action has been indicated in italics along with revised timescales.

50. Objectives have been chosen that either i) reduce our impact on the environment, locally and globally or ii) improve our environment, locally and globally.

Responsibilities and oversight

51. Responsibility for the Sustainability Sub-Strategy is as follows:

51.1   Strategy Owners: Deputy Vice-Chancellor and Registrar and Secretary.

51.2   Strategy Manager: Carbon Change Advisor.

51.3   Approval: USG and Council.

51.4   Monitoring: University Steering Group will monitor this Sustainability Sub-Strategy via the Sustainability Engagement Group.

51.5   Review: This is the first annual review of the Sustainability Sub-Strategy. The next review will take place and be submitted to USG during January 2019. The action plan below shows the success indicators from the Sustainability Sub-Strategy.

Recommendation

52. USG are requested to note the findings in the Sustainability Sub-Strategy annual update.

Chris Oldham, Director of Estates and Campus Services

Rob Davey, Head of Sustainability and Grounds

Daniel Dempsey, Carbon Change Advisor

8 January 2018

Action Plan: 2016-19

Strategic objective (O)	Success Indicators *Revised indicators in italics*	Timescale *Revised timescale in italics*	Cross reference to Sustainability Sub Strategy	Lead	January 2018 Update
Energy and Carbon emissions The University will use the energy necessary to heat and power our three campuses as efficiently as possible and reduce the amount of energy derived from fossil fuels.
1. To optimise energy management to reduce net carbon emissions	1. Heat and power usage will fall annually.	August 2017	O1	Energy Manager	1. Achieved. kWh consumption from gas & electricity have fallen every year since 2012.
	2. The University will generate 15% of its energy from renewable sources.	August 2018 *August 2019*			2. Ongoing. The University is reviewing its renewable energy use as part of its Energy Strategy. The University is installing Solar PV and CHP as part of its new build programme. The Energy Strategy review will also look at the potential for offsite renewables supplied via private wire to help reduce reliance on conventional energy forms.
	3. The costs associated with energy usage fall annually.	August 2017			3. There was a marginal increase in the cost of energy incurred by the University with electricity rising from £0.0883/kWh to £0.1066/kWh and gas rising from £0.01638/kWh to £0.01746. The University is undertaking an analysis of its energy purchasing as part of its Energy Strategy.

Strategic objective (O)	Success Indicators *Revised indicators in italics*	Timescale *Revised timescale in italics*	Cross reference to Sustainability Sub Strategy	Lead	January 2018 Update
	4. CO_2e emissions will be 12,500t CO_2 and on course to fall by 43% on 2005 levels by 2020.	August 2018	O1	Carbon Change Advisor	4. Ongoing. Emissions for 16/17 were 14,556 tCO_2. The University will need to exceed the current trajectory of emissions reductions to achieve this target and is reviewing options as part of its Energy Strategy
	5. Emissions per FTE student and per m^2 will be among the top quartile for higher education institutions.	August 2018			5. Achieved. University 22nd/125 for emissions intensity. Emissions per student fell below 1tonne per annum for the first time.
	6. New buildings will be constructed to exceed the energy performance requirements of Building Regulations (Part L) and be informed by BREEAM Excellent and LEED energy certification	August 2017			6. Achieved. All new buildings exceed Part L and are informed by high environmental standards including widespread use of energy efficient technologies and micro-generation.

Strategic objective (O)	Success Indicators *Revised indicators in italics*	Timescale *Revised timescale in italics*	Cross reference to Sustainability Sub Strategy	Lead	January 2018 Update
Waste Management					
The University will manage consumable resources in accordance with the waste hierarchy with priority given to waste reduction, opportunities to reuse materials then recycling and recovery of energy.					
2. To reduce waste production and maximise waste recycled	1. The University will recycle over 60% of its waste materials. *1. The University will recycle over 80% of its waste materials. This will be achieved through both on and off campus waste separation processes. The University will increase the amount of waste segregated for recycling on campus to 50% (peak) and an average monthly to 40%).*	August 2017 *August 2019*	O2	Domestic Services Manager	1. Achieved. The University separated 39% (peak figure) of its waste for recycling on campus. The remaining 61% of waste is sent to MRF (material recovery facility) of which 88% is recycled. The remaining 12% produces RDF (refuse derived fuel) off campuses.
	2. Less than 5% of waste will be sent to landfill.	August 2017			2. Achieved. <1% of University waste sent to landfill.
	3. Waste arising will be in the lowest quartile for higher education institutions.	August 2017			3. Data not available currently. The University is currently reviewing benchmarking against peer institutions and will report separately in 2018.
Transport					
The University will encourage sustainable transport through provision and promotion of infrastructure and incentives.					
3. To support sustainable forms of transport	1. The University will increase promotion and provision of alternatives to car use, ensuring improved access, cycle maintenance, cycle security, cycle training with routine evaluation of impact undertaken.	August 2017	O3	Transport Policy Manager	1. Partly Achieved. Work has begun on identifying routes onto campus and their connectivity to existing cycle paths as part of the External Estate Strategy. Cycle Maintenance service

Strategic objective (O)	Success Indicators *Revised indicators in italics*	Timescale *Revised timescale in italics*	Cross reference to Sustainability Sub Strategy	Lead	January 2018 Update
					to be retendered Spring 2018. Cycle Training made available to staff and students.
	2. The University will Improve washing and shower facilities with priority given to women's facilities.	August 2017			2. Achieved. Upgrades to shower facilities in November 2017.
	3. The University will increase provision of electric vehicle infrastructure with access to charging points at all University car parks.	August 2017			3. The University is currently reviewing its electric vehicle infrastructure. As well as providing more charging points the University has procured its own electric vehicle fleet which will be expanded over 2017/18.
	4. Consideration will be given of transport infrastructure provided in conjunction with our local authorities in Colchester, Southend and Loughton.	August 2018			4. Achieved. New developments are being monitored via Ideas in Motion and Colchester Travel Plan Club membership.
	1. *For cars purchased or leased the environmental impact should not exceed 100g CO2/Km (tax band A).*	*August 2018*			
	2. *For light vans the environmental impact should not exceed 120g CO2/Km (tax band B).*	*August 2018*			

Strategic objective (O)	Success Indicators *Revised indicators in italics*	Timescale *Revised timescale in italics*	Cross reference to Sustainability Sub Strategy	Lead	January 2018 Update
Biodiversity The University will maintain and enhance its urban and parkland landscapes through monitoring and protecting the species found within them. The University recognises its Colchester, Southend and Loughton campuses are fantastic assets and will use them to champion sustainability by providing well managed access to its landscapes for its students, staff and the wider community.
4. To maximise the quality of the grounds, biodiversity and landscapes	1. The University will undertake annual monitoring of its landscapes and report on changes.	August 2017	O4	Grounds Manager	1. Achieved. Yearly Tree survey undertaken. Vacant site at Knowledge Gateway levelled and seeded (over 10,000m^2).
	2. Additional installations of bio-diversity enhancing infrastructure including bird feeders, insect boxes, apiaries.	August 2017			2. Achieved. Additional 10 bird boxes installed.
	3. The University will derive benefits from its grounds that contribute to the health and well-being of its staff, students and visitors and develop a suite of infrastructure improvements allowing for increased access and enjoyment of its grounds.	August 2018			3. Achieved. Lower Lake work including BBQ for students and new path. Gets students around the lake and into new areas of our parkland. Considerable increase in seating as well for users to spend time in the Parkland

Strategic objective (O)	Success Indicators *Revised indicators in italics*	Timescale *Revised timescale in italics*	Cross reference to Sustainability Sub Strategy	Lead	January 2018 Update
		IT Services			
	The University recognises that IT contributes significantly to our carbon footprint. The University will seek to purchase the most energy efficient equipment, use it efficiently and foster sustainability through IT equipment and apps.				
5. To use information technology sustainably	1. The University will monitor & record energy use from the PCs, Laptops and Printers it owns or leases.	December 2016 *December 2018*	O5	Director of IT Services	1. The University does not currently have the equipment necessary for this work. Metering, monitoring and targeting is being reviewed as part of a separate energy strategy which will be presented to USG, Spring 2018.
	2. The University will procure the most energy efficient IT equipment.	December 2016			2. Achieved.
	3. The University will encourage the use of sustainable IT resources in education and research; with automatic power down after lectures, and Moodle & Lynda providing alternatives to printed handouts and travelling to training.	December 2016			3. Achieved.

Strategic objective (O)	Success Indicators *Revised indicators in italics*	Timescale *Revised timescale in italics*	Cross reference to Sustainability Sub Strategy	Lead	January 2018 Update
Procurement The University will purchase goods and services in accordance with the highest environmental standards, engaging with our supply chain so that no harm to our students and staff is attributable to the products we buy and that minimal resources are utilised in their manufacture, transport and disposal.					
6. To embed sustainability into procurement processes	1. The University will monitor and publish its emissions derived from its supply chain on an annual basis.	August 2017	O6	Deputy Director of Finance (Procurement)	1. The University has measured its scope 3 emissions to be 23,000 tCO$_2$. The methodology only provides an estimate of emissions based on University revenue. In future the University will engage more closely with key suppliers to monitor environmental performance in order to get a more accurate picture of their emissions footprint.
	2. The University will monitor and publish actions its suppliers have undertaken to reduce the environmental impact of its supply chain.	August 2017			2. Achieved. The University has set up a Green Impact scheme for suppliers with the first participants recruited from maintenance contractors.
	3. The University will divert its investments into a Sustainable and Responsible Investment Vehicle eliminating investments in tobacco, arms and fossil fuel industries.	January 2017			3. Achieved. The University no longer invests in these industries.
	1. *The University will include questions on bidders environmental and sustainability policies as part of its procurement processes.*	*January 2018*			

Strategic objective (O)	Success Indicators *Revised indicators in italics*	Timescale *Revised timescale in italics*	Cross reference to Sustainability Sub Strategy	Lead	January 2018 Update
	2. The University will monitor and publish actions its key suppliers have undertaken to reduce the environmental impact of its supply chain.	*August 2018*			
	3. The University will include questions on Modern Slavery in its procurement processes to ensure that no members of the supply chain are being exploited.	*August 2018*			
Water					
The University will manage its water so that the absolute minimum is used, where possible derive water from grey water sources and use rain water for landscaping activities. The University will take care to process water to the highest environmental standards and avoid polluting the local water courses which are vital habitats and of substantial amenity value.					
7. To reduce water use	1. The University will achieve annual reductions in its water use.	August 2017	O7	Energy Manager	1. Achieved. Water reductions from leak detection and repair & installations of water efficient equipment.
	2. Water use will be in the lowest quartile for higher education institutions.	August 2017			2. The University is reviewing sector benchmarking and league tables and will report to USG separately in 2018.
	3. The University will install infrastructure to utilise grey water and rainwater.	August 2018			3. Achieved. The University utilises $68m^3$ of rainwater annually.
	4. The University will take care to process water to the highest environmental standards and avoid polluting the local water courses which are vital habitats and of substantial amenity value.	August 2017			4. Achieved. Water samples taken from all 3 main University lakes on a quarterly basis and water quality good.

Strategic objective (O)	Success Indicators *Revised indicators in italics*	Timescale *Revised timescale in italics*	Cross reference to Sustainability Sub Strategy	Lead	January 2018 Update
Food The University will serve healthy food prepared with the minimum harm to nature. The University will champion ethical production, alternatives to meat, local ingredients and avoid foods derived from endangered species.					
8. To maximise the amount of food offered at catering outlets derived from sustainable and local sources	1. The University will maintain its Fairtrade accreditation status.	October 2016	O8	Catering Operations Manager	1. Achieved. Fairtrade status maintained.
	2. The University will avoid foods derived from endangered species by using Marine Stewardship Council certified fish.	October 2016			2. Achieved. Only MSC certified fish sold on Campus.
	3. The University will ensure that 100% of its meat is Red Tractor assured.	October 2016			3. Achieved. Only Red Tractor Meat sold on campus.
	4. The University will source its meat from local suppliers.	October 2016			4. Achieved. Meat sourced locally.
	5. The University will source 100% of its eggs from free range sources.	October 2016			5. Achieved. 100% free range eggs sold on campus.
	6. The University will promote meat-free alternatives across its catering outlets.	October 2016			6. Achieved. Extensive range of meat-free options on campus.
	7. The University will provide and promote opportunities for food grown on our campuses.	October 2016			7. Achieved. University campus farm relocated with new infrastructure.
	8. The University will use 100% recyclable or compostable food packaging.	August 2017			8. Partly Achieved. Trials of new packaging undertaken, more work needs to be done including with waste operator Veolia.

Strategic objective (O)	Success Indicators *Revised indicators in italics*	Timescale *Revised timescale in italics*	Cross reference to Sustainability Sub Strategy	Lead	January 2018 Update
Engagement					
The University will inspire its stakeholders to engage in positive environmental behaviours taking skills and enthusiasm gained in each of our three campuses beyond the University to make a positive contribution to the global environmental challenge.					
9. To maximise engagement of staff and students in sustainability issues through the Green Impact project.	1. The University will host the UK's leading Student Switch Off programme, measured by student engagement.	August 2017	O9	Carbon Change Advisor	1. Achieved. Although NUS not able to rank its programmes. University of Essex achieves some of the highest engagement and consistent energy savings of all Student Switch Off programmes.
	2. Staff in every department will participate in the University's Green Impact programme.	August 2017			2. Achieved. The University has 36 Green Impact teams.
	3. The University will be recognised as a community leader in sustainability in the local media and through securing awards for environmental performance.	August 2017			3. Achieved. The University won the Green Flag Awards for its Grounds.
	4. Staff and students involved in sustainability research will be recognised as contributing to the University's excellence in education.	August 2017			4. Achieved. Research projects involving sustainability showcased at Green Impact Awards.
	5. Education for sustainability will be provided to all staff and students as part of their induction to life on our three campuses.	August 207			5. Achieved. Sustainability Summer School commenced summer 2017.