Biodiversity Plan 2017

Objective	Sub-objective	Target	Target date for completion	Commentary
Ensure protection and enhancement of campus biodiversity by increasing native plant species by 10% through tree planting and installation of green roofs by 2017	To develop initiatives which improve biodiversity on campus	Undertake campus-wide Phase 1 Habitat survey in collaboration with academic and student community	Ongoing (2020)	Compliance with legislative requirements, policies and grounds management agreements (including non use of pesticides) leading to beneficial impacts on environment
		Develop updated Habitat Management Plan to ensure ongoing protection and enhancement	Ongoing (2020)	
		install green roofs to New Academic Building and Northfields residences by 2017	Completed	Sedum roofs installed
		Undertake tree planting of native species to Falmer campus	Ongoing (2020)	Over 100 trees of native species planted in 2018 a further 100 are planned for November 2018
		Develop record management of environmental history of site	Ongoing (2020)	Compliance with Environmental Management System requirements

Waste Management and Recycling Plan 2017

Objective	Sub-objective	Target	Target date for completion	Benefit	Commentary
Reduce general waste disposal by 30% by 2020 against a 2005 baseline		Develop and deliver a programme of waste audits across campus to ensure (a) appropriate labelling (b) appropriate wastes are disposed of correctly	2020 (Improvements being made in spite of increases to student numbers)	Mitigating risk of prosecution & resultant damage to reputation, compliance with Environmental Management System requirements	Total mass of general waste in 2005/06 was 924 tonnes, of which 799 tonnes (86%) was disposed of (Source: EMS). Target for reduction is 559 tonnes of general waste. Reported general waste figures are as follows: 2013-14 - 1,361tonnes. 2016-17 - 1,086tonnes 2017-18 - 1,057tonnes (Forecast)
		Undertake feasibility study and trial of anaerobic digestion to divert food waste from the general waste stream.	2018 (project under review)	Potential savings to be calculated	General waste disposal costs at the University are significant; £100,000 in 2009/10 (Source: Estates Management Statistics). Subject to an acceptable payback period. We are trialling food waste bins within the New East Slope Development in 2018-19 to ascertain the viability of a campus role out.
	Eliminate waste to landfill by 100% by 2020 and seek to ensure all non-recyclable waste is sent locally for energy recovery.		Complete	Reduction in landfill tax, reduction in methane emissions from landfill site	All general waste diverted from landfill now in place, sent to Newhaven Waste to produce energy.
	Increase recycling rates to 80% by 2020 against a 2005 baseline	Develop communication strategy and awareness campaign for waste	2020 (Reassessment required on current practices)	Improved awareness across the campus community will deliver increased recycling rates	Total mass of waste in 2005/06 was 924 tonnes, of which 125 tonnes (14%) was recycled (Source: EMS). Recycling contract and all necessary infrastructure is in place. Reported % of recycling are as follows: 2013-14 - reported at 48%. 2016-17 - reported at 30%. 2017-18 - reported at 27%. (Forecast)

Sustainable Transport Plan 2017

Objective	Sub-objective	Target	Target date for completion	Commentary
To reduce the environmental impacts from private vehicular transport emissions by 20% by 2020 and increase passenger numbers on buses and trains by 20% by 2020 against the 2009 transport survey results	Reduce the number of car journeys to and from the campus by a minimum of 5.25 per cent per annum until 2020	Continue to encourage sustainable modes of travel such as walking, cycling and public transport through various mechanisms such as season ticket purchasing	Ongoing 2019	The University has a cycle to work and a reduced rail fair scheme set up for all Univeristy Staff
		Review car parking charges in terms of costs and operational times	Ongoing (2018)	Increase in charges will result in revenue increase for reinvestment in other transport-related environmental schemes
		Carry out additional modes of transport survey of campus users to determine up-to-date data for comparison to benchmark data	Ongoing	Survey completed February 2016 and public transport figures now shown at over 61% of campus users against a sample survey size of 1419 staff and students.
		Review incentives for car sharing	On Going (2018)	Contributes to reduction in car use, reduces congestion on campus
	Reduce Scope 1 emissions associated with University owned or leased vehicles	Assess the feasibility of replacing all University fossil-fuel powered vehicles with electric or hybrid vehicles	On Going (2018)	8No electric vehicles are in use to imminently replace Scope 1, fossil fuelled vehicles, along with 17 charge point located, 9 for staff and student use in Jubilee Multistory carpark.

Reduce air travel emissions for business use by 10% by end of calendar year 2021 from baseline data of 495 tonnes in calendar year 2011	Quantify Scope 3 transport emissions by 2021	Continue to record and report on data arising from domestic and international air travel undertaken by staff and students and include within Carbon Management Plan, demonstrate reduction as per objective	Ongoing Data Collection and Validation (2018)	
Community Involvement Plan 2017				
Objective	**Sub-objective**	**Target**	**Target date for completion**	**Commentary**
To engage with the local keys stakeholders in East Sussex regarding the environmental impacts of the Rampion Offshore Wind Farm and act as the local community focus point for liaison with Eon and the Crown Estate	Promote sustainable and renewable energy generation whilst protecting the South Downs National Park	To ensure close co-operation and agreement with key stakeholders including the South Downs National Park Authority, on the appropriate approach to environmental impact assessment and mitigation of adverse impacts by Eon and its contractors, particularly with reference to the underground installation of high voltage electricity cables across the South Downs between the Rampion ashore substation at Lancing and the Bolney inland substation	Completed (2018)	
To restart the Environmental Forum, which will discuss all aspects that the university has on its local environment. Attendance is open to all aspects of the university.	Information/concerns and interest will be presented into the Health, Safety and Environmental Forum, chaired by the VC.	To assist in delivering the university's carbon reduction targets, highlighting water conservation and Scope 3 emissions and what we can do to reduce them and work collaboratively to improve the university's performance in all league tables to ensure that we are truly represented and recognised for energy and environmental achievements.	Started 2016 Ongoing (2018)	
Emissions & Discharges Plan 2017				
Objective	**Sub-objective**	**Target**	**Target date for completion**	**Commentary**
To prevent potential toxic, chemical or hazardous emissions and pollution to air, water and land in accordance with best practice guidance and legislation, ensuring 100% compliance with relevant legislation by 2015		Establish and adopt a procedure to maintain and cascade an appropriate legal register, including subscription to legal database (Croners, HIS or similar)	2019	Mitigating risk of prosecution & resultant damage to reputation, compliance with Environmental Management System requirements
		Accurately map foul and surface water drainage across the campus, and ensure this is referred to during contractor briefings	2019	
		Assess feasibility of Sustainable Urban Drainage (SUDS) in accordance with Environment Agency guidance when upgrading areas of hard standing and hard landscaping as appropriate to minimise urban rainwater runoff and flood risk	2019	
		Embed emergency preparedness and response procedures for managing pollution incidents on campus into Emergency Management Plan	2019	
		Establish and adopt procedure to identify, quantify and monitor all point source aerial emissions across campus	2019	
		Establish and undertake audit programme to monitor compliance	2019	
To reduce *absolute* Scope 1 (direct - energy) and Scope 2 (indirect - energy) carbon emissions by 44% by 2020 against a 2005/06 baseline	To reduce energy consumption by 44% by 2020 against a 2005/06 baseline	Install energy sub-metering of substantial energy uses with a pulsed output to enable remote real-time energy consumption monitoring	2018 (90% Completed)	Remote real-time energy monitoring allows rapid identification and response to consumption anomalies
		Ensure all external light fittings are controlled through a time switch or daylight sensor to prevent operation during daylight hours	Complete	Improvements to light fittings and controls have a typical payback period of 1-3 years
		Ensure where practicable that all internal light fittings are controlled through Passive Infrared Detection (AND daylight sensors where appropriate e.g. in naturally-lit areas)	Ongoing (Trial Planned for 08/18)	
		Investigate and trial the installation of LED street lighting	Complete	LED lighting typically saves 80% of the energy of traditional high pressure sodium lighting
		Undertake feasibility assessment of increasing the CHP operational cycle by 10 hours/week	Complete	Saving of 0.352kg CO_2 and £0.10 per kilowatt hour
		Work with ITS to support the department's plan for energy reduction, including PC hibernation and shutdown protocols	Complete	Reduced electricity use
		Carry out transformer tap change during scheduled 5 yearly substation inspection and maintenance to achieve voltage optimisation	Ongoing (2018)	Reducing the electrical transformer output could achieve savings of up to 15%, but can only realistically be performed during routine inspection and maintenance of the substations.
		Implement programme of gas boiler replacement in residences to ensure most energy-efficient SEDBUK A-rated boilers	Ongoing (2018)	Reduced gas use - Typically, boiler efficiencies can be improved from 55-60% to 85%+ efficiency
		Conduct detailed building energy audits to identify low cost and longer term options for efficiency and improvements which comply with Salix funding criteria	Completed	
		Undertake feasibility study for biomass boiler/CHP to supplement gas-fired plant in the Energy Centre	Ongoing (2018)	Reduced gas use
	Seek to change building user	Deliver "The Student Energy Project" energy awareness campaign across campus residences,.	Ongoing (2018)	Reduced energy use

	behaviours surrounding energy use through education and awareness	Improve Green Impact Involvement across Schools and Departments	2020	Reduced energy use
		Work with School of Psychology to support the funded PhD researcher examining the modification of IT user behaviours	Completed	Reduced electricity use
Quantify Scope 3 (indirect - other) emissions and develop plans for reduction by 2012 against a 2005 baseline		Quantify scope 3 emissions in accordance with HEFCE guidance and develop targets for reduction as appropriate, e.g. commuter travel to campus (see *Transport* section)	Ongoing (2020)	Reduced liabilities under the Carbon Reduction Commitment (Subject to achievement of targets and league performance)

Water Management Plan 2017

Objective	Sub-objective	Target	Target date for completion	Commentary
To reduce *absolute* water consumption by 44% by 2020 against a 2005 baseline The 2005 baseline water consumption was 302,717 m^3, therefore target is 272,445 m^3). The carbon footprint associated with the supply and treatment of water is 0.695kg CO_2/m^3 (Source: MacKay, D, 2009, *Sustainable Energy Without the Hot Air*), therefore any reduction in water consumption will have a corresponding decrease in the total University carbon footprint.	To minimise unplanned losses and leaks	Replace under-reading and faulty meters identified during water consumption survey with WRA-compliant recommended meters enabled with *Open Collector Pulse Transmitters*	Ongoing (2020)	Improved information management and water balancing in order to identify unplanned losses through consumption anomalies via real-time data
		Replace automatic make-up switches and sensors to Falmer House moat	Completed	Savings of up to 4.5m^3 per hour (equivalent to £9.68 per hour or £80,000/year)
		Drain Falmer House moat and investigate for leakage	Completed	
	To identify opportunities to reduce campus-wide water consumption	Undertake water pressurisation pump audit is to determine if there are any savings in replacing the existing pump set based on energy savings and pay-back time	Superceeded, pumps to be replaced for the campus masterplan	Improved understanding of the water demand requirements with a view to reducing both the energy currently being drawn and ensure an efficient and accurate constant supply pressure is maintained.
		Undertake feasibility studies for rainwater harvesting and deliver at least 1 scheme per year subject to a positive payback of 5 years or less	Ongoing (2020)	Reduced water consumption and reduced reliance on mains supply
	To minimise the consumption of potable water in sanitary applications	Install solenoid valves on the water supply to each toilet area with the flow of water controlled by passive infrared detectors or door contacts	Ongoing (2020)	Savings of up to 6.6m^3 per hour (equivalent to £12.77/hour or £105,000/year). Targets will be delivered as part of Long Term Maintenance (LTM) programme and agreed refurbishment projects through the development of standard specifications.
		Ensure 100% of all WC's have *an effective flush volume* of 4.5 litres or less, and 80% of WC's have *an effective flush volume* of 3 litres or less	Completed	
		Ensure that all taps (except for kitchen, cleaners' sink, external, process taps in laboratory's) have a maximum flow rate less than 6 litres/min and are listed as a Buildings Research Establishment *Green Book Live* water-saving product	Completed	
		Ensure that all urinals are either (a) fitted with individual presence detectors that operate the flushing control with each use *or* are ultra-low flush or waterless	Completed	