

Report

Title: Environment and Sustainability Report 2018/19

From: Nicola Turvey, Environment & Sustainability Manager

Date: Thursday 11th July 2019

This annual report aims to inform the University Executive Board on the current (August 2018 – July 2019) performance and ongoing progress in ensuring environment and sustainability is embedded within everyday practise, across our Estate.

1. Leadership & Governance

Nicola Turvey was appointed to the post of Environment & Sustainability Manager on 6th August 2018, with Adam Tewkesbury (previously Transport Manager), appointed to the post of Associate Director for Transport & Sustainability on 6th February 2019, establishing the Estates & Facilities Sustainability Team.

Since 30th October 2018, the newly formed Environment & Sustainability Steering Group (ESSG) chaired by Dean Rachel Mills, has driven both the team and University’s strategic direction. The ESSG aims to provide leadership and oversight for embedding sustainability across the University. This group has since met termly, evaluating how we meet the set ISO14001:2015 environmental objectives collaboratively between Estates & Facilities, Professional Services, SUSU and Faculties. To operationally ensure we meet these KPI’s additional working groups have been established and chaired by Associate Faculty Deans or Associate Directors within E&F to develop detailed monitoring and analysis of how we are currently performing RE: Biodiversity, Energy, Faculty Electricity Use, Sustainable Building Design and Building Management improvements.

These KPI’s are set within the University’s ISO14001:2015 Environmental Management System, last externally audited by NQA Ltd in October 2018 - who confirmed that the management of our environmental performance is effectively meeting the requirements of the international standard for Environmental Management, evidencing legal compliance, as well as demonstrating continuous improvement.

The ISO14001:2015 has an overarching Environmental Policy Statement (**Appendix 1**) listing our key commitments, signed by Interim Vice Chancellor Mark Spearing, and remains valid until July 2020 when at which point, we are due to undergo recertification for a further 3 x years.

Externally we are collaborating more strategically with our key stakeholders such as Southampton City Council, by signing the ‘[Green City Charter](#)’ on 20th June 2019, pledging to support Southampton City Council in the aim to achieve carbon neutrality as a city and organisation by 2030.

Other external partnership pairings have included working alongside the Southampton Common Forum, Hampshire County Council, and through speaking to the Hampshire collective of Local Authorities and Public Sector Organisations on our Environmental ambitions. On 17th May 2019 at the Boldrewood Innovation Campus, we hosted a 1-day practioner meeting for Sustainability Managers & members of the Environmental Association of Universities and Colleges, from across the South England.

In addition to this, in 2019 we have hosted Sustainability Managers from Oxford Brookes University & the University of Tasmania (strategic international partner) to peer review our Environmental Management System, sharing sustainability initiatives & best practise.

2. Energy & Carbon

A 20% carbon emissions reduction target was set by HEFCE for achievement by 2020, using 2005/2006 baseline data. The reduction needs to be evidenced within each of the following 8 x KPI’s:

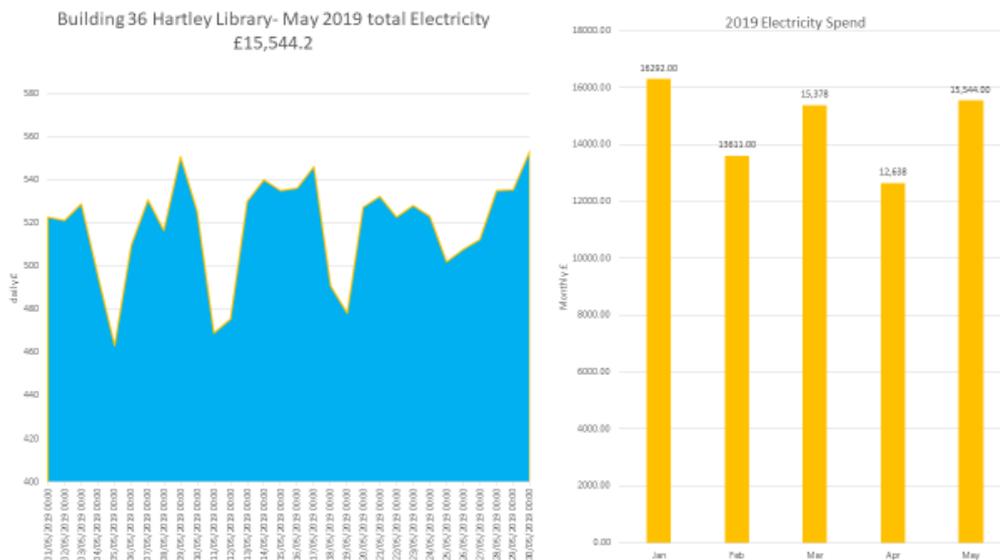
KPI = 20% reduction in:	Baseline	2017/18 result
Tonnes of CO₂ generated from Scope 1 & 2 emissions	31,983 Tonnes of CO ₂	2017/18 Actual: 32,208 Tonnes of CO ₂ Target: <25,586 Tonnes of CO ₂
Electricity usage in kWh	35,868,000 kWh	2017/18 Actual: 33,228,981 kWh

		Target: < 28,694,400 kWh
Gas usage in kWh	86,838,000 kWh	2017/18 Actual: 93,736,722.00 kWh
		Target: < 69,470,400 kWh
kg of CO₂ / £ turnover	0.103kg/£	2017/18 Actual: 0.055 kg CO₂ /£
		Target: < 0.08kg CO₂ /£
Tonnes of CO₂ / FTE student & staff	1.37 tonnes CO ₂	2017/18 Actual: 1.12 tonnes CO₂
		Target: <1.096 tonnes CO₂
Tonnes of CO₂ / Halls of Residence Occupant	2.02 tonnes CO ₂	2017/18 Actual: 1.10 tonnes CO₂
		Target: <1.61 tonnes CO₂
Water usage in M₃	569,540 M ₃	2017/18 Actual: 468,074 M₃
		Target: <398,678 M₃
Water usage in Tonnes of CO₂	552 tonnes CO ₂	2017/18 Actual: 452 tonnes CO₂
		Target: <386.4 tonnes CO₂

During this time there has been a 24% increase in employees, and 26% increase in students, with academic sites gross internal area reducing by 6% due to Faraday and New College closing, including the demolition and rebuild of Boldrewood; & with a gross internal area increasing by 14% in our Halls of Residence.

These changes will make an impact on how quickly we progress towards our overall reduction commitments; however, there are some underlying successes. Across our academic sites there has been a 51% reduction in CO₂ emissions/m² & a 41% reduction in energy use/ m². And at residential sites it's been a healthy 30% reduction in the CO₂ emissions/m² with a 17% reduction in energy use/m².

As of January 2019 Building Managers have started to receive monthly electricity profiles of their buildings daily electricity use in £, as well as a month on month trend to identify if and where savings can be made as a result of building operations, use, and opening time tweaks. An example of the monthly electricity profile is B.36 Hartley Library below. Building Managers then circulate this PowerPoint slide to building users via internal public LCD displays:



A quarterly Building Managers Forum, established in April 2019, is a peer led forum for colleagues across our estate to share best practise in efficient building operations, resulting in electricity reductions. B.53 (Zepler) is a good example where because of discussion on mirroring equipment running times to building opening times, B.53 Building Managers generated a 16% electricity reduction in June 2019, compared to June in the previous 2 years – a financial saving of £11,000.00 for that month.

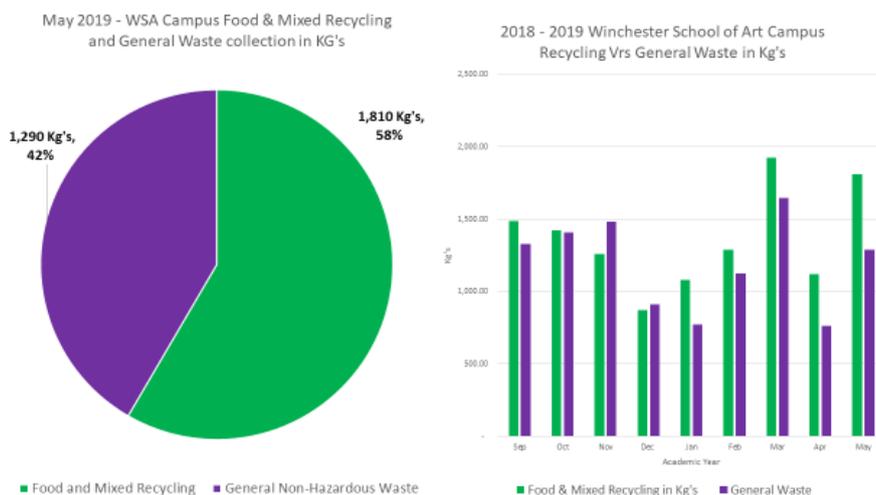
3. Waste and Recycling

An overall 65% recycling target is set for achievement by 2020, using 2009/2010 as the baseline year. The following 5 x KPI's are how we measure our progress towards this:

KPI	Baseline	2017/18 result
Recycle >65% of ALL resource streams	46%	2017/18 Actual: 50% Target: >65%
Recycle >60% of bin weight & food waste from Academic Campuses	49%	2017/18 Actual: 46% Target: >60%
Recycle >50% of bin weight & food weight from Halls of Residence	34%	2017/18 Actual: 35% Target: >50%
Recycle >85% of all refurbishment waste from demolition and construction waste	92%	2017/18 Actual: 91.5% Target: >85%
Recycle >85% of all new build demolition and construction waste	98%	2017/18 Actual: 99.6% Target: >85%

In 2017, there was a change of Waste Carrier contract from BIFFA to Suez, which has resulted in tighter controls over what is deemed acceptable for recycling, and what is deemed contaminated and thus sent to the incineration 'waste to energy' plant. This has impacted negatively on our progress at academic and HoR sites in achieving our intended recycling rates, however there is ongoing work within SUSU, HoR and E&F to improve our recycling rate.

Campus Managers & Facilities Managers within Halls of Residence (HoR) now receive monthly performance graphs on the general waste, food & recycling tonnes and percentage for their site. This has proved a very effective way of information sharing between academic or HoR sites – keeping focus on the targets & addressing why there may be poorer performance recorded at a particular site, as well as measuring the success of any new recycling initiatives. Winchester School of Art below is an example of the monthly performance graph each site manager receives:



Operationally, the Waste & Recycling Manager left the organisation in August 2018, the post is now overseen by the Campus Services Manager and a team of 6 external cleaning and recycling operatives.

4. Travel

Since May 2018 'Clarity Travel Management' has become the required web portal to be used for making all employee overseas air & train travel bookings, with significant uptake for UK travel as well. Although this system has only been available for use since May 2018, over 19,185 bookings have been made to date (June 2019). The benefit of ensuring travel bookings are made through this portal is that monthly scope 3 travel carbon emissions data can be captured across the entire organisation generating readily available carbon data the Sustainability Team can start to report on, as of 2020.

In November 2018 our Unilink bus service was shortlisted Times Higher Education Awards and within the 'Benefitting Society' category of the national Green Gown Awards, due to our entire fleet being updated with new ultra-low emission standard EURO6, and fitted with auto stop/ start engines. This significantly reduces the immediate air pollution at bus stops, due to the engines switching off when the doors open.

In January 2019, 10 x Electric Vehicle charge points were installed on our Highfield, Boldrewood, Avenue and Winchester Campuses, available for use to all staff & visitors whom may need to charge their EV whilst on site. Joju Solar are our charging point provider, whom we procured through Hampshire County Council's electric vehicle framework, and costs 20p/kWh for use.

In March 2019 The 5 year Travel Plan was revised to reflect the 2017 Travel Survey results, recording the positive increase in Unilink usage, meaning we have exceeded our 2020 target for staff using Unilink, and just over 57% of students using the bus is twice that of anticipated 24% usage target by 2020.

5. Procurement

In July 2019 the Procurement Team established the Sustainable Procurement Working Group. Although this group is yet to define its Terms of Reference, the strategic aim is to become a better-informed Institute on our purchasing sources by having a fuller life cycle understanding of our supply chains material sourcing, labour and manufacturing processes involved in final products we purchase, as well as greater control over contracts.

Within the vehicle of this working group, the starting focus will be on student merchandise given away at open days and sold within the shop, due to the public facing element of these items. There is an increased pressure and therefore necessity to know the environmental & ethical audit trail behind merchandise. Working collaboratively with Faculties, Merchandise, Marketing and Events team, the Sustainable Procurement Working Group will audit merchandise supply chains, transferring to an alternative where a lack of CSR is uncovered, moving our investments towards supporting fair working conditions, local manufacturers with auditable materials used, turning purchasing into a narrative beyond the product. This will strengthen our own commitment to CSR and provide evidence of this decision-making framework to prospective and current students.

6. Biodiversity

The Biodiversity Group was re-instated on 2nd November 2018, to oversee the continued implementation of the Biodiversity Action Plan, and monitor our progress with habitat improvements. Actions in the past year to enhance our Biodiversity across the Estate, and promote our fantastic open spaces to the University community have included:

- Collaborating with Sport & Wellbeing & SUSU to plant 10 x oak trees at Wide Lane Sports Ground
- Planting a rose garden of over 180 red roses & double rows of lavender in South Garden, Hartley Library
- Clearing & replanting a large shrubbery between B.44 & B.46 with 1,000 daffodil bulbs
- Planting a 50m native hedge along the back boundary of WSA
- Replanting Mayflower Halls internal courtyard with butterfly friendly Potentilla
- Replacing the pagoda at Highfield Halls to hold & support the beautifully matured Wisteria growing on site
- In February 2019, the annual dredge and clearance of West Stream was carried out
- Investing in Wildflower seed for Valley Gardens, Wide Lane Sports Ground & the Water Sports Centre
- Successfully winning Kew Gardens 'grow wild' £500.00 fund, to purchase 4 x time-lapse cameras – which will be donated to SUSU Conservation Volunteers Society, used to capture wildflower growth across estate grounds
- Hosting Southampton's 24 hour Bioblitz event on 7th to 8th June 2019, in partnership with UoS Academics, Southampton City Council, Southampton Common Forum and Hampshire Biodiversity Information Centre

7. Communicating Sustainability

Continuous environmental improvements, events & activities are communicated to our internal community, as well as external audience via the following media channels:

- [Website](#) - due for an update as of September 2019
- [Twitter 'Sustainable Soton'](#) - since 2018 followers have increased by 161, taking us to 2,583 followers
- [Facebook 'University of Southampton Sustainability'](#) - now followed by 355 people with 340 likes
- **SUSSED announcements** - between August 2017 - July 2018 18 x Sustainability posts have been published
- **Staff Matters** - 1 x article published in 2019

An Environment and Sustainability Strategic Communications Plan has been developed with the Internal Communications Team, and will be implemented in 2019/20.

8. Events, Awareness & Engagement

Events and awareness raising activities are an additional way to engage an audience beyond our University community, by hosting accessible Citizen Science events on topics from Bat Walk, Bird Walks, and local seminars on Biodiversity through to Air Quality - encouraging knowledge sharing platforms to the wider Southampton community.



Environmental Lessons from Scrooge: air quality past, present and future

On Wednesday 12th December the [Air Quality Event](#) was delivered, as part of a Citizen Science offering. Over 134 people secured a ticket through Event Brite, to listen to our academics Professor Ian Williams, Dr Matt Loxham and Dr Steve Johnson narrate the great smog of 1954, lecture on air quality and modern day health, and inform the audience of the future of technology to monitor air quality.

The event was hugely successful, and included SUSU society presidents discuss activities students are actively delivering to make a difference within the University community.



Waste Wars

The University of Southampton has undertaken a waste audit (Waste Wars) every year since 2007. The 13th annual Waste Wars was held on 06.03.2019 in Wessex Lane's Boiler House.

Of the 215kg's of waste analysed by 38 student volunteers, we found a very positive reduction in contamination rates within recycling bags, where an increase in food waste being correctly separated out into the designated food waste bags. An overall increase in recycling rates to just under 50% of the total weight was recorded.



Bioblitz

We hosted Southampton's 24hr Bioblitz event from 7pm on Friday 7th June through to 7pm on Saturday 8th June 2019. This mini festival included an evening seminar series, late night cinema experience (replacing scheduled bat walks due

to wet weather), dawn chorus guided walk and the main BioBlitz audit on Highfield Campus and Southampton Common, where 24 teams of Natural History explorers and volunteers recorded over 340 observations, with over 195 different species identified.

Aside from these main events, The University Biohub, a hub manned by student volunteers have exhibited their Biohub stall at over 8 public facing Hampshire Fairs during 2019, to engage the differing audiences from children to adults on the issues of biodiversity, natural history and habitat protection, increasing knowledge through games, and interactive displays.

9. Next Steps

The future progress of Sustainability at the University of Southampton is not without a challenge ahead. The two main difficulties are ensuring there is both sufficient finance and human resource to embed environmental improvements and changed behaviour across the organisation.

However, there is a strong appetite for change driven by both employees and students wishing to engage with the University's sustainability programme to make the improvements needed. Within the next academic year a Sustainability Representatives Forum will be established, where environmental champions from each building will collectively work together to make an improvement to recycling rates, electricity usage, commuter travel and biodiversity within and around their own buildings.

The Sustainability Team will continue to collaborate with SUSU, Professional Services and Faculties on setting up initiatives led by students, such as a establishing a more circular economy within the organisation initiating projects, citizen science events and supporting Faculty led teaching. We will also reshape our waste furniture to increase reuse where appropriate; and continuing to work towards our 2020 targets for carbon emissions reduction.

In 2020 both the current Travel Plan, and ISO14001:2015 certification cycle will have reached the end of their current certification cycles, giving an opportunity to tie both together within the Estates Strategy, which will set out new strategic goals driving us to where we wish to be in 10 years' time. A strategic ambitions and goal setting year lies ahead.