University of Hertfordshire

Environment and Sustainability

Annual Report

2021 - 2022

University of Hertfordshire UH

CONTENTS

INTRODUCTION

Welcome to the University of Hertfordshire Environment and Sustainability Annual Performance Report 2021-22. The reporting period runs from 1 August 2021 to 31 July 2022, and while we began to adapt to a new normal, it has still been a turbulent year, impacted considerably by lockdowns and uncertainty. Despite these challenges, however, we are pleased to report on many positive initiatives across the University and beyond. While the effective management of our risks and compliance obligations remained a priority, we continued to focus on embedding sustainability holistically across the university, and made great progress with many of our strategic aims and operational commitments.

Climate change continued to be an environmental priority in 21-22. The sobering findings of the Intergovernmental Panel on Climate change (IPCC)'s Sixth Assessment Report; Climate Change 2021: The Physical Science Basis set the scene for the postponed COP26 Convention, where members convened to discuss carbon reduction and keeping the global temperature rise below 1.5°C. Some progress was made, and nearly 200 countries agreed to phase-out the use of unabated coal power and inefficient fossil fuel subsidies in the Glasgow Climate Pact, as well as to accelerate the development, deployment, and dissemination of green technologies. In the summer of 2022, we witnessed the consequences of climate change here in the UK as unprecedented heatwaves caused wildfires, droughts, and food system collapse locally and around the world.

In 2021 the Environment Act became law, plugging the gap on legislation on nature protection, water quality, clean air and other environmental protections that came under risk when we left the EU. The Act provides the Government with powers to set new binding targets, including for air quality, water, biodiversity, and waste reduction. These should be ambitious, meaningful and informed by experts, however critics argue that the target dates are weak and do not do enough to protect people and nature from the harmful effects of e.g. particulate pollution. It does also not address the important issue of global deforestation, which was identified as a priority area by leaders at COP26.

As we adapted to the new normal, sustainability was seen to return to agendas in the University sector once again. In 2021, Universities UK published a report on the role of the sector in driving sustainability: Confronting the climate emergency. This report sets out the commitments that all UK universities should make in order to reduce emissions and protect the environment, and addresses some of the common challenges faced by the sector. The report reinforces the Race to Zero pledge to reduce emissions by 78% by 2035, and to be Net Zero by 2050 at the latest[1]. The QAA and Advance HE also jointly launched new guidance on Education for Sustainable Development in higher education to help UK higher education institutions incorporate Education for Sustainable Development (ESD) within their curricula.

[1] Scope 1 & 2, and compared to 1990 levels.

ENVIRONMENT AND SUSTAINABILITY AT UH

As for most universities, 2021-22 represented a period of transition and understanding of what a new normal could look like for university life. While hybrid working and studying helped keep emission and waste levels relatively low compared to pre-pandemic levels, they saw a slight increase on the previous year due to increased activity on campus and more ventilation. The period did, however, offer an opportunity to start reassessing how we use our spaces and buildings, and how sustainability can be incorporated into future planning and strategy.

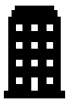
At an operational level, we were still able deliver on our Environmental Policy commitments, and progress our Environment and Sustainability (E&S) ambitions. Our Environmental Management System (EMS) remained a priority, and we worked hard to not only meet our compliance obligations, but to also have a wider positive impact through a range of engagement, development, and education opportunities. Furthermore, we continued to incorporate the Sustainable Development Goals into more of our aims and objectives, and embed our sustainability agenda holistically across the university. Some of our main achievements and successes are summarised below:

KEY ACHIEVEMENTS & SUCCESSES

1. Total waste output reduction of 5% compared to 2018-19 pre-pandemic levels
2. Scope 1 & 2 emission reduction of 20% compared to 2018/19 levels
3. Climate Vision published
4. Board KPI on carbon reduction and commitment to Net Zero
5. A 21% reduction in water consumption per m3/person compared to 2018-19 pre-pandemic levels
6. LED lighting upgrade in the LRC
7. ISO14001 external audit: No non-conformances or opportunities for improvement identified
8. Education: Carbon Literacy, over 100 members of staff completed training
9. Launch of Herts' first ever sustainability-focused R&D Accelerator
10. New Carbon & Net Zero club for staff
11. Partnership with the Hertfordshire Climate Change and Sustainability Partnership (HCCSP)
12. New Graduate Attributes finalised including Sustainability Driven
13. 77 members of staff across 13 teams took part in Green Impact
14. Launch of preloved online marketplace

PROGRESS TO DATE

The university’s environment and sustainability commitments are managed and reported on through our EMS, and in 2021 – 22 our legal obligations were effectively monitored and maintained according to our procedures and terms of reference. Looking beyond legal compliance, ambitious targets were set across all impact areas as part of our drive for continual improvement. In 2021-22, there were 28 Environmental targets associated with 14 objectives, of which 16 targets were achieved and 7 are ongoing, on track to be achieved by their scheduled date. Only 5 targets remain outstanding after being indefinitely postponed either due to Covid or a lack of resources.

Impact Area	Aim	Position 21/22	Current Progress
Energy and Carbon 	Reducing the University's negative impact on climate change through the implementation of projects within its evolving Carbon Management Plan.	4 objectives: 1 achieved 3 ongoing	With a board KPI to reduce emissions year on year and a commitment to reach Net Zero by 2050, energy and carbon is a key priority for UH. We undertook a 2018/2019 carbon footprint assessment for scope 1 and 2 emissions to be used as our baseline to measure ongoing carbon reduction progress against. As can be expected, the 21-22 level rose slightly on the previous year when the campus was significantly impacted by Covid (13,590 tonnes CO2e 12,044tCO2e). It still represents a 20% reduction against our 18/19 baseline (17,004), however. While efficiency measures have help keep emission levels relatively low, the reduction can largely be attributed to the grid becoming greener, and reduced demand from Covid.
Waste 	Reducing University waste production and promoting resource efficiency	3 objectives: 1 completed 2 ongoing	Waste levels increased slightly from last year as staff and students returned to campus. Despite PPE and disposable packaging still remaining in place, total waste was down 5% on pre-pandemic levels. While landfill fell to just 1%, recycling rates dropped by 5% due to contamination.
Transport 	Encouraging reduced dependency on single occupancy car travel to and from the University and between sites	2 objectives completed	A travel survey carried out in the Autumn of 2021 revealed that 62% of users travel to the university on single use car journeys. 60% of respondents said they use this mode of travel due to a lack of alternatives, and 60% would be prepared to car share if this service was available.
Water 	Preventing pollution by managing and reducing emissions to air and discharges to water and managing and reducing water consumption	1 objective achieved	We are making good progress with our water objectives. While water consumption increased slightly on the previous year as a result of staff and students returning to campus, this is still a 21% reduction on pre-pandemic levels and below target level of 13m^3 per FTE. Leak detection and rectification works continue at the College Lane Campus.
Construction 	Taking account of Sustainable Construction Principles in University new builds through the incorporation of such principles throughout project life-cycle	1 objective, still outstanding	Our objective pertaining to this aim was to understand the principles of net gain in the context of construction. As the team focused on other matters, this objective remains outstanding. We do, however, still commit to BREEAM excellent for any new builds, and will be a target for the new SPECS building.
Procurement 	Reducing the environmental impact of the University's procurement processes and supporting responsible procurement	1 objective still outstanding	While we have made good progress with the review of the Procurement Sustainability Policy and guidance on HertsHub, we still need to deliver training on sustainable supply chains and the Sustainable Development Goals to the team to support the implementation of the policy in practice.
Engagement 	Increase awareness across Staff and Students on the University approach to the SDGs and the	6 objectives completed	We made excellent progress with our Engagement programme this year. Our engagement coordinator set up a sustainability staff network, organised Green Impact and collaborated on several events such as the Wellbeing and Sustainability fair, the COP26 Herts conference and much more.

	Environment and Sustainability across the UH campuses		
Biodiversity 	To have biodiversity Net Gain on the College Lane and DeHavilland	4 objectives: 1 achieved 3 ongoing / postponed	We have made good progress on our Biodiversity objectives and have achieved Hedgehog Friendly Campus Bronze accreditation. Many of our engagement initiatives also focused on Biodiversity, helping our community connect with our natural spaces and our sustainability agenda.
Compliance 	Ensuring that the University's compliance obligations with all relevant environmental legislation, regulations and other requirements are met.	2 objectives ongoing	Our compliance obligations were all met as verified by through our internal and external auditing process.

REDUCING OUR IMPACT ON THE ENVIRONMENT

As a university there are several areas where our activities and infrastructure can have a negative impact on the local and wider environment which would lead to biodiversity loss, resource depletion, and climate change. It is therefore a key priority that we recognise these impacts and put plans in place to mitigate them wherever possible.

CLIMATE CHANGE

In order to reduce our impact on the climate, we must reduce, and ideally stop emitting greenhouse gases altogether. While most of these are a direct result of burning fossil fuels, other gases such as methane, f-gases and nitrous oxide also add to the greenhouse effect. At UH, most of our Scope 1 and 2 emissions sit with gas for heating, electricity for energy, and diesel for company cars and the UNO fleet. We have made significant strides in our carbon reduction plan so far, and this year have made board level commitments to go even further:

- A board level objective to meet the Race to Zero commitment by building in sustainability into core University Group.
- A board KPI to reduce carbon emissions year on year (scope 1 and 2)

Our Environmental Policy statement on climate change states that we commit to:

- *Reducing the University's negative impact on climate change through the implementation of projects within its evolving Carbon Management Plan.*

PROGRESS SO FAR

In 2021-22 we emitted just under 13,600 tonnes[2] of scope 1 & 2 CO^2e emissions. While this is a 12% increase on the previous reporting period as students and staff returned to campus, it represents a 20% decrease on the 2018/19 baseline level. While much of this was down to a decrease in energy demand and the national grid's energy mix becoming greener, there were other drivers to which the decrease can be attributed, such as continued improvements in building energy consumption across the portfolio:

- Improvements in building fabric, i.e. newer buildings replacing older ones and the renovation of spaces

[2] As reported to HESA

- Improvements in HVAC systems, lighting systems and controls
- Investment in energy-efficient equipment
- Sub-metering allowing for better monitoring and preventative action

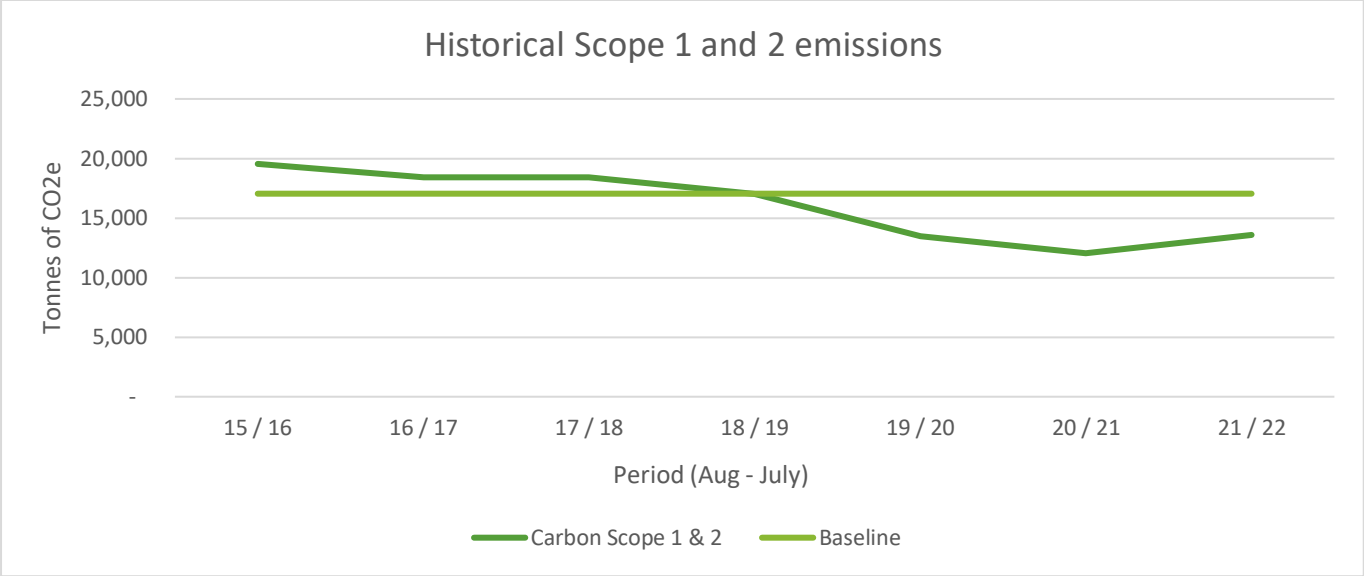


Fig. 1 – CO^2e emissions over the last years. Baseline is the 2018/19 level.

2020 – 2021 COMMITMENTS

Despite these achievements, however, we are not complacent, and as a University we have this year made a board-level commitment to join the United Nation's Race to Zero campaign, and set a KPI to reduce Scope 1 & 2 emissions year on year. This means that we will aim to be Net Zero by 2050[3], with a 78% reduction in emissions by 2035 against a 2018/19 baseline. This supersedes the previous sector commitment to reduce scope 1 and 2 emissions by 43% against a 2005/6 baseline by 2020. Our commitment to climate action is set out in our Climate Change Vision, published in 2021. This vision addresses the climate crisis and outlines our aims to reduce our overall carbon impact while empowering positive action within the community.

CARBON FOOTPRINT REPORTING

In order to help us take our climate intentions from vision to delivery, we have conducted a 2018/19 carbon footprint assessment of university group, including subsidiaries. This baseline assessment will allow us to track and monitor progress against our targets, and has also helped identify hot spot areas and activities that can inform future interventions and carbon reduction initiatives.

ENGAGEMENT AND BEHAVIOUR CHANGE

A Behavioural change programme will help us reduce some of our Scope 3 emissions. By implementing initiatives such as Carbon Literacy and Green Impact we hope to see positive change in areas such as travel, waste, and consumption, both on campus and outside of work / study. While we are in the early stages of considering our Scope 3 impact, building a sustainable

[3] Across scopes 1, 2, and 3, and for the whole UH Group, including subsidiary companies

community will help instil the mindset necessary to unite all stakeholders under a common purpose. See Sustainable Communities below for more on this.

CURRICULUM DEVELOPMENT

The new QAA guidance highlights not only the interconnected nature of environmental and social wellbeing, but also the role that education has to play in building a sustainable future. Following a consultation with students, we have this year finalised our new graduate attributes which represent the skills and knowledge that students should graduate with, regardless of course or programme. Being **Sustainability driven** and **globally minded** will give our graduates not only the resilience to face the challenges of a changing world, but also the mindset to help drive a sustainable future.

WASTE

Waste can have a significant impact on our immediate, local, and global environment. It can emit pollution to land, water, and air, causing harm to wildlife and humans. This is especially true for hazardous and plastic waste. Waste also emits greenhouse gases during treatment processes such as recycling or converted to energy, and that is provided it is disposed of, segregated, and processed correctly. In many instances it is simply dumped into waterways or countryside abroad. Waste sent to landfill can emit significant greenhouse gases and contaminate the surrounding land if not handled correctly.

Waste also highlights the problem with the linear economy, where resources are used to create items, that are then discarded when no longer wanted. Resource depletion is a serious environmental problem that could be mitigated if products and materials could be re-introduced to existing or new product life cycles, thereby creating a circular economy.

As well as compliance issues, waste can also have reputational consequences if not managed properly, both of which can pose a risk to the continuity of the business. For a full list of the risks and impacts associated with waste, please see Appendix. 2

WASTE AND RESOURCE MANAGEMENT AT UH

The University's Waste and Resource Management Strategy is based on the principles of waste hierarchy which sets out the order in which waste management measures should be prioritised based on environmental impact. Our Environmental policy statement lists the following objective related to waste:

- *Reducing University waste production and promoting resource efficiency through its Waste and Resource Management Strategy to 2023.*

In the first instance, waste should be prevented and minimised; if waste can be avoided then there is no need to look at recycling or disposal options. Where waste cannot be prevented, the University's next aim is to share, lease, reuse, repair, refurbish and recycle existing materials and products as long as possible, thereby creating a circular model of production and consumption, instead of a linear take – make – waste one. Waste that cannot be managed in this way will be processed for energy recovery, or as a last resort, sent to landfill.

OUR PROGRESS AND ACHIEVEMENTS

While 2021-22 saw a significant increase in waste compared to 2020-21, it is worth noting that the latter period was an anomaly as a result of the pandemic. The table below provides an indication of performance to date against a number of KPIs.

	Waste Output (tonnes)	Waste per head (kg)	Waste to landfill (tonnes)	Waste to landfill %	Waste Recycled %*	Waste to Energy %	CO2e (t) from waste
2016 - 17	1142.46	52.5	n/a	n/a	71.9%	28.1%	N/A
2017 - 18	851.45	38.5	14.61	1.7 %	76%	22.3%	N/A
2018 – 19	895.62	44.60	13.55	1.51 %	59 %	39 %	25.35
2019 - 20	621.65	29.55	9.86	1.59 %	72 %	27 %	16.64
2020 - 21	564	24.7	7.34	1.30 %	50 %	49 %	14.68
2021 - 22	622.44	24.34	8.7	1.4 %	65 %	34 %	16.0

** total recycling rate includes source segregated recycling, Mixed Recycling Facility (MRF) recovery, composting and anaerobic digestion.*

Despite an increase in total waste output for 2021-22 compared to 2020-21, 622.44 tonnes still represents a 5% decrease on pre-pandemic figures (2018-19). Waste per head and waste to landfill also saw improvements on the baseline level, however recycling rates dropped somewhat largely as a result of contamination. Some of the challenges during this period included managing the extra waste from single use plastic and serve-ware, particularly as staff and students started returning to campus.

We have also made improvements with our bulky waste – this year we re-upholstered 200 chairs that would otherwise have been destined for recycling / landfill, and we continue to encourage users reuse and repurposed unwanted furniture internally.

In 2021, a new Waste and Resource Management plan was published, setting out our intentions to reduce total waste levels and improve recycling rates. Our action plan includes deliverables under five streams; providing appropriate infrastructure and systems, ensuring compliance with legal and other requirements, communications & behaviour change, collecting and reporting data and information, and providing training and support, and provides a framework for waste management going forward.

IMPROVING OUR BUILT ENVIRONMENT

In 2021 – 20, UH invested significantly in improving the usage and efficiency of its building stock and spaces, helping to reduce our demand for energy and lower our scope 1 and 2 emissions. Our Environmental Policy relating to this impact area states our commitment to:

- *Reducing University waste production and promoting resource efficiency through*

its Waste and Resource Management Strategy to 2023.

Some of the projects that were either completed or in progress during this time are listed below:

LED PROJECT

In 2021, a £1.082m capital expenditure project to replace all the lighting in the De Havilland and College Lane LRCs with LEDs was completed. It is estimated that as a result, the energy consumption from lighting in these areas has reduced by 85%. While this is a significant reduction, we will continue to incorporate other interventions such as sensors and smart controls to further reduce demand. The project was part funded by a grant obtained from SALIX (£750,000).

SPECS PROJECT

The construction of the new School of Physics, Engineering and Computing (SPECS) building began in 2021. Set to open in 2024, the building will be versatile, multi-purpose and flexible providing the space needed to work effectively with cutting edge tools and facilities for students, staff and businesses. It will accommodate all the School's teaching staff and researchers under one roof, enhancing the student experience and creating stronger and more supportive academic communities and teaching spaces. Our new facilities will replicate the modern working environments that mirror our students' future careers.

The project has been designed with the University's net zero carbon target in mind, and forms part of the University's plan to replace or upgrade older sites that are energy inefficient. The university is aiming for a sustainability certification for the building of BREEAM 'Excellent'.

ANNUAL CAPEX AND REVENUE PROJECTS

We have continued to invest significantly in refurbishment projects adopting, where possible, a 'fabric first' approach to reduce Scope 2 & 3 emissions, such as the replacement of old gas fired water heaters at de-Haviland M&R Blocks to more efficient models.

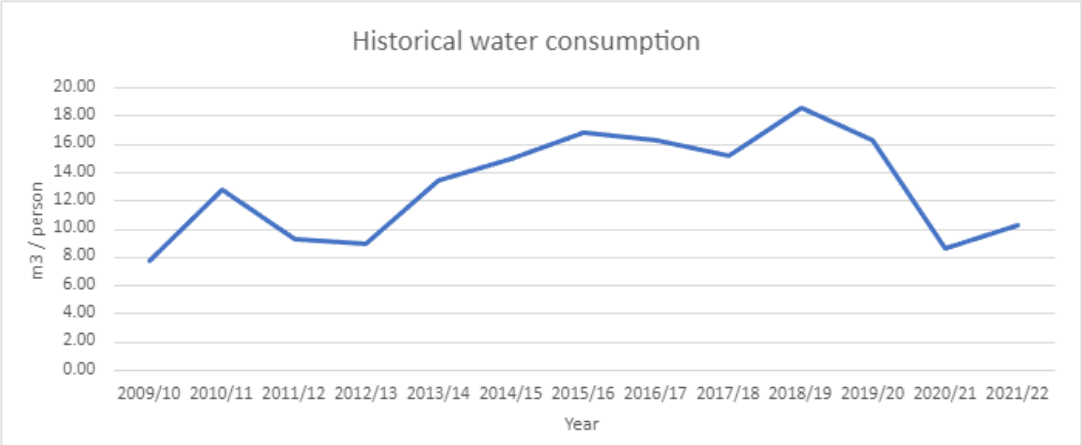
These projects also featured, where feasible;

- New low energy LED lighting and intelligent controls
- Product selection with our supply-chain that includes recycled and recyclable materials e.g., Flooring and Furniture
- Low VOC paints
- New technology in teaching rooms to allow blended learning to occur, thereby reducing reliance on travel.

WATER

Water is a natural resource, and whilst it is renewable, global warming continues to put pressure on our reserves, making water a fragile resource indeed. Preserving water is extremely important, not just through efficient water-savings solutions, but through the prevention / repair of leaks is the water system.

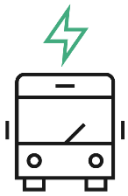
While 2020-21 saw a steep reduction in water consumption as a result of the pandemic and home working, we have continued to reduce our water consumption against the 2018-19 levels. In 2021-22 we reported 263,909 m^3 of water consumption, which when converted to a more appropriate metric, equates to 10.32 m^3/person. This compares favourably to 18.55 m^3/person for 2018-19, representing a 44% reduction. While hybrid working can be attributed to some of this improvement, much of it is down to extensive leak detection and rectification works completed at the College Lane Campus which resulted in savings of approximately £200,000 per year.



F-GAS

F Gas describes a particular family of fluorinated gases which are widely used as refrigerants in air conditioning and commercial refrigeration systems. F-Gases are an incredibly powerful greenhouse gas, and count towards our Scope 1 emissions. At 235 tonnes of CO^2e, F-Gas emissions were up slightly on the previous year, but down on the baseline period. This is largely due to proactive leakage monitoring and system efficiency upgrades where possible.

TRANSPORT



Travel can have various negative impacts on the environment including greenhouse gas emissions, particulate pollution, habitat destruction, waster consumption and waste generation. It is important, therefore, that travel and transport is considered as part of out sustainability agenda, and that sustainable travel options are encouraged and promoted.

The environmental policy statement relating to this impact area states that the university will:

- *Encourage reduced dependency on single occupancy car travel to and from the University and between sites through the implementation of a Travel Plan to 2023.*

Public Transport:

The University of Hertfordshire owns a bus company that operates routes around Hertfordshire and North London. In this period the service carried over 2 million passengers. The greenhouse gases derived from Uno Bus fuel

contribute to our Scope 1 emissions, which in this period amounted to 4,185 tonnes of CO2e. Uno Bus continues to invest in green technologies, and are exploring way to make their service even more environmentally friendly.

Commuting:

As a result of the pandemic and hybrid working and studying during this period, while up on 20-21 car parking movements were still significantly lower for 2021 - 22 in comparison to a normal year. The 2021 travel survey revealed that:

- 62% of commuters travel to campus in single use cars
- 60% only use a car because there are no viable alternatives
- 67% want more frequent bus services
- 60% would car share if they had help finding a car share partner

BIODIVERSITY

With three campuses spanning 97 hectares, the university has a key role in protecting and enhancing biodiversity. Biodiversity is a core component of our Sustainability agenda and Estates Vision. The University's Environmental Policy sets the foundations for its sustainability approach, which makes the following commitments relating to biodiversity:

- *Creating and enhancing wildlife habitats through the implementation of a* Biodiversity Action Plan.

Our Biodiversity objectives continue to be managed through the Biodiversity Action Plan published in 2021.

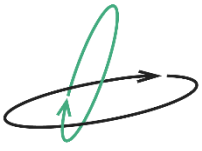
HEDGEHOG FRIENDLY CAMPUS

This year, we participated in the Hedgehog-friendly campus scheme run by SOS (Students Organising for Sustainability) and funded by the Hedgehog Preservation Society. This project aims to:

- Better protect hedgehogs and wildlife in the local area.
- To better protect and support hedgehogs on campus.
- To increase awareness around issues affecting hedgehogs in the UK.

Both staff and students volunteered with us to carry out surveys, litter picks, install hedgehog huts and bug hotels, and attend conservation workshops. In 2022 we were awarded **Hedgehog Friendly Campus Bronze** status for our efforts. We hope to achieve Silver next year.

MANAGING OUR RISKS AND COMPLIANCE OBLIGATIONS



Managing our environmental risks and obligations is a key priority at the University of Hertfordshire. We have a robust Environmental Management System which continues to be governed, managed, and reported on through our working and steering groups, and according to our terms of reference. As per our Environmental Policy statement, we commit to:

- *Ensuring that the University's compliance obligations with all relevant environmental legislation, regulations and other requirements are met*

While our management system provides the strong foundations upon which to deliver our environmental commitments, it is our demonstration of continual improvement that enables us to be Platinum Eco Campus certified. It is through our EMS that we manage our risks, obligations, and commitments, enabling us to mitigate our impact on the environment as much as possible.

In July 2022, we were externally audited by Interface as part of the ISO:14001 cycle. Site tours of both the main College Lane campus, De Havilland, and newly added to scope: Bayfordbury, were undertaken and activities investigated included:

- Construction and Refurbishment
- COSHH
- Energy and Water
- Grounds and Biodiversity
- Leadership
- Waste and Recycling

The main findings were that the University operates an "It was observed that the University continues to operate a robust Environmental Management System and there were no issues meeting the high-level requirements of the standard."

There audit report identified a number of positive points to note, including:

- Evidence of a well-managed and comprehensive EMS that is driving qualitative and quantitative improvements.
- Investment in environmental improvement, e.g., SPECS building.
- Positive impacts at Bayfordbury (specifically biodiversity) – now included in scope of certification.
- Operational aspects, e.g., waste, grounds maintenance, COSHH continue to be well managed.
- Collaboration between operational functions and academic expertise.
- Plans (biodiversity, waste and resources) are thorough and appear appropriate, demonstrating a robust understanding of the University's contextual issues and strong links to the EMS and wider sustainability strategy.
- Carbon Literacy programme appears to have been successful in delivering tangible carbon reductions, raised awareness, and positively changed behaviours
- Evidence of commitment to include sustainability awareness into learning and teaching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CERTIFICATE OF REGISTRATION

ENVIRONMENTAL MANAGEMENT SYSTEM:
BS EN ISO 14001:2015

This is to certify that:

University of Hertfordshire Higher Education Corporation

Holds Multi-Site Certificate No: **E8066**

and operates an Environmental Management System which complies with the requirements of ISO 14001:2015 for the following scope:

The Provision of Higher Education and Academic Services at the College Lane, Bayfordbury, and De Havilland campuses

Sites and activities are listed on the additional page(s)

For and on behalf of Interface NRM Ltd:

Dr. Gavin Jordan

Director, Interface NRM Ltd.

First Issued: **10/12/2012**
Latest Issue: **09/11/2022**
Expiry Date: **14/09/2024**

ISO 14001 Certified

Our environmental risks and opportunities stem largely from our buildings and activities on site, however there are many external factors that also influence our impact that need to be considered. These can be found in our PESTLE analyses (Appendix 2.) which lists influencing factors such as Political, Economic, Sociological, Technological, Legal

and Environmental. The PESTLE analysis helps inform our aspects and impacts, which together with other risks identified in the area-specific management plans, are listed on our Aspects and Impacts register. Like with most aspects of university life, our risks and opportunities were still impacted by Covid in 2021-22. To reflect these changes, a new version of the Aspects and Impacts register was created. This can be found in Appendix 3.

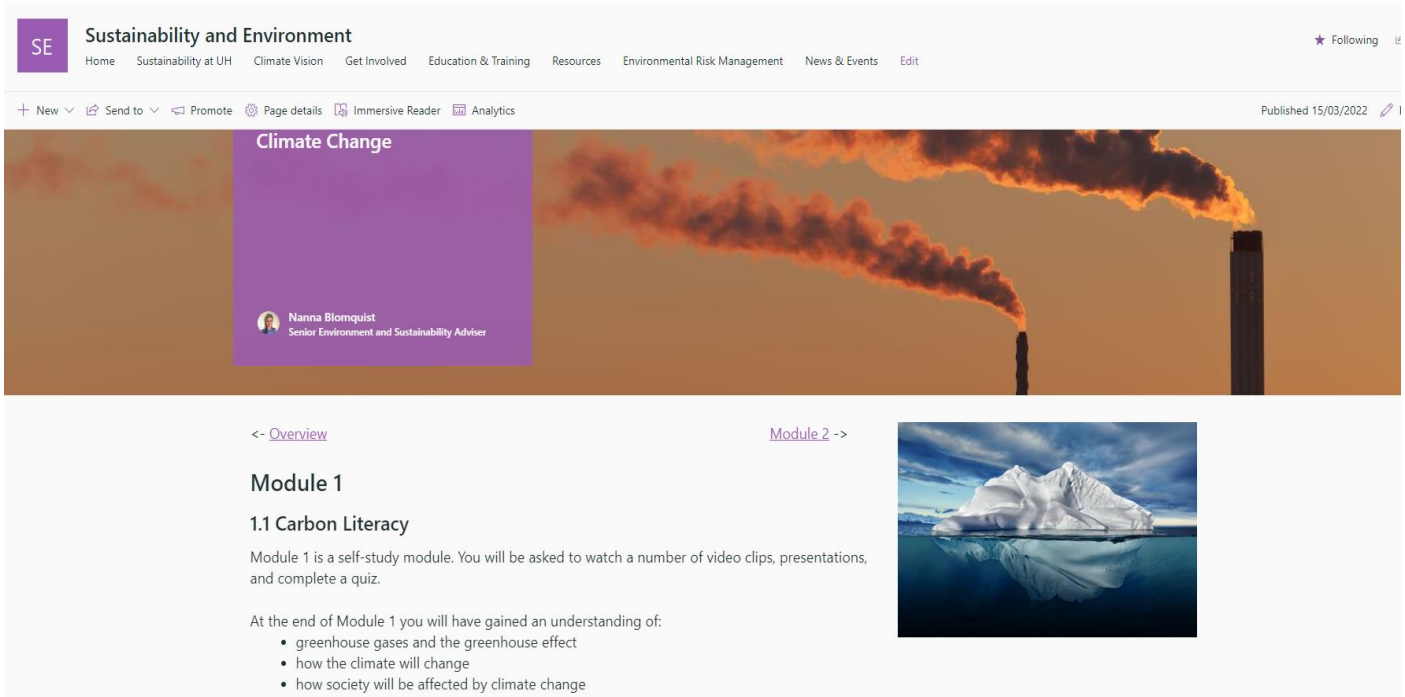
BUILDING A SUSTAINABLE COMMUNITY

Our approach to environmental sustainability is about more than just compliance, however, it is about identifying risks beyond legal obligations, harnessing opportunities in our immediate and wider communities, and using our position as a Higher Education institution to drive a positive impact. We want our EMS to act as a launchpad for a broader environmental agenda, where students, staff and other stakeholders are not only aware of our obligations, processes, and commitments, but part of our journey too. In order do this, we need to engage with all our stakeholders, inviting them to take part, learn, share, and develop. This year we have offered a number of opportunities that will help empower the Herts community with sustainability in meaningful and impactful ways.

CARBON LITERACY

In June 2021, we launched the UH Carbon Literacy programme to help educate our staff community on climate change – what it is, why it is important, and how we can help. This project has been led by a dedicated member of staff, and the plan is to run the scheme for a year, at which time we will re-assess to see if and how it can be implemented in the long run.

The course is currently a blended 10-hour programme taught over 4 weeks, and consisting of self-study material and live webinars. Over 100 members of staff undertook the training in 2021-22, with more than half of these submitting for external certification by the Carbon Literacy Project.



COMMUNITY ENGAGEMENT

This year we have offered a number of engagement opportunities to both staff and students, most of which have been in person following a year of mostly online events.

GREEN IMPACT

The Green Impact programme for staff was launched in October 2021 with 80 members of staff signing up across 12 teams. Green Impact is a United Nations award-winning programme run by Students Organising for Sustainability (SOS-UK) designed to support environmentally and socially sustainable practice in your organisation. Teams had to work through a toolkit completing environmentally focused activities, and after the evidence was audited by our sustainability advocates were awarded either Bronze, Silver, or Gold.

COP26 CONFERENCE

In November 2021 the Sustainability team organised a climate change conference: COP26 and beyond. The conference was aimed at staff, students and external stakeholders, and was delivered online over 3 days. There were panel talks on Race to Zero, Sustainable Food, Energy, Transport, and Green Skills delivered by internal and external guests and experts. The event was attended by over 190 delegates across the 3 days, and 100% of those who attended said they had learnt something by attending the conference, and 78% said they felt that they had a better understanding of climate change and its key challenges after attending the conference.

GO GREEN WEEK

In March 2022, the engagement team ran a Go Green week – a week of different activities and events with the aim to foster pro-environmental behaviour change, particularly among students who are not already engaged with sustainability. The event was a great success, engaging of 237 students across 11 events run by various groups across the university.

UH SUSTAINABILITY ADVOCATES

In February 2022, the UH Sustainability Advocates volunteering programme was launched. 31 Advocates signed up and took part in volunteering and enrichment activities such as recycling audits, Green Impact audit, supporting at events, litter picks and more. The hours volunteered earned them points towards their GoHerts award as well as Sustainability certificates.

WELLBEING AND SUSTAINABILITY FAIR

In March 2022 the Sustainability and Wellbeing teams collaborated to run a Staff Wellbeing and Sustainability Fair for university staff. The day included lightning talks, workshops, awareness stalls, wellbeing clinics, debates, and keynote speakers. The event engaged over 200 members of staff.

STAFF NETWORK

The Sustainability Network was set up to provide an opportunity for like-minded staff to unite around a shared passion for environmental sustainability. The Network aims to:

- Provide a forum for staff to share and discuss ideas and advice on environmental issues.
- Increase awareness of environment and sustainability at UH and beyond.

The network gained 52 members throughout the year, and sessions were generally attended by 20+ members of staff.

INVESTING IN PEOPLE

In 2021-22 the team recruited a dedicated Senior Environment and Sustainability adviser to manage the EMS and other operational and strategic elements of the sustainability agenda. A full-time engagement coordinator was also recruited to engage our staff, student and wider community with environmental issues and to inspire a sustainable mindset.

RESEARCH AND IN THE NEWS

HERTS SUSTAINABILITY ACCELERATOR

The Herts Sustainability Accelerator Programme is designed to support ambitious Hertfordshire-based SMEs with scale-up potential to launch an innovative and sustainable product, service or technology. Businesses will receive a tailored package of support worth up to £25k, providing them with the right guidance and environment to accelerate the development of their innovative idea through 1-2-1 mentoring, training and specialist technical, commercial and creative marketing support.

The Hertfordshire Sustainable Innovation Accelerator is part of a set of business support provisions included in 'Building Back Better,' a Community Renewal Fund funded programme delivered by University of Hertfordshire in partnership the Hertfordshire Growth Hub.

Read more about the Sustainability Accelerator on the University of Hertfordshire website.

CLIMATE CHANGE RESEARCH

In 2021-22, an online study of over 800 participants was conducted by researchers at the University of Hertfordshire and Edinburgh Science. Respondents were asked to estimate, on a scale, how many kilograms of carbon dioxide would be saved by taking a range of actions. The survey revealed that many people need clearer information on the impact that key behavioural changes have on carbon emissions. While 53% of respondents thought their lifestyle

was more sustainable than the average person in the UK, many significantly under- or over-estimated the difference that their actions make.

Many of the ratings were hugely inaccurate. In general, people overestimated the effects of less impactful changes, such as unplugging appliances, but underestimated the contribution of larger lifestyle changes such as following a vegetarian diet.

Psychologist Professor Richard Wiseman from the University of Hertfordshire, who led the study, explained the significance of the findings:

“Every little helps, and people should consider doing whatever they can to cut emissions. However, these results suggest that when it comes to sustainable behaviour, there are many widely believed myths. There is a definite appetite to make changes, which is great, but people need to understand how they can make a real impact”.

Respondents were also asked to indicate how much they thought they knew about sustainable lifestyles, with 65% believing they know more about the topic than the average person in the UK. However, even those that rated their knowledge most highly, made inaccurate estimations.

“The danger is that many people overestimate the impact of a few well-publicised behaviour changes, and fail to engage in more significant and important changes like stopping flying”, noted Professor Mike Page, cognitive psychologist at the University of Hertfordshire.

Simon Gage, Director of Edinburgh Science, welcomed the findings as a useful tool in how to approach climate action and education: “We are committed to helping people understand how to tackle climate change, and knowing the impact of certain behaviours is an important step in taking effective action”.

The researchers hope that the findings will help organisations and policymakers to support the public in understanding the impact that changes in their behaviour can have.

Read more about our climate research and the important work they are doing here: Climate change and Sustainability Research

LOOKING AHEAD

In 2022 – 23 we will continue to build on our strong foundations and embed sustainability holistically across the university. As the push for climate action intensifies, carbon reduction will remain high on our priority list.

We have plans to:

- Continue investing in a low carbon estate e.g., SPECS building and LED lighting project
- Develop an Estate decarbonisation plan
- Publish our Net Zero Action Plan
- Publish a New Sustainability Framework
- Work with procurement to create a sustainable purchasing UPR
- Explore the option of launching a Lift Share service
- Review our Environment and Sustainability external and internal pages
- Continue an engagement programme for staff and students such as Green Impact and a Sustainability volunteer initiative
- Continue to embed the sustainable development goals through toolkits, education, and advocacy
- Carry out a gap analysis for People and Planet with a view to improve our score
- Engage and develop partnerships with external stakeholders and the wider community

MEET THE TEAM

While the aim is for sustainability to be embedded within activities, schools, and SBUs at a local level, there is a core team that helps drive and facilitate this. Individuals that held key responsibilities in 2020 – 2021 included:

Monica Kanwar - Director of Health, Safety and Sustainability
Ian Grimes – Director of Estates
Tracey Russell - Assistant Director of Campus Services
John Corbett – Head of Capital Projects
Nanna Blomquist - Senior Environment and Sustainability Adviser (from January)
Tom Andrews - Head of Facilities
Scott Copsey - Senior Lecturer and Transport Planner
Mike Tofts - Energy Manager
Darren Summonds - Head of Procurement
Zoe Austin – Engagement coordinator

APPENDIX

Appendix 1. Sustainable Development Goals

Appendix 2. PESTLE Analysis for Environmental Management at UH

University of Hertfordshire UH

PESTLE Analysis

Political

External issues	Risks	Opportunities	Score of importance 1 not important to 5 Important		Internal issues	Risks	Opportunities	Score of importance 1 not important to 5 Important
Changes to government policy	Due to COVID 19, changes to policy may put public funding of higher education at risk e.g. research grants. A reduction in overall funding may reduce the resources allocated to the EMS.	Government policies may incentivise the institution to address environmental issues in order to reduce costs			***Restructuring - Management***	Risk of losing supportive management staff	Opportunity to engage with new staff members	
Changes to taxes/levies Green Taxes and Levies	An increase in taxes may reduce funding for the EMS.	An increase in tax linked to energy or waste may incentivise the institution to become more efficient. Engage in practive Plannning to reduce risks			***Restructuring - Strategies/Policy***	Potential for focus to be reduced from EMS	Opportunity to ensure that Environmental management is considered within institutional strategy during the Strategy Review	
Influence from NGO's, unions or other external bodies.	Unions may highlight poor environmental performance; Funding bodies may place further environmental requirements on institutions which entails additional resource	Incentivise good environmental management practice Student engagement opportunities for environmental initiatives			**Budget for Environmental Management**	Failure to invest in cost saving technology Failure to provide legal compliance via EMS. Risk to budget form UH financial performance / student recruitment. Budgets might be reduced due to the impact of	Implement cost saving Prove legal compliance Use EMS to identify cost savings	
General public pressures	Risk of not meeting public expectations for environmental performance especially when many orgnaisations are announcing a Climate Emergency.	Adds pressure to ensure good level of environmental performance			***Varying focus of management during term times***	Lack of commitment during peak times whilst working off site and working during the impact of COVID 19	Opportunity to implement environmental initiatives during quite periods in preparation form student return	
League tables	Reputational damage	Adds pressure to ensure good level of environmental performance			***Resistance to change***	Lack of commitment from staff & push back from unions	Opportunity to engage with staff	
International Commitments and Brexit policy changes	University unprepared for changes in environmental legislation after Brexit and from future Climate Change talks	The Environmental Management Systems prepares the University/ EMS for key changes May Reduce Red Tape			***Lack of awareness / engagement***	Risk of failing to meet requirements of the standard	Opportunity to engage with staff and students	
Government Policy e.g. (25 Environmental Plan) and change to local government policy	UH unready to meet the policy commitments to achieve a green Brexit including the 25 Year Environmental Plan and the New Environmental Act.	Existing University environmental management processes and EMS have positioned the University to meet many of these challenges			***Internal Stakeholder Expectations e.g. Student and Staff***	Failure to meet student and staff expectations related to university environmental performance resulting in potential difficulty recruiting both	Potential to use environmental performance as a recruitment tool	
External stakeholder expectations such as, Community, local NGO's and media	Lose of licence to operate due to environmental incident, noise and management of student impacts in community.	Proactive working with community to manage UH impacts Maintaining the Environmental Management System to reduce						

Economic Issues							
External issues	Risks	Opportunities	Score of importance 1 not important to 5 Important	Internal issues	Risks	Opportunities	Score of importance 1 not important to 5 Important
Changes to economic climate	A downturn in the economy due to COVID 19 may negatively impact the institution's investment in environmental initiatives	Present opportunities for investments in environmental initiatives e.g. increase energy prices may decrease the payback periods for energy efficiency projects?		***Budget changes***	Re-allocation of funds away from EMS and related initiatives during COVID 19	Re-allocation of funds for EMS and related initiatives	
Changes to taxes etc.	Increased taxation may reduce funding available for EMS	Increased taxation may incentivise investment into environmental initiatives		***Budget for Environmental Management***	Failure to invest in cost saving technology Failure to provide legal compliance via EMS Risk to budget form UH financial performance / student recruitment	Implement cost saving Prove legal compliance Use EMS to identify cost savings	
Legislation changes e.g. heat network (installation costs)	Increased costs to ensure compliance	Forces spending on environmental management		***Institution's financial performance***	Poor financial performance may lead to withdrawal of funding from EMS	Positive financial performance may lead to further funding for environmental initiatives.	
Energy costs	Increase in energy costs may decrease funding available for the EMS	Incentive to reduce energy consumption and investment into energy saving initiatives Increased energy prices may decrease the payback periods for energy efficiency projects		***Significant decisions***	The institution's strategic direction may not align with the intended outcomes of EMS. Large capital projects may not sufficiently address environmental issues	Opportunity to address environmental issues early on in capital development process	
Availability of funding	Previous government policy changes have allowed Universities to charge higher tuition fees but have also reduced public funding.	There are funding schemes available for institutions e.g. Revolving Green Fund. Energy performance contracting schemes could be used to finance renewable		***Changing student numbers***	Higher proportion of HE institution funding is linked to tuition fees therefore greater emphasis placed on retaining student numbers	Increased engagement opportunities	
Green Taxes and Levy's	Risk of increased costs particularly on energy usage	Proactive planning to reduce risks		***Institution's direct impact on the environment (Carbon, Transport, Waste, Building Management, Food and Biodiversity)***	Failure to develop strategies and targets which ensure that University operations meet the needs of 1.5° C world Failure to achieve cost savings Failure to manage contractors to deliver the impacts.	Opportunities to develop strategies that meet the a 1.5°C world. - Phasing out natural gases and increase use of renewables - Electrification of transport - Promotion of Vegan and	
Resource costs and availability (for physical goods)	Increase population will put pressure upon resource availability (Population of between 9 and 10 billion by 2050), resulting in increasing costs across all procurement categories.	Opportunities to embed circular economy principles. Work to reduce and reuse waste across all procurement categories. Achieve cost savings via the EMS		***Sustainable Procurement***	Failure to address environmental and social supply chain impacts	Promote positive environmental and social management through supply chain	
Sub Contractors	Lack of control and training of sub contractors leading to environmental incidents	For intigrating best practice processes and achieving cost savings		***Stranded Assets***	Fossil Fuel investments may loss as a result of climate change policy	Review investment vulnerability to Climate Change and Policy impacts	

Social Issues							
External issues	Risks	Opportunities	Score of importance 1 not important to 5 Important	Internal issues	Risks	Opportunities	Score of importance 1 not important to 5 Important
External stakeholder expectations such as, Community, local NGO's and media	Lose of licence to operate due to environmental incident, noise and management of student impacts in community.	Proactive working with community to manage UH impacts Maintaining the Environmental Management System to reduce environmental risks		***Demographics***	Environmental initiatives may be halted by certain groups e.g. Objections to wind / solar projects from local communities.	Changing demographics may increase support for environmental initiatives	
Societal pressures and cultural trends e.g. Single use plastic (Disposables)	Failure to respond to new and existing environmental concerns with potentially detrimental effect on perceptions of future students	Pre-empt likely trends and proactively make positive changes to manage cultural expectations		***Expectations of internal interested parties - SU, staff, student bodies***	Lack of stakeholder pressure may detract focus away from the EMS	Stakeholder pressure may incite investment into environmental initiatives	
Impact of climate change on society	By not responding to climate change, the institution is risking the impact of potential adverse health and wellbeing effects on staff and students	Increased climate change awareness can make it easier to engage staff and students		***Staff retention***	High staff turnaround can negatively affect EMS through lack of engagement	Engage new staff with new ideas and increase the engagement across a larger group of individuals	
				Environmental awareness	Lack of awareness can hinder EMS progress	A lack of awareness may present opportunities for behavioural change.	
				Education for Sustainable Development (Graduates of Tomorrow)	Students have an expectation that universities will be sustainable. Additionally, 60% of students nationally wish sustainability subjects to be embedded into the curriculum. The University has the potential not to meet desire and need, and become less competitive as a result	Work to embed sustainability across the curriculum	
				Internal Stakeholder Expectations e.g. Student and Staff	Failure to meet student and staff expectations related to university environmental performance resulting in potential difficulty recruiting both	Potential to use environmental performance as a recruitment tool	

Technological Issues							
External issues	Risks	Opportunities	Score of importance 1 not important to 5 Important	Internal issues	Risks	Opportunities	Score of importance 1 not important to 5 Important
Technological advancement	Failure to adopt and adapt to new low carbon technologies	Proactively adopt technologies which produce cost savings and provide opportunities for continuous EMS improvement		***Technological advancement***	Failure to adapt to technical changes	Opportunity to active as an innovation hub and living lab for new technology. Use of onoline tools to increase education opportunties	
Costs	High technology costs with relatively long payback periods can reduce uptake of new technologies	Costs of technologies will likely fall over time becoming more financially viable		***Use of new technology***	Technologies may not be used to full capacity e.g. complex energy monitoring systems are only useful if data is used to manage energy consumption	Hot desking / remote working may reduce energy and transport emissions.	
Funding availability for technologies	A reduction in the financial incentives for technologies may make it harder for the institution to achieve carbon reduction targets e.g. Closure of Feed in tariff scheme	External funding available for carbon reduction technologies		***Capital development and Existing Infrastructure***	Failure to adopt environmental standards for new projects. Failure to adapted projects to future climate change	Opportunity to design buildings with adaptations to extreme weather and climate change and, meet future requirements for renewable energy usage and elimination of gas usage.	

Legal Issues							
External issues	**Risks**	**Opportunities**	**Score of importance 1 not important to 5 Important**	**Internal issues**	**Risks**	**Opportunities**	**Score of importance 1 not important to 5 Important**
New legislation	Prosecution for non-compliance Costs associated with tax, levies and fines	Incentive to manage environmental responsibilities		**Environmental training and awareness programmes**	Failure to train student and staff in environmental management and legislation Failure to achieve cost savings from environmental awareness campaigns	Opportunity to produce cost savings from engagement programmes Train teams in environmental management techniques	
Cost of compliance	Increased costs of compliance may detract funding from other areas			***Awareness/keeping up to date***	Lack of knowledge, understanding and accountability of legal requirements can lead to non-compliance	Opportunities to engage with staff to ensure compliance and create training programmes	
International Commitments and Brexit policy changes	University unprepared for changes in environmental legislation after Brexit and from future Climate Change	The Environmental Management Systems prepares the University/ EMS for key changes		***Staff knowledge***			
				Communication			
				Responsibility			
				Accountability			
				Operational changes - cost/training	Resistance to comply due to extra resources required		
				Enforcement	Lack of enforcement from regulatory bodies can make it difficult to demonstrate the need to comply		

Environmental Issues							
External issues	Risks	Opportunities	Score of importance 1 not important to 5 Important		Internal issues	Risks	Opportunities	Score of importance 1 not important to 5 Important
Climate change (1.5C report)	Failing to meet target will increase negative effects of climate change. Implications of target include electrification of transport systems, requirement to produce electricity from renewables and phasing out natural gas as source of heating	Pre-empt the changes needed to meet the 1.5° C target in future waste, energy and transport plans.			***Institution's direct impact on the environment (Carbon, Transport, Waste, Building Management, Food and Biodiversity)***	Failure to develop strategies and targets which ensure that University operations meet the needs of 1.5° C world Failure to achieve cost savings Failure to manage contractors to deliver the impacts.	Opportunities to develop strategies that meet the a 1.5°C world. - Phasing out natural gases and increase use of renewables - Electrification of transport - Promotion of Vegan and vegetarian life styles Use EMS to identify cost	
Increase risk from Extreme Weather, Water stress and Food supply chain interruptions	Failure to adapt to the effects of climate change from an infrastructure and impacts to our supply chains	Opportunity to create adaption mitigation plans for climate change and prepare for likely risks to food supply chains			***Sustainable Procurement***	Failure to address environmental and social supply chain impacts	Promote positive environmental and social management through supply chain	
Resource costs and availability (for physical goods)	Increase population will put pressure upon resource availability (Population of between 9 and 10 billion by 2050), resulting in increasing costs across all procurement categories.	Opportunities to embed circular economy principles. Work to reduce and reuse waste across all procurement categories. Achieve cost savings via the EMS			***Scope 3 carbon emission (Emissions from Business travel, procurements and third-party residences)***	Failure to address carbon emissions resulting in unintended climate change effects	Opportunity to be sector leading by joining the Science Based Targets movement	
Societal pressures and cultural trends e.g. Single use plastic (Disposables)	Failure to respond to new and existing environmental concerns with potentially detrimental effect on perceptions of future students through th euse of single use plastics as a result of COVID 19	Pre-empt likely trends and proactively make positive changes to manage cultural expectations			***Capital development and Existing Infrastructure***	Failure to adopt environmental standards for new projects. Failure to adapted projects to future climate change	Opportunity to design buildings with adaptations to extreme weather and climate change and, meet future requirements for renewable energy usage and elimination of gas usage.	
					Environmental Research	Failure to take advantage of research opportunities needed to deliver a low carbon future	Potential to expand research opportunities into low carbon lifestyles and technology	

Appendix 3. Environmental aspects and impacts for all activity areas, including changes as a result of Covid.

	Number	Theme	Risk Discription:	Impact	Impact	of Environmental Risk		Risk Owner		Pre-Controls				Place:	Post-Controls				Optional Titles		
Sustainable Development Goal			Environmental Aspects e.g. Activity/product/service of the University which can cause environmental impact.	Negative Environmental Impacts: Risks and Threats	Positive Environmental Impacts: Opportunities including lifecycle approach.		Positive or Negative impact	Risk Owner	Risk Operational conditions Normal, abnormal or emergency	Severity of Impact	Frequency of impact	Significance	Compliance risk (Yes/No). Is there related legisation	programme or target associated with the significant environmental risk	Severity of Impact	Frequency of impact	Significance	Explination of mitigation score	SBU actions	Links to Business Continuity Plans	Business Risk Long Term
	ENV1	Business and Sustainability	**Use of Energy:** Use Electricity, Heating Oil and Natural Gas	Greenhouse gas, NOx SOx emissions and use of natural resources. Increase in costs from utilities	Use of Renewable Energy onsite or offsite generation. Potential to save costs from reduction and emission saving technologies	Source of energy used, Change in energy provider, Change in supplier contracts, Poor oversight of energy consumption	Neg	Energy Manager	Normal	5	3	15	Y	Carbon Management Plan	5	3	15	With only a skeleton crew of staff onsite and no students the energy use has reduced substantialy. Carbon reductions of 21% have been achieved	Promote switching off items. Use energy efficient equipment	Covid -19 Included in Business Risk Register with aspects such as increase in costs from utilities in future. Included in Brexit Risk Register from interuption to supply	Increases in utility costs and reductions Continutity of Supply Impact on UH core business and accommodation
	ENV2	Business, People and Sustainability	**Transport:** Student and Staff commuting, Fleet vehicles and business travel	Greenhouse gas, NOx, SOx emissions. Particulates and used of resources. Scope 3 carbon emissions from business and commuting	Promotion of Travel Hierarchy, e.g. cycling and walking, public transport and electric vehicles and managing a bus company.	Provision of viable and affordable alternatives to single vehicle usage and non renewable transport	Neg	Travel Planner	Normal	5	2	10	Y	University Travel Plan	5	2	10	At current home working is stopping nearly 99% of travel. When lockdown eases there might be an increase in self occupancy travel and reduction in use of public ransport. Student travel targets achieved with parking policy aiming to tackle staff travel targets	Promote walking and cycling. Use public transport or video conferencing for business travel	Covid -19 Brexit Risk Register from increase costs from fuel impacting on student and staff recruitment.	Future increases in fuel costs and preparation for low carbon alternatives to transport. Reputational impact from not being seen to be Green
	ENV3	Business and Sustainability	**Procurement of goods and services**	Embedded carbon, reuse usage, impacts on modern slavery, conflict minerals and biodiversity. Scope 3 carbon emission from manufacture and	Promotion of waste hierarchy principles and circular economy. Positive benefits to suppliers and local services.	Procurement of services with negative environmental, social and reputational impact. Change of supplier	Neg	Procurement Team	Normal	5	4	20	N	Sustainable Procurement Guides and Sustainable Procurement Policy	5	3	15	Less goods and services being purchased as the bussiness adjusts to home working and students not being on campus. Sustainable procurement programmes in place	Follow sustainable procurement guidance	Covid -19 Interuption to supply chains included on Business Risk Register. How Security of supply, vlue for money and local procurement in terms of reputational risk	Security of supply with limited global resources. Promoting the circular economy. Reputational Corporate Social Responsibility
	ENV4	Business and Sustainability	**Procurement of goods and services:** Catering (Outsourced)	GHG from farming supply chains, reuse usage, land usage and negative biodiversity impacts	Support of vegan and vegetarian options, supply chain benefits from Red tractor and Fairtrade, and support of local supply chains	Reputational impact from supply chain and distruption to food supply from Brexit and Global Heating. Change of supplier and sourcing of food items	Neg	Assistant Director Campus Services	Normal	5	1	5	N	New catering contract includes sustainable procurement and management criteria	5	1	5	Catering outlets have been closed and staff encouraged to bring in their own packed lunches. Programme of sustainability criteria is being created	Purchase vegan and vegetarian options, use reuses mugs, use tap water instead of bottled	Covid -19 Included in University Risk Register in terms of food safety and wellbeing risks	Reputational: Food Poisoning and samonella risk Not been supporters of Local Supply chains Not being Green and costs of compliance
	ENV5	Business and Sustainability	**Construction and Refurbishment of Buildings**	Construction waste, use resources, produce dust, noise, Hazardous chemical usage, use of water,	Breaam building, low energy and water infrastructure, invest in renewables and Enhance Biodiversity	Failure to construct energy efficient buildings, adapt Climate Change e.g. future cooling and heating needs,	Neg	Assistant Director, Property and Development	Abnormal	5	5	25	Y	Use Breeam Standards	5	4	20	New buildings are using this standard. Construction work might have been delayed but it does not change the score when considering Covid 19	Use of sustainable building materials, energy efficient buildings, net biodiversity gain principles, high recycling rates etc.	Covid -19 Impact on Student Experience. The Estates Risk Register includes energy usage in terms of investment	Brexit - impact on costs/ supply/ skills Reputational risk if construction not effecively managed
	ENV6	Sustainability	**Waste Estates:** Production of standard office hazardous and non-hazardous waste	Resource usage, air and water emissions associated with waste and management of plastics	Increase recycling, reuse, reduction and elimination across waste streams.	Increase in waste production, increases costs, provisional of singlel use disposables, international changes to recycling markets, Brexit.	Neg	Head of Facilities Management	Normal	5	3	15	Y	Waste and Resources Strategy	5	2	10	Whilst the Campuses are working on a skeleton crew and the students are off site waste production has decreased by 90% on like for like months. 75% recycling rate, 100 tonnes reduction in waste and 98% diversion from landfill.	Promote recycling facilities and use office food waste bins	Covid -19 Risk Brexit may affect the current waste processes	Failure to meet regs/ non compliance and Reputational impacts

ENV7	Sustainability	**Waste Managed by SBU's:** Production non office wastes e.g. clinical, lab etc.	Incorrect management of materials, fly tipping.	Apply waste hierarchy (lifecycle) and minimise quantity of substances stored onsite	Increase in waste production, increases costs, provisional of international changes to recycling markets, Brexit.	**Neg**	SBU Safety Contacts/ HSS	Normal	4	4	16	Y	Waste and Resource Strategy	4	3	12	Researches will be some of the first staff back on site. And thus will generate more waste than other areas.There needs to consideration of the hazardous waste collectors working at full capacity The audit cycle has identified minimul issues with waste management	Ensure hazardous waste streams are managed according to waste guidance	Covid -19 Risk Brexit may affect the current waste processes	Failure to meet regs/ non compliance and Reputational impacts
ENV8	Business and Sustainability	**Water Usage:** Use and disposal	Use of water resources	Implementation of water saving technologies	Leak of water / drought	**Neg**	Energy Manager	Normal	4	5	20	Y	Target in Place	4	4	16	Whilst water useage will have reduced. Water leaks are still likely. Current target has been exceeded	Fill the kettle to correct amount	Covid -19 Not specified	Costs/ waste supplies reputation
ENV9	Business and Sustainability	**F Gas/ Ozone Depleting Substances:** Air Conditioning	GHG impacts from Fgas management	Potential to limit the high GWP gases in use.	Leak of F Gas	**Neg**	Head of Maintenance/ Health and Safety Adviser (Estates)	Abnormal	5	4	20	Y	Estates control process via Tenon Contract	5	3	15	F-gas leaks can still happen during this time. The Estates team have introduced an accute system for monitoring F gas	Follow F gas legal requirements	Covid -19 Not specified	Penalities for non-compliance and reputational impact
ENV10	Business and Sustainability	**Use of hazardous substances:** COSHH in cleaning and research	Incorrect disposal and use of substances resulting in Environmental Pollution	Minimise use and work to use less hazardous substances	Accident or spill	**Neg**	SBU Safety Contacts/ HSS	Abnormal	4	4	16	Y	Health and Safety Guidance and Training. Auditing programmes to address concerns	4	3	12	Being provided a procedure by waste contractor for handling the disposal of PPE will reduce the disposal of some items as hazardous. Well developed system for managing the risk across the University	Apply health and safety guidance, eliminated hazardous substances and minimise the use of hazardous substances where they are required.	Covid -19 Has appeared on the Business Contrinity Risk Register in the past.	Reputation. Unclear regs post Brexit. Poor/ Ineffective use of resources
ENV11	People and Sustainability	**Engagement:** Education for Sustainable Development	Failure to prepare Graduates for likely environmental changes	Education for Sustainable Development and Engagement Campaigns	Failure to meet students expectations in relation to environmental management	**Pos**	HSS Team	Normal	4	4	16	N	Student and staff engagement programme	4	3	12	Ensure that a programme of line engagement campagiins is considered. Green team programmes for the year.	Embed Education for Sustainable Development into course curriculums	Covid -19 Ensure integration with UH Objectives Explore ptions via ADC/ Programme boards (Global Strategy)	
ENV12	Research and Sustainability	**Research**	Research into technology which is detrimental to the Environment.	Carry out research to benefit the Environment	Failure of take advantage of opertunities for Environmental Research	**Pos**	Pro Vice-Chancellor (Research and Enterprise)	Abnormal	3	4	12	N	Research Themes	3	4	12	There might be a reduction in the available funding for some research projects. No specific mechanism for environmental research	Promote opportunities to develop research into environmental issues	Covid -19 Clarity of UH requirements and related regs and targets Clear link to UH strategic objectives	
ENV13	Business and Sustainability	**Use of hazardous substances:** Asbestos Management	Potential to expose students and staff to Asbestos's where it is badly managed	Removal and safety disposal of Asbestos's	Failure of the Asbestos Management process	**Neg**	Head of Maintenance/ Health and Safety Adviser (Estates)	Abnormal	4	3	12	Y	Estates Asbestos register and permits to work	4	2	8	No impact from Covid 19 if contractors and Estates contonue to work to the Management plan is extensive	Ensure that Estates is consulted in regards to all issues involving Asbestos	Covid -19 Appears on the Estates BCR. Clarity of regulations post Brexit (unlikely to change)	
ENV14	People and Sustainability	**Teaching:** Education for Sustainable Development	Failure to prepare Graduates for likely environmental changes	Education for Sustainable Development and Engagement Campaigns	Failure to meet students expectations in relation to environmental management	**Pos**	HSS Team	Abnormal	2	5	10	N	Student and staff engagement programme	2	5	10	Speicific programme not in place. Think about online prgrammes	Embed Education for Sustainable Development into course curriculums	Covid -19 Ensure integration with UH Objectives Explore ptions via ADC/ Programme boards (Global Strategy)	
ENV15	Sustainability	**Biodiversity:** Management of University grounds	Reduce biodiversity via use of pesticides, herbicides, introduction of invasive species.	Improve Biodiversity Impacts	Management of the grounds which damages existing wildlife or reduces biodiversity. Construction projects	**Pos**	Head of Facilities Management	Normal	3	3	9	Y	Target to Create a BAP	3	2	6	Reduced work on site during lockdown restrctions BAP is draffted	Take part in Biodiversity activities advertised on staffq	Covid -19 Integrate into community and environment strategy	

ENV16	Community and Partnerships	**Community Engagement:** Work to improve relations with local community	Have negative impact from noise, litter and impacts from developments	Litter picks and community projects such as the Community Garden and the Community Fridge	Community Complaints	**Pos**	Dean of Students	Normal	3	3	9	**N**	Targets in Place	3	2	6	Some activities were cancelled but online programme continues. The community team engage the wide community programmes and run litter picks		Covid -19 Integrate with community objectives
ENV17	Business and Sustainability	**Use of hazardous substances:** Oil and Fuel Management: Use, storage and disposal	Potential for spills and creation of contaminated land	Reuse usage of oil to minimise associated risks	Contamination of Land or water	**Neg**	(Engineering) and Infrastructure Development Manager (Library and Computer Services)	Normal	4	2	8	**Y**	Oil Management Procedures in Engineering	4	1	4	Procedures in place. Ensure that inspections of stores still occurs where necessary	Manage oil stores in compliance with HnS guidance	Covid -19 Reputational risk
ENV18	Sustainability	**Adapting to Climate Change:** Infrastructure on Campus	Negative impacts on the University Estate from Climate Change e.g. extreme weather	Adapt the campus to the likely effects of climate change	Failure adapt the campus to future weather and supply challenges	**Neg**	Director of Estates	Abnormal	2	2	4	N		2	2	4	No changes during the period of lockdown. No specific programme in place		Covid -19 Sever weather appears on the Estates BCR in terms of them managing it
ENV19	Business and Sustainability	**Use of hazardous substances:** Radioactive isotopes	Accidental release, inappropriate management	Low levels radiation used for research.	Contamination incident	**Neg**	Technical Manager (School of Life and Medical Sciences) and HSS Team	Abnormal	4	1	4	Y	Radiation Management Plan local procedures	4	1	4	No change. Has not been used in the University siince opening of New Science Building.	Manage in compliance with HnS guidance	Covid -19 Clarity of regs and management reputation
ENV20	Business and Sustainability	**Vehicle:** use and disposal	GHG emissions from usage. Incorrect disposal of vehicles	Electric vehicle usage. Correct vehicle recycling	Failure to procure electric or low emission vehicles	**Neg**	Estates/ Senior Research Fellow (Engineering)/	Normal	3	1	3	**Y**	Fleet vehicle are largely electric	3	1	3	Reduced usage could increase the positie impact but will leave as is. Good controls	Use electric vehicles	Covid -19 How to achieve UH default
ENV21	Business and Sustainability	**Emissions to Land Water:** Substance Spill and Pollution to Drain	Pollution of land, surface water or ground water by hazardous material or material with high turbidity e.g. any liquid which is not rain water.	None	Substance spill	**Neg**	Estates/ Security and SBU Safety Contacts	Abnormal	3	1	3	**Y**	Spill response in place via Security and spill kits in high risk SBU's. No disposals of waste liquid to external drains	3	1	3	Ensuing the staff onsite have refresher training to manage spills if less trained people are available onsite.	Train team in managing spills of substances and food stuffs to prevent injury and leak to drain	Covid -19 Reputational risk
ENV22	People and Sustainability	**Fire**	Pollution to water, land and air	None	Fire	**Neg**	HSS Team and all SBU's	Emergency	2	1	2	**Y**	Fire management in place	2	1	2	No change		Covid -19 Ensure compliance and testing
ENV23	Sustainability	**Emissions to Air:** Fume Cupboard	Emissions to air	Use of filter reduces impact	Contamination of air	**Neg**	Research Fellow (Engineering) and Technical Manager (School of Life and Medical Sciences)	Abnormal	1	2	2	N	Minimal emission and filter systems in place	1	1	1	Less work taking place. Esnure appropirate checks take place before restarting work		Covid -19 Reputational risk