



Sustainability Strategy 2022 - 2027

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REVISIONS

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It is intended that this document covers the period 2022 to 2027, with annual reviews in order to ensure it maintains relevance and suitability to the goals of the University and its developing estate.

Responsibility for the review and amendment of the strategy will reside with the Estates directorate, with the University Sustainability Board being notified of the status of the strategy and any significant amendments on an annual basis.

Summary of changes

Issue 2 – section added within emissions and discharges section giving overview of carbon emissions from scope 3.

Minor changes to the emissions section made to update current year's energy and emissions figures

Issue 3 – Procurement section updated to better reflect current procurement strategy and processes to track procurement based emissions.

Energy data and emission updates for FY2022/23 and scope 3 data also updated for 2022/23

Issue 4 - Energy data and emission updates for FY2023/24 and scope 3 data also updated for 2023/24.
New University emissions target added and baseline year updated

Executive summary

The planet is warming at an unprecedented rate and the Humber region is one of the coastal regions around the world officially listed as at high risk due to rising sea levels and increasing flood threat.

Recognising that global and national improvement will only be made with local and individual commitment and action, the University is actively seeking to employ operating practices that integrate environmental integrity with a concern for the physical and social fabric of the campus.

This strategy outlines how the University of Hull will manage, control its environmental impacts and strive for a continual improvement in its environmental performance. Of equal importance will be to disseminate the information gathered and inform the University population of actions being taken in order to cultivate the knowledge and awareness this engenders amongst students and staff.

Effective control of environmental performance can only be achieved if the impacts created by the University's activities and operational practices are identified. Accordingly creating accurate and accessible data sources will be central to the success of this strategy and also in facilitating research and innovation from the wider University community.

Sustainable improvements to environmental performance will not be achieved from a one-off process but rather progress will be incremental and require sustainability to be integrated within the day to day activities of the University operations.

Compliance with legislative requirements is seen as the very minimum requirements and the University has set a number of ambitious targets to give direction to this progress and includes Sustainability as a core element of its current strategy development vision. Key targets include:

- Net zero operations by 2040
- To reduce the overall University owned estate water consumption by 50% compared to the 2018/19 baseline by 2027
- No waste will be sent to landfill
- Increase EV charge point availability to encourage use of non-fossil fuel powered vehicles
- Create a whole campus ecosystem by ensuring the connectivity of habitat rich "islands"
- Aim for new build construction projects to be carbon neutral in performance

The management of the University's environmental performance will develop and evolve as the University itself grows and evolves, but through the monitoring of impacts and proactive and collective action, it will generate continuous and sustainable improvements to its environmental impact and embed these improvements as the normal operating practice of the University.

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INTRODUCTION

The University of Hull is committed to operating as a sustainable organisation and minimise any negative environmental impact. Sustainability is one of the key elements of the University's Strategic Plan with the University pro-actively working towards ensuring a sustainable future in all areas of the University's activities.

In keeping with operating in a sustainable manner the University shall act to protect the environment and prevent pollution that could be caused by its activities. The University will fulfil its compliance obligations and aim to continually improve its environmental performance.

The University has already successfully taken measures aimed at improving its performance regarding energy consumption, biodiversity, water usage and waste disposal. This strategy aims to develop these further and establish and embed working methods that continue to promote sustainable and ethically responsible use of natural resources.

The overarching aim of this strategy is to facilitate the effective control and management of the environmental impacts generated by University operations and by doing so enhance the student experience and contribute to an improved reputation of the University of Hull.

Fundamental to creating the necessary effective management control are:

- The identification of the sources of environmental impact and the current level of those impacts
- To use this data to establish baselines and to implement effective and regular monitoring, to demonstrate improvements across all sustainability areas and across all University activities
- To use the knowledge of our resource consumption and environmental impact to identify short, medium and long-term opportunities for improvement that are realistic, achievable, measurable and sustainable
- Make the data available to the wider University community so as to facilitate research and innovation in sustainability and environmental management and technologies
- To raise awareness amongst all staff and students of the activities that generate environmental impacts with the aim of engendering changes in attitude and behaviour that support improved environmental performance and the wider sustainability objectives

This strategy aims to provide the framework by which the University of Hull can realise the benefits associated with improving its environmental performance and as a result deliver more people-friendly, efficient and sustainable operating practices, facilitating the continued enhancement of the staff and student experience.

The University has recognised the impact of climate change and the need to adopt more sustainable operating practices. As a result, the University has made a commitment to become net zero by 2040.

Biodiversity and ecosystems are affected by the presence and operation of the University and the aim is to ensure both are considered as central elements to the design and maintenance of the estate. There is a recognition that these systems are dynamic and evolve with time, as do the needs and physical structure of the University. There will therefore be a constant flux within the biodiversity provision as ecosystems are impacted by estate developments, mitigations provided to compensate for any negative effects and opportunities taken for positive intervention.

Water is an often overlooked resource consumption and waste stream. The University is committed to treating water as a valuable commodity and ensuring its use is carefully managed. In most areas of the University operations there is limited “process” water usage with the bulk of the consumption believed to be associated with “domestic” use (toilets, washing etc.) and food preparation. The focus of attention in the short term therefore will be in ensuring the aging distribution infrastructure is fit for purpose and taking opportunities to minimise usage.

It would be naive to ignore the fact that resource consumption, whether it be energy, water, food or indeed any of the myriad of finished goods procured, represents a significant cost to the University. By managing the resources it consumes in the most sustainable manner, the University aims to control that expenditure and benefit from limiting its operational costs.

By making data from environmental management activities available to the wider University community the intention is to support and facilitate research and innovation and enhance learning opportunities.

Making the University’s performance available to all staff and students is a means by which sustainability and environmental management can be integrated into the collective consciousness and become a motivator for behavioral change.

The University appreciates that establishing effective and sustainable control over its resource consumption and environmental impacts will not be instantaneous, there is no immediate solution that will reduce energy consumption and no single intervention that will limit emissions from travel and waste streams. The goals of the University will be met by numerous actions and involve a great number of people.

With the growing international, national and local focus on sustainability, the language and terminology used continues to evolve and, in some cases, currently lacks broad consensus understanding and definition. To avoid doubt where it is believed to be the case, the University will clarify the basis of its targets and achievements.

CURRENT POSITION

Carbon Emissions

In 2011, the University published its first Carbon Management Plan. This mirrored a government set target of reducing Scope 1 and 2 CO₂ emissions by 34% by 2019/20 using the 1990 baseline of 19,090 tCO₂e.

The university exceeded this target, and by 2019/20 the carbon emissions from gas and electricity use had actually been reduced by 56% from the 1990 level. Whilst this original target was met, those setting it couldn't have foreseen the considerable change in the size, number and type of buildings within the University estate, nor the changes in teaching methods and facilities that occurred over this period.

Since 1990 was set as a baseline the University's carbon emissions from gas and electricity, consumptions of both have reduced considerably. Over the same period the University estate has also undergone significant change. The buildings of the former Humberside and Lincoln College have been acquired, some of that college estate then being demolished to allow the build of the Allam Medical Building and Westfield Court. The Courtyard student accommodation blocks have been added to the campus and along with the Sports complex doubling in size.

The lasting impact of the Covid pandemic has been the wholesale introduction of working from home by Professional Service Staff and Academic staff for part of their working week which has had a noticeable effect on electricity consumption especially.

The level of development at the University means it now has a very different estate, has very different teaching methods and has very different needs moving forward. This means that this 1990 baseline is no longer technically relevant, nor is it socially relevant to a large percentage of our student population.

The University has therefore has adopted the 1st August 2022 to 31st July 2023 reporting year to be the baseline for its carbon management efforts moving forward and will use this data set as the starting point for the strategy to achieve its net zero ambitions.

Using data available, a baseline position of the scope 1, 2 and 3 emissions has been established for the whole University estate and is set out in the table below.

| 2022/23 | Whole Estate |
|------------------------|--------------------------------|
| Scope 1 | 4,139 tCO ₂ e |
| Scope 2 | 3,337 tCO ₂ e |
| Scope 3 | 42,409 tCO ₂ e |
| Total Emissions | 49,884 tCO₂e |

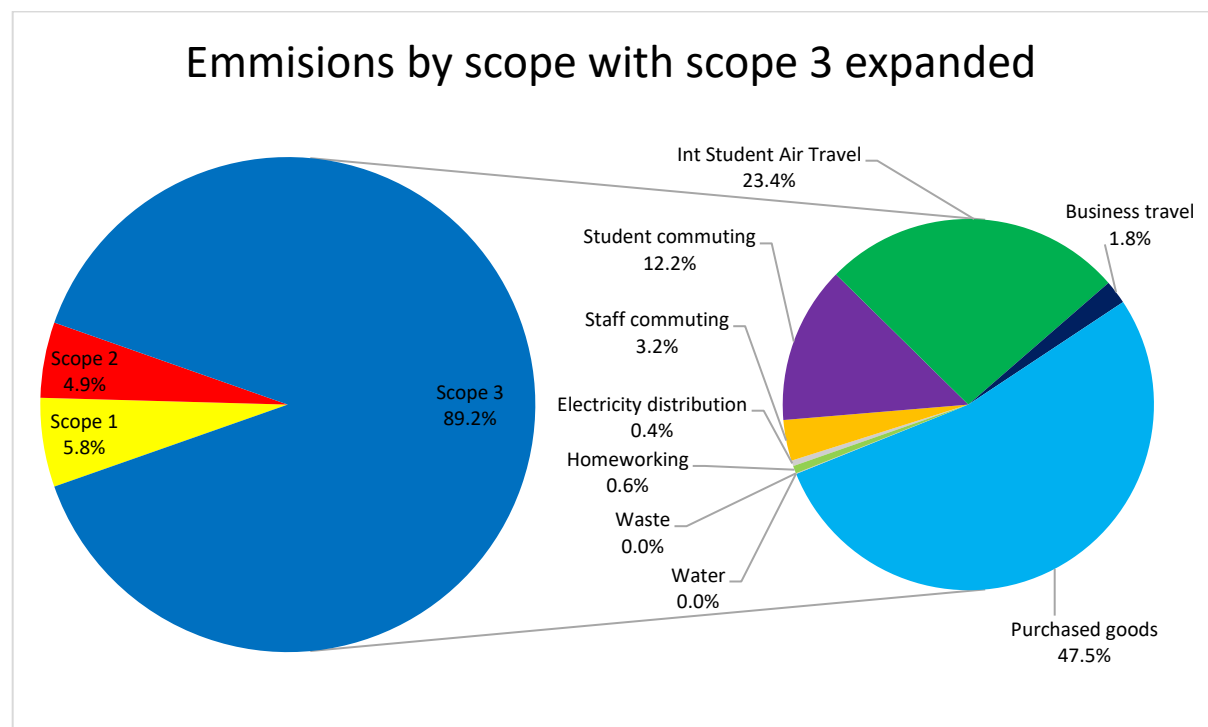
The 2023/24 energy consumption figures for the whole estate had dropped to slightly but due to changes in the demographic of students enrolled, particularly those overseas students, and the implementation of projects that created an increase in goods and services spend the scope 3 figures rose significantly.

The 2023/24 emissions levels are summaries in the table below

| 2023/24 | Whole Estate |
|------------------------|--------------------------------|
| Scope 1 | 3,785 tCO ₂ e |
| Scope 2 | 3,214 tCO ₂ e |
| Scope 3 | 58,088 tCO ₂ e |
| Total Emissions | 65,086 tCO₂e |

Whilst scope 1 & 2 emissions are more straight forward to tackle the University is conscious they only tell part of the story and thus is also actively working to establish an increasingly accurate picture of its scope 3 emissions. Currently there are some significant areas that require more detailed analysis, however the for the majority of scope 3 areas, emissions data is available albeit in some cases only based on financial spend.

The scope 3 emissions currently identified highlight the relatively high contribution this area makes to the overall University footprint. The breakdown of scope 3 emissions also shows the activities with a high GHG emissions output. The process of collecting the data, especially in these early years of compiling the figures, is highlighting areas where more accurate reporting methods could usefully be employed. Measuring progress is anticipated therefore to, initially at least, need caveats to be made, and the data set reviewed where calculation methods change significantly.



Travel related emissions are a significant element in the overall emissions of the University and one that is highly variable. These travel emissions include business travel as well as commuting emissions from staff and students. Changes from where the student intake is

recruited has a fundamental effect on the carbon emissions generated plans to reduce emissions level will need to reflect the challenges this will create.

Purchased goods and services also make up a large proportion of the scope 3, and total, emissions. This highlights the need for accurate methods to calculate the emissions levels, but also the need for accurate asset registers so that goods bought do not duplicate those already owned by the University.

Energy

Gas and electricity remain the primary energy sources employed by the University. Gas boilers provide space heating in almost all campus buildings and in most of those cases also provide the heat source for hot water services. This gas is supplied via the national mains gas distribution network and is not blended with hydrogen or bio-gas.

Electricity is predominately from the nation grid and in most cases supplied at high voltage. The university does have rooftop solar PV installed on some buildings but this contributes only slightly more than 1% of the overall estate consumption.

The current strategy is to gradually phase out the use of fossil fuels as an energy source across the university. This will mean replacing the existing gas-fired boilers with either heat pumps, boilers running utilising green hydrogen as a fuel, or hybrid systems utilising multiple heat emitter types in order to provide greater operational efficiencies.

The potential electrification of space heating and hot water production will obviously increase the demand and consumption of electrical power within the university. The university is not content to simply wait and hope that grid supplied power de-carbonises in order that it can meet its net zero ambition. The installation of solar PV on existing university owned land is being actively explored with potential for near term projects of this nature to deliver c25% of the electricity demand. In addition, CPPA agreements that deliver additionality in renewable power generation are a likely route to provide the university with zero carbon generated power.

Regardless of the strategies adopted to supply the university with energy with the lowest possible carbon footprint there will remain a focus on limiting the university's consumption levels and using energy in the most efficient manner possible. Actively seeking out control strategies that maximise the operational efficiency of buildings and their associated infrastructure will remain a key area of work.

With climate change already impacting weather conditions and technology continuing to advance the university expects its management of energy to continue to adapt new challenges and opportunities.

The major targets for energy consumption are:

1. To reduce carbon emissions created by the energy use in the University owned estate to net zero by 2040
2. Introduce building level monitoring of energy consumption across all campus buildings by 2030
3. To reduce the overall consumption of energy/m² of GIA in the University owned estate by 20% compared to the 2022/23 baseline by 2030

Water

The University uses large volumes of water to support its activities, most of this is connected with the provision of domestic water services for toilets and washrooms with onsite catering being another significant source of consumption.

Water consumption will be a necessary aspect of many taught courses and research activities. It is the intention in these areas to provide information to these faculties and departments of what that consumption is and to work with them, where appropriate to identify where reductions in consumption could be made.

Where appropriate, the University will seek to adopt rainwater harvesting systems with the intention of reducing the volume of water resources it consumes.

Water sub-metering will be adopted across all the campus buildings and high-volume consuming plant and equipment. The value of this data will be not only in managing incoming water supplies but also in controlling wastewater discharges and providing information to research activities within the University, notably in the area of Sustainable Urban Drainage systems.

As with Carbon emissions and Energy consumption the University's 2022/23 financial year will be taken as the consumption period that will form the baseline for improvement over the period covered by this document. In this year the university billed consumption was 111,209m³

The major targets for water consumption are:

4. To reduce the overall University owned estate water consumption by 30% compared to the 2022/23 baseline by 2027
5. Introduce building level monitoring of water consumption across all campus buildings by 2027
6. Benchmark water consumption against other Universities
7. Report bi-annually to the Sustainability Board

Waste Management

The University has recognised that while there is a base level of waste that will be generated by the normal operation of the University, the impact of overzealous resource consumption will have a negative impact on waste volumes and the University's environmental impact. There is therefore an immediate need to adopt more sustainable operating practices that reduce over consumption and thus prevents the resource consumption at source, rather than managing it via the waste disposal process.

As waste is generated by everybody using the University facilities, there will need to be actions taken by all to reduce those volumes.

The approach to manage and reduce waste volumes will be:

- Establish robust monitoring processes to clarify the source and magnitude of waste being generated
- Utilise the data gathered to establish the current position and regularly update the position to stakeholders
- Identify anomalies in usage to be investigated and resolved
- Identify opportunities to reduce over consumption and thus waste volumes and implement projects to realise those savings

By making data from waste management activities available to the wider University community, the intention is to support and facilitate research and innovation and enhance learning opportunities, as well as heightening awareness and engendering a change in behaviour.

Behavioural change by everyone is a key element in managing waste and especially recycling. By making the University's performance available to all staff and students, it is hoped that it will integrate waste into the collective consciousness and generate consistently good decision making regarding disposal routes.

The effect on the working environment and operation of the University created by the Covid-19 pandemic means the waste generation and volume of recyclable material collected in the most recent reporting years are believed to be an unrepresentative measure of the University's current position.

Standardising on the adoption of the 2022/23 reporting year for baselines is as relevant to waste as it is energy and water consumption and it is this data set that will be used as the starting point for the strategy to reduce waste volumes and against which to measure progress.

In 2022/23 the University created 643 tonnes of waste from residential and non-residential sources. (This excludes waste created as part of capital projects to the buildings on campus). Of this some 40% was recycled and none was sent directly to landfill.

Under the current waste arrangements, no waste from the University goes directly to landfill, all waste is sent either to recycling facilities or to be incinerated for energy production. This "zero waste to landfill" aim will remain the default stance of the University.

The major targets with regards to solid waste disposal are:

1. No waste will be sent to landfill
2. Where capital projects create inert, non-recyclable waste, this will be re-used on-site wherever possible
3. Increase the recycling rate so that 65% of the combined residential and non-residential waste volume goes for recycling by 2027
4. Report to Sustainability Board on waste levels at least bi-annually

Travel and Transport

The overarching aim of the travel and transport strategy of the University of Hull is to make available to all staff and students, the opportunity to commute to the University, by

whichever means has the lowest environmental impact possible for their own personal circumstances.

Additionally, the University recognises that providing the infrastructure to facilitate different transport methods can itself create negative environmental impacts. Land consumption for car parks results in loss of biodiversity and habitat that must be mitigated. The provision of welfare facilities to support cycling options can increase water and energy consumption and some public transport options may have minimal or no benefit in terms of emissions, relative to car use.

In short, there is a recognition that there is no “one size fits all” solution applicable to all staff and students and that every travel option comes with a range of advantages and disadvantages, both to the environment and the individual.

The University is committed to providing a range of options to facilitate each person being able to make commuting decisions that best balance their wellbeing needs and the environmental impacts created by that choice.

The university has installed 24 EV car charging points around the main campus to encourage non-fossil fuel powered cars. The university continues to encourage active travel and has invested in a new fleet of bikes as part of its low cost cycle hire offering.

International student air travel to the UK remains a significant contributor to the overall travel emissions. Overseas students contribute significantly to the vibrancy of the campus and the richness of experience for the whole university population; the aim therefore would be to identify alternative travel options for international travel that avoid the use of air travel.

Initial plans and targets include:

1. Providing low cost cycle hire on campus
2. Introducing salary sacrifice schemes aimed at promoting electric car and electric bike usage
3. Identify alternatives to air travel for overseas students and have that information ready to be included in induction packs by 2027
4. Reduce average both staff and student commuting travel emissions by 10% of the 2022/23 level by 2030

Biodiversity

Biodiversity and ecosystems are an integral element of the University. Inevitably the presence of the campus and the activities on site will impact biodiversity and the habitats and ecosystems present and vice versa. There are, however, many ways in which the University can, and does, make a positive impact.

The University campus already contains a range of habitats and ecosystems. The campus covers over 55 hectares and within that, grassland constitutes the largest single component, covering over 32 hectares in total. These grassed areas contain trees and shrubs, which are also present in cultivated beds and woodland areas. Also present are open water areas and some areas of green walls and roofs. These areas support a range of species and habitats and the strategy for biodiversity is to enhance these areas and ensure they are “joined”, so rather than having habitat rich “islands” supporting a small range of species, we create a whole campus ecosystem.

The University aims to continue its approach of seeking to accommodate and encourage the greatest diverse mix of ecosystems and habitats as possible and encourage a wide range of species that can survive and flourish cohabitating within the University estate and its operations.

The University recognises that there is a balance to strike between interventions to enhance the aesthetic value of the campus and pursuing a less intensively managed approach that allows ecosystems to develop naturally and areas to better support and encourage a range of species with which we can share our environment.

A campus offering a high visual amenity is an important element to the wellbeing of staff and students and adds to the social fabric of the University. Similarly, the presence of a rich and varied collection of habitats and ecosystems can also have a positive effect in promoting a local environment conducive and supportive to the academic activities of the University.

As with other areas of sustainability, the presence of a biodiverse campus will provide opportunities to enhance student learning by providing an environment to develop practical skills associated with taught courses. Additionally, by demonstrating and communicating the actions being taken to support and nourish ecosystems throughout the campus, we will raise awareness throughout the whole University community of the possibilities and benefits this brings.

The more immediate aims and targets to manage and enhance biodiversity on campus are:

1. Reinvigorate the identified conservation area to improve grass species quality. To be completed by Spring 2027
2. Continue to leave grassland margins uncut during growing and flowering season. Additionally, identify areas where a low intensity mowing regime could be established to encourage wildflower growth
3. Reinstate Peregrine nest box on the Library roof prior to nesting season in 2027
4. Continue to provide deadwood habitats within woodland blocks and around grassland margins.
5. Introduce wildflower planting as part of landscaping plans for proposed solar PV arrays
6. Adopt a “peat free” stance for the provision of topsoil and compost needed for the maintenance of the campus

Construction and Refurbishment

As the University enters a phase of development of its built environment, it does so with the main strands of its current strategic vision, namely people and sustainability, firmly at the core of those developments.

The intention is that new build and refurbishment projects will prioritise sustainability in their designs. This focus on sustainability will not be limited to the carbon emissions generated from the operation of the building once complete, but will take a much broader view incorporating:

1. Low impact construction methods. The University will explore the most appropriate construction methods and materials rather than simply following the established industry standard approach
2. Optimise building insulation levels and airtightness to limit the heating and cooling loads in operation
3. Maximising the support the building can give to biodiversity and ecosystems. The incorporation of elements, such as living walls to both boost biodiversity, but also limit the impact of solar gains and contribute to the mental wellbeing of those using the building
4. Water usage – the installation of rainwater harvesting for use in suitable systems
5. Incorporation of low water use sanitary appliances to limit water resource consumption and waste water production
6. Use of heat recovery within all building ventilation plant
7. Integrate intelligent control systems to allow flexible operation of lighting and heating systems
8. Provision made with the building for clear and intuitive waste collection facilities, so that high recycling rates can be facilitated

Sustainable Procurement

Sustainable procurement is an area of increasing concern with the carbon value of procured goods being a highly significant proportion of the University's annual emissions level. The carbon emissions resulting for the procurement of goods and services making up close to 50% of the University's scope 3 emissions.

The University seeks to work with suppliers to reduce the environmental impact of the goods and services used, whilst ensuring value for money is still maintained.

The aim of the University's Procurement Policy is to ensure the University is engaged with suppliers who not only offer value for money with regards to the goods they provide but also have a high regards for the environmental performance of their products and share the University's values on sustainability

The procurement policy seeks to ensure the University avoids engaging with suppliers or purchasing products which are likely to:

- Endanger health
- Cause significant damage to the environment
- Consume a disproportionate amount of energy
- Cause unnecessary waste
- Use materials derived from threatened species or environments
- Involve the unnecessary use of or cruelty to animals
- Adversely affect other countries
- Cause danger or hardship to employees due to poor working conditions, discrimination or poor health and safety

- Have a negative impact on the local economy or community in which the products are produced

The following checklist items are suggested as those which should be considered by requestors of products to promote sustainable and environmentally friendlier purchasing:

- Is it essential that the product is bought?
- How efficiently will the product use resources in operation and have these costs been taken into consideration before purchase?
- How durable is the product? Would a more expensive product have a longer life and thus a lower “per year” cost? Is the product rechargeable, repairable, refillable or reusable? and thus lower waste burden and avoid the need for frequent replacement.
- Can the product be recycled at the end of its useful life?
- Is the product likely to emit toxic or polluting substances during its use or disposal?
- Suppliers must demonstrate that they are committed to anti-discrimination in areas such as age, sex, religious beliefs, disability etc.
- Where suppliers manufacture the products overseas can they demonstrate that they are committed to improving working conditions, working hours, minimum age for employment and employee welfare?

Accurate and timely monitoring of scope 3 emissions created as a result of university procured goods and services is an ongoing challenge. The current system used links carbon emissions to monies spent and as such is recognised as having some significant potential for accuracy issues. The University is exploring options to get carbon emissions data direct from suppliers so that this data can be used in preference to values calculated from spend based carbon factors.

Reducing the emissions from purchased goods and services will be fundamental in achieving the overarching university ambition to be net zero. As a result, the target would be for scope 3 emissions from purchased goods and services to reach a net zero position by 2040.