SUSTAINABLE SUSSEX



DECARBONISING THE ECONOMY



WE WILL REACH NET ZERO BY 2035 THROUGH OUR ACTION PLAN FOR ACHIEVING THIS

We will achieve this objective through four key areas of activity. Firstly, by setting strong aspirational net zero targets. Secondly, by accurately recording and analysing our emissions annually via excellent carbon accounting. Thirdly, by decarbonising our energy infrastructure; and fourthly by creating a more energy-efficient campus through better insulation and energy use. Our key commitments in this area are summarised below and explained in more detail in the remainder of this section.

KEY COMMITMENTS: DECARBONISING THE ECONOMY

- Set a target of achieving net zero carbon emissions by 2035, with indicative interim targets for 2025 and 2030
- Set an annual carbon reduction target every August to be monitored as a key performance indicator by Council each year from August 2022
- Put in place more robust carbon-accounting practices and achieve Science Based Targets initiative (SBTi) Net Zero Carbon Standard accreditation by August 2023
- Begin to invest in replacing priority fossil fuel dependent infrastructure with lower carbon alternatives by December 2026, with a first step of producing feasibility studies in each of the following areas by December 2021:
 - Replacement of our Combined Heat and Power Plant with a low carbon alternative
 - Expanding our renewable energy production
 - Creating a new sustainable transport hub
 - Upgrading electric vehicle, scooter and bike charging infrastructure

- Reduce our digital emissions through our IT Network Replacement Project and Cloud-First Policy by December 2024
- · Improve the energy efficiency of our campus by:
 - High-level auditing of the energy efficiency of all of our estate by December 2021
 - Producing investment opportunity analysis of the 20% of our most poorly performing buildings and business cases for improvements by 2023
 - Upgrading our Building Energy Management Systems – e.g. automatic heating controls – by August 2022
 - Developing minimum environmental product standards for the furnishings and fixtures that we buy for our estate by December 2022
 - Identifying if there is a business case to move beyond BREEAM Excellent construction standards for new buildings by December 2022
- Introduce new more modern flexible ways of working that can reduce our carbon footprint by 2025.

NET ZERO BY 2035



In February 2021 we completed internal modelling of our current carbon footprint and options for decarbonisation by 2030, 2035 or 2040. We have used this analysis to set a **target of achieving net zero carbon emissions by 2035, with indicative interim targets for 2025 and 2030** that we will review and update annually.

The following graph shows our indicative interim targets for reaching net zero.¹



Not all net zero targets are the same. We are proud that our net zero target contains both direct emissions and indirect emissions caused by our supply chain, financial investments, and the way that our staff and students travel. The **Green House Gas Protocol** classifies emissions in three ways – known as scope 1, 2 or 3 emissions. Examples of these are given below.



Our target means that **we will be net zero for all scope 1**, **2** and **3** emissions by **2035**. This puts us ahead of many other organisations who are only committed to being carbon neutral for scope 1 and 2.

Having a clear understanding of our greenhouse gas emissions and stretching SMART (Specific, Measurable, Achievable, Realistic and Timed) targets for reducing them are the key to success. The remainder of the Decarbonising the Economy section of the strategy outlines how we will reduce our scope 1 and 2 emissions, while the subsequent section of the strategy (Civic Leaders and Partners) includes our plans to reduce our scope 3 emissions from travel and the supply chain.

¹ It should be noted that we still expect to have a carbon footprint of $17,860 \text{ TCO}_2$ in 2035, which we will either need to compensate for or rely upon new technological solutions arising over the next decade that can enable us to become net zero. We will actively pursue ways to achieve net zero as sustainably as possible, for example, through demand reduction or appropriate carbon sequestration measures.

EXCELLENT CARBON ACCOUNTING



We will work with our relevant energy management service partners – currently Sussex Estates and Facilities (SEF) – to **put in place robust carbon-accounting practices** based on the Green House Gas Protocol produced by the World Business Council for Sustainable Development. This will allow us to track our progress towards achieving our net zero target.

We will ask SEF – in an improved energy management agreement – to **provide an annual report on our carbon footprint** to the Sustainability Committee, chaired by our Vice-Chancellor every February. We will then use these data to agree an **annual carbon-reduction target** for each academic year from August 2022 onwards. Achievement of this annual carbon-reduction target will be a **key performance indicator** that the Sustainability Team reports to the University Council (the highest governing body at the University) each year for scrutiny, challenge and approval. We recognise that the quality of our carbon accounting will only be as good as the quality of the data that we are collecting to inform it. So, we will **review our current carbon footprint data and produce an improvement plan** by December 2021, which we will implement by December 2022. This means we will review the data quality in relation to our top 10 sources of carbon emissions and put in place an improvement plan for each area. For example, utilising industry best-practice methodologies to calculate indicative emissions from our procurement activity and investments.

In order to ensure that our carbon-accounting policies and procedures are guided by best practice we will also look to **apply to the Science Based Targets initiative (SBTi) Net Zero Carbon Standard accreditation** by August 2022 with an aim to have received accreditation by August 2023. This standard sets out requirements for quantification, reduction and compensation of greenhouse gas emissions for organisations, products and events.



DECARBONISED ENERGY INFRASTRUCTURE



Even if we have the best carbon-accounting system in the world, it will mean nothing if we do not **invest in replacing our fossil fuel dependent infrastructure from the 20th century with modern lower-carbon alternatives**.

This process requires a change in mindset from thinking about what is the cheapest product to buy now in today's world as opposed to what is going to be most cost effective over the life of this strategy. It is about asking what to invest in now to **prevent us from having to pay for expensive carbon offsetting and higher energy costs in the future** because we did not decarbonise early enough.

In setting a net zero target for 2035, we cannot predict where technology will be by then to know all the future decarbonisation avenues available to us. However, we have **identified the four biggest opportunities to decarbonise our infrastructure over the next five years**.

That is why we are committing to working with the **Greater South East Energy Hub** to produce feasibility studies in each of the following areas by December 2021:

- Replacing our Combined Heat and Power Plant with a low carbon alternative
- Expanding our renewable energy production through the creation of an additional solar farm
- Creating a new sustainable transport hub with bike storage, showers, public transport infrastructure and solar ports
- Upgrading of electric vehicle, scooter and bike charging infrastructure.

These feasibility studies will allow us to appraise the best options and solutions in each of these areas. They will also enable us to estimate the relative costs and benefits (both financial and environmental) of each option. This will give us the necessary data to **make appropriate business cases to the University's Capital Programmes Committee and external funders**, such as the Government's Public Sector Decarbonisation Scheme to obtain the budget to begin to **pay for the necessary capital infrastructure investments by December 2026**.

In prioritising the above feasibility studies, it is important to acknowledge that we are not currently looking to decarbonise our existing district heating system. This is because the current system has at least 15 years left to run and it would create perverse carbon impacts if we replaced it at this time. However, we will **commit to replacing our district heating system with a low-carbon alternative by 2035**. We will also regularly review the advances in technology as they arise, and identify any opportunities to retrofit the existing system to become lower carbon.

Finally, we will **reduce our digital emissions** through progression of the Digital Infrastructure Programme, including realisation of our 'cloud first' principle **by 2024** and commit to being at the forefront of low-carbon computing and software techniques within our research.

AN ENERGY-EFFICIENT CAMPUS



While it's great to invest in cleaner energy infrastructure as outlined above, reducing overall energy consumption is usually the most cost-effective way of saving carbon and reaching net zero. That is why **improving the energy efficiency of our campus** is the absolute bedrock of our net zero action plan.

That is why we will **undertake an initial high-level audit** of the energy efficiency of all of our buildings to identify the most cost-effective ways of reducing our energy consumption by December 2021. We will do this using our current contract with Sussex Estates and Facilities (SEF). We will then take these findings to prioritise a more detailed audit of the 20% of the most poorly performing buildings by 2023 and complete a detailed investment opportunity analysis of the entire estate by 2030. For each audited building we will calculate:

- how energy efficient it currently is compared to similar buildings of its type
- the specific measures (such as improved insulation, double glazing or underfloor heating) that could make it more energy efficient
- · how much the improvement would cost
- · how much carbon the improvements would save; and
- the payback period (i.e. how many years would it take for the improvement to pay for itself in reduced energy costs).

We will use this audit information to **make regular business cases for funding for energy efficiency improvements** to our Capital Programmes Committee and external grant funders, e.g. the Public Sector Decarbonisation Scheme so that these improvements can be built into our annual maintenance and project plans each year. These new investments will help us to build on already planned investments totalling $\pm 660,000$ to complete the first stage of **upgrading our Building Energy Management Systems** – e.g. automatic heating controls – by August 2022.

We will also **develop a register of minimum environmental product standards** for the furnishings and fixtures that we buy for our estate by December 2022. This will allow us to ensure the optimal energy efficiency of everything from our fridges to our taps. We will commit to using these standards every time that we buy and/or replace a fixture or fitting in our building.

We also want to make any new or refurbished buildings on campus as sustainable as feasibly possible. We already require new buildings to achieve the BREEAM Excellent standard in relation to sustainable construction but want to know if we can go even further. That is why we are going to conduct a review of current environmental building standards and **identify if there is a business case to move beyond BREEAM Excellent environmental construction standards by December 2022**.

Finally, we recognise that the way that we use buildings is as important as the technologies and fabric that we introduce. So, we are investigating how we can **introduce more modern flexible ways of working** – including more remote working – that can help **lower our carbon footprint** by August 2025.