

University of Kent – Carbon Management Plan 2022

Following approval of the Net Zero Emissions Target agreed by the University's Executive group in February 2021, a full Carbon Management Plan for the period to 2040 is under development and will be published in stages from 2022/23 onwards. This statement sets out the vision and baseline for our net zero carbon targets, details the reporting and responsibilities for delivery and summarises our approach to addressing the climate challenge.



Prof Karen Cox
President and Vice-Chancellor



Prof Richard Reece
Deputy Vice-Chancellor and
Chair of Sustainability Steering Group

Our Vision

We will exemplify a progressive culture which puts the climate challenge at the forefront of our strategic decision making. Leading from the top we will develop governance and accountability structures that drive carbon reduction allowing us to reduce energy consumption, develop infrastructure for renewable energy generation and identify opportunities to reduce indirect emissions.

Our Baseline

Our previous Carbon Management Plan (2010-20) saw emissions fall by 29.4% compared to the baseline year of 2005. This exceeded our target of 23% despite significant growth both in terms of the estate and staff and student numbers over that period.

The end of the current plan provided us the opportunity to reset our baseline year in order to focus on future emissions rather than rely on previous successes. The baseline year was chosen as 2018/19 as the most recent year for which robust data is available (this year was not affected by the impacts of Covid-19). Total annual scope 1 and 2 carbon emissions for 2018/19 were 12,628 t CO₂

Baseline data for the full range of scope 3 emissions is yet to be established. Nevertheless summary of available baseline data, scope 3 boundaries and targets can be found in relevant section of this report.

Our Target

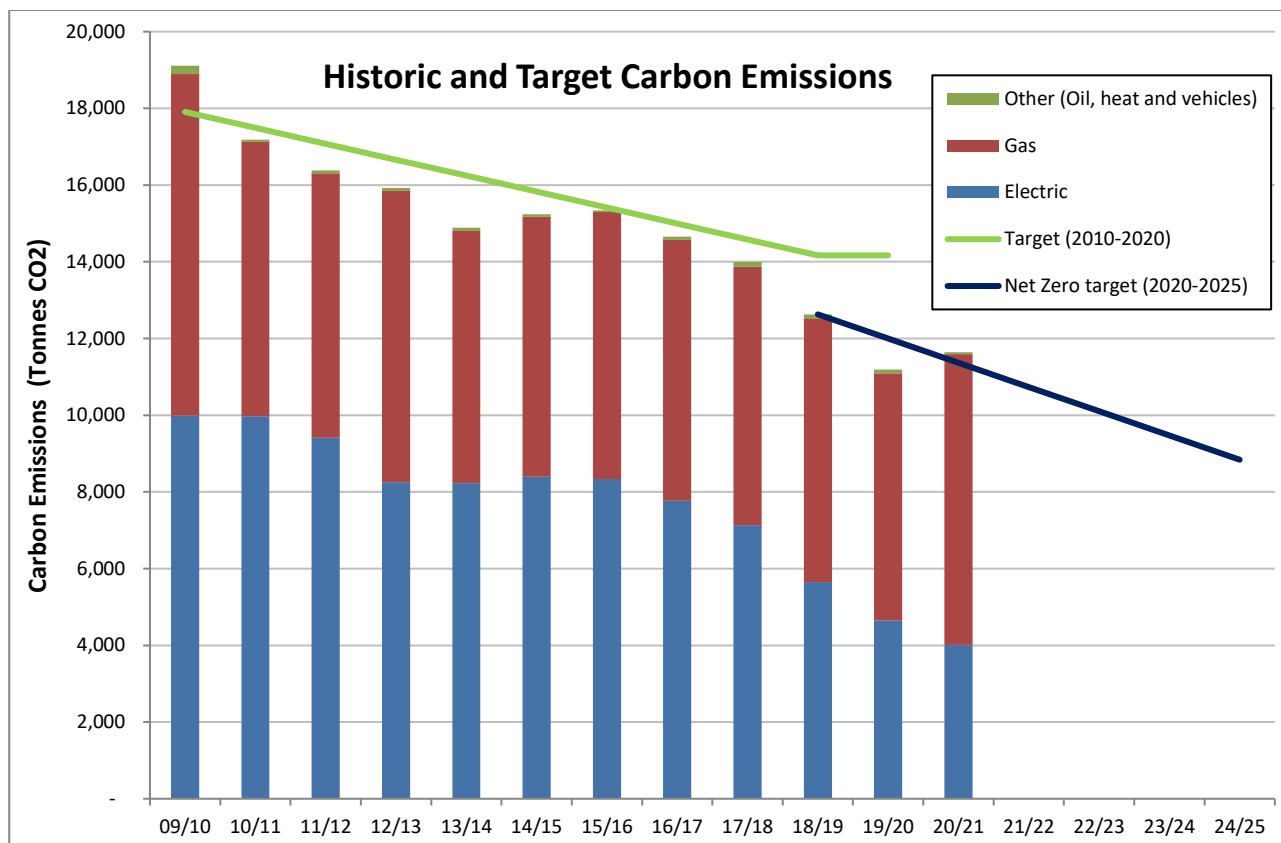
In 2021 the University of Kent agreed on an ambitious yet achievable target of reducing scope 1 and 2 greenhouse gas emissions to net zero by 2040 and scope 3 emissions to net zero by 2050. Our aim is that emissions will be reduced by at least 50% by 2030 compared to the baseline year of 2018/19.

By 2025 – We will reduce our scope 1 and 2 emissions by 25% compared to the 2018/19 baseline year. We will establish the baseline for all scope 3 emissions and set interim targets toward achieving net zero scope 3 by 2050.

By 2030 – We will reduce our Scope 1 and 2 emissions of carbon by 50% compared to the 2018 baseline year.

By 2040 – We will achieve net zero carbon for Scope 1 and 2 emissions

By 2050 – We will achieve zero carbon across scope 1, 2 and 3 emissions



A Whole University Approach

Achieving net zero will require collaboration and participation from across the institution to embed carbon reduction and place it at the heart of decision making. Responsibility cannot be held by any one individual or department but rather action be led by and supported from the university’s leadership. We aim to deliver against our commitment through four key areas of responsibility:

Leadership and Governance

Driven by the Sustainability Steering group, the University Executive Group will act as leaders driving forward the changes required across the organisation to achieve net zero. We will ensure that our governance and accountability structures drive carbon reduction and that strategic decision making incorporates climate change risk and adaptation.

Learning, Teaching and Research & Innovation

We will take action to enable all students graduate equipped with the skills and knowledge to work in addressing the climate and ecological emergency and to drive sustainability and climate related research through existing and new focuses for research.

Society, Partnerships and Engagement

We will support, empower and encourage our staff and students to be responsible global citizens. We will use our influence locally, nationally and globally to act as leaders to drive climate action and to develop partnerships to contribute towards city- and region-wide bodies aligned to this challenge.

Campus Operations

We will ensure that our estate is fit for the future through adopting zero carbon building standards thus reducing our energy demand. We will ensure that energy is used efficiently and that positive environmental behaviours are encouraged, and we will invest in renewable energy and low carbon technologies. Our Estate strategy will support and underpin this work to deliver a carbon resilient estate.

Scope 1 & 2 Emissions

Carbon emission rose slightly above the target line in 2020-21 which was largely due to the need to provide additional ventilation in response to Covid 19. This requirement combined with the fact that the winter 2020-21 was the coldest in the last 5 years drove up gas consumption, and the associated carbon emissions. The effect of this is shown in the Carbon Emissions graph shown earlier in this report .

The University implemented a series of carbon saving reduction measures during 2020-21, and these will have helped limit the increase in annual carbon emissions seen in the year. Following on from this the University continually reviews how it operates to maintain energy efficiency dependant on operational requirements. Further the University works in Partnership with other organisations to reduce carbon emissions, and is working to increase this type of engagement with a view to keeping the University on track with the targets set out in the Carbon Management Plan.

Over the next 2 years we be undertaking a number of projects and initiatives, some of which are already underway, which will support our net zero objectives. This include:

- Improving our metering, data collection and analysis to allow us to develop energy saving projects and campaigns at the building level.
- Embedding more life-cycle costings into financial decision making so that the operating costs and lifetime carbon emissions can be factored into our procurement and practices
- Exploring rolling out carbon literacy training for staff and students
- Continual improvement of day to day operational energy efficiency through 2-way communications with users; keeping time control settings in line with user requirements, and providing information on local controls.
- Continual development of energy efficiency improvements, working to include energy efficiency measures in new Projects, and retrofitting measures such as energy efficient controls and replacement of lighting.

Energy Partnership

The University of Kent is in the first stage of establishing a strategic partnership with Siemens to work in collaboration to achieve our net zero targets. This partnership is underpinned by the opportunity to develop apprenticeships, further research and develop the culture of a whole-university approach to net zero.

The partnership will help the University to achieve its net zero goals through 3 workstreams; energy efficiency, renewable energy generation and heat decarbonisation.

Energy Efficiency - The initial stage of this work has been to undertake initial audits to identify opportunities for energy saving projects. Over the first 2 years these measures will focus on large scale replacement of lighting, and installation of energy efficient plant and controls.

Renewable Energy - Siemens will be investigating options to increase on site generation of electricity primarily through increasing the installed capacity of solar PV at the University, either on roof tops, or mounted at ground level.

Decarbonisation - Plans to decarbonise heat will be developed to move the University away from using natural gas for heating and hot water to using a low carbon energy source. The plan is for the implementation of this work to begin after the energy and generation measures have been done in years 1 and 2.

Scope 3 Emissions

Baselines, boundaries and interim targets for scope 3 are subject to ongoing review as the collecting of scope 3 data has been significantly impacted by Covid-19 and subsequent changes to how the University operates.. The baseline year of 2018/19 remains the most recent year unaffected by the pandemic and will therefore be used for a baseline until more robust data can be collected over the next few years.

Subject to ongoing review, scope 3 emissions are included/excluded from emissions data reporting and targeting as shown in the table. Where excluded, emissions are measured (where possible) but not included in target setting and/or reporting.

All scope 3 emissions included in the target boundary will be subject to the Net Zero by 2050 target. Interim targets will be set according to the following criteria:

- Where reliable data exists for both baseline setting and ongoing monitoring, interim targets for scope 3 emissions have been set to be achieved by 2030 with a full review to take place in 2025.
- Where data is incomplete or only available for some years, interim targets will be set no later than 2025 and data collection methodologies developed by end 2023/24.

Details of targets for each category of scope 3 emissions are given in the table below. Baseline data is given in the appendix.

Scope 3 Emission	Included in target boundary?	Reliable data available?	Interim target (decrease by 2030 against 2018/19 baseline)
Business travel	Yes	Yes	20%
Waste	Yes	Yes	20%
Water (supply and wastewater)	Yes	Yes	20%
Scope 3 Emission	Included in target boundary	Reliable data available	2025 objective
Staff commuting (Cars)	Yes	No	Data collection methodology developed by end 2023/24
Student commuting – day to day (Cars)	Yes	No	
Procurement (excl. Construction & refurbishment)	Yes	No	Interim targets set by 2025
Construction & Refurbishment	Yes	No	
Student commuting – beginning and end of term	No		Data collection methodology developed by end 2023/24
Tenants (Farmland, Coop, Kent Union)	No	No	
Homeworking	No	No	

Our Reporting

Progress towards achieving our net zero targets will be monitored by the Estates Department. Scope 1 and 2 emissions will be calculated directly by the Estates department using existing mechanisms. Scope 3 emissions will be calculated using a combination of existing and newly developed mechanisms requiring input from other areas of the University, primarily procurement and finance.

Responsibility: John Kingsland (Energy Engineer, Estates) – Collation and processing of data



Scope 1, 2 and 3 emissions data and progress towards overall and interim reduction targets will be reported by the Estates Department at least annually to the Environmental Management System (EMS) team as part of the ISO14001 management review process.

Responsibility : Jim Bloor (Head of HSES) – EMS Team Chair
Catherine Morris (Sustainability Manager: HSES) – EMS Lead



Overall progress against the net zero emissions target will be reported to the Sustainability Steering Group (SSG) annually. The SSG will also monitor wider progress against the carbon management plan including the areas of leadership, curriculum, research and partnerships.

Responsibility: Richard Reece (Deputy Vice Chancellor Education and Student Experience) – Sustainability Steering Group Chair.

Our Resourcing

The University is committed to achieving its Net Zero target and acknowledges that this will require significant financial investment over the target period.

Each year the Estates Department will update its rolling 2-year energy management and water action plan (EMWAP) setting out the short term objectives, critical steps and time frame for projects to deliver our carbon reduction targets. Across 2020/21 and 2021/22 the EMWAP details 14 projects with a total budget of over £500,000.

Budgets for future projects will be assessed, including the development of a Business Case for each Project. Depending on the type and value of each project, funding will be sought from one of the following options:

- Small projects funded from existing revenue budgets
- Requests for grant funding will be submitted where the project meets the criteria of the scheme.
- Large capital projects funding would be allocated by the University's Finance and Resources Committee dependant on the Project's business case being approved.

Other funding opportunities including partnerships with external companies is being explored.

Based on the above options the University of Kent will resource the work required to achieving net zero carbon emissions in line with the target.

Appendix

Baseline data for all emission scopes

Emission	Scope	Baseline Data 2018/19 tCO2
Electricity	1&2	5,646
Gas	1&2	6,882
University owned vehicles	1&2	99
Other (Oil, heat)	1&2	1
Business travel	3	3,167
Waste	3	31.3
Water (supply and wastewater)	3	255
Staff commuting (Cars)	3	1,602
Procurement (excl. Construction & Refurb)	3	7,296
Construction & Refurbishment	3	8,527
Student commuting – day to day (Cars)	3	No baseline data available
Student commuting – beginning and end of term	3	No baseline data available
Tenants (Farmland, Coop, Kent Union)	3	No baseline data available
Home working	3	No baseline data available