



Environmental Sustainability Report 2022/23

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The scope of this report does not cover the 31 Colleges, which are independent and autonomous institutions, or our associated businesses, although we work in partnership with them on a number of matters and do highlight a small number of examples in this report.

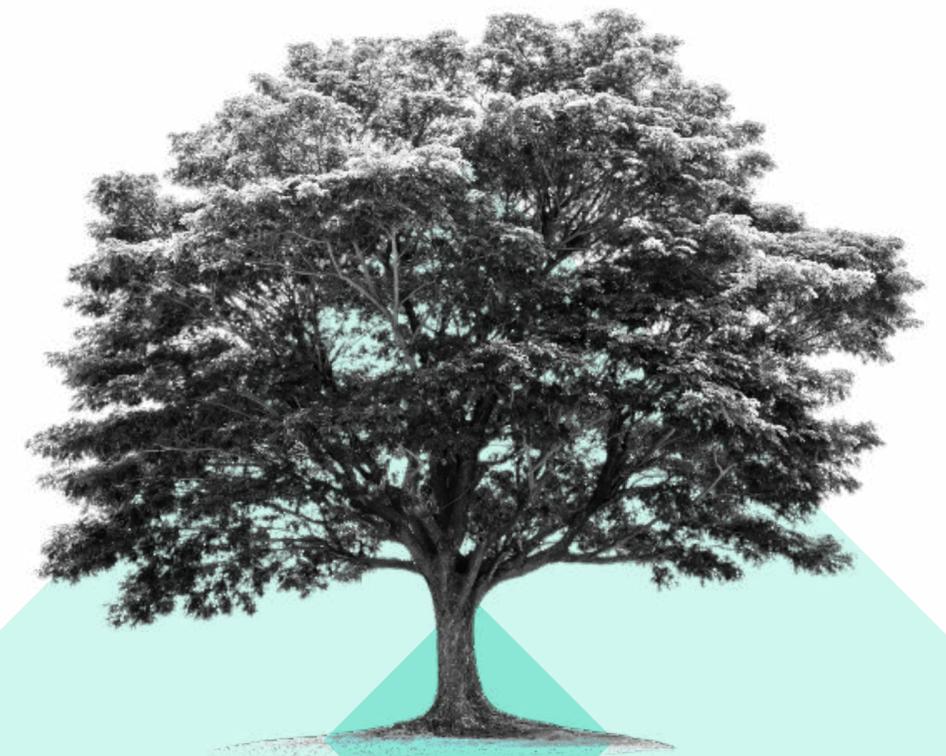
Introduction

Welcome to the University of Cambridge Environmental Sustainability Annual Report 2022/23. This report covers some of the many sustainable initiatives and activities happening across the University from 1 August 2022 to 31 July 2023.

Environmental sustainability is a key commitment of the University of Cambridge, and we are dedicated to making a positive impact through outstanding environmental performance. Back in 2014, when we were developing our Environmental Sustainability Vision, Policy and Strategy, we assessed materiality – those environmental sustainability issues that were of most importance and significance to the University and to our stakeholders. This report – along with previous versions – is structured against the issues that were found to be material.

We are now undertaking work to inform the development of a new sustainability strategy and as part of this we are revisiting materiality. This may mean that the structure of our reporting looks different in future.

Our ongoing commitment to sustainability means that there are initiatives, projects, research and commitments right across our University. In compiling this report, we have spoken to Departments, Faculties and institutions to get a full picture of sustainability here at Cambridge. But we cannot include everything in one report and if you're working on a sustainability project, we'd love to hear about it. Please get in touch so that we can highlight your achievements in our future reports.



Foreword

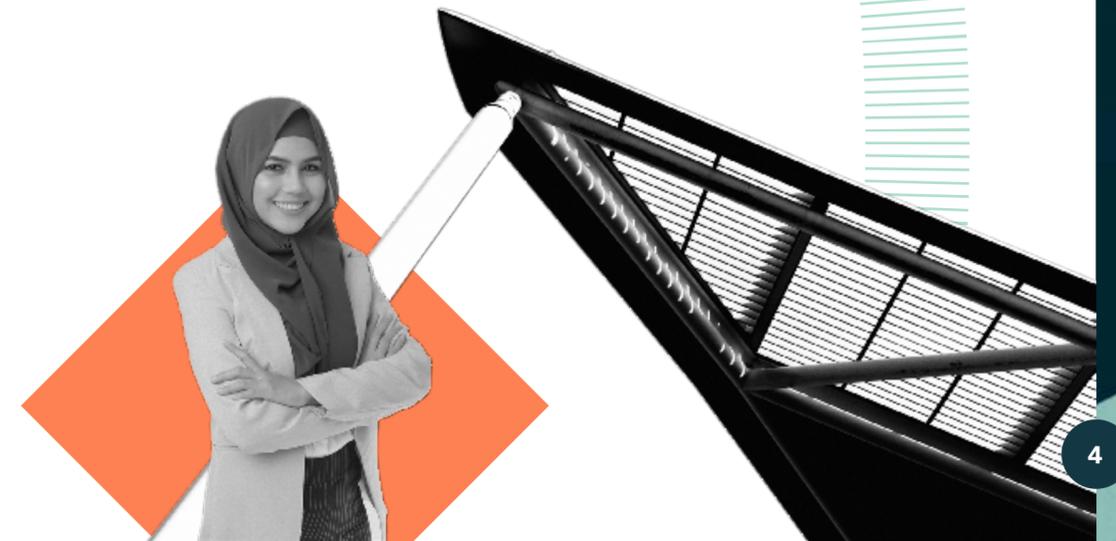
We face a *planetary emergency*. Our future depends on the natural world, but we are neither taking accountability for nor addressing our own destructive impact on the planet as climate change and biodiversity loss accelerate. Urgent and sustained action is required. We can all play a part, from individual staff and students to research groups and departments. Most importantly, the University itself must show leadership. There is much that has been and is being done that has contributed to the results in this Report. Looking forward, an enormous challenge in front of us is the reduction in our consumption of, and reliance on, fossil fuels to run the University's operations, especially space heating. This must be a key focus in the immediate years ahead if we are to remain on the correct side of our science based carbon reduction target. In considering our contribution to sustainability we must also consider how we contribute to wider societal challenges. It is only through ambitious delivery of these actions that we will meet the University's mission.

Professor Ian Leslie, Chair of Environmental Sustainability Strategy Committee and Director of Information Services

The University of Cambridge is an engine of progress, developing solutions to the world's toughest challenges. Sustainability and the climate crisis are at the forefront of these global challenges.

The progress, innovation and impact showcased in this report highlight the great work being done in environmental sustainability across the estate. The work being undertaken by staff and students is proof of the passion and commitment to create a sustainable future and achieve our ambitious zero carbon target by 2048 at the latest.

Graham V Matthews, Director of Estates



Changing the way we report progress

A major change for this 2022/23 reporting period is the reduced number of Key Performance Indicators (KPIs) we are reporting against, from 30 last year to 8 this year. This is in recognition of the need to the focus on the most strategic and material items aligned to our strategy and performance targets. We remain committed to being transparent about our environmental sustainability performance, but we believe it is more appropriate to use our resources taking action rather than on reporting. In reducing the number of KPIs we report, we free up staff time to focus more on delivering sustainable initiatives.

In deciding which KPIs to report this year, we considered:

- which KPIs relate to the University's most material environmental impacts and those that we believe matter most to our stakeholders
- where we have current targets (a number of the targets set out in our 2015 Environmental Sustainability Vision, Policy and Strategy have now expired)
- where we need to further improve our data collection methodologies to make them less reliant on estimates and assumptions

Independent limited assurance procedures have been performed over selected environmental performance metrics for the year ended 31 July 2023 and more information can be found on [page 48](#).

We will continue to develop our data collection methods and, as these advance, we will be able to bring additional KPIs into the assurance process over time.

In [Table 1 \(page 6\)](#), we outline our current progress on the targets that we are continuing to report against. [Table 2 \(page 7\)](#) provides an update on the extent to which we achieved our expired targets, based on 2021/22 data as this is the last period for which we compiled data for these targets – as well as outlining where new targets are being developed.

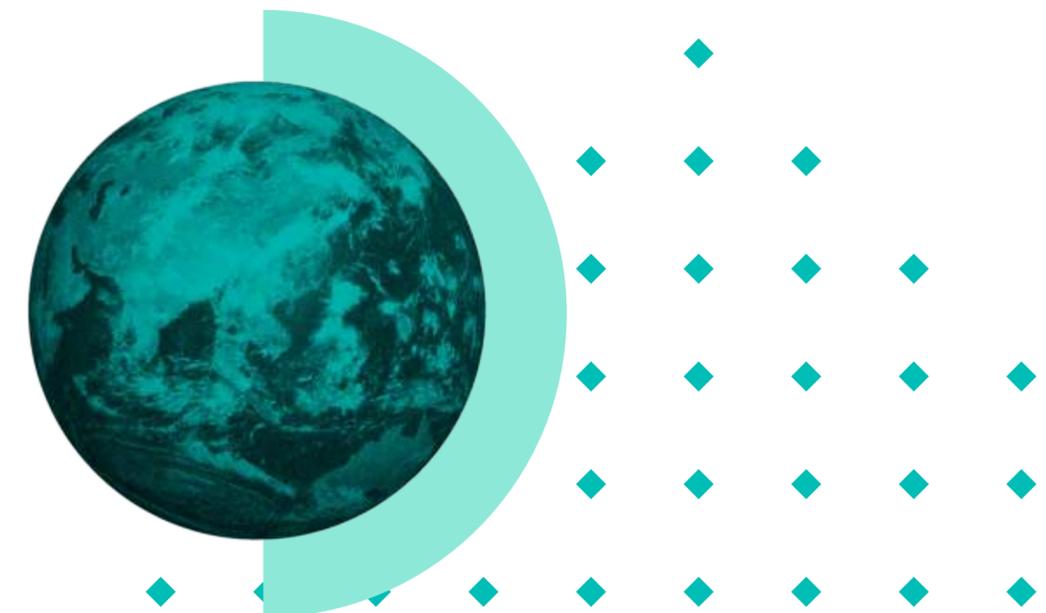


Table 1: progress to date against current targets

Impact area	Target	Position 2022/23	Current progress 22/23
Carbon	To reduce total scope 1 and 2 carbon emissions to absolute zero by 2048.	We are making good progress.	<p>We report against 2 KPIs under energy and carbon – Market-based and Location-based carbon emissions¹.</p> <p>Progress against our carbon reduction target is measured by our Market-based emissions. Our Market-based carbon emissions have decreased by 6.2% on the previous year, keeping us on track to meet our target. This was primarily due to a 2.4% reduction in total gas consumption compared to the previous year and lower electricity consumption at the Cambridge Biomedical Campus.</p> <p>Our Location-based carbon emissions increased by 3.19% compared with the previous year. This was largely due to a 7.1% increase in the UK electricity carbon factor.</p>
Waste	To achieve continuous year-on-year reductions in waste arising per FTE staff and student.	We are making good progress.	Waste mass generated per FTE staff and student (tonnes/FTE) has reduced from 0.12 tonnes/FTE in 2021/22 ² to 0.10 tonnes/FTE in 2022/23.
Travel and transport	At least 75% of staff to be regularly commuting to work by sustainable modes ³ of travel by 2024.	We have a plan for improvement.	The main findings from the annual staff travel survey in October 2022 were that 68% of staff travel to work by sustainable modes.
Travel and transport	To reduce per capita carbon emissions from business flights by 25% against 2014/15 levels by 2024/25.	We have a plan for improvement.	<p>We met this target during the pandemic, but figures are now slightly above the target at 0.69 tCO₂e per capita (target should have seen us at 0.62 tCO₂e per capita for 22/23).</p> <p>We will continue to raise the profile and increase engagement with The Guidelines for Sustainable Business Travel.</p>

¹ The location-based carbon accounting method reflects the average emissions intensity of the UK energy grid. When calculating the University's emissions under this method, the University's energy use is converted into carbon by applying grid-average emissions factors.

The market-based carbon accounting method reflects the emissions from the energy suppliers that the University has chosen to source its energy from. This includes and reflects the zero carbon electricity that the University has sourced from UK wind farms via a Power Purchase Agreement (see page 10).

For further information on location-based and market-based reporting, see https://ghgprotocol.org/sites/default/files/Scope2_ExecSum_Final.pdf

² There was a change in the methodology for this KPI. The KPI was reassessed with no change in the prior period reported figure. Please refer to our updated methodology.

³ Sustainable travel modes are bus, train, cycle, walk, car share and motorcycle.

Table 2: progress against lapsed targets (as of 2021/22)

These targets have now lapsed, but we have undertaken or are undertaking work to replace them with revised targets.

Impact area	Target	Comments
Waste	To send zero non-hazardous waste to landfill by 2020/21.	This target was not met by the deadline. We diverted 95% of non-hazardous waste from landfill by 2022/23, just 5% off the target. Our new hazardous and non-hazardous waste framework contracts include the target of zero waste to landfill.
Waste	To recycle at least 95% of total waste produced at the University by 2016/17.	We achieved 48.3% ¹ recycling by 2022/23. Our new non-hazardous waste contract includes a target for 80% of waste to be recycled.
Water	To reduce water consumption by 20% by 2020/21 against a 2005/06 baseline.	This target was not met by the deadline. The University's water consumption was 366,717m ³ in 2022/23 – a 0.2% reduction on the previous year and an 11.6% reduction against the 2005/06 baseline. The development of an Estate Water Management Plan and a new water reduction target is underway.

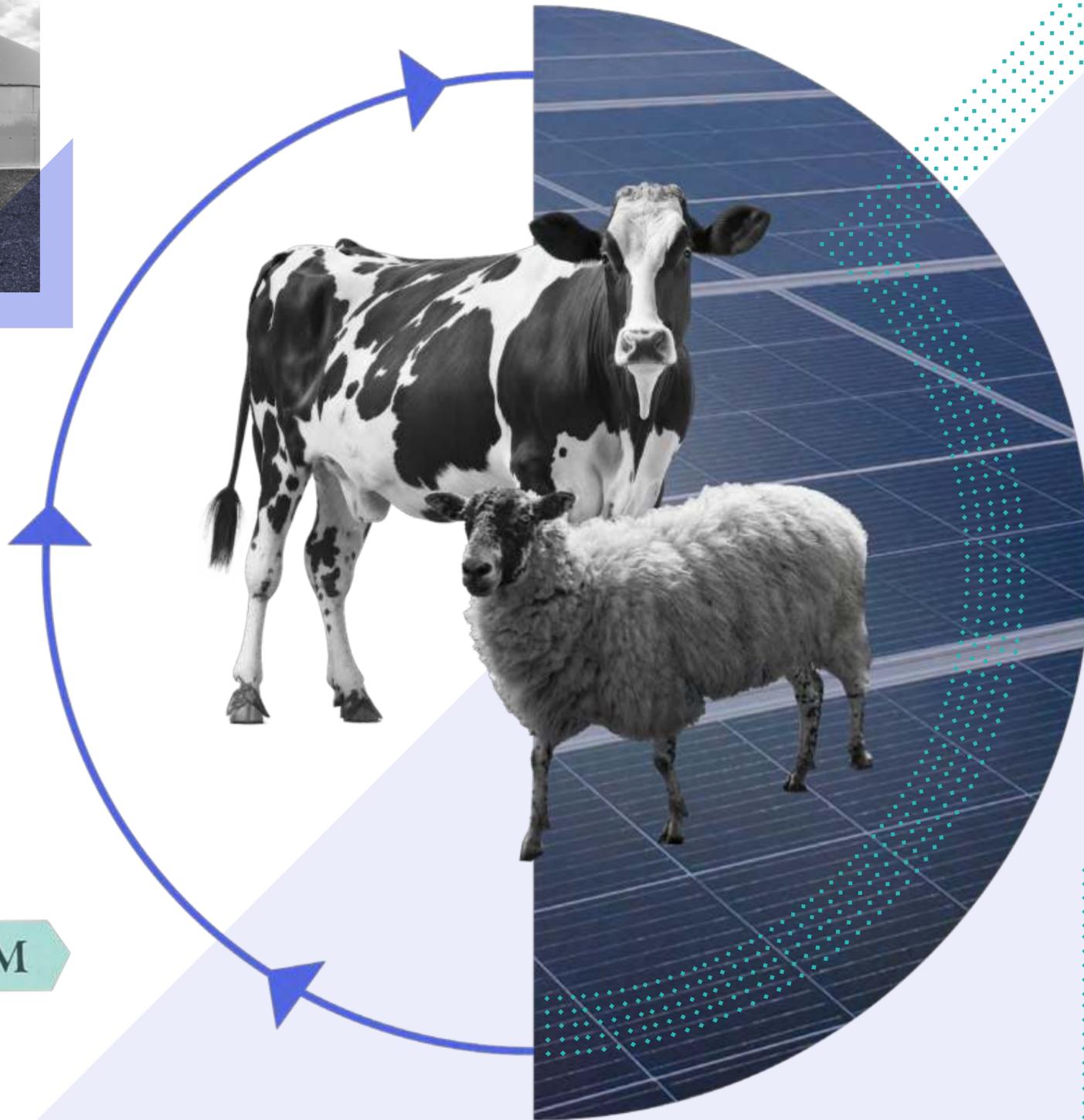
Table continues...

¹ This figure excludes hazardous waste.

Impact area	Target	Comments
Biodiversity and ecosystems	In the expert opinion of the Ecological Advisory Panel, that no construction, refurbishment or maintenance work ² on the estate (including emergency repairs) has a net negative ³ impact on biodiversity and that, where possible, the impact is net positive.	All of our construction projects this year have had a net positive impact. In 2020, the University published the Biodiversity Action Plan. We have created additional biodiverse habitat, restored and enhanced existing habitat, engaged with staff and students and worked with city wide stakeholders to promote nature recovery on a landscape scale – and we continue to do so. We will be developing a new target(s) for nature.
Sustainable construction and refurbishment	To establish and implement a standard for sustainable construction at the University of Cambridge that is context specific and is considered a leading approach in comparison to our peers.	In 2018, we established and implemented a standard for sustainable construction; our Design and Standards Brief. We continuously review this document and in December 2022 we enhanced it by issuing guidance on how to best upgrade thermal performance of existing building fabric.
Sustainable procurement	<p>That central University procurement frameworks are more attractive financially, more environmentally friendly and faster than other routes and, therefore, more institutions use them.</p> <p>To achieve at least level 4 ‘Enhance’ across all themes of the Sustainable Procurement Flexible Framework by December 2015.</p> <p>For institutions to consider sustainability criteria within their procurement activity.</p>	<p>We are no longer reporting against these targets. We achieved level 4 of the Flexible Framework in the 2015/16 academic year. As part of the University’s Strategic Procurement and Purchasing project, we then moved away from reporting against the Flexible Framework towards the international standard in sustainable procurement, ISO20400.</p> <p>Work is underway to identify priorities for our supply chain, which may lead to new targets in future.</p>

² These are defined on page 26 of the [Biodiversity Action Plan](#)

³ These are defined on page 12 of the [Biodiversity Action Plan](#)



PARK FARM



Carbon



Anaerobic Digestion plant,
Park Farm in Madingley



Work continues to reduce the University's energy use and deliver against our commitment to reduce energy-related emissions from the operational estate to absolute zero, for scope 1 and 2 emissions, by 2048 at the latest.

Over the past year, the University has been exploring options for removing gas from Cambridge West and the Sidgwick sites, and replacing with electric-based heating, as well as working with Cambridge City Council to assess the feasibility of a city centre heat network. In July 2023, the University received planning permission to build a solar farm.

A programme of work is also underway to help the University make more efficient use of existing space and identify opportunities to reduce carbon, as well as improve biodiversity and climate resilience across the estate.

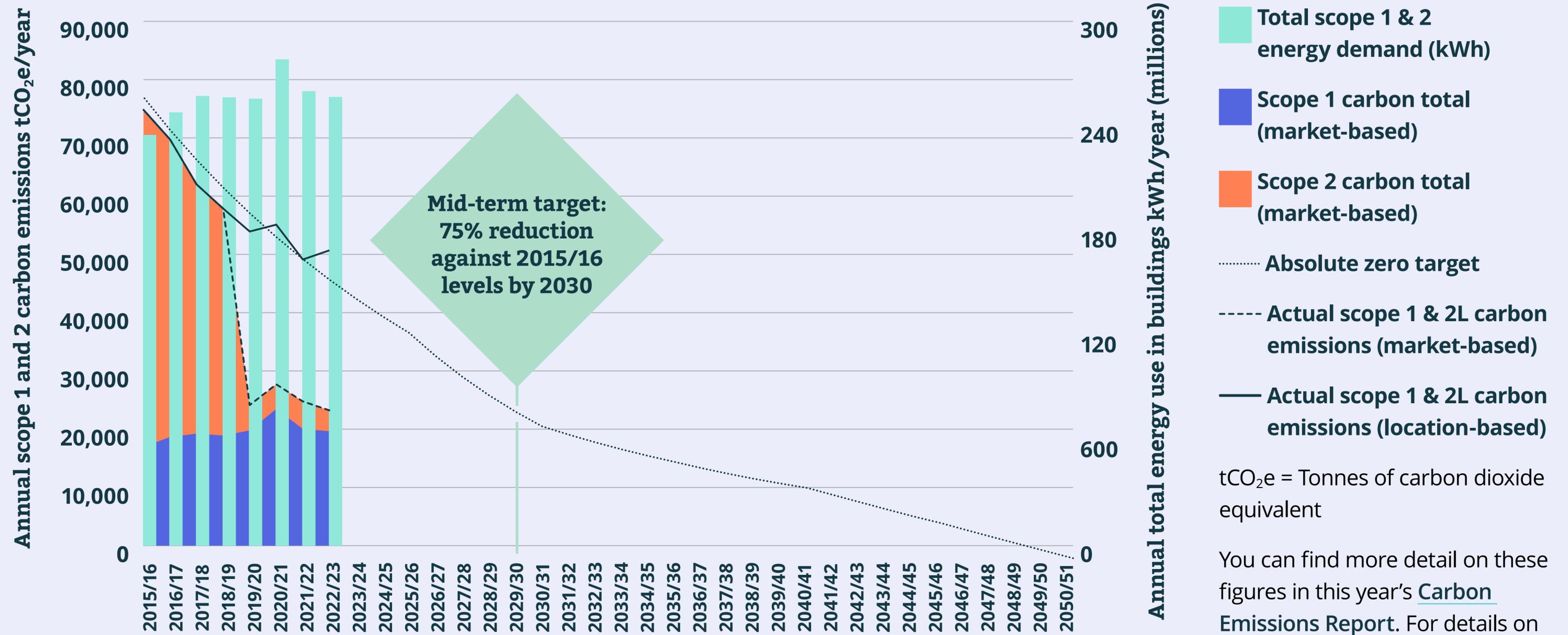
The University's long-term aim for its procured electricity is to incrementally increase the proportion that is being sourced from renewables. Currently, the University sources approximately 17% of its electricity from UK based wind farms via a Power Purchase Agreement (PPA). As an interim step towards zero carbon energy sources, the proportion of the University's procured electricity that is currently not sourced via a PPA is generated through nuclear power, which under carbon accounting guidance can be reported as zero carbon. In the interests of transparency, we have calculated the amount of nuclear waste that has been generated as a result of the University's use of nuclear power. The nuclear waste figure for 2022/23 is 0.794 tonnes. This figure has not been subjected to independent limited assurance procedures.



We remain on track to meeting our commitment to reduce energy-related emissions from our operational estate to absolute zero, for scope 1 and 2 emissions, by 2048.

We have achieved a reduction of 2.4% in total gas consumption against the previous year through direct action to manage our demand through control of heating in our buildings.

Graph 1: annual scope 1 and 2 emissions (tCO₂e/year)¹



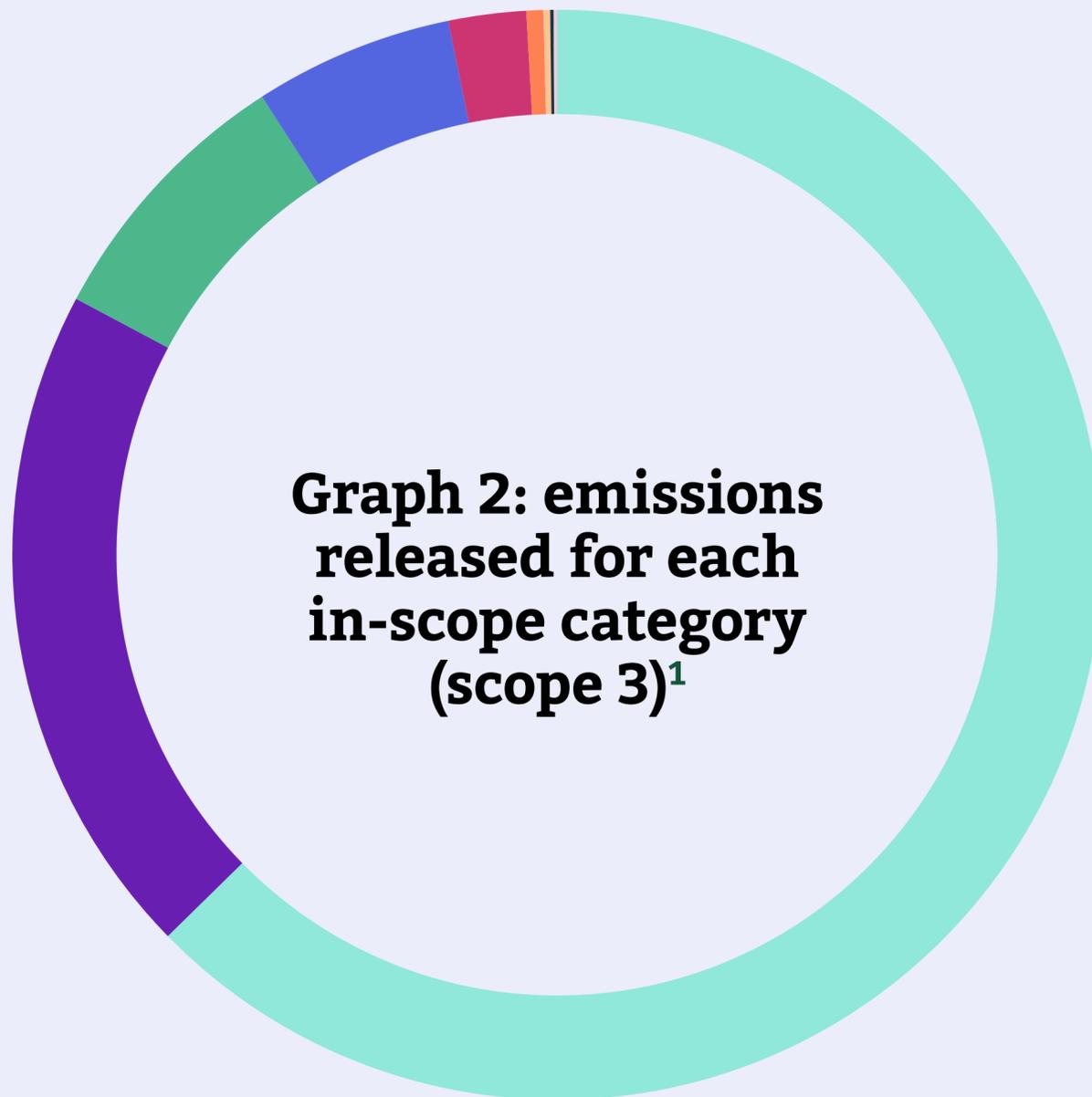
¹ Progress against our target is measured against our Total Scope 1 and 2 Market-based carbon emissions (energy and fuel use) (tCO₂e), which includes purchased electricity and steam, gas, oil and fuels. Scope 1 and 2 emissions reported excludes fugitive emissions and enteric emissions, due to a lack of available data and methodology. The data represented within this graphic relates to the University of Cambridge and does not include the Colleges, CUP&A and our principal subsidiaries, associate undertakings and significant investments.

Scope 3 screening assessment and prioritisation

Scope 3 emissions – those that are not produced directly by the University but that we are indirectly responsible for – make up the largest proportion of the University’s emissions, so are a significant part of our impact on the climate. This year, we have been focused on understanding our scope 3 emissions in greater depth, both in terms of the extent of our emissions and our ability to reduce these. By doing so, we are better able to understand where the best opportunities (and risks) for carbon reduction are across all our activities.

We are now using the findings of the screening assessment to develop an action plan to address our scope 3 emissions, which will include target setting, supplier engagement, awareness raising and further improvements to the data.





- 62.6%** Category 1: Purchased goods and services
- 20.1%** Category 15: Investments
- 8.1%** Category 2: Capital goods
- 5.9%** Category 7: Employee commuting
- 2.3%** Category 3: Fuel and energy related activities
- 0.5%** Category 13: Downstream leased assets
- 0.2%** Category 8: Upstream leased assets
- 0.1%** Category 6: Business travel
- 0.1%** Category 5: Waste generated in operations

These are the results of the screening assessment, not reported emissions and are based mainly on 2020/21 results.

¹ Categories 9, 10 and 11 are deemed out of scope for the academic portion of the University. This is because they relate specifically to emissions generated by the transportation, use and processing of products sold by an organisation. As a University, we do not produce or transport physical products, so these Categories are not relevant. Category 14 is deemed out of scope as the University does not have any franchises.

Reducing carbon emissions from business flights

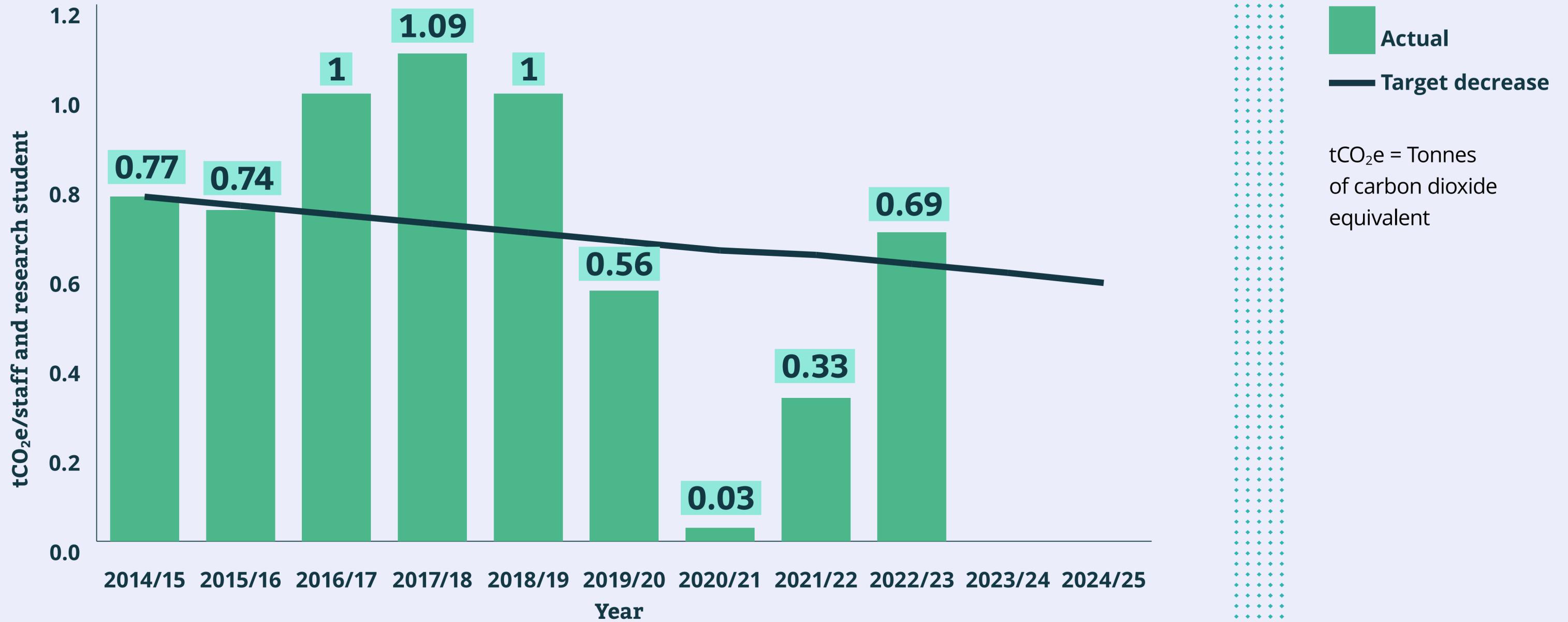
The University continues to work towards its target to reduce emissions from business flights. [Graph 3 \(page 15\)](#) shows progress made against our target to date. The impact of the pandemic on our business travel activity can be clearly seen. It is also evident that emissions from business flights are now increasing towards pre-Covid levels.

Over the coming year, we are delivering staff engagement initiatives to increase awareness of the [University's Guidelines for Sustainable Business Travel](#) and stress the importance of considering the necessity of travel and the way we choose to travel. We are also making data on emissions from business travel at the departmental level available to our staff.

The University's target is to reduce emissions per person (staff and research students) from flights by 25% against 2014/15 levels by 2024/25.



Graph 3: flight emissions tCO₂e per capita¹



¹ The data represented within this graphic relates to the University of Cambridge and does not include the Colleges, CUP&A and our principal subsidiaries, associate undertakings and significant investments.

Engaging with the University's banks

The University's Banking Engagement Forum (BEF) began meeting in the 2022/2023 academic year and co-ordinates engagement between the Collegiate University and the banks that provide services to it. The group has had particular focus on the goal of encouraging banks to cease financing (lending and underwriting) to companies that are engaging in fossil fuel expansion, especially the construction of new fossil fuel infrastructure that risks locking in long-term emissions, such as new coal- and gas-fired power stations. Other topics related to this are executive remuneration and its link to achieving sustainability targets, and the financing of green infrastructure in the Global South.

The BEF also provided advice to incoming students and staff who may be opening new bank accounts. This University's website now provides [links to information](#) on the sustainability credentials of various banks.

Relationship with the fossil fuel industry

Following a Grace¹ calling for an end to all sponsorship and collaboration with companies involved in the fossil fuel industry, the University commissioned an independent study – 'The Topping Report' – to examine its ties to the fossil fuel industry. Published in July 2023, the report made a number of recommendations on how the University should respond to the Grace.

Read the full report: [Grace on Fossil Fuel Industry Ties](#).

¹ A Grace is a formal proposal from members of the University community, which is placed before the University's [Regent House](#).



CASE STUDY: LEAF Demonstration Farm

The University's Park Farm has been awarded Demonstration Farm Status by the global charity Linking Environment and Farming (LEAF). LEAF Demonstration Farms are commercial farms that deliver and promote the regenerative, nature-based practices of Integrative Farming Management (IFM) to a broad range of audiences. Park Farm provides a vital teaching resource to the Department of Veterinary Medicine and offers work experience to a wide variety of students who want to gain agricultural experience.

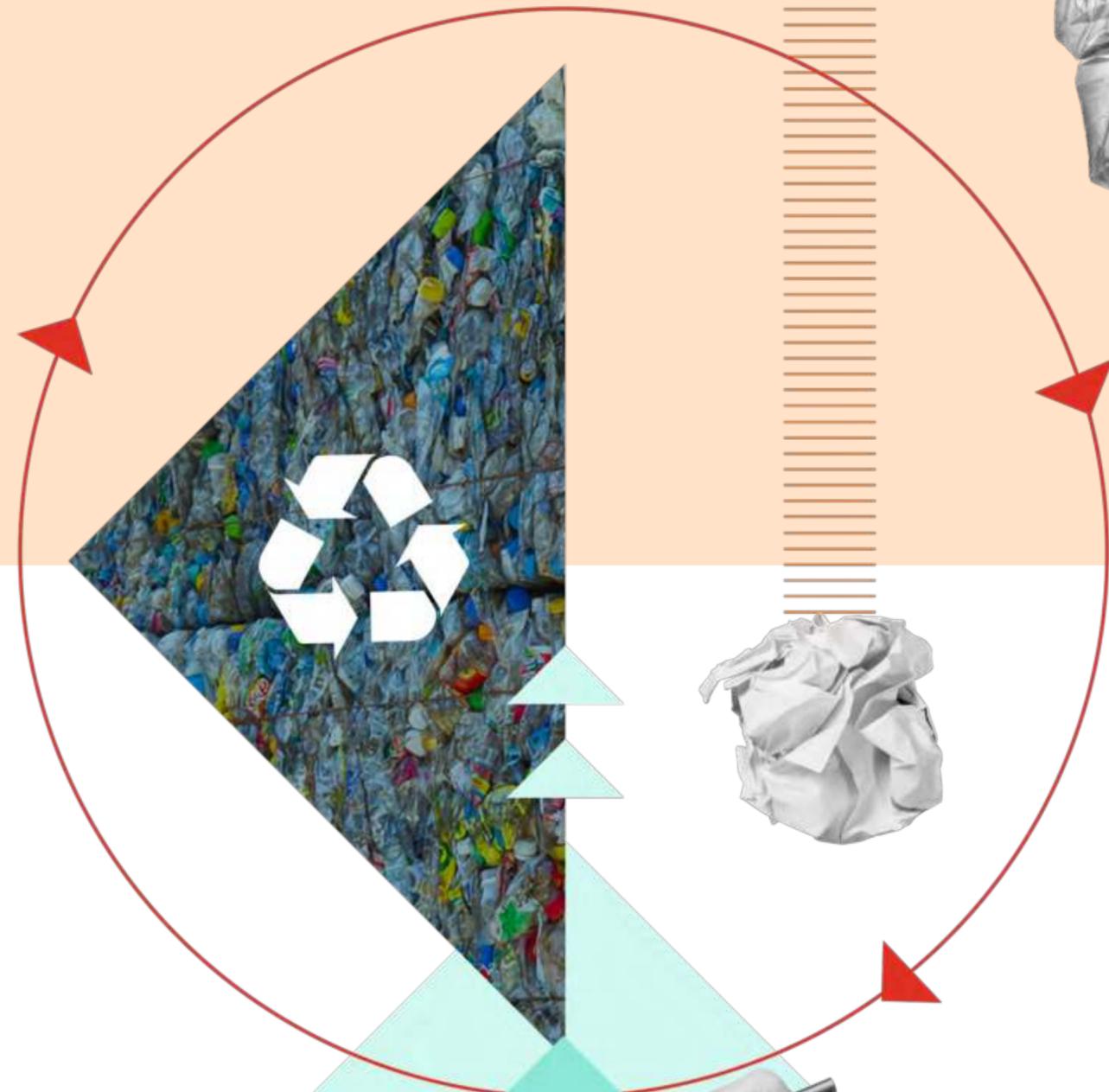
In line with the University's scopes 1 and 2 target to reach absolute zero by 2048, Park Farm has already introduced a range of environmental efficiency measures including electricity generated from solar and anaerobic digestion, crops grown for animal feed, and the conversion of slurry into electricity and fertiliser. In the past three years, Park Farm has reduced its carbon footprint by 21% through the implementation of a Farm Sustainability Policy. The Farm now has ambitions to reduce the carbon footprint of its milk production even further by increasing efficiency while upholding the highest standards of animal welfare.



Park Farm LEAF Demonstration Farm



Waste



Waste

This year, the University secured new contractors for the whole estate. Sustainability was a fundamental part of the process, with some minimum standards from the previous contract carried forward and new targets set. For example, the target for 'zero to landfill' remained, but the University also wanted to significantly increase recycling rates. In the new non-hazardous waste contract, the target is for 80% of materials to be recycled.

The new contractor has one of the most technologically advanced processing facilities in the country – a Material Recovery Facility where a greater percentage of material can be recycled due to its advanced technical capability in segregation and the fact there are more end destinations for recycled material. Just one example is black plastic, which is usually really hard to recycle, can now be turned into plastic drainpipes.

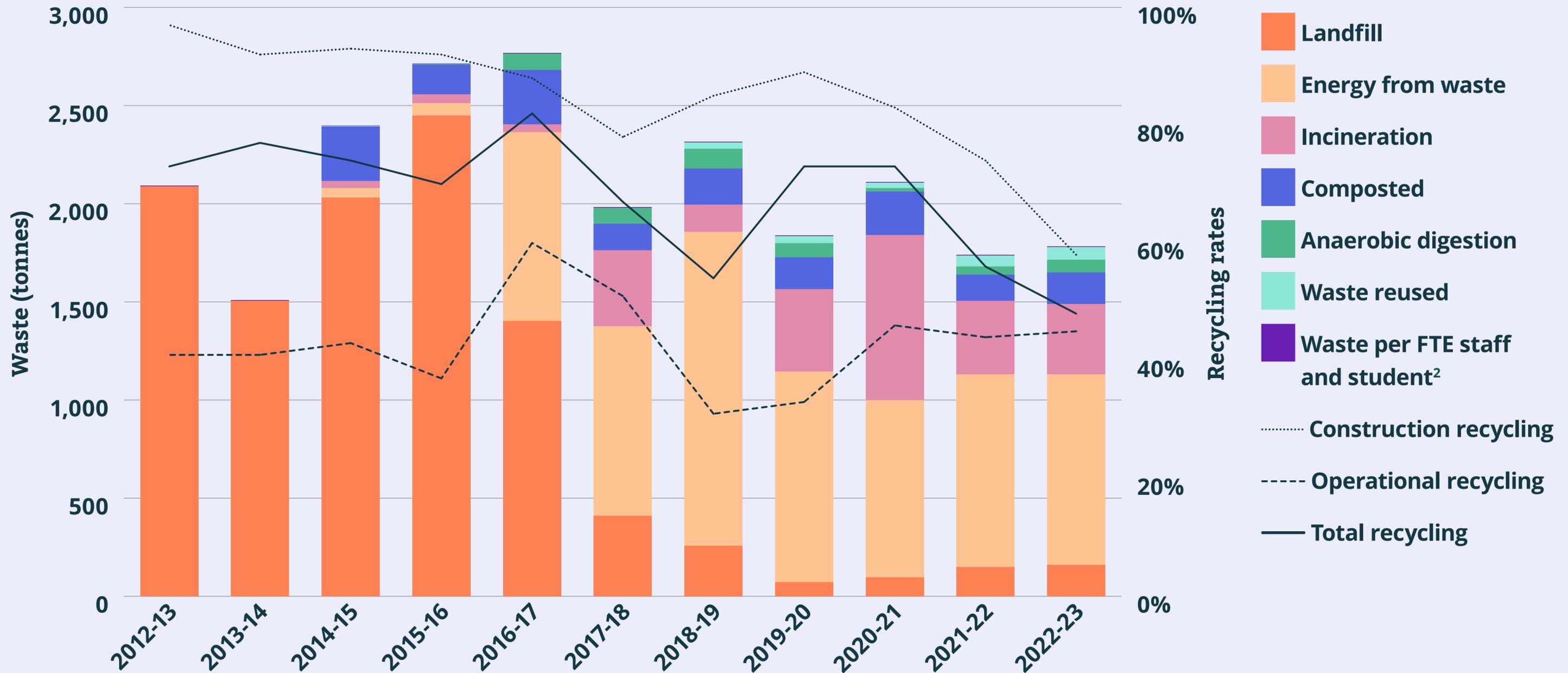
This was an important new contract to get off the ground and the Procurement and Facilities Management Teams are now committed to periodically reviewing the service and listening to feedback to make sure it's working as it should and increasing our overall recycling rates.



“This is a step change in how we look at recycling, no longer seeing waste, but a resource. By making this change we are aiming to see recycling climb to 80%.”

Steve Matthews, Facilities Management Operations Manager, University of Cambridge

Graph 4: waste disposal routes and recycling rates¹



¹ The data represented within this graphic relates to the University of Cambridge and does not include the Colleges, CUP&A and our principal subsidiaries, associate undertakings and significant investments.

² There was a change in the methodology for this KPI. The KPI was reassessed with no change in the prior period reported figure. Please refer to our updated methodology.

Waste per FTE staff and student includes hazardous waste



Drosophila spp



Water

Building a plan based on accurate data

Cambridgeshire has known pressures on its water environment and, as a relatively prominent user in a water constrained region, the University recognises its responsibility to reduce its water use and use water efficiently.

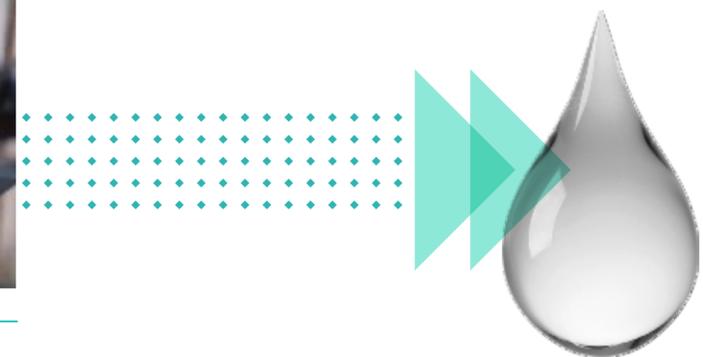
As we seek to better understand and manage our water usage, we have been focused on developing our Water Management Plan. We appointed a company to help set out our baselines, understand how and where we are using water, and then look at ways to manage this more efficiently. We are now in the process of installing automated meter reading (AMR) at our main sites to provide more accurate data on our water usage.

CASE STUDY: A clean solution for glass vials

The fly facility in the Department of Genetics uses 4,000 glass vials a day. The majority are used for research, some for experiments and many for keeping the stock of *Drosophila* (Fruit flies) for various research groups. Global research into *Drosophila* has been ongoing for over a century, with over 30 groups here in Cambridge. The glass vials used in this research were previously being washed by hand, which used 52m³ of very hot water a week. This amount of water could have been reduced by switching to single use plastic vials, but this wasn't a sustainable alternative. The team secured £6,000 to buy a lab glasswasher for their vials, which has significantly reduced their water consumption to less than 4m³ a week, as well as preventing single use plastic going into landfill. The team is now sharing their results and promoting the switch to glass and glasswashers to other departments.



Glass vials in a glasswasher



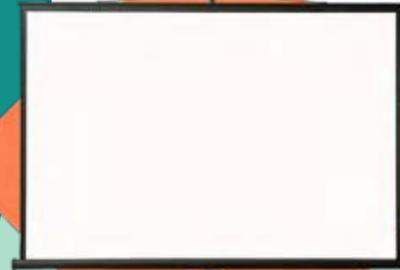


Biodiversity



Speckled
Wood butterfly

Hawthorn



Boosting biodiversity knowledge

The Operational Grounds Team is responsible for delivering a huge amount of the [University's Biodiversity Action Plan](#) – maintaining the green spaces around our sites and creating our wildflower areas. Our Grounds Team joined the team at Cambridge City Council (who are busy looking after the parks, trees and verges in the city) for training delivered by the Bedfordshire, Cambridgeshire and Northamptonshire Wildlife Trust. This is the start of a wider programme of engagement and collaboration to share knowledge and ideas across the teams.

Providing ongoing opportunities for the teams managing our sites was a great chance to discuss issues and ideas and to enhance practical skills and understanding. It also means our team can share their knowledge and spread the word of biodiversity when asked by students, staff and members of the public.

This engagement will support our Grounds Team with bringing parts of the contract for operational grounds maintenance in house. It means we can focus more clearly on biodiversity, change plans and respond more quickly if necessary.

We are planning ongoing opportunities for training and collaboration in the future.

“The training has been invaluable for my team, both new and existing. Everyone has had a chance to get involved and it’s a great way to share best practice, change some ways of working and think differently about biodiversity, as well as providing an opportunity for professional development.”

Mark Jermy, Head Grounds Supervisor,
University of Cambridge



A Nature Positive University

This year, the University signed a Nature Positive Pledge as a founding member of the Nature Positive Universities Alliance. Set up by the United Nations Environment Programme and the University of Oxford, the scheme launched in December 2022 with 111 universities from 44 countries working together to promote nature in our universities, in our supply chains and within our cities and communities.

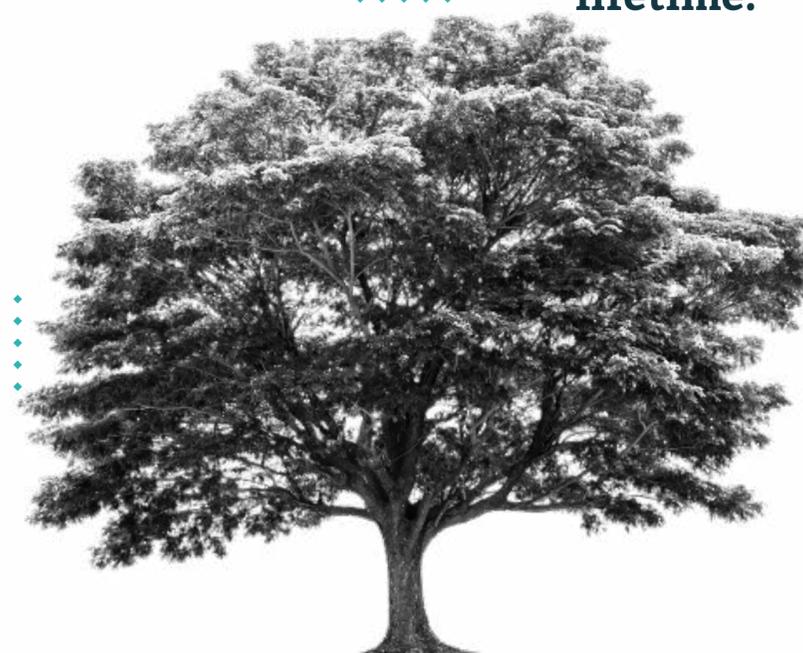
For the University of Cambridge, being Nature Positive aligns with our own Biodiversity Action Plan. It's about restoring and protecting species and ecosystems on our own sites and ultimately enhancing our positive impacts on nature.



The Queen's Green Canopy

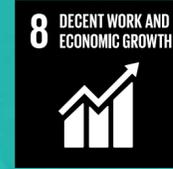
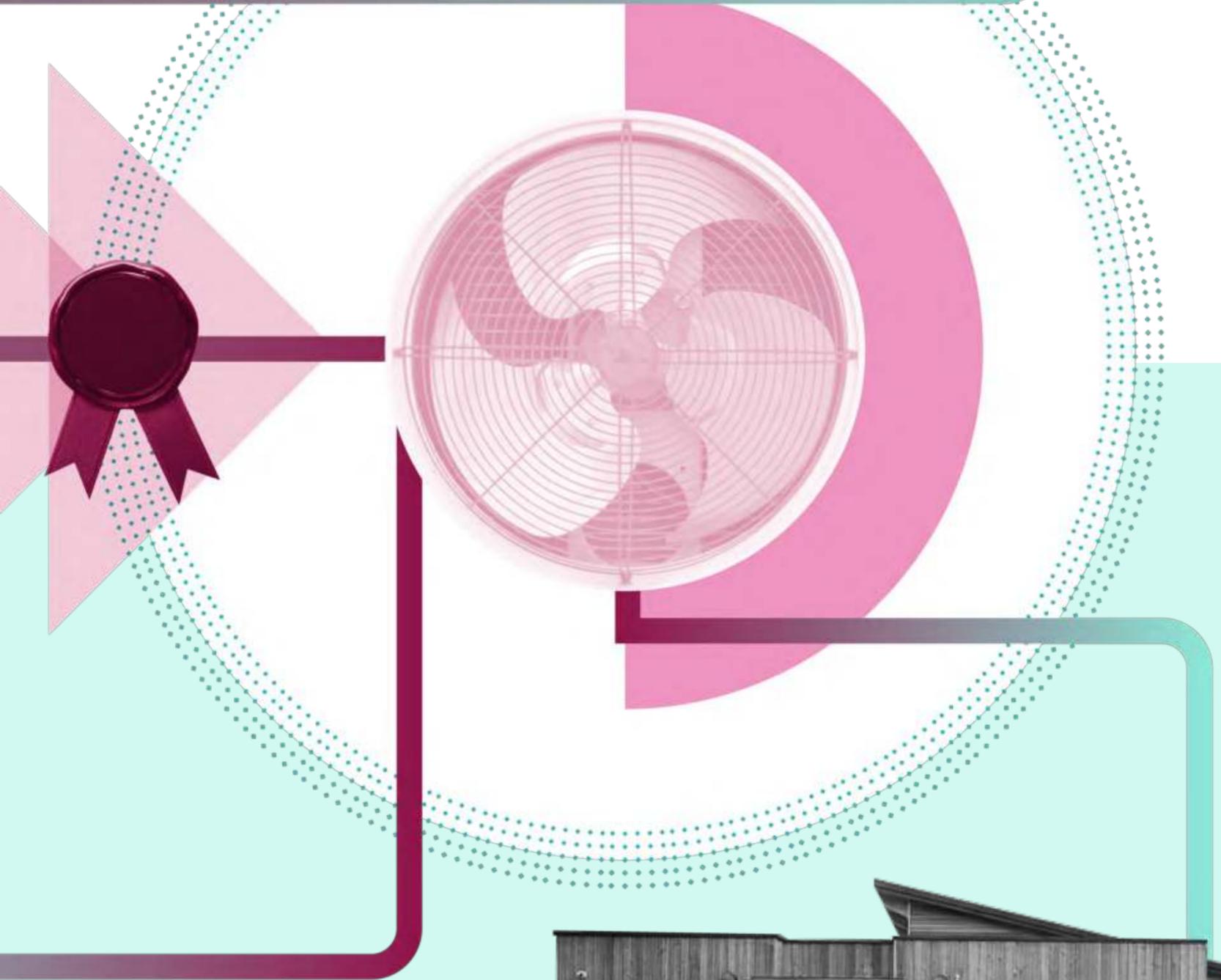
As part of the late Queen Elizabeth II's Platinum Jubilee celebrations, we planted 58 trees in Madingley Park. The trees – a mix of native species such as beech, lime and oak – will become part of the million trees that make up the Queen's Green Canopy.

This planting scheme is also part of the University's Biodiversity Action Plan and the University Farm's Higher Level Stewardship agreement. The planting design is loosely based on how the original Capability Brown landscape would have looked over 250 years ago.



English Woodland Grant Scheme

This year, we submitted a successful application to the English Woodland Grant Scheme to fund a range of measures including around 9 hectares of woodland planting in Eddington. The trees will form part of the University's offsetting scheme for unavoidable business travel (currently under development), sequestering carbon over their lifetime.



Built environment



Entopia Building,
Chris Abell Day Nursery

Developing a decarbonisation plan for the estate

We have undertaken a lot of work this year to identify and assess options for decarbonising our existing buildings, many of which are still heated using gas from fossil fuels. We are now drawing this together into a heat decarbonisation plan for the University's operational estate. We have also been developing plans for the refurbishment of the Stirling Building and air source heat pumps at Keynes House and hope to get moving on those projects and report progress in next year's report.



Award winning Entopia

Greater Cambridge Design and Construction Awards:

Best Conservation, Alteration or Extension of an Existing Building – Over £2m Construction Costs

David Mackay Award for Engineering and Sustainability



AJ 100 Award for Collaboration of the year



Low Carbon Project of the Year Award



BREEAM excellent



The Chris Abell Day Nursery has been awarded an 'Excellent' BREEAM rating.



Travel and transport



Universal Bus



Making the move to electric

Following the procurement of an 8-year, multi-million Universal Bus contract in late 2022, we have now introduced electric buses and extended routes to the service. After almost a year of organising, building and kitting out the new vehicles, the first electric bus arrived at the depot in summer 2023.

It's been a busy year for the Universal Bus, with current passenger numbers higher than pre-Covid figures. Over half of trips were taken by members of the public, showing that it's a service that is valued beyond our staff and students.

For those staff wanting to switch to an electric car, we introduced our electric vehicle salary sacrifice scheme in June 2023. The scheme aims to reduce petrol and diesel cars on the road and contributes to the University's Carbon Reduction Strategy by reducing the carbon emissions of staff commuting.

“The new Universal buses are packed with features to enhance journeys by bus – from free WiFi, air conditioning and brilliant next-stop information displays to phone chargers and reading lights at every seat. We have thought of our drivers, too, and included smart technology that makes for a comfortable work environment and safer journeys. With lane detection warnings, camera mirrors and some creature-comforts – drivers enjoy their work more than ever before. They’re also fully electric, really helping to improve the air quality in Cambridge.”

Ed Cameron, Commercial Manager, Whippet

A busy year for buses

2022/23 was the busiest ever year for Universal Bus, with almost 720,000 passengers using the service.



97



try-before-you-buy sessions allowed staff to test folding, electric, hybrid bikes and trailers for just £10 per month for a total of 940 weeks

6,670

hours cycled on pool bikes

3,030

km travelled on pool e-bikes



721,183

Universal Bus passengers

388,002

km travelled by the Universal Bus

1,659

Dr Bike sessions – 53% of participants were women, bucking the trend in a cycling population, which is usually more male dominated

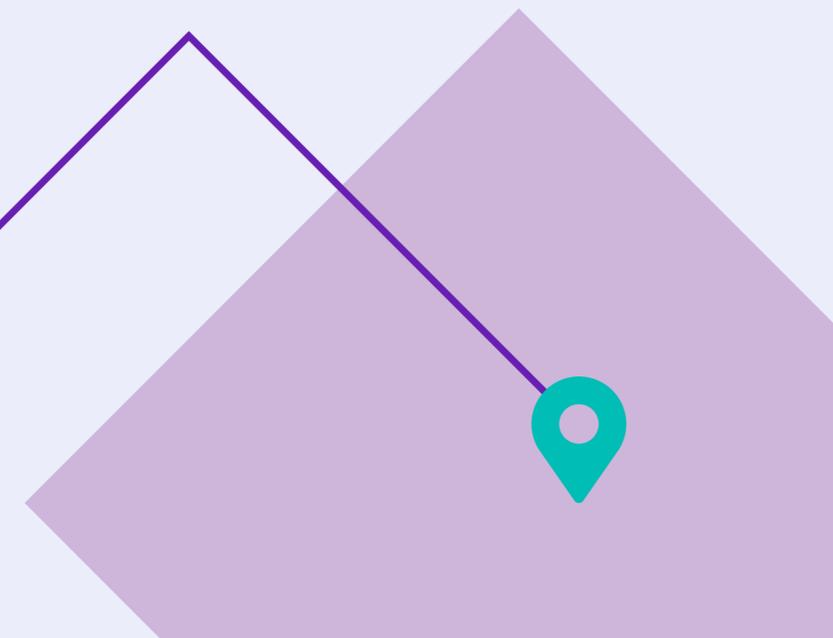
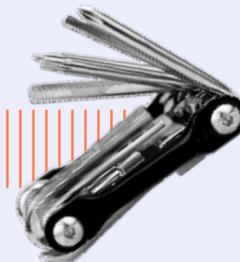
446

journeys on Voi e-scooters and e-bikes...

... covering over

400

km across the city





Procurement



Implementing the strategic procurement and purchasing project



This year has seen the continued implementation of the University's Strategic Procurement and Purchasing (SPP) project, and it is fast becoming 'business as usual' for the Procurement Team. Critically, we have defined where we are and where we want to be in terms of sustainable procurement. This information is being used to draft plans and commitments towards carbon and other environmental, social and economic benefits in the future.

To be successful in tendering, prospective University suppliers need to demonstrate the sustainability value they can deliver through projects. We now have a minimum 10% weighting relating to sustainability in all tender criteria. This 10% weighting is the minimum expectation and, depending on the contract type, we will set a higher weighting. For example, the new hazardous waste tender, agreed in spring 2023, included a 25% sustainability weighting.

The Procurement and Environmental Sustainability Teams have been working together to determine the greatest sources of carbon emissions across our supply chain and identify how to increase engagement to both reduce carbon emissions and improve carbon data. This has focused on the main carbon categories of the University's supply chain; laboratory equipment and consumables; information and communication technology; and construction. Beyond carbon, the next phase of this work is to look at social, economic and environmental risk across the supply chain.

To help further embed sustainability throughout the University's procurement services we are planning to deliver environmental sustainability training, initially for our internal team before extending it to other stakeholders, including suppliers.

The University continues to work towards ISO20400, the international standard on sustainable procurement. This would mean that our purchases have 'the most positive environmental, social and economic impacts possible over [their] entire lifecycle' (ISO20400). It would also contribute to reducing the University's scope 3 emissions.

"We are working closely with the Environmental Sustainability Team to establish our requirements for a suitable sustainability and carbon tool, which will enable us to work with our supply chain to drive improvement. We are also exploring a procurement sourcing platform, which would help determine and drive requirements for the sustainability and carbon tool."

Cyndi Mudaly, Head of Sustainable Procurement, University of Cambridge

3 GOOD HEALTH AND WELL-BEING



11 SUSTAINABLE CITIES AND COMMUNITIES



13 CLIMATE ACTION



15 LIFE ON LAND



17 PARTNERSHIPS FOR THE GOALS



Collaboration



David Attenborough Building,
Gonville and Caius College,
Churchill College, Downing College



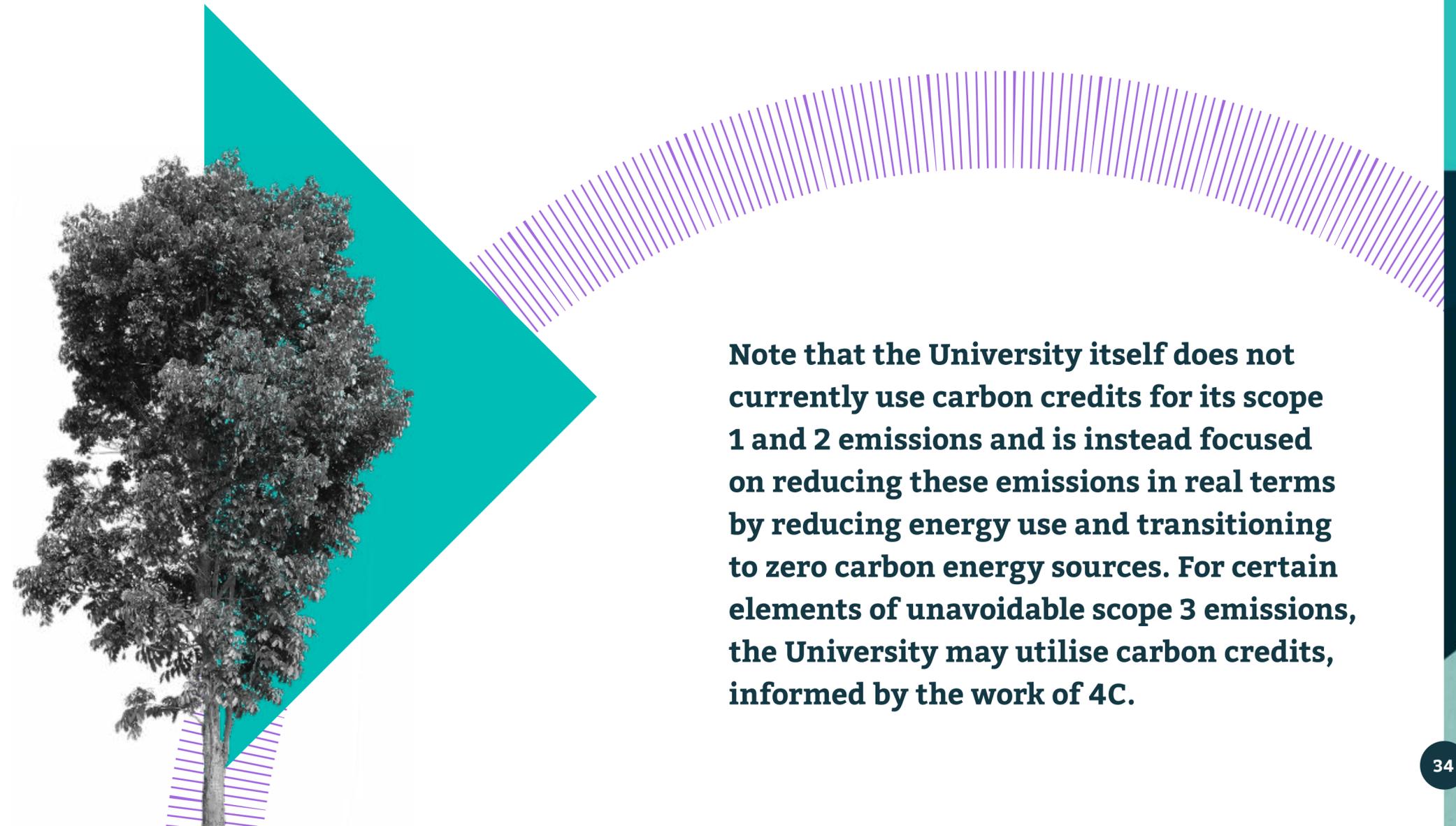
Determining a method for carbon credits

The [Cambridge Centre for Carbon Credits \(4C\)](#) brings together conservation and computer scientists, who carry out research alongside their regular roles, to create an independent verification process for nature-based solutions.

This year, 4C has been developing its method for estimating the number of credits to be issued to a project in the tropical moist forest biome. It expands on the work of the Cambridge Carbon Impact project, which focused on rebuilding trust through an independent assessment of carbon credits, using the best methods and data available.

Many offsetting schemes used by organisations assume the carbon stored in forests is permanent. But forests can change – trees die, there are forest fires, deforestation and so on. 4C's new methodology accounts for these changes and can more accurately assess the carbon credits required for offsetting.

[Read more about the work of 4C.](#)



Note that the University itself does not currently use carbon credits for its scope 1 and 2 emissions and is instead focused on reducing these emissions in real terms by reducing energy use and transitioning to zero carbon energy sources. For certain elements of unavoidable scope 3 emissions, the University may utilise carbon credits, informed by the work of 4C.

Cambridge Colleges Environmental Sustainability Report

For the first time, all 31 Cambridge Colleges came together to highlight the positive progress that they are making towards environmental sustainability in their own Colleges Environmental Sustainability Report.

The report outlines the wide range of initiatives the Colleges have in place to improve their environmental sustainability performance and is a great way to share knowledge and best practice for even wider impact.

[Read the report.](#)

Sustainability Showcase

In June 2023, the Environmental Sustainability Team hosted the University's first [Sustainability Showcase](#). The event threw a spotlight on the sustainability research, initiatives and activities taking place right across the Collegiate University. This included celebrating individuals in our Green Impact Teams, LEAF Teams, Engage for Change and the Climate Challenge as well as Sustainability Champions and Green Officers. On the day, there were presentations on a range of case studies including the Green Impact Excellence and Engage for Change projects; sustainable food at Darwin College; Local Environmental Sustainability Plans (LESPs); and progress at 4C (the Cambridge Centre for Carbon Credits). Critically, the event brought together individuals and groups working on sustainability across the Collegiate University to share ideas, success and drive sustainability forward.





Engagement



Carbon Literacy at Cambridge University Press and Assessment

Cambridge University Press & Assessment (CUP&A), the publishing and assessment department of the University of Cambridge, has launched a new bespoke Carbon Literacy training course for its staff, developed in partnership with the Carbon Literacy Project. The course aims to raise awareness and enhance understanding of climate change, its impacts, and the actions staff can take to reduce their impact. Crucially, it supports the University's goal of achieving zero carbon on all energy-related emissions by 2048.

The course is accredited by the Carbon Literacy Trust and staff who complete it will be certified as Carbon Literate. There's a mix of online and in-person learning on topics including impacts of climate change, exploring carbon footprints, and organisational carbon targets.

You can read more about the work on CUP&A in its [annual report](#).



“The launch of our Carbon Literacy training course is an important milestone and a great achievement for our organisation. Through a combination of scientific understanding, policy insights and pledging practical actions, colleagues taking the course can contribute to a more sustainable future. Raising awareness in our workplace helps us design, develop and deliver more sustainable products and services, and informs our mission around global and local climate education.”

Christine Özden, Global Director
for Climate Education, Cambridge
University Press & Assessment

Spotlight on Cambridge Zero

Cambridge Zero exists to maximise the University of Cambridge's contribution towards achieving a resilient and sustainable zero-carbon world. Here, we look at three initiatives over the past year, but you can find out more in their [annual report](#).

Green Officers

Green Officers are the elected students within the various Student Associations of the Cambridge Colleges (commonly known as the JCRs or MCRs – Junior or Middle Combination Rooms). They democratically represent the student voice and are often the drivers of sustainability or climate related initiatives within their Colleges.

Each term, Cambridge Zero run training sessions, knowledge shares and socials (in collaboration with the Cambridge Climate Society). The Green Officers also delivered 2 Green Weeks in the Easter and Michaelmas terms with around 1,000 students, staff, academics and local residents attending a range of events to discuss and take action on the environment and climate crisis. The Green Officers network continues to grow and the Green Week events demonstrate how student leadership, open collaboration and trust can come together on climate action, resilience, support and accessibility.



CAMBRIDGE
ZERO₂

Collaboration on land use planning

In April 2023, the Cambridge Zero Policy Forum, the Centre for Science and Policy (CSaP) and the Centre for Landscape Regeneration (CLR) ran a policy stakeholder visit to the CLR, addressing the challenges associated with land use in the Cambridgeshire Fens. The event brought together key academic, policy, third sector and business stakeholders, including from the Department for Environment, Food & Rural Affairs and Department for Energy Security and Net Zero, National Institute of Agricultural Botany the Geospatial Commission, Fenland Soil, Anglian Water, the Food, Farming & Countryside Commission and Natural Cambridgeshire.

Three roundtable discussions on trade-offs in water, greenhouse gases and farming; trade-offs in farming, biodiversity, and people; and the importance of multidisciplinary work with strategic partners highlighted the incredible complexity of issues facing the Fenlands today and highlighted the importance of continued conversations between stakeholders.



Research symposia

Cambridge Zero held 4 Research Symposia over this reporting period on Climate and Disease; Behavioural Change and Education; Carbon Capture and Climate Repair; and Economic and Societal Change. Each symposium highlights the ground-breaking research being undertaken on this wide range of topics, with keynote presentations from both senior Cambridge academics and early career researchers.

The Cambridge Zero Research Symposia provide a unique opportunity for researchers from diverse disciplines to interact and exchange ideas, and to enable new collaborations which could form the basis of new cross-disciplinary research projects.

Spotlight on Cambridge Institute for Sustainability Leadership

[Cambridge Institute for Sustainability Leadership](#) (CISL) is an impact-led institute within the University of Cambridge that activates global leadership to transform economies for people, nature and climate. This is a snapshot of their work, you can find out more in their [annual review](#).

“It’s exciting to see the different kinds of sustainability start-ups drawn to joining the Canopy: from those working in social responsibility to using AI as an alternative to classic quantitative approaches. We’re building a community of green entrepreneurs and it’s inspiring to watch them bounce thoughts and ideas off one another.”

Sam Laakkonen, Director of The Canopy, CISL

Better decision-making and system design

CISL has published new [tools and guidance](#) to help businesses, policy makers and financial institutions respond to the climate and nature crisis. This includes frameworks on sustainability leadership and business transformation to help individuals and organisations drive change; a 6-point plan on the rationale for joint action between climate and nature; a first industry specific primer to help companies navigate the new target-setting guidance from the Science Based Targets Network and [guidance](#) to help financial institutions understand nature related financial risk.

Catalysing entrepreneurial leadership to accelerate solutions to global challenges

CISL’s [Canopy](#) community supports start-ups and entrepreneurs who are pioneering sustainability innovation. Launched in November 2022, the Canopy now has over 40 members including Monumo, Rural Voices, ClimateNode and Archipel&Co. Over the past year CISL’s [Accelerator programmes](#) have helped hundreds of start-ups on subjects ranging from digital solutions to climate change to the circular economy.



Building alliances across business, finance and policy

CISL has leveraged the influence of its private sector partners and networks to lobby in favour of progressive, pro-climate and nature legislation. In the run-up to the recent European Nature Restoration Law, CISL's European Corporate Leaders Group joined with other business and investor networks in signing a public letter to the European Parliament's Environment, Agriculture and Fisheries Committees urging them to support this lynchpin legislation.

CISL's sustainability education programmes in numbers

10,000+

influential leaders and business stakeholders

8,000+

learners from all continents completed online sustainability courses and leadership courses

200+

students on postgraduate programmes on sustainability leadership, sustainable business and sustainable built environment

800+

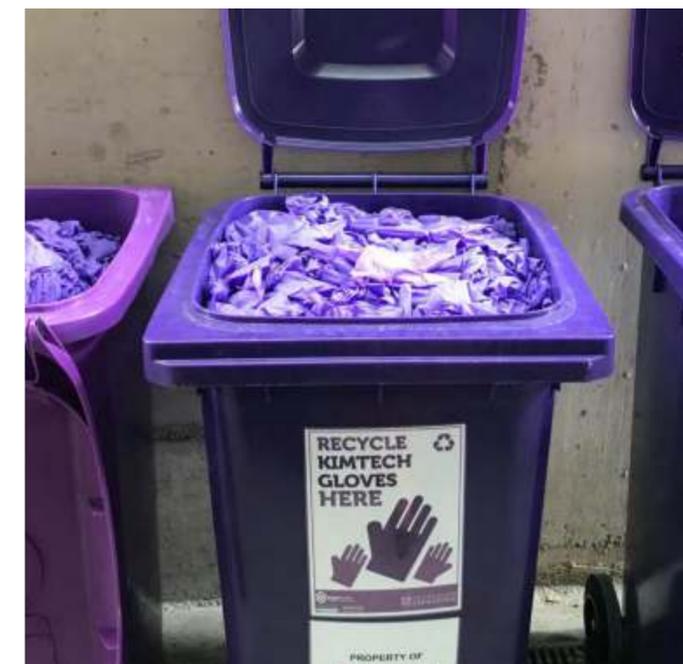
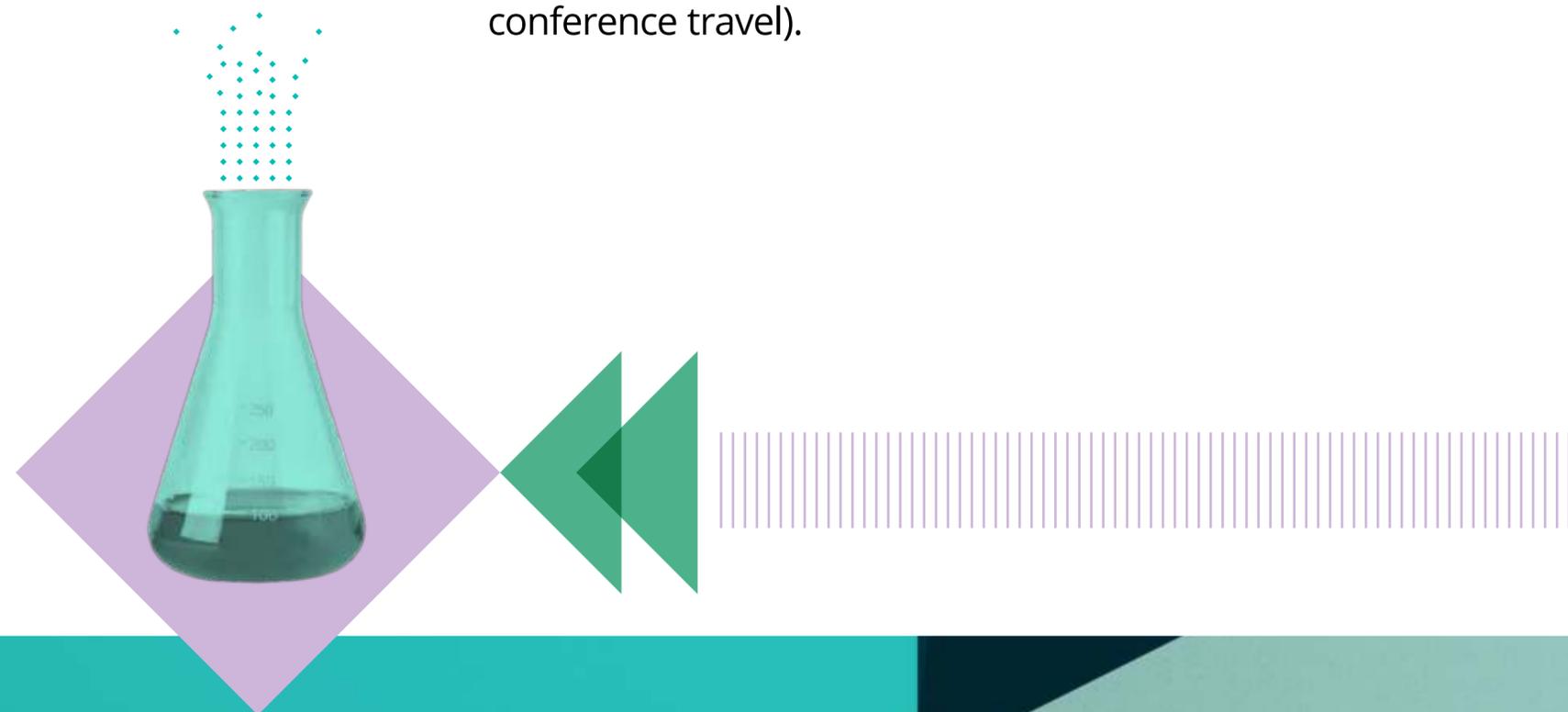
senior executives joined executive and board level sustainability programmes



CASE STUDY: Chemistry department sustainability committee

The Yusuf Hamied Department of Chemistry recently established a sustainability committee to start tackling its impact. Work started with a PhD student setting-up nitrile glove recycling and getting over 25 laboratories to participate in the programme. Since then, the group has met with the University's Procurement Team on an initiative to trial more sustainable lab equipment, such as waterless condensers and glass replacements to single-use plastic.

Future issues for the group to tackle include behaviour change in the hundreds of fume hoods across the department (which are each responsible for up to four times the annual emissions of an average UK home); producing sustainability guides as an induction to lab members; and advocating for adherence to the [University's Guidelines for Sustainable Business Travel](#) (as Chemistry is the largest research department contributor to emissions from conference travel).



Top: recycling bins for glove recycling
Bottom: Yusuf Hamied Department of Chemistry Sustainability Committee.

CASE STUDY: Plant-Based Cambridge

The student-led climate campaign group, Plant-Based Cambridge, promotes the importance of institutional food systems in leading the way in averting the climate and biodiversity crises. The campaign educates on the impact of animal agriculture on the environment and advocates for a transition to a fully plant-based food system across the University of Cambridge.



Green Week training at Thrive

In this first year, most work has been focused on education and engagement. Key outcomes over this year have included over 600 signatures of support for the campaign; an academic open letter of support; the Student Union voting twice in favour of supporting Plant-Based Cambridge; being shortlisted for the Student Union's Campaign Impact Award; and a highly successful Green Week day of campaigning. The message is spreading and attitudes are changing, as demonstrated by the first fully plant-based May Ball at Darwin College this year, and more Colleges supporting fully plant-based formal halls.

Now the campaign is established, it will be branched into sub-campaigns in the future, including Plant-Based University Catering Services, Plant-Based Colleges, Plant-Based Student Union, Plant-Based departments and divestment from animal agriculture. Over the next year, the group expects to make tangible change in food policy across the University and is already in discussions with the University Catering Services and Cambridge Zero-Cambridge Colleges Sustainable Food Initiative on moving toward a Plant-Based Cambridge.



CASE STUDY: Excellent student engagement at Land Economy

The Land Economy's Green Impact Excellence Project focused on encouraging students to participate more in sustainability initiatives, both within the department and across the wider Collegiate University. From student surveys, there was a clear desire for regular updates on what students could do to get involved in sustainability. As a result, 6 Land Economy students completed the Engage for Change programme in early 2023. Students also got involved in work with Cambridge Carbon Literacy Project, Cambridge Zero, the College Green Week and the student-edited sustainability newsletter, 'A Matter of Degrees'.

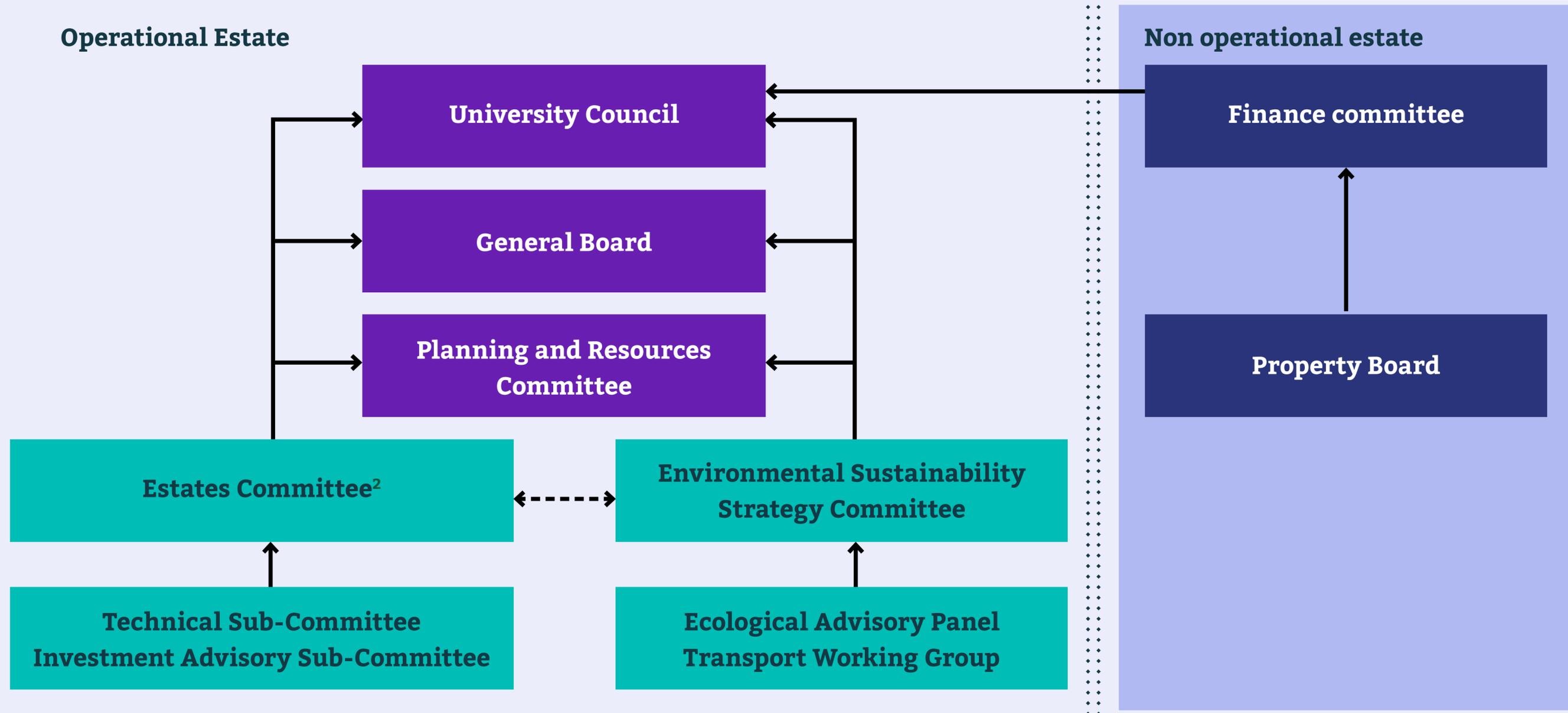
The team also organised a seminar based on the research of one of the Department's PhD students on the environmental impact of food production and how to promote sustainable food consumption. Another request for more activities around energy efficiency resulted in a new Green Impact Student Inclusion Plan including the aim of carrying out an annual workspace energy-use audit. Land Economy is based in one of the older University buildings, so this focus on being as energy efficient as possible is key.

Following the success of this student focused project, Land Economy is now running an Excellence Project to improve staff involvement in sustainability initiatives.



Governance

Governance¹



¹ The University has created a new Estates Committee, which will oversee the development of, and approve policies and strategies relating to, the environmental sustainability performance of its estate.

² Estates Committee will consult the Environmental Sustainability Strategy Committee and ask them to endorse new commitments relating to the environmental sustainability performance of the estate.

Risk management

Our Risk Management Policy sets out the University's approach to risk management. Effective risk management is crucial in protecting the reputation and sustainability of the University. The University's Risk Register includes risks that are relevant to environmental sustainability and outlines mitigating actions to address these risks.

The accuracy of our data

Having accurate data is key to evaluating the success of the sustainability projects we implement and is essential to measuring our progress against our environmental targets and KPIs. It also helps the University address risks relating to setting and achieving appropriate environmental sustainability targets. This risk can only be managed if we have robust and reliable environmental sustainability data.

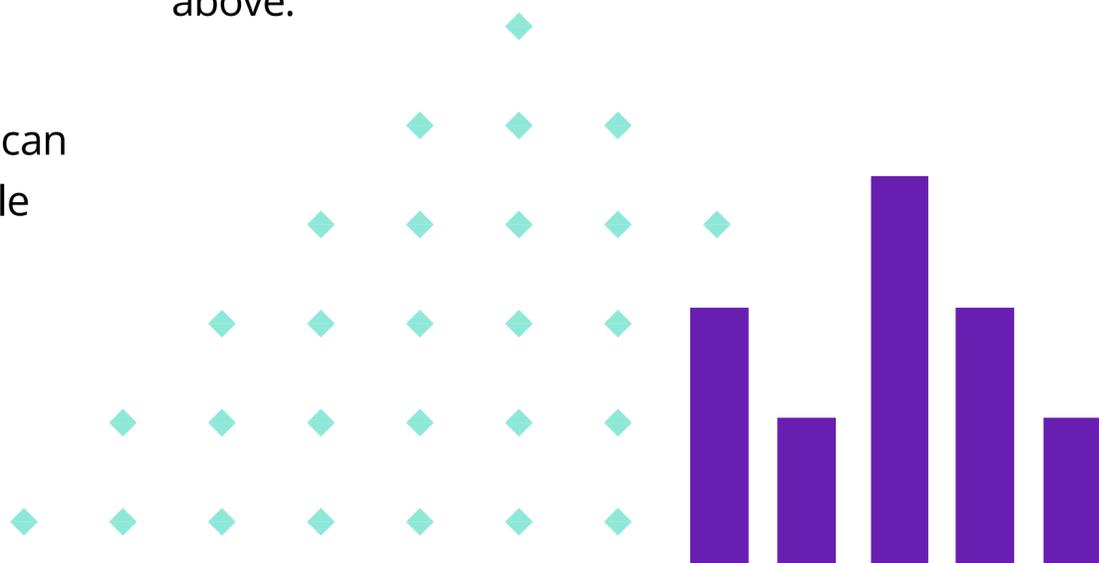
PricewaterhouseCoopers LLP (PwC) have performed an independent limited assurance engagement on selected information for the year ended 31 July 2023, with details provided on [page 48](#). We want to drive continual improvement in the quality and credibility of our data and the assurance process helps us do this.

Within our [Methodology Statement](#), we explain how we compile our data, being clear about gaps or assumptions made.

PwC's [Independent Limited Assurance Opinion](#) can be found on our website alongside this annual report and our Methodology Statement as linked above.

Environmental Management System

The University has an established Environmental Management System (EMS) and is working towards it being externally accredited to the international standard ISO 14001:2015. This year, the University launched a revised [Environmental Policy](#), providing a robust framework for our Environmental Management System (EMS) and promoting awareness across all staff and those associated with the University. We also continued to work with NETPositive Futures to integrate EMS compliance actions into relevant Local Environmental Sustainability Plans (LESPs), ensuring environmental considerations are embedded at the University's operations level. Looking ahead, we are planning comprehensive third-party certification audit in the next academic year to ensure objective and rigorous evaluation of our EMS compliance, demonstrating University's commitment to environmental excellence.



Key performance indicators (KPIs)

As outlined earlier in the report, we have reduced the number of KPIs for the 2022/23 reporting period to eight in total. Three of these have been subjected to independent limited assurance procedures.

KPI	2022/23	2021/22 restated	2021/22
Total Scope 1 and 2 Location-based carbon emissions (energy and fuel use) (tCO ₂ e) ¹	50,690 [Ⓐ]		49,124
Total Scope 1 and 2 Market-based carbon emissions (energy and fuel use) (tCO ₂ e) ²	23,229 [Ⓐ]		24,766
Waste mass generated per FTE staff and student (tonnes/FTE) ³	0.10 [Ⓐ]		0.12
Scope 3 emissions (supply chain) (tCO ₂ e)	277,803		310,742
Scope 3 emissions – Other (water; commuting; business travel; waste) (tCO ₂ e)	18,139		11,325
Per capita carbon emissions from flights (tCO ₂ e/FTE)	0.69	0.32	0.33
Percentage modal split for staff commuting by sustainable modes of travel	68%		73%
Total water consumption (m ³)	366,717		367,600

¹ Scope 1 and 2 emissions reported excludes fugitive emissions and enteric emissions, due to a lack of available data and methodology.

² Scope 1 and 2 emissions reported excludes fugitive emissions and enteric emissions, due to a lack of available data and methodology.

³ There was a change in the methodology for this KPI. The KPI was reassessed with no change in the prior period reported figure. Please refer to our updated methodology.

Statement of the responsibilities of the Council

Council's Statement on the University of Cambridge's selected environmental sustainability data (the "Selected Information") within the Environmental Sustainability Report for the year ended 31 July 2023 ("the Report").

As the Council of the University of Cambridge we confirm that we are solely responsible for the preparation of the Report including this Statement and for reporting the selected information in accordance with the reporting criteria set out within this document.

We confirm, to the best of our knowledge and belief, that we have:

- designed, implemented and maintained internal controls and processes over information relevant to the measurement, evaluation and preparation of the Selected Information that is free from material misstatement, whether due to fraud or error;
- established objective reporting criteria for preparing and presenting the Selected Information, including clear definition of the entity's organisational boundaries, and applied them consistently;
- presented information, including the reporting criteria, in a manner that provides relevant, complete, reliable, unbiased/neutral, comparable and understandable information;
- reported the Selected Information in accordance with the reporting criteria.

Professor Ian Leslie,
Chair of Environmental Sustainability Strategy Committee

For and on behalf of The Council of the University of Cambridge
20 March 2024.

Independent Limited Assurance

PricewaterhouseCoopers LLP ("PwC") has performed an Independent Limited Assurance engagement on selected balances within the 2022/23 data, shown with the symbol [Ⓐ], in accordance with the International Standard on Assurance Engagements 3000 (Revised) 'Assurance Engagements other than Audits or Reviews of Historical Financial Information' and, in respect of the greenhouse gas emissions, in accordance with International Standard on Assurance Engagements 3410 'Assurance engagements on greenhouse gas statements', issued by the International Auditing and Assurance Standards Board. The 2022/23 [Independent Limited Assurance Report](#) can be found on our website along with our [Methodology Statement](#) – the basis on which the KPIs are calculated and on which the limited assurance is given. As described in our Methodology Statement, the University has adopted what is known as the Operational Control approach, under which the buildings, activities and operations included in our calculations and reporting are those over which the University has direct control or significant influence. Our KPIs therefore do not include the Colleges, CUP&A and our principal subsidiaries, associate undertakings and significant investments.

Help build a sustainable University

Everyone has a role to play in reducing our environmental impact and creating a sustainable University. You have the power to make a difference!

Find out about how you can get involved

- Become an ambassador for environmental issues as a Sustainability Champion
- Join a Green Impact team and make real environmental change in your department
- Discover a wide range of opportunities to get involved in sustainability through Cambridge Zero
- Keep up to date with the latest sustainable news and events with our Greenlines newsletter
- Find out what's going on across the University to tackle the climate crisis on the [Sustainable Earth](#) site

Be social

 www.environment.admin.cam.ac.uk

 /CUustainabilityteam

 @CambridgeSust

 /the-university-of-cambridge-s-environmental-sustainability-team/