Christ's College, Cambridge **Environmental Sustainability Strategy**

Approved by Governing Body in November 2022
and reviewed in 2025

CHRIST'S COLLEGE
UNIVERSITY OF CAMBRIDGE

Contents

Master's Foreword

Although it is increasingly fashionable to deny it, eight billion human beings are inexorably destroying the planet where we live. Collectively, we need to change. Governments make policy. When an issue is sufficiently important, they get together to set policies for all governments to follow. Planetary diplomacy kicked off with the Rio Earth Summit in 1992, which issued the United Nations Framework Convention on Climate Change. This prepared the ground for annual COP (Conference Of Parties) climate summits, which began in Berlin in 1995. Earlier this year, the international community reunited in Brazil for COP30.

The recommendations of these summit meetings need to be implemented by organisations and individuals as well as governments. Acting first generally feels riskier (scientists may adjust their conclusions) and more expensive (all new technologies are more expensive than the next generation of those technologies) than waiting to be forced to act. But Christ's and Cambridge want to lead.

So, we're putting our money where our mouth is. All new buildings (starting with our new Library) will meet the highest sustainability standards. And all our existing buildings will be made as sustainable as possible. That's tough when some of your buildings are over 500 years old. But it's being done. We're cutting down waste, of food, of heat, of materials. This brochure describes in detail what we're doing, what targets we plan to hit, and when and why. It's vital that we get cracking.

Our Vision

As a leading academic institution for over 500 years, with a core mission of education, learning and research, our vision is that our environmental impact should not harm future generations.

Environmental sustainability is a symbiotic and responsible co-existence with the natural environment. We strive to live in such a way as to maintain the environment without adverse impact or harm.

Now, more than ever, we recognise our responsibility to conserve and protect natural resources, encourage diverse global ecosystems, enhance biodiversity, and support the health and wellbeing of our communities by making choices that maintain, and improve, the environment for future generations.

To this aim, several Fellows are engaged in research related to climate change and one of our Fellow-Commoners, Professor Charles Kennel endows a fund that supports an annual seminar series on Climate Change and a postgraduate in Climate Science. The Governing Body recently approved the establishment of the Darwin-Hamied Centre at Christ's College, which was launched in July 2025 and will undertake research on biodiversity.

The College has over 700 undergraduates and postgraduates who live in student accommodation within the grounds of the College or in external hostels in Cambridge, and about 76 Fellows and 130 staff members with varied working patterns.

Using 2018 data as a baseline, the College was estimated to produce 920 tonnes of CO2e per year. A science-based target was then set to reduce this by just over 30% (31%), aiming to cut emissions to 632 tonnes of CO2e by 2030.

Given that activity to improve sustainability must not materially disturb students' education and research activity, implementing an environmental sustainability strategy in an organisation with many historic buildings is a significant and costly challenge that will take many years to complete.

We recognise our responsibility to **conserve** and **protect natural resources**, encourage **diverse global ecosystems**, enhance **biodiversity**, and **support** the **health** and **wellbeing** of our **communities**.

Science-Based Targets and Journey to Net Zero

We have given early attention to quantifying our environmental carbon impact and establishing our Science-Based Targets (SBTs). Many actions have also been undertaken in the past few years.

In early 2020, the College established a baseline audit of emissions using the SBT model – a set of tools that helps organisations determine what they need for sustainable change and to measure their progress. The SBT model reflects how global emissions need to be reduced to achieve goals set out in the 2015 Paris Agreement.

SBTs relate to Scope 1, 2 and 3 emissions. For the College, Scope 1 targets involve removing gas; Scope 2 involves increasing renewable electricity supplies; and Scope 3 involves the wider impact such as travel.

Our primary efforts have concentrated on Scope 1 and 2 emissions to reduce our carbon footprint. More work is needed to understand how the College can reduce Scope 3 emissions, however there is increased use of Teams/Zoom for meetings and our travel policy encourages train over plane for appropriate journeys – and, where air travel is necessary, that reputable carbon credits are purchased.

The plan for achieving Net Zero carbon emissions will evolve over time, working with other Colleges and the University, sharing best practice as knowledge and understanding grows.

The baseline audit, using 2018 data, estimated that the College creates 920 CO_2e tonnes per year, and set the SBT to reduce this by just over 30% (31%) to 632 CO_2e tonnes by 2030.

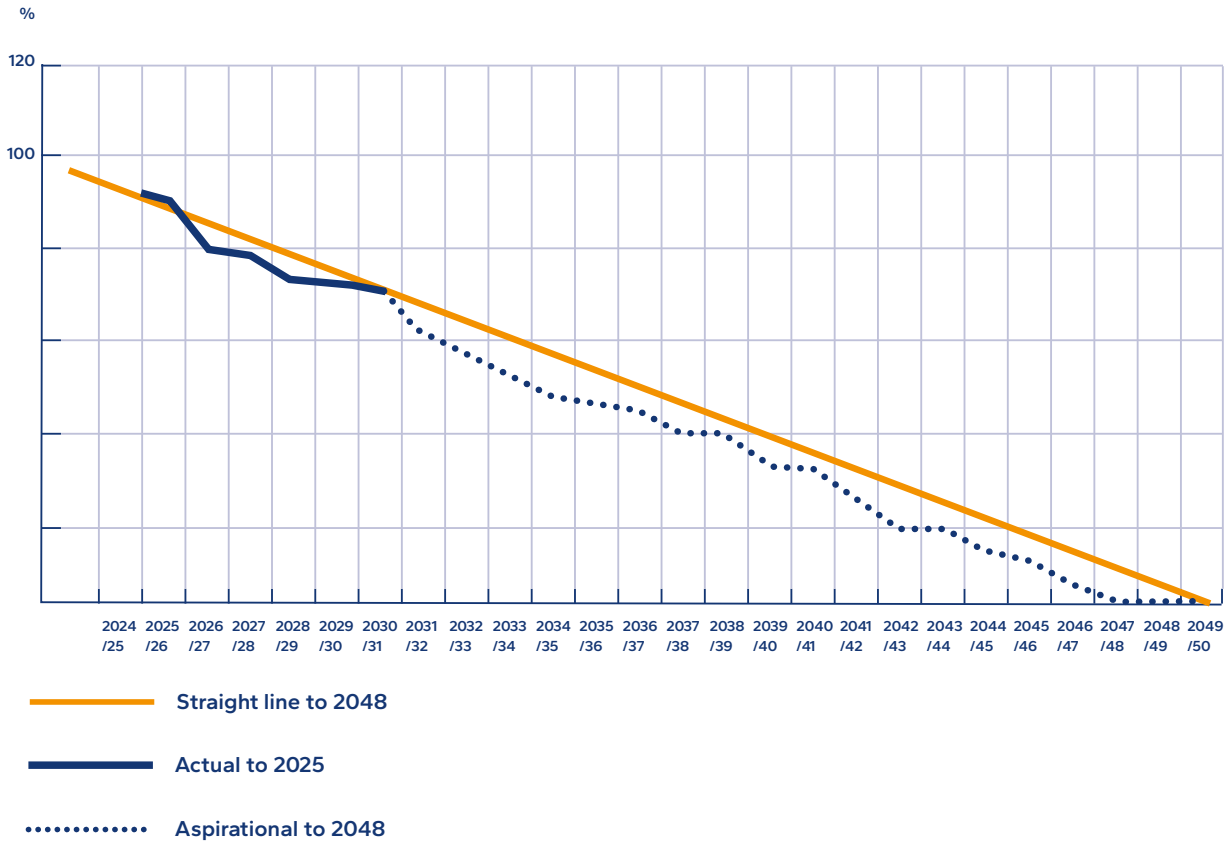
To achieve this target, the College originally planned to remove gas from all its hostels (20% of our gas usage) and from the Fellows' Building and C, D, and E Staircases in Second Court (14% of our gas usage) by 2030.

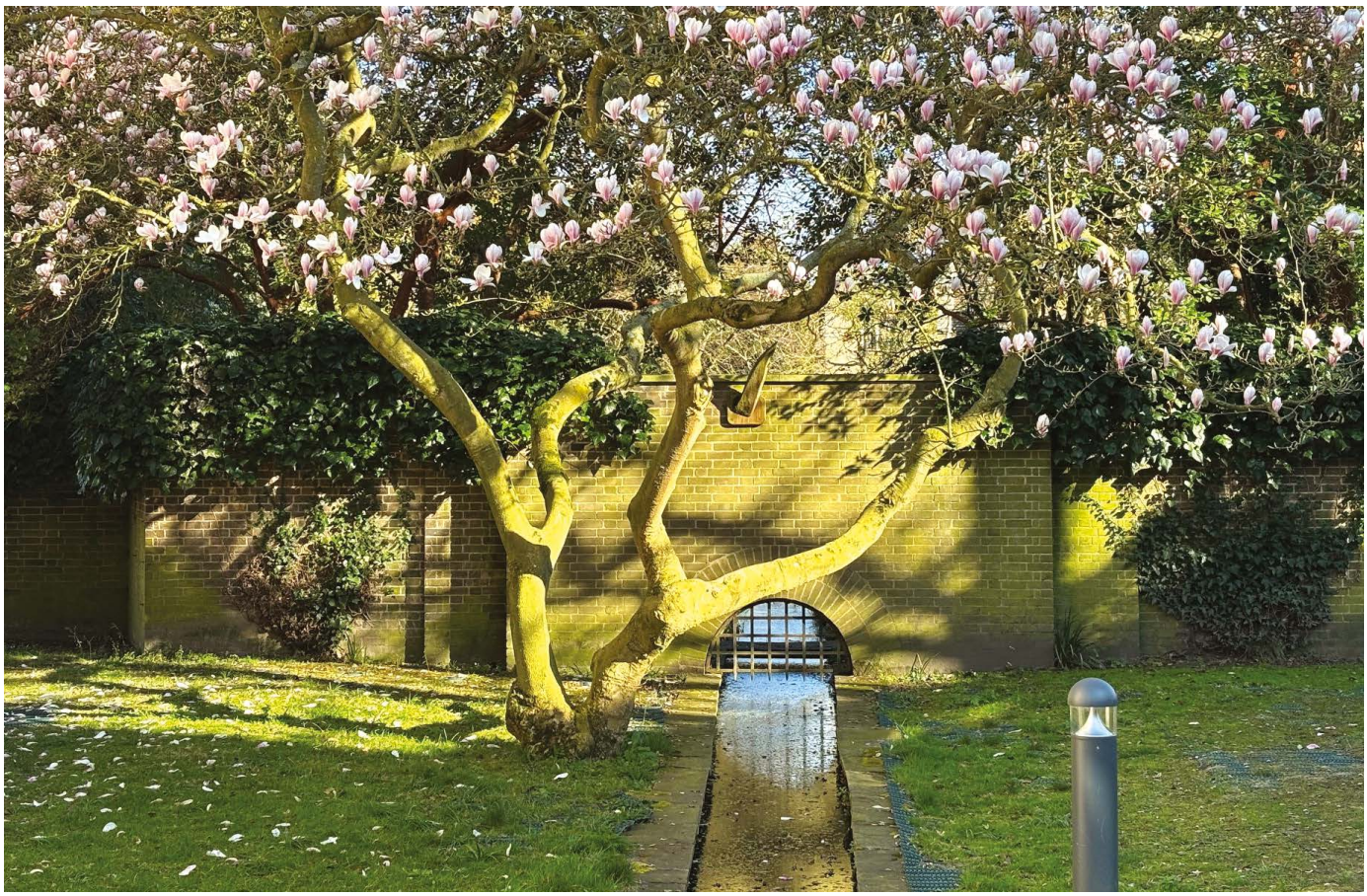
Changes in plans since 2022, principally relating to the priority to replace the Library, have required a revision to the sequence of degasification.

The current (2025) plans involve degasification of the following buildings by 2030: 1 and 17 Emmanuel Road, 5 Willis Road, 64 to 72 Jesus Lane, Library, Kitchen, and First Court. However, it is still estimated that the College will achieve a 30% reduction in Carbon usage by 2030.

Figure 1 illustrates the journey the College must take to achieve the interim target, as well as the longer-term pathway toward net-zero across the remaining estate – a goal which will not be possible without significant additional funding.

Figure 1. 2048 Aspirational target to remove all carbon energy from the estate





Gas and Electricity Consumption Per Available Room

Over time, the size of the College's estate changes, with hostel purchases, temporary use of rented rooms and refurbishment programmes. Therefore, to help gauge the College's progress on reducing carbon, the College reviews its gas Kilowatt Hours (KWH) in comparison to the number of available rooms for student and Fellows' use.

In the table below (Figure 2), we can see that the baseline 2018 figure for the College's gas consumption was 8721 KWH per available room. Following refurbishment work of several hostels, converting them to Air-Source Heat Pumps (ASHPs), the introduction of smart Thermostatic Radiator Valves (TRVs) in the Blyth building and the introduction of 64 postgraduate rooms on the domus site, heated by ASHPs - the average

consumption per available room for the College has reduced to 6284 KWH.

This shows a 28% reduction in gas from the 2018 baseline, visualised in Figures 3 & 4.

Figure 2.

	2017/ 2018	2018/ 2019	2019/2020 - COVID	2020/ 2021	2021/ 2022	2022/ 2023	2023/ 2024	2024/ 2025
Rooms Available	585	582	587	582	591	596	621	617
Gas KWH Total	5102000	4866584	3936548	4531482	4563734	4552732	3733098	3877534
Gas KWH per Room	8721.37	8361.83	6706.21	7786.05	7722.05	7638.81	6011.43	6284.50

Figure 3.

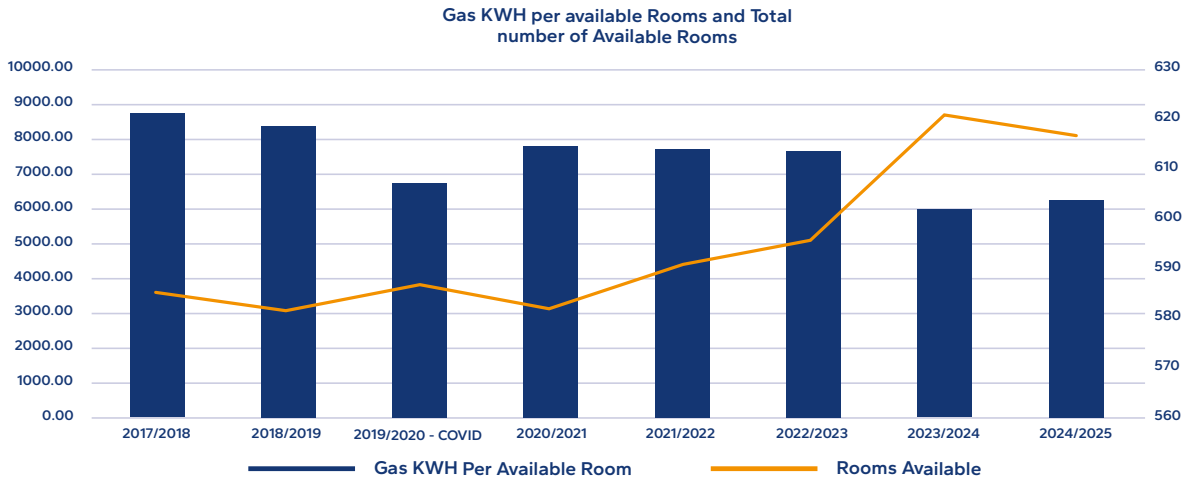
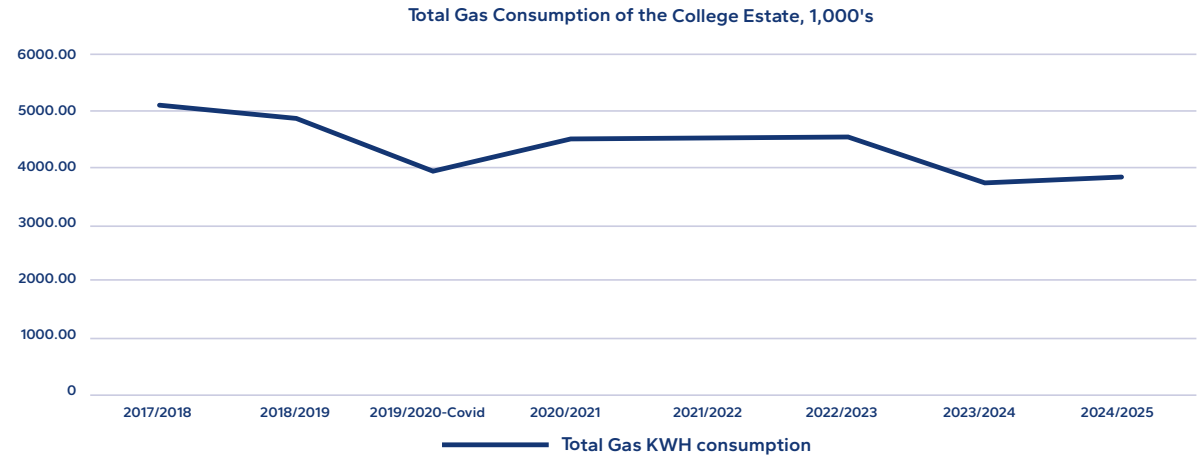


Figure 4.



Governance and Reporting

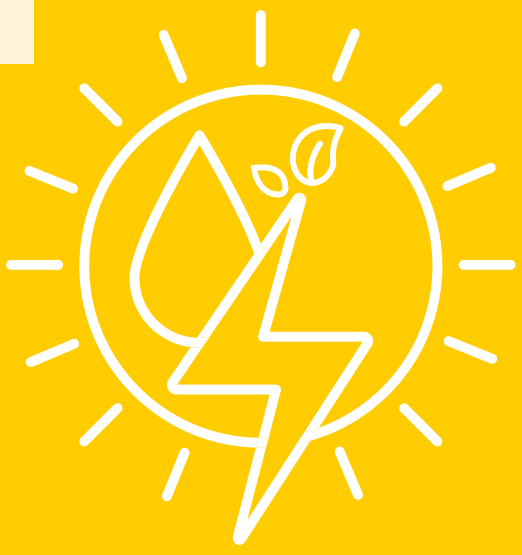
The College's Estates Strategy and Environmental Policy Committee (ESEPC) is attended by Senior Members of the College with representation from staff and students. This Committee considers the detailed environmental and estates plans for the College and assesses their effectiveness and impact, including reviewing usage data for both gas and electricity. The Committee reports regularly to the College's Governing Body and makes recommendations as necessary. Progress is also reported in the College's Annual Report and Accounts. Information is also available on our website, **Sustainability | Christs College Cambridge**

The College's Investments Committee reviews, on a regular basis, the integration of Environmental, Social and Governance (ESG) considerations into the investment process of each appointed investment manager.

The May Ball Committee is also committed to considering sustainability issues for their bi-annual event.

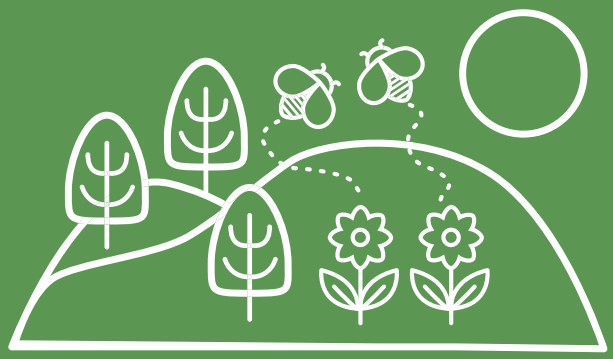
Our core strategy for achieving our vision is based on four strands:

1



Carbon, Energy and Water Management

2



Biodiversity and Ecosystem Management

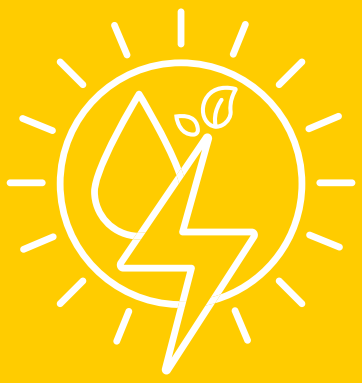
3

Social Behaviour and Sustainable Procurement

4

Responsible Investment

Strand 1: Carbon, Energy and Water Management



The College is required to reduce its overall carbon footprint to Net Zero by 2050 and aspires to match the University's ambition of doing so by 2048. However, achieving this is dependent on significant funding not yet sourced. It is likely to require a combination of government funding (of which there is currently none available to College), internal College resources, donations, and long-term loans.

The College is currently focused on the Science Based Target (SBT) of reducing its carbon footprint by just over 30% (31%) by 2030.

The College is also committed to ensuring that all its major building projects comply with and exceed environmental building regulations, as demonstrated by the use of Air-Source Heat Pump (ASHP) technology in Yusuf Hamied Court and in the design of the new Library.

The College is also focused on reducing the usage and wastage of water within College buildings to preserve this precious resource. The new Library project, which aims to be completed by September 2028 will harvest rain water for use in Bath Court.

What have we done so far?

The College has completed a boiler efficiency programme that replaced the gas boilers on the domus with more efficient condenser boilers, reducing gas consumption by an average of over 600,000kwh per year. We are also rolling out the installation of smart Thermostatic Radiator Valves (TRVS) onto room radiators, which initial trials suggest could reduce energy consumption by a third.

In 2018, the College removed gas as the primary source of heating in Hamied Villa (8 Victoria Street), replacing it with an ASHP and significantly improving the thermal properties of the building. This hostel was the pilot for 'degasifying' other College hostels.

The College is now engaged in a rolling programme of hostel refurbishments, starting with Hamied House (1 Emmanuel Road), 5 Willis Road and nine hostels on Jesus Lane (64 to 72), removing gas and improving the thermal efficiencies of the buildings. The programme will continue in line with our SBT, providing sufficient funding can be secured. By October 2026 the College will have converted twelve hostels to run on ASHPs.

As previously mentioned, Yusuf Hamied Court is heated by ASHPs, and the thermal properties are 10 times more than those specified by building regulations. The new commercial retail spaces within the building on King Street are not provided with any gas connections, with tenants required to use electricity for all their energy.

The College has installed Solar Panels onto the roof of the Yusuf Hamied Court and the tops of the New Court Building (completed in Summer 2025).

The College procures its electricity from a green tariff provider. A rolling plan to upgrade lighting to low energy LED bulbs - and install motion sensor lighting wherever practical - has also been undertaken.

The College has promoted the benefits of washing laundry at 30 degrees and the benefits of efficient use of heating to students. Aerated showerheads within our accommodation save water, water coolers have timer switches to reduce unnecessary costs at night, and all College bathrooms are fitted with water-saving devices.

With the support of the Students' Union (JCR) and Graduate Society (MCR), all students are inducted on relevant environmental issues within the College, led by active JCR & MCR Green Officers who front the College's Green Engagement initiatives each year.

The College installed electric vehicle charging points during the Summer of 2022 and has already replaced one of the College-owned vehicles with an electric vehicle.

Most of the petrol powered garden machinery has been replaced with battery powered models.

What are our next steps?

The remaining College-owned vehicles will be upgraded to hybrid or electric as they reach the end of life (by 2030).

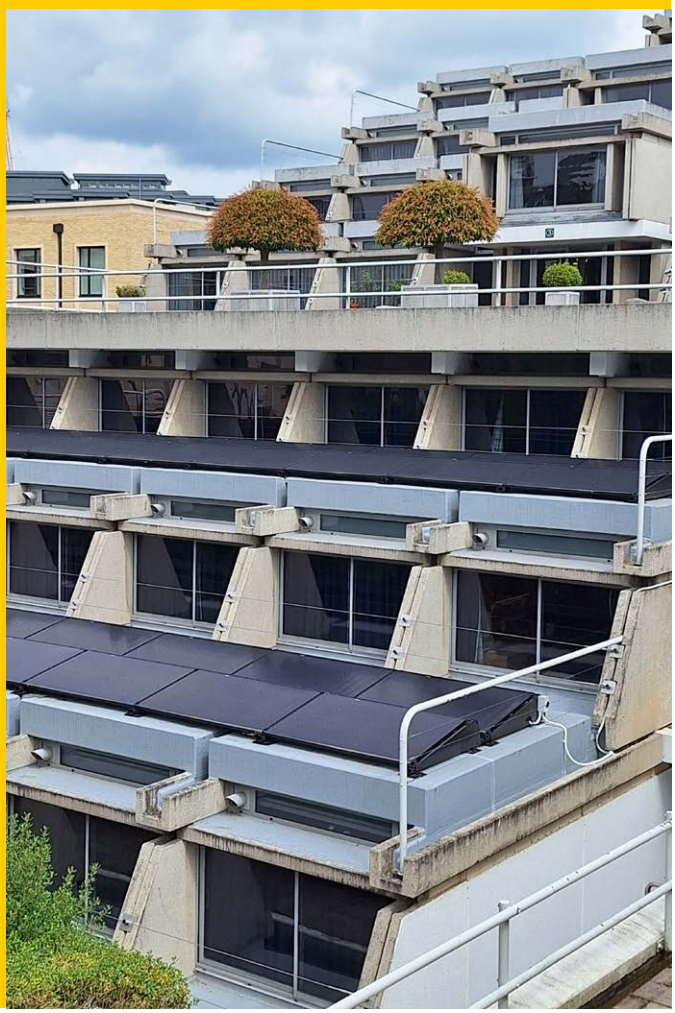
Investigations into Ground Source Heat Pumps (GSHP) utilising the College grounds are also being undertaken.

The current First Court building refurbishment project - whilst not removing gas as the heating source for now - includes additional insulation and more extensive pipework to accommodate future installation of ASHP/ GSHP technology when the Christ's Library+ project is completed. The recent enabling works, which moved the heating pipe from behind the parapet wall to cross First Court lawn, were installed in a specific way to avoid future borehole locations.

The Gardening team will review planting schemes and reduce the amount of water needed to maintain the gardens. Rainwater is captured from the roofs of the greenhouses in the Fellows' Garden and used to water plants growing in the greenhouses. We will next investigate ways to harvest more rainfall from the buildings within the Domus site and investigate more effective sprinkler systems that water the grounds during the night.

Installing Thermostatic Radiator Valves (TRVs) across Four Stairs accommodation during Summer 2025.

We are in the process of installing a UV lamp in the filtering system of the swimming pool. This will reduce the use of algaecide and chemicals.



Strand 2: Biodiversity and Ecosystem Management

The College is committed to preventing and reducing actions that harm biodiversity and ecosystems. Inspired by the Green Impact Award scheme, for which we hold a Platinum Award, the College has made significant steps.

What have we done so far?

The College gardeners do not cut hedges during the nesting season from March to August. The Team has committed to using standard peat-free compost materials when possible, and chip and mulch excess wood cuttings, rather than send them to landfill. The College gardeners produce compost that it is used in borders and shrubberies. Over the last few years the College has increased the areas of permanent long grass, placed numerous bird boxes, and wood piles.

The College has an established Apiary and a number of Bat Boxes.

The College does not use pesticides or fungicides in its operations. Organic pest control is in place in the greenhouses and in the College Garden.

The College arranges the collection of the core recyclable waste streams:

- residual (non-recyclable) waste
- food waste (mixed with garden waste if appropriate)
- paper and card
- all other dry recyclable materials (plastic, metal and glass).

Our Student accommodation facilities are classified as residential and are therefore required to align with the Simpler Recycling Government Initiative from March 2025.

In recent years, the College has successfully grown vegetables with organic methods within the grounds, which were given away free to College members.

The Housekeeping team has reviewed the chemical cleaning products it uses and now where possible uses products that do not cause harm to the ecosystem.

Our initial Biodiversity Baseline Report 2025 has identified the following key findings within our green spaces.

Habitat Identification and Areas

- Six habitats were identified: Open grass, Long grass, Grass with trees, Borders, Woodland, and Water.

Habitat	Area (m2)
Open grass	5,779
Long grass	96
Borders	2,641
Woodland	3,214
Water	59

Plant and Animal Diversity

- Plant diversity levels were generally comparable to other colleges, except for Long grass, which exhibited lower species richness due to its recent establishment.
- Three lichen species were identified on trees, and various invertebrates were recorded.
- For animals, the greatest abundance and diversity is found in long grass and woodland. Notable species included the woodlouse spider and various beetles in Woodland, while Long grass supported a dominant delphacid bug species.

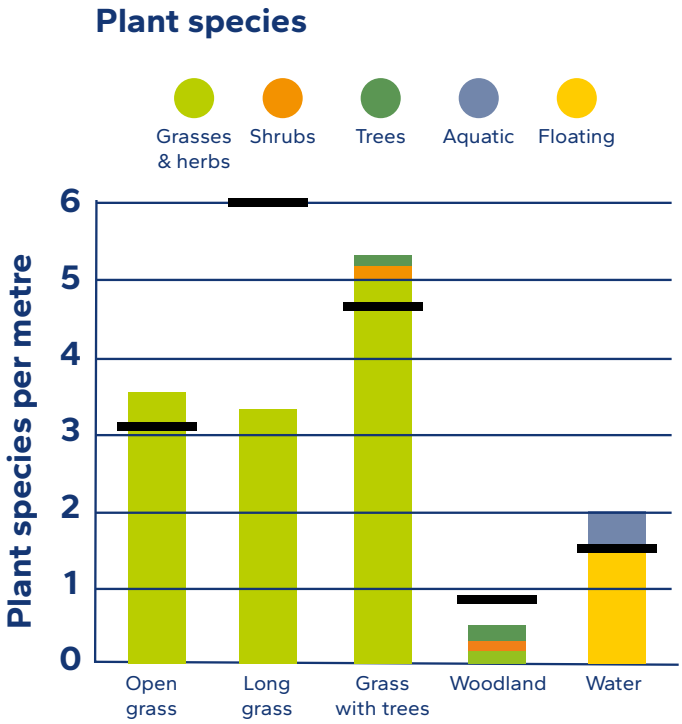
Water Habitat Observations

- The water bodies, including a pond and part of Hobson's Conduit, supported emergent plants and various aquatic species, including damselfly larvae and flatworms.
- The pond serves as a water source for honeybees, and a bee hotel has recently been placed by the pond for solitary bees.

Wildlife Presence

- Other wildlife includes resident foxes and occasional sightings of muntjac, indicating a diverse ecological environment.

Figure 5.



Numbers of plant species recorded (bars), compared to the average of all Colleges (lines).

What are our next steps?

The College has received an initial Biodiversity Baseline Report, and we expect the full version in 2026, which will incorporate additional analysis and new recommendations. This work aligns with the University's own Biodiversity Baseline and Biodiversity Action Plan.

The Catering Department will carry out a chemical review, incorporating additional insights and learnings from the Housekeeping Team.

The Housekeeping team will meet once a term to support and review products with the Catering department. We will look at new products that come to the market and change where we feel there is a significant benefit. We will look at cost, cleaning power and environmental benefits.

Strand 3: Social Behaviour and Sustainable Procurement

The College is committed to encouraging the community to live and work sustainably; behavioural change is a vital aspect of any successful sustainability strategy. The College is actively engaged with the community to find solutions to reduce, re-use and recycle resources.

The College participates in the University's Environmental Accreditation Scheme. In 2018, and again in 2022, the College achieved a Green Impact Gold award for its commitments and actions on sustainability, and in 2024 we secured a Platinum award.

What have we done so far?

The College kitchens ensure that MCS certified suppliers supply our fish and that all chicken and eggs are sourced from non-caged systems. Our Chefs look to source items locally and from within the UK wherever possible.

Following the Cambridge Zero initiative we are also working on the following 4 priorities:

- Increasing plant-based meals
- Reducing "ruminant" meats
- Purchasing sustainable seafood
- Reducing food waste.

Regular kitchen maintenance ensures the filters are cleaned regularly which prevents the build-up of grease and results in lower running costs.

Front of House offer jugged water at events rather than single use bottled water, and the

College uses reusable containers for takeaway food.

The College provides recycling bins in all rooms and communal areas and recycles paper, cards, cans, batteries, and plastics through the City Council. Small food waste bins are provided in all kitchenettes which is deposited into the kitchen specific bins for food waste collection.

The College participates in the Government's "Cycle to Work" Scheme and has recently increased bicycle storage facilities in the College to encourage cycling.

What are our next steps?

The College will undertake a more in-depth procurement review to ensure that all suppliers are committed to using sustainable and ethical products. The College will look for other ways to help support and encourage sustainable habits by all its members.

The College will continue to highlight the Waste Hierarchy Framework to its members and look for ways to prevent waste from materialising in the first place.

Within Catering, we will look to improve the promotion of local products being served and promote greener, seasonal, healthy, vegan, and vegetarian items. Further work will be undertaken with the purchasing consortium to ensure that most of the meat used by the College is Red Tractor certified. More significant promotion of reusable mugs within the College Catering outlets will be made. The Catering team will aim to reduce food waste further and investigate ways of limiting over production in the first place.

The College aims to become a Fairtrade College, committed to supporting and using Fairtrade in as many places as possible.

The College will continue to encourage members to switch off electrical equipment when not in use.

The College will continue to encourage the use of bicycles over motorised vehicles and has set up a small self-service repair station for cyclists.

Strand 4: Responsible Investment

The College wishes to act as a responsible investor so that its endowment is invested in a way that reflects the College's purpose and values, mitigates the long-term risks and reduces any significant reputational risks that may result from its investments.

The Council adopted the following statement in October 2020:

"The College Council believes that decarbonisation of the economy represents a social imperative (in the face of global warming caused by greenhouse gases). It has therefore agreed:

- The College will not hold direct investments in the shares or bonds of fossil fuel producers and their suppliers (defined in each case as companies deriving 10% or more of their revenues from fossil fuel production). It does not currently hold any such investments.
- The College will continue to seek opportunities in sustainable businesses, including renewable energy. It already has significant investments of this type.
- The College expects to have no material direct or indirect exposure to investments in fossil fuel producers and suppliers by 2030.
- The College has the ambition to achieve net zero greenhouse gas emissions from its investment portfolio by 2038. For the directly held property investment portfolio, a study is being commissioned on the existing carbon footprint to inform a roadmap to net zero – this may be later than 2038.
- The College's work to reduce the carbon footprint of its own operations will also remain a high priority.

This policy is incorporated into the College's Statement of Investment Principles, approved by Council in January 2022.

What have we done so far?

ESG considerations have been incorporated into decision-making on various investment/ divestment opportunities since 2021/22, including:

- Additional investment of £29m with Cambridge University Endowment Fund (CUEF), with whom we share the same net zero target ambition for investments.
- Investment of £21m in Amundi ESG Global Low Carbon Fund.
- Investment of £2.5m in Partners Capital ESG Co-Investment Equities Fund.
- Commitment of $750k to Partners Capital 15 Degrees Fund, which makes private equity investments primarily in the decarbonisation theme.
- Transitioning an investment in Vanguard S&P 500 Index Fund to the Vanguard ESG US Stock Fund (holding since redeemed).
- Investment of £10m in IFM Net Zero Infrastructure Fund which invests in infrastructure assets that will accelerate the transition to a global net zero economy.

- Commitment of $500k to PGIM Real Estate Global Data Centre Fund, which makes private equity investments to build state of the art green data centres and renewable energy.
- Commitment of $1m to Common Fund Environmental Solutions Partners II.

We have funded these new investments by reallocating capital from less aligned managers.

We have joined a group of Higher Education (HE) institutions, led by University of Cambridge, who have used their combined capital allocation potential to request lending institutions to create investment grade cash deposits and money markets funds that do not fund further fossil fuel expansion and align with the International Energy Agency's (IEA's) Net Zero Emissions (NZE) scenario. We are already using one of the resulting cash deposit facilities.

We have disposed of some land to a local Countryside Trust to support their nature recovery ambitions.

What are our next steps?

A study is being commissioned on the existing carbon footprint of the directly held property investment portfolio to inform a roadmap to Net Zero. This will inform the setting of a realistic date for the ambition to achieve Net Zero for this element of the portfolio – which may be later than 2038, given tenanted nature of the portfolio.

We are encouraging our farm tenants to take advantage of opportunities for improving environmental sustainability and habitat enhancement. Additionally, we have secured funding for tree and hedge planting projects at Cottenham and Helpston, scheduled for the next planting season, further demonstrating our commitment to environmental improvement.

The Investments Committee is stepping up its engagement with our managers on reporting progress on Net Zero as a key element of their ESG reporting.

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