

College Sustainability update 2026

Thank you to everyone who has contributed to this report, which provides a snapshot of some of the activity taking place across collegiate Cambridge.

Building on the Cambridge Colleges Environmental Sustainability Report, published in 2023, this update offers an opportunity for Colleges to share their continuing efforts to reduce their environmental impact, support biodiversity, and embed sustainable practice.



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Christ's College

Christ's College is committed to, and on track to achieve, a 30% reduction in carbon usage by 2030 from a 2018 baseline measurement.

Yusuf Hamied Court, completed in September 2023, has **solar panels installed** and is heated by **Air Source Heat Pumps (ASHPs)**, with thermal properties ten times those specified by building regulations. This new building provides meeting spaces, offices, and accommodation for 64 postgraduate students.

Five student hostels in the city are also heated by ASHPs. To date, 181 solar panels are fitted to College properties.

28%
REDUCTION
ACHIEVED
SINCE 2017



These innovations, combined with the use of smart Thermostatic Radiator Valves (TRVs) mean that gas consumption per available room has reduced by **28%** from 8721 kilo watt hours (KWH) in 2017/18 to 6284 KWH in 2024-25.

CASE STUDY

As part of the College's commitment to biodiversity, 'bug hotels' for solitary bees and other insects are placed around the College gardens and grounds.

The 'bug hotels' were built by a member of the Maintenance Department, filled with twigs, sticks and stems by children attending an Alumni Family Day, and installed by the Gardening Team in summer 2025.





Churchill College

Biodiversity: Churchill's commitment to sustainability is evident across its 50-acre grounds, where thoughtful environmental stewardship supports thriving ecosystems. A comprehensive 2023 audit by the Botanical Society of Britain & Ireland revealed almost **300 naturally occurring plant species**, including 15 on Cambridgeshire's Register of Plants of Conservation Concern and 34 classified axiophytes – positive markers of habitat health.

The dedicated **Grounds & Gardens** team actively enhances biodiversity through initiatives including a wildlife pond and innovative wildflower turf that addresses drainage whilst nurturing local flora and fauna. With nearly 1,000 trees, abundant butterflies, and diverse wildlife, this living laboratory demonstrates how sustainable land management creates both ecological value and an enriching environment for the College community.

Catering: Churchill College champions transparency in sustainable dining through **systematic carbon footprint monitoring**. The catering team utilises specialised online calculators to assess the climate impact of every dish, displaying carbon labels directly on menus to empower informed dining choices. This data-driven approach enables monthly tracking of food-related emissions, creating accountability and revealing trends over time. By making the environmental cost of meals visible, the College fosters awareness and encourages lower-carbon selections without compromising choice or quality.

Energy: Churchill is actively decarbonising its estate through ambitious sustainability initiatives. Recent **solar PV installations** and **Enerphit-standard house refurbishments** have already achieved 70% reductions in gas and electricity consumption in renovated properties. In early 2025, the College approved a decarbonisation programme targeting 95% emissions reduction over the next decade. This comprehensive strategy encompasses transitioning to air-source heat pumps, enhancing building fabric efficiency, and expanding on-site renewable energy generation. By phasing out gas entirely and integrating cutting-edge sustainable technologies, the College is creating a low-carbon environment that demonstrates environmental leadership whilst ensuring comfortable, energy-efficient spaces for its community.



Waste and recycling: The College has **achieved zero-landfill waste** through a comprehensive waste management strategy. All materials are either recycled or directed to energy-from-waste incineration facilities. **Advanced waste compactors** have transformed operational efficiency, reducing disposal lorry movements by 76% - from over 630 to just 152 annually. This shift from daily bin collections to compactor-based systems eliminates approximately 16 tonnes of CO₂ emissions each year whilst significantly reducing traffic and disruption across the site. This integrated approach demonstrates how innovative waste infrastructure can deliver environmental benefits alongside practical improvements, reflecting the College's commitment to minimising its ecological footprint through smart, sustainable solutions that benefit both the community and the wider environment.

CASE STUDY



Churchill College's **Big Butterfly Count** revealed how thoughtful habitat management creates exceptional biodiversity. Long grass areas and naturalistic zones dramatically outperformed formal borders, with Gatekeepers and Meadow Browns flourishing alongside Common Blues, Holly Blues, Brimstone, Green-veined Whites, Speckled Wood, Red Admiral, and Jersey Tiger moths.



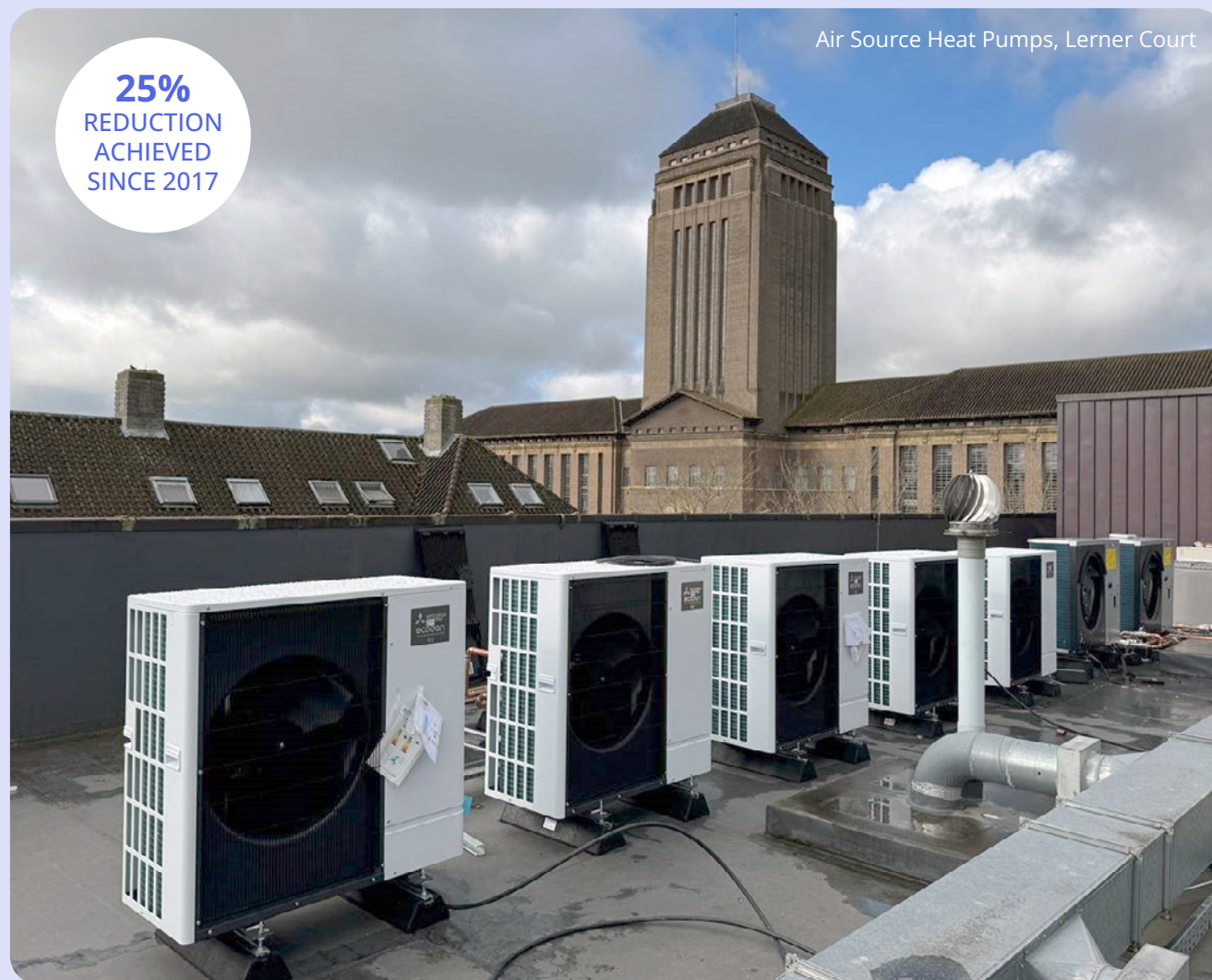
Self-sown **wildflower patches** proved particularly rich habitats, demonstrating the impact of strategic low-intervention management. The College's elm trees support rare White-letter Hairstreaks, whilst Brown Argus butterflies also thrive on site. These findings validate the grounds team's biodiversity-focused approach, creating varied habitats that balance aesthetic appeal with ecological value - providing students and Fellows with a setting that exemplifies sustainable land stewardship.

Clare College

Clare continues efforts to make the built environment more sustainable. Since the baseline year of 2017, the College has reduced its Scope 1 and 2 emissions by 25%, excluding an offset for the purchase of renewable electricity. When this is included, the decrease in Scope 1 and 2 is 45%. In the past year a number of energy saving and decarbonisation projects have been completed and demand reduction exercises have been undertaken.

- **Air Source Heat Pumps** were installed on the roof of Lerner Court during Easter 2024, and the Ground Source Heat Pumps replaced in early 2025, at which point the gas boilers were removed. The two projects combined have so far saved nearly 41 tonnes of CO₂e emissions.
- **Individual room heating controls** were installed in Castle House in September 2024. These automatically adjust the radiators to a setback temperature when the room is vacant. In conjunction with the ongoing project to replace the windows with triple glazing, this has saved nearly 12 tonnes CO₂e, and over £3,000 on gas bills.
- A warmer than usual spring meant the **heating hours were reduced** early across the College, with a 17.5 tonne carbon saving.

In addition to these carbon saving projects, the College achieved a **Green Impact Platinum Award**; the student group Clare Goes Green won an Excellence Award for a composting project; and last year's Tangled Planet exhibition organised by the College Office won a National Green Impact Award. These awards recognise the College's sustainability improvements beyond building projects and staff actions, requiring input from across the College community.



Clare Hall College

Gardens: The gardening team has expanded **on-site composting** at 5 Herschel Road and West Court, using leaves, grass cuttings and old plants to create compost that is returned to beds instead of purchasing peat-based products.

Chemical pesticides were **avoided** in favour of natural approaches that support soil health and biodiversity, while planting choices focused on resilient species that can regrow from cuttings, reducing the need for new purchases. When additional plants were required, these were sourced locally, including from social enterprise nurseries that support community wellbeing.

Wildlife observation has been encouraged through a chalkboard at the Porters' Lodge, as well as the distribution of nature guides and activity materials that promote environmental awareness.



Housekeeping: The housekeeping team has strengthened reuse and recycling through **donation bins** placed with the British Heart Foundation at key residential sites, helping to reduce end of term waste.

Food waste bins have been introduced across student housing, with weekly collections diverting organic waste from standard disposal.

Bedding packs for new residents are offered at reduced rates when purchased second hand, with items sanitised and reused each year.

Furniture has been **repaired** or **refurbished** where possible and usable items donated rather than discarded.



Catering: The kitchens have adopted the **CamEATS ZERO Sustainable Food Initiative**, supporting responsible sourcing, reduced waste and expanded plant-based options. Meatless Monday has been introduced as the newest weekly action encouraging low impact choices at the start of the week.

The **Carbon Crushers** initiative runs on Tuesday lunchtimes, offering dishes where a portion of the meat is replaced with a plant-based alternative, typically using a 40:60 ratio.

Menus have included vegetarian tasting meals, responsibly sourced fish dishes and plant-forward formal dining.

Leftovers are repurposed into soups, stocks, breadcrumbs, fish cakes and next day lunch items. The **Leftovers** initiative invites evening diners to take a second portion home for £1 when the food cannot be reused elsewhere.

The College has operated a **fully electric, gas free kitchen** since 2022.

A reusable container programme reduces single use packaging, supported by a small charge on disposable boxes.

A partnership with a supplier that rescues surplus produce has enabled the use of thousands of kilograms of fruit and vegetables. Kitchen scraps and used coffee grounds are composted in the GSB allotment.

Energy: The College has improved building energy efficiency by insulating two older buildings, expanding building management systems to reduce unnecessary heating, and continuing an upgrade programme that aims for full LED lighting.

Catering: Darwin's catering team aims to minimise the impact of its operations on the environment through local sourcing of ingredients, the promotion of plant-based foods, the reduction of food waste and minimal use of plastics.

Ruminant meat is not served in College, while vegetarian options are the default Formal Halls, and vegan and vegetarian options are promoted and subsidised in daily service. Leftover food is made available free of charge via the **Community Fridge**, and fruit and vegetables grown by student volunteers are regularly used in College catering.

Student initiatives: **Project Second Life (PSL)** is an award winning, student-led reuse scheme encouraging students to donate the items they don't need any more when they leave College, and offer them to incoming students to save money and reduce waste. Unwanted bikes are also serviced and sold on.

Green Week is an annual opportunity to students to discuss green initiatives and engage with sustainable ideas. Introduced in 2025, the **Sustainable Travel Grant** covers the cost differential between a flight and a more sustainable travel option for students travelling for research purposes.

Energy: An **air-source heat pump** has been successfully introduced to provide low-carbon heating and hot water for student accommodation at Gwen Raverat House, replacing the previous gas boiler system.

Waste: The College recognises its responsibility not only for the waste it produces, but also for the behaviour of its members. It aims to promote best practice in waste reduction and responsible waste disposal. The College Catering Department has been a leader in this area, having segregated food, recyclable and non-recyclable waste for several years, as well as taking the decision to remove single-use takeaway cups and containers.

In May 2025, the College implemented four separate waste streams in line with new UK government regulations. To support responsible waste management, bin signage was also updated to include consistent colour coding and clear labels. The College also weighs its waste to monitor disposal habits, track progress, and to ensure that the College stays both sustainable and compliant.



CASE STUDY

In 2026, building will commence on the Pump House, an innovative approach to green energy which will use **water source heat extraction** from the River Cam to provide heating and hot water needs for the College's Silver Street site.

The Pump House, visible from the river, will respond to the industrial heritage of this stretch of the Cam, housing the equipment required to safely extract and return the water without detrimental impact on the river temperature or wildlife.

At the same time, extensive refurbishment of the College buildings to replace windows and improve insulation will ensure that the site is as energy efficient as possible.



CASE STUDY

Homerton's extensive gardens and grounds are central to College life, and over the past year its sustainability work has spanned both the energy used across the estate and the biodiversity of those grounds.

Gas consumption has fallen by around 22% since 2017-18, from **5,766 MWh to 4,476 MWh**, with the steepest drop — roughly 13% — coming in the most recent year. Much of that progress follows a smart heating programme rolled out with EcoSync, under which more than 530 intelligent radiator controls now manage heating room by room across the main site and the College's residences. Using adaptive scheduling and occupancy data, the system heats rooms only when they are in use. Residents can also flag empty rooms through a QR-code "away" function, and reductions of **over 45%** were recorded in the Queen's Wing and Mary Allen residences. Across the buildings analysed, the programme cut heating energy use by 47% over the 2025-26 season, **saving around 31.5 tonnes** of CO₂e.

22%
REDUCTION
IN GAS
CONSUMPTION
SINCE 2017

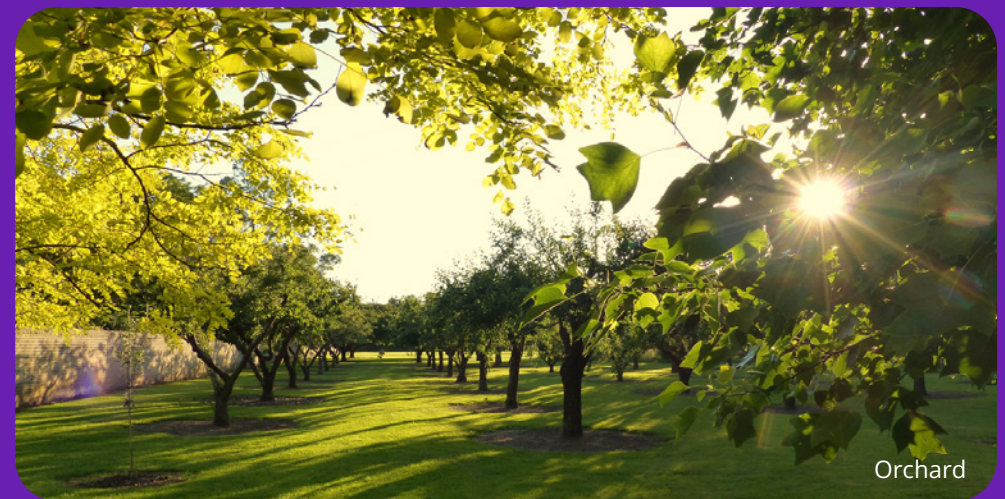
In the grounds, the gardening team have significantly expanded the College's wild flowering areas, now mown rotationally at the end of summer with one area left fallow each year to support wildlife. Dead wood is retained across the site to create habitat, and the tree stock has been steadily increased over the past eight years as part of a long-term regeneration programme.

The College is also working to bring students closer to this environment. A new permanent nature trail is being created to link academic disciplines to the plants, animals and habitats found in the grounds, and supervisors are being encouraged to draw on natural examples close at hand in their teaching. Together, these efforts reflect Homerton's aim to value its green spaces as highly as the efficiency of its buildings.

An educational nature trail: Homerton is developing a permanent nature trail that makes the biodiversity of its grounds more visible and shows how it contributes to the academic life of the College. Discreet wooden QR-code markers will let students, staff and visitors reach short digital resources, stories and research examples as they move through the grounds.

The trail links each undergraduate subject studied at Cambridge to a particular tree, wildflower, animal or habitat at Homerton. The orchard is tied to Newton's apple, the lawns to land economy, and bird behaviour to developments in artificial intelligence. As the project grows, students will be invited to contribute content of their own.

By connecting the species and habitats on the College's grounds with teaching and research, the trail aims to encourage people to take greater notice of Homerton's green spaces and to value them more highly. It is due to open for the start of the 2026 Michaelmas term.



Orchard

Jesus College

Since the last report in 2023, Jesus College has advanced a wide range of initiatives across energy management, biodiversity, waste reduction and student engagement as part of its Sustainability Strategy 2020–2030.

Biodiversity and Grounds Management: The College continues to strengthen biodiversity across its extensive 33-acre site through targeted ecological improvements and climate-resilient planting. Recent initiatives include **increased wildflower areas** and the expansion of pollinator-supporting habitats such as dead hedges, wood piles and an enhanced wildlife pond.

Wildlife is often spotted around the College. This year, a species of weevil new to Britain was identified on site. The weevil was identified by Mark Gurney, a national expert, and Max Barclay of the Natural History Museum as *Othiorhynchus corruptor*, a Mediterranean species. A muntjac deer is a regular visitor, and the College hosts a resident family of foxes. Both visitors and College members regularly admire the wildlife as they explore the extensive nature trails.

The gardens team has transitioned almost all machinery to electric models, eliminated herbicide use, adopted no-dig practices to reduce carbon dioxide release from the soil, and significantly expanded composting.

Student-Led Second Life Scheme

Now in its second full year, the student-run “**Second Life**” scheme plays a growing role in reducing waste to landfill and encouraging reuse. The initiative collects unwanted clothing, bikes, kitchen and household items from outgoing students and redistributes them free of charge to incoming and returning students. This reduces textile and materials waste, lowers the demand for newly purchased goods, and promotes a culture of circularity within the community.

CASE STUDY

New solar panels were installed on top of two Jesus College buildings, The Forum at West Court and the gym, as part of the College’s continued investment in low carbon, energy efficient improvements to its estate.



182 new photovoltaic (PV) panels were installed, covering an area of 370 square metres (the size of one-and-a-half tennis courts). The new PVs will allow the College to self-generate an estimated 70 megawatt hours of clean energy in a typical year. They will also help to achieve annual carbon savings equivalent to around 13.5 tonnes per year.

King's College

Biodiversity: A paper co-authored by Head Gardener Steven Coghill and researcher Cicely Marshall, Urban wildflower meadow planting for biodiversity, climate and society: An evaluation at King's College, Cambridge published in *Ecological Solutions and Evidence* on behalf of British Ecological Society, has ranked within the top 10% of most-viewed papers published by the journal in 2023, according to the journal's publisher, Wiley.

The College wildflower meadow continues to flourish and provide a home for a variety of plant species and insects.

Building improvements: The College is investing in building baseline data on energy and water consumption to inform a sustainability strategy which will be presented to the Governing Body in 2026. Heat meters were recently installed across the main estate, to accurately measure the thermal energy delivered by the College's heating system, which is essential for monitoring energy usage and improving efficiency. By providing precise data, they support sustainability objectives through enabling reductions in energy consumption and carbon footprint.

The College has also invested in a water efficiency trial aimed at enhancing sustainability across the estate. This initiative includes installing flow restrictors on toilet cisterns and replacing taps to reduce flow rates, while maintaining user experience.



Credit: Edward Valletts

Waste and recycling: King's has introduced food waste caddies and designated recycling bins across all office and residential spaces.

Student initiatives: The undergraduate Green rep, Alexis Lambert-Dowell, has set up a Library of Things to make more items available on a loan basis that can be re-used and cut down on waste and overconsumption.

Lucy Cavendish College

Here are some of ways in which Lucy Cavendish is working to become more sustainable:

Travel: College staff are auto-enrolled into the **bike-to-work scheme**. The College owns two motor vehicles (two all-electric vans).

Initiatives: The College community has launched various sustainability initiatives, including a biodiversity event, clothes swap, sustainability bingo, and a litter-picking marathon.



Biodiversity: The College has installed new **bird boxes and bee hotels**, as well as relandscaping to increase biodiversity, and has introduced a number of environmental policies (such as no hedge cutting during nesting season).

Societies: The JCR Green Officer represents the student voice in the College's sustainability work and helps develop practical initiatives to make College life more environmentally conscious. This includes projects such as a "Library of Things", relaxed welfare-oriented planting events during Exam Term, and student input into broader sustainability discussions and policy decisions. The Green Officer also liaises with Green Officers at other Colleges to share ideas, gather information, and support wider sustainability efforts across Cambridge.



Buildings and Energy: The College's new eco-friendly building meets and exceeds the Passivhaus standard. To avoid fossil fuels, it uses air-source heat pumps to provide heating and hot water; a first for Cambridge College accommodation. Across the site, **100% of electricity used in College buildings is supplied by renewables** (with over 80% generated from solar farms within 20 miles of Cambridge).



Awards: Lucy Cavendish College has received the **Platinum Award for Green Impact**, reflecting the great progress made with infrastructure and procurement. The new eco-building won **Best Project** at the RTPI East of England Awards for Planning Excellence and the Architects' Journal Award for **Best Higher Education Project Award**. The College's sustainability research projects have received multiple awards, including the Green Impact **Excellence Award** (three years in a row) and the **National Innovation Award** (for a pioneering project that uses emerging tech to better translate and visualise emissions data).

Drink: Single-use plastic water bottles are not available for sale. Instead, the College has free water refill stations.

Investments: Lucy Cavendish has fully divested from direct investments in fossil fuels and pursues positive investment opportunities (such as renewable technologies).

SINGLE-USE
PLASTIC WATER
BOTTLES
BANNED

Murray Edwards College

The College has redesigned some of its borders and moved to **planting more perennials and drought and shade tolerant plants for sustainability**. The waste created in the gardens has been composted or shredded, and in the autumn all of the collected leaves were composted for mulch.

Murray Edwards has also worked to attract as much wildlife as possible, by creating habitat such as **log piles, dead hedges** and a **wildlife pond** for insects and invertebrates to live in. These efforts were rewarded by sightings of wrens and wild mice nesting in the dead hedges. Around 20 bird boxes, installed to encourage nesting, are monitored regularly, and wildlife sightings are recorded on the University biodiversity monitoring and data collection site, with at least 50 species reported.



CASE STUDY

To improve the thermal performance of the College library's barrel roof, and ensure water tightness, the insulation of the main barrel section of the roof has been replaced with 120mm thick **Polyisocyanurate (PIR)** insulation. This was chosen because it offers one of the lowest thermal conductivities of all common insulation types, provides excellent fire resistance, and is highly resistant to moisture, mould, and decay.



Existing insulation



New insulation



Finished coat

The specific installation method of “splicing to meet the curve of the barrel” was a critical detail. This custom fitting eliminates air gaps and weak points (known as thermal bridges), ensuring that the excellent performance is achieved uniformly across the roof's complex geometry. It has the potential to achieve a heat loss of over 90% compared to a very poor starting condition and nearly 50% compared to the minimum legal requirement for an upgrade.

In addition, the superior insulation minimises cold surfaces and drafts, which reduces temperature fluctuations. This ensures a more comfortable and stable internal climate for students and staff using the library throughout the year.

Newnham College

Over the past couple of years, Newnham has advanced its commitment to sustainability through a range of impactful initiatives.

Biodiversity: Newnham's Head Gardener has recently promoted a member of his team to be Lead for Biodiversity, Training and Education, organising tours, talks, and workshops to raise awareness of these issues.

Grounds management includes creating **diverse grassland habitats** through mosaic cutting, monitoring wildlife via moth traps and bumblebee transects, and reporting through iNaturalist. Sensitive management of badger setts, hedges, and trees continues, with ivy retained where possible and new native hedges planted. The College is introducing drought-tolerant species and maintains non-toxic cleaning practices using O₃ water and plant-based products.

Building Improvements: A recent six-month project rewired the College libraries and Skilliter Centre with LED **lighting** and **motion sensors**, reducing energy use and extending fixture life. Single-glazed windows in Grange Road were replaced with heritage double-glazed units made from **sustainable wood**, improving insulation. TRVs were installed across College properties.

Food and Catering: Newnham prioritises local, seasonal sourcing and has introduced **culinary borders** for herbs and salads. Single-use plastics and takeaway boxes have been removed. In recognition of these efforts, Newnham achieved the **Gold Green Impact Award** in 2024/25.

Energy: Three postgraduate properties have been de-gassed and fitted with **air-source heat pumps**. **PV panels** were also installed on one property, reducing reliance on fossil fuels.

Waste and Recycling: Following a successful re-tendering process, the College now sends zero waste to landfill. Waste is sorted and recycled by Ellgia, supported by staff training and a "**Trash Talk**" awareness day was held in College in 2025, which invited other Colleges to share expertise and learning. Sustainability inductions are provided for all new students.

Student Initiatives: Newnham's active "**Shrub Club**" student society manages the student permaculture gardens and allotments). The JCR and MCR promote reuse through termly swap events and hold regular litter- picking events fostering a culture of sustainability.

CASE STUDY

To further complement the existing staff and student allotments, a Newnham student permaculture garden was established in 2021 as part of the College's 150th anniversary celebrations. Its creation by student Lily Hands, the founding President, and the Newnham College Gardeners coincided with a period when outdoor spaces gained renewed importance following the Covid-19 lockdowns.

Management of the garden is now shared between undergraduate and postgraduate students, with ongoing support from the College Gardeners and the Garden Committee. The initiative has led to the formation of Shrub Club, a student society that organises events such as Apple Pressing, Wreath Making, and Seedling Swaps.

Students report significant benefits, including the opportunity to grow food from scratch and engage in sustainable practices guided by permaculture principles: care for the earth, care for people, and fair share. The garden also fosters community, wellbeing, and biodiversity, providing a space for collaboration and environmental stewardship. A student member remarks: "The space is a sanctuary away from deadlines and the stress of an intense degree where we can build something together and focus on giving back to the earth."



Peterhouse College



Peterhouse is endeavouring to decarbonise all its activities to meet its 2048 Net Zero target and a priority is addressing the carbon emissions associated with the College's heating and hot water. In this respect, a number of immediate measures have been introduced, including the use of "smart" radiator control valves, refurbishments to reduce heat demand, and optimisation of boiler control systems. These have been successful in **reducing gas consumption by around 20% over the past three years.**

An exciting new project currently underway is the installation of a novel, **solar-assisted ground-source heat pump system** in Cosin Court. This comprises 32 boreholes (some almost 200m deep), two 100 kW heat pumps, thermal storage tanks and arrays of PV and solar-thermal (ST) panels, totalling 45 kW_e and 350 kW_t peak capacity respectively. Heat from the ST panels will replenish the ground during the summer, preventing the gradual drop in ground temperature that would otherwise occur, and allowing a high coefficient of performance (ratio of heat delivered to electricity consumed) to be maintained. The solar-assistance provides a form of inter-seasonal energy storage, thereby reducing peak electricity consumption relative to other heat-pump solutions.

The Environment Committee is currently reviewing ways to decarbonise heating in the rest of the College with solutions likely to include a combination of ground-source, air-source and river-source heat pumps. Consideration is also being given to the proposed **Cambridge City-Centre Heat Network**, which Peterhouse has supported via partial funding of its Detailed Development Plan.



Biodiversity: Peterhouse has been recording biodiversity in the College grounds since 2017 through termly biodiversity surveys led by Dr Justin Gerlach, Fellow, assisted by students. A total of **989 animal species have now been identified** in College, from badgers all the way down to the tiny and rare pale giant oak aphid.



Peterhouse was included in the Cambridge Colleges Biodiversity Working Group's survey of College gardens and is implementing the management recommendations aimed at maintaining and improving biodiversity.

The College is the central Cambridge site for the Wellcome Sanger Institute **Tree of Life BIOSCAN insect genetic diversity monitoring programme**, which is monitoring insect numbers over a five-year period.

Queens' College

A major step of Queens' commitment to sustainability has been successfully reached following the environmental refurbishment of the Erasmus Building.

Designed by Sir Basil Spence and opened in 1961, the Erasmus Building was the first modernist structure along the River Cam. Now, over 60 years later, it has undergone a transformative £8.6 million upgrade, preserving its distinctive architectural heritage while significantly enhancing its energy efficiency and accessibility, and transforming the student experience.

To enhance the building's overall environmental performance, and provide benefits to the surrounding buildings and lay the groundwork for future decarbonisation plans to take place across the site, several key improvements have been made, including:

- High-performance triple glazing, new insulation to the roof and walls, and solar shading to reduce heat loss in winter and overheating in summer.
- **Solar photovoltaic panels** Installed on the roof to supply clean electricity to the building.
- Implementation of **Mechanical Ventilation Heat Recovery (MVHR)** systems, which recover heat from outgoing air to pre-warm incoming air.
- Replacement of the gas-fired heating system with **Air Source Heat Pumps (ASHPs)**, resulting in an estimated 90% reduction in carbon emissions and 65% reduction in energy demand for heating.

In total, these measures are expected to reduce the building's annual carbon emissions by approximately 50,000 kg.

Overall, the College aims to reduce its carbon footprint by 50% from 2020 levels by 2030, and to net zero by 2045 by:

1. **Focusing on Clean Energy** - replacing the existing gas fired boilers with electrically powered heat pumps and to focus on clean electricity supply.
2. **Focusing on Demand Reduction** through fabric improvements such as upgraded windows and additional insulation, efficient equipment and active management and monitoring.



Erasmus Building

EMISSIONS
REDUCED BY
50,000 KG

CASE STUDY

Owlstone Croft

As part of the College's pathway towards a net-zero educational estate, the development at Owlstone Croft serves as a blueprint for sustainable student living.

The centrepiece of the new development consists of four student residential terraces engineered to the prestigious Passivhaus Classic standard. By prioritising ultra-high-performance thermal insulation, eliminating cold bridging, and meeting strict international airtightness targets, these buildings retain heat exceptionally well.



Owlstone Croft

While the new structures showcase modern engineering, the existing campus properties are undergoing an aggressive green retrofit. Legacy gas boilers are being replaced by cleanly powered Air Source Heat Pumps (ASHPs), supported by a solar photovoltaic (PV) panel array on the roof of Block B.

Because Owlstone Croft shares a direct boundary with the Paradise Local Nature Reserve, preserving the local ecology is just as critical as reducing carbon emissions.

Traditional lawns are therefore being replaced by pollinator-friendly "bee lawns" and species-rich damp neutral grasslands. New native trees and hedgerow corridors, including stilted field maples, are being planted between the buildings, while the building envelopes will feature integrated nesting boxes for native bird and bat species, biodiverse green roofs, and rain gardens.

Selwyn College

Building on a long-term commitment to sustainability, Selwyn College continues to reduce its environmental impact across buildings, grounds, catering, and operations.

Biodiversity and grounds: The gardens team recycles waste wherever possible through mulching and wood chipping, with remaining green waste and cardboard sent for composting. Lawns are no longer watered. New planting uses drought-tolerant, clover-rich mixes that support pollinators. Wildflowers were seeded near West-By-Lane in 2024, with plans for more sites. Chemical use has been reduced, and heat-based methods are being considered for weed control. Pesticides have been fully phased out, and over the past five years older petrol-powered machines have been replaced with electric or cleaner alternatives.

Buildings and energy efficiency: Two new dishwashers installed in summer 2025 use less water and electricity while reusing the heat they generate. In 2024, Cripps Court installed 70 solar photovoltaic panels, **increasing green energy capacity by 50%** and reducing Selwyn's carbon footprint by over 22,000 kg of CO₂ each year. Rotary driers were installed across all off-site hostels in 2024, allowing natural clothes drying and reducing energy use.

Food, catering and housekeeping: Since 2015, catering oil has been converted into **biodiesel**, and organic food waste composted for use in the gardens. In 2023–24, plant-based cleaning products and washable cloths replaced disposable options. **Reusable containers and cups** now replace single-use items. Staff training promotes energy-saving practices and careful meal planning to reduce waste.

Waste, travel and digital systems: Food compost caddies have been in use in all College accommodation since 2024. The College now uses **recycled, unbleached paper products**. Many routine processes, such as guest check-ins and meeting materials, are now handled digitally to cut paper use. Train travel is prioritised, car sharing encouraged, and vehicle use reduced through improved manual handling equipment.

**50%
INCREASE IN
GREEN ENERGY
CAPACITY**

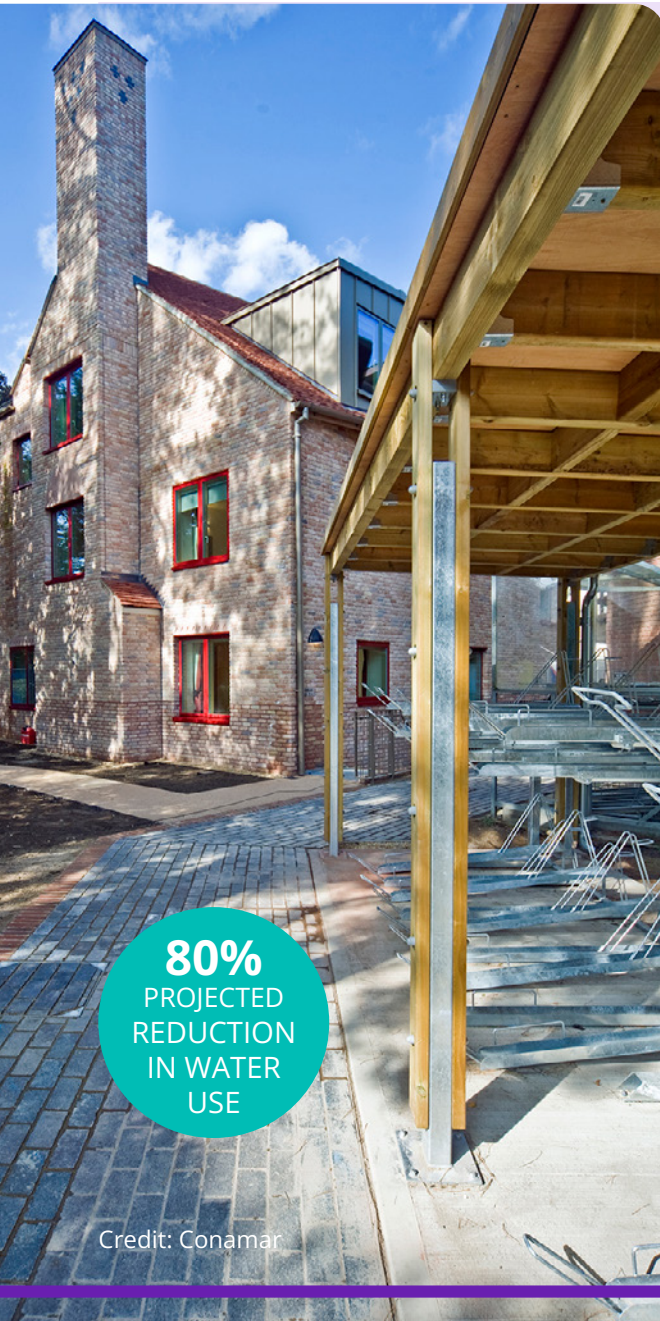
CASE STUDY



In 2024, a new **wildflower meadow** was planted along West-By-Lane, turning a plain grass area into a colourful, wildlife-friendly space. The mix of clover and other drought-tolerant plants provides food for bees and butterflies while needing far less watering and maintenance.

It has already become a cheerful feature of the College grounds, changing with the seasons and attracting plenty of interest from students, staff and visitors. The project shows how small changes in planting can make a big difference for nature and sustainability, and the College is looking forward to creating more areas like it in the future.

St Catharine's College



80%
PROJECTED
REDUCTION
IN WATER
USE

Credit: Conamar

Since 2020, St Catharine's has publicly stated that working to address climate change is one of the biggest challenges that humanity has ever faced.

St Catharine's **published its first environmental sustainability strategy** in 2022, led by its Green Working Group of students, staff and Fellows, and with the full support of its Governing Body. This strategy set out what the College means by environmental sustainability and why it is important, as well as what the College intends to achieve and how these goals will be delivered. For the first time, in this new strategy, the College announced an ambition of achieving carbon-equivalent net zero status by 2040.

In 2023, St Catharine's published a **roadmap document** explaining how it intends to achieve net zero status by 2040, backed up by detailed action plans covering different areas of life in the College: purchased electricity, energy usage, purchased goods and services, construction, travel, waste, investments and community engagement.

Two years on and there has already been a **great deal of progress**:

- **194 solar panels** saving roughly 14,000 kg of CO₂ every year.
- **Six air-source heat pumps** saving over 9,500 kg of CO₂ every year.
- **160 student rooms** using heating sensors that already save more than 16,000 kg of CO₂ each year.
- A plan for **phasing out farmed ruminant meat** by 2027 in parallel with improving plant-based food options.
- **153 food caddies** and **11 communal food waste bins** have been introduced across the College estate.
- **New student accommodation** opened in September 2023 with sustainably sourced cross-laminated timber, triple-glazed windows, high-performing insulation and a new bike store, along with fixtures that should reduce water use by up to 80%.

CASE STUDY

St Catharine's was delighted to receive planning permission from Cambridge City Council in October 2024 for 114 solar panels on the roof of E/Gostlin buildings (to power heating, air conditioning, lights and sockets) and a further 80 solar panels on the roof of postgraduate accommodation on Russell Street (to power lights, sockets and the two air source heat pumps installed last year).

The last of these panels was installed in October 2025 and together they will generate approximately 66,000 kWh annually and save in the region of 14,000 kg of carbon dioxide every year.



St John's College

5TH
CONSECUTIVE
GREEN IMPACT
PLATINUM
AWARD

Over the past year, St John's has completed three major postgraduate accommodation projects as part of its long-term plan to modernise and decarbonise student housing. The developments include renovated heritage properties and **new low-carbon homes**, all designed to increase capacity, improve accessibility, and reduce the environmental impact of the St John's College estate.

One of these schemes, the newly built Hinsley Lane development off Wilberforce Road, is one of the largest student projects in Cambridge constructed to Passivhaus standards. The 39 townhouses provide 245 rooms, 60 of which are occupied by St John's students. Built to a rigorous international benchmark for **ultra-low-energy** buildings, the homes maintain stable indoor temperatures using a fraction of the power of conventional housing.

Two further schemes focused on renovating historic buildings.

- **On Portugal Street**, six 19th-century houses within a conservation area have been upgraded to create 43 student rooms with shared living areas and outdoor communal space. The refurbishment preserved the character of the street while introducing discreet but significant sustainability features including air source heat pumps for heating and hot water, **solar panels**, **enhanced insulation** and **green sedum** roofs.
- **On Madingley Road**, two Grade II-listed houses have been converted into nine self-contained flats for couples and families. All fossil fuels have been removed, with heating and hot water now supplied by **air source heat pumps**. Windows have been secondary-glazed or replaced, and additional insulation installed. The shared courtyard has been improved with new paving and planting.

All new and refurbished postgraduate homes offer efficient electric heating, high-quality facilities, and easy access to the main College site.

This year, St John's also received its fifth consecutive **Green Impact Platinum Award**, recognising sustained work across the College to improve environmental performance including energy use, sustainable food, waste management, recycling, and biodiversity.



Trinity College

Building Improvements/Energy: In November 2025, Trinity commenced work to install an **electric boiler plant** at a major site on its grounds, contributing to reliable and resilient heating across the College. The project replaces a gas-fired system, which serves over 200 rooms across the main estate and represents around 14% of Trinity's operational gas consumption. This transition supports the College's long-term sustainability objectives and contributes meaningfully to reducing its reliance on fossil fuels.

Biodiversity: Trinity's Gardens Department is working to incorporate a **Climate Resilient Garden Strategy**, reduce water use, and foster biodiversity. The College harvests rainwater in a 23,000-litre tank, while rainwater collected from nearby roofs irrigates an orchard at Burrell's Field. There are plans to expand collection across additional buildings in the future. To deal with increased pressures, Trinity is also using more **climate-resilient species** and tree ring mulching to reduce water stress.

Trinity's Gardens Department also encourages citizen science and biodiversity initiatives to collect data, engage the community, and inform new planting approaches. In addition to regular surveys with leading academic partners, the College participates in both the **Big Garden Birdwatch** and the **Big Butterfly Count**, which can help assess the health of the environment. Using iRecord and eBird, Trinity members have contributed to data-driven research and conservation efforts across the College grounds.

Catering: Trinity has **reduced** the use of single-use plastic containers by approximately 90% and now bottles around 50% of its water in-house in reusable containers. The College has **retrofitted** its kitchens with high-efficiency electric systems, and cooking oil is converted into biofuel, saving over 100 tonnes of CO₂ each year.

The Catering Department at Trinity has adopted a wider ethos of stewardship and accountability in the food chain, reflected in its sourcing policies. The meat found on Trinity's plates comes from surrounding counties and the fish from British waters, following the Marine Conservation Society's rating system; menus feature seasonal ingredients wherever possible.

90%
REDUCTION
IN SINGLE
USE PLASTIC
CONTAINERS

CASE STUDY

Alongside efforts to transform the way it powers its main campus, Trinity has incorporated sustainability as a key feature for its landholdings. One of the most visible examples of this commitment has been the push to **decarbonise the Cambridge Science Park**, founded by Trinity College in 1970. Spread across 152 acres, the Science Park is comprised of 60 buildings, 170 companies, and over 7,000 employees. **50% of Trinity's buildings on the site no longer use gas**, with the aim to reduce the reliance on fossil fuels even more in the future.

Credit: Harrison Bunning



Trinity Hall

Trinity Hall continues to take a whole-College approach to sustainability with ambitious plans for the future and major new, sustainable, refurbishments in its building stock.

Buildings: Recent building work has reflected this commitment to sustainability. In the College's Central site, upgrades to O staircase, which is predominantly student accommodation, were the first to include additional insulation on the internal face of the external walls, **secondary glazing** and **solar thermal panels**, providing a wonderful, modern improvement to this 19th century building.

An ambitious project to refurbish student accommodation and event space at Bishop Bateman Court will be the first to totally **de-gasify** the building and have it run solely on site-generated green energy. This will involve the addition of **air-source heat pumps** and solar panels included in the design for the refurbishment of the 50-room hostel.

STUDENTS: Overall the College's commitment has been reflected and supported by students' recent success in the University's Green Impact Award where they secured a Platinum award.

The award reflected in large part the College's adoption of a new **Sustainability Strategy** and a variety of student-run initiatives which included a College litter-pick during **Green Week** and a Giving Day supporting sustainability initiatives such as a new solar array.

The sustainability Strategy includes an aim to decrease overall energy consumption by 20% and the College's emissions by 60% by 2035.



Credit: David Valinsky

Catering: Trinity Hall's catering team have long embraced sustainability and have their own sustainability policy. While the College has long had a "**meat-free Monday**" and a "**Fish Friday**" (as well as having vegetarian and vegan options for all meals since 2017) the team have also reduced o reliance on ruminant meats this year, recognising their high-impact on greenhouse gas production.

Wolfson College

In 2024/25, Wolfson College transformed its catering facilities with a **fully electric kitchen refurbishment**, eliminating gas entirely and making a major step towards decarbonisation.

The project features a state-of-the-art **Enjay Lepido** heat-recovery unit with patented **Particle Repellent Geometry (PRG)**, which allows kitchen exhaust to pass through without clogging, efficiently capturing heat and returning it to the building, reducing heating costs by up to 90%. Alongside a modern back-of-house extension, upgraded ventilation, and innovative rooftop plant, the refurbishment creates a low-carbon, future-proof space for formal dining, café services, and student life.

90%
REDUCTION
IN HEATING
COSTS



Thank you

This report was compiled by Laura Kenworthy,
Communications Manager at Darwin College, on behalf of
the College Bursars' Sustainability Sub-Committee.