



JESUS COLLEGE  
CAMBRIDGE

# January 2024 Progress Report

## Jesus College Sustainability Strategy 2020-2030



## Foreword

Jesus College aims to be recognised globally as a leading academic institution where sustainability is intrinsic through engagement, collaboration, and innovation.

The College currently has about 500 undergraduate and 460 postgraduate students, most of whom are full-time and living in accommodation managed by the College. There are around 175 Fellows and Research Associates and 205 staff, with a variety of working patterns. Our ambition is that every member of our community will understand and embrace the principles of sustainability and act as a catalyst for positive, sustainable change for generations.

The College published its [2020-2030 Sustainability Strategy in June 2021](#), with three strands:

1. Identify and implement sustainable measures on the College site
2. Adopt a sustainability-driven approach to College activities beyond the site
3. Identify and encourage behavioural changes onsite and beyond (in time and space).

The strategy identified a series of aims and targets which the College is working on achieving over the decade. Progress on these will be reported regularly.

This is the second progress report and is designed to be read in connection with the Sustainability Strategy. The aims and targets are grouped according to a selection of the [United Nations Sustainable Development Goals](#) and progress and developments associated with each are reported in turn.

The form of this report is expected to evolve over time as sustainability metrics and reporting legislation evolve.

Christopher Marquis  
Chair, Environment Committee  
January 2024

## Sustainable Development Goal 7: Affordable and clean energy



### Progress against our aims and targets

- **Aim to achieve Net Zero carbon status for Scope 1 and Scope 2 emissions by 2030, avoiding any carbon offsetting as part of any strategy, while recognising that we may be constrained by factors such as local electricity infrastructure, availability of technology, and serious disruption to essential College activities.**
- **Using 2018/19 as the base year, reduce Scope 1 and 2 emissions year on year with target percentages agreed once data has been finalised.**

Energy Consumption (by academic year, September-August)					
		Oct 2021 - Oct 2022*	2020-2021	2019-2020	2018-2019
Natural gas	Main site	4 095 MWh	4 530 MWh	5 030 MWh	4 163 MWh
	External housing	2 415 MWh	2 285 MWh	2 273 MWh	2 440 MWh
	<b>Total</b>	<b>6 510 MWh</b>	<b>6 815 MWh</b>	<b>7 303 MWh</b>	<b>6 603 MWh</b>
	Carbon footprint <sup>1</sup>	1192 te CO <sub>2</sub> e	1253 te CO <sub>2</sub> e	1 343 te CO <sub>2</sub> e	1 214 te CO <sub>2</sub> e
Electricity	Main site	2 183 MWh kwh	1 819 MWh	1 459 MWh	1 598 MWh
	External housing	550 MWh	430 MWh	352 MWh	417 MWh
	<b>Total</b>	<b>2 733 MWh</b>	<b>2 249 MWh</b>	<b>1 811 MWh</b>	<b>2 015 MWh</b>
	Carbon footprint <sup>2</sup>	580 te CO <sub>2</sub> e	524 te CO <sub>2</sub> e	422 te CO <sub>2</sub> e	469 te CO <sub>2</sub> e

\* reporting timeline linked to billing schedule

In 2021-22 non-renewable natural gas provided roughly 71 per cent of the College's Scope 1 and Scope 2 energy requirements, producing 1,192 tonnes (te) of CO<sub>2</sub> equivalent, principally for space and water heating.

By using electricity from renewable sources, the College has significantly reduced its Scope 1 and Scope 2 footprint.

Main site electricity consumption in 2021-2022 is linked to the switch to electricity for all cooking in the catering operations.

- **Engage mechanical and electrical consultants to audit all buildings on the College site, establishing priority areas for improvement and providing detailed baseline data so that we can measure success in future reports.**

In May 2022, building services engineering firm Max Fordham LLP completed an Energy Assessment and Decarbonisation Strategy review. Building on this review, in June 2023 Building Services consultants engaged to review the performance of West Court and Chapel Court - the two buildings representing the largest consumers of non-renewable natural gas - and offer opportunities for the installation of sustainable energy sources and storage.

<sup>1</sup>. Calculated using the [Carbon Trust Carbon Footprint Calculator](#). Summaries in Appendix A and Appendix B.

<sup>2</sup>. Jesus College sourced all its electricity from renewable sources in these years; the values reported are for UK electricity sourced from non-renewable sources, for comparison.

- **Ensure that 100 per cent of our lights are LEDs by the end of 2024, via an accelerated refurbishment programme.**

Steady progress is being made on upgrading the College's lighting to LEDs. The Hall, Quincentenary Library, Boathouse, and Chimney upgrades are all complete. A small number of Quincentenary Library fittings proved difficult to access or replace; these were isolated and taken out of use with no detrimental impact to Library users and staff. Miscellaneous replacement of standard lights with LEDs will continue across the College's buildings.

- **Ensure that sustainability is considered in future infrastructure projects.**

All current works include sustainability initiatives such as removing fossil fuel-generated heating and hot water, adding double or secondary glazing, and enhancing insulation. Wherever possible, and subject to local planning authority consent, materials are sourced from the UK and the entire product life cycle, including embodied carbon, is taken into consideration at the design and procurement stages.

- **Adopt the University's Science Based Targets approach and engage in sharing best practice.**

Data continues to be entered into the Target's calculators. In time, the quality of the data will improve and reflect the changes being made to the fabric of our buildings, which includes planning the removal of fossil fuel-generated heating and hot water and encouraging more sustainable behaviours.

[Professor John French](#) has been engaged to support the College as a Net Zero Advisor. Two new working parties, 'Net Zero Strategy' and 'Decarbonisation', have been instigated and are focusing on the strategy for, and operational delivery of, sustainable solutions for the College and its endowment properties.

## SDG 9: Industry, innovation, and infrastructure



### Progress against our aims and targets

- **Begin a consultation on transport, to include all constituents of the College community, with a view to launching a transport strategy in 2022.**

A [Sustainable Transport Strategy](#) has been approved by Council. The strategy includes an action plan to meet its objectives.

- **Achieve and maintain 60 per cent of staff and Fellows using sustainable transport as their primary mode of transport when travelling to work by 2026.**

The College continues to monitor uptake of sustainable methods of transport for commuting via the Smart Journeys annual survey.

The College has created additional bike parking bays. Extra covered spaces at Park Street are due to be completed in early 2024. Additional showers and a drying room have been created for those using active travel to commute.

- **Commencing in 2022, launch a 15-year capital investment plan to improve the performance of our infrastructure, including electric, water, heating, insulation and waste initiatives.**

Consistent with previous years, £500,000 was approved in the 2023-24 budget for sustainable initiatives across the operational estate. This approach allows the operational teams the agility to respond to mechanical failures and replace equipment in a timely manner. A longer-term capital investment plan is being prepared. It will consider:

- Analysis of current data
- Prioritisation according to the best return on investment (financial cost and carbon cost)
- Projected operational costs<sup>3</sup> and product life cycles
- Consultation and procurement
- Funding sources.

- **Engage with University stakeholders to capture and share data and scientific evidence to influence environmental initiatives.**

The College continues to participate in the Bursars' Environment Sub-Committee and University Transport Working Party, as well as meetings with intercollegiate and University members and third parties.

The kitchen project's ground source heat pump is fully operational and the College has hosted multiple visits and discussions of this technology. In addition, information has been shared across the collegiate community regarding access to [Salix funding](#) and the decarbonisation plan that has been commissioned using these funds.

<sup>3</sup> These are the costs of in-service support (including repairs, regular maintenance, and replacement parts) and disposal, and excluding the costs for any finance spent on concept development, assessments of options, design and manufacture of anything bespoke to us.

## SDG 11: Sustainable cities and communities



### Progress against our aims and targets

- **Increase proactive internal and external communication on environmental issues.**

The College website has been regularly updated. Proactive communications across different channels since the last report have included:

- The launch of the kitchen and dining facilities upgrade
- New studentships for climate science research
- The launch of the College's Sustainable Transport Strategy and the A-Z of sustainability
- A discussion of the College's decarbonisation report
- Achievement of an excellence award at the University Green Impact awards
- Interviews given to relevant publications such as Cambridge University's Endowment Fund annual report
- Environment and sustainability events organised by the Intellectual Forum and activities of its Research Associates
- Individual environment and sustainability initiatives and research involving students, Fellows, staff, and alumni.

The Intellectual Forum was awarded a P4NE grant to tackle fossil fuel investment; this story received media coverage by Bloomberg and other media outlets.

The student members have hosted a number of environmental-themed/green weeks and are progressing an informal second-life scheme for the re-use of unwanted household items.

- **Adapt the students' A-Z guide to living sustainably at Jesus College and publish for staff and Fellows.**

This was [launched](#) early in Michaelmas Term 2023. Additionally, a Sustainable Behaviours Strategy has been developed and is under consultation. It is hoped that it will be approved and circulated soon.

- **Establish a protocol to manage student living space better, including turning lights and computers off, closing windows, and turning the heating off when they leave the room. This change of behaviour could be encouraged via Freshers' week, using data from the previous occupants.**

Utility usage data by household is now published on JNet.

In Michaelmas Term 2023 a trial of Ecosync Smart Thermostatic Radiator Valves commenced in North Court, and a trial revision of residential heating times started.

- **Develop a clear services strategy across the site and our property portfolio by 2022.**

Plans are developing to install Air Source Heat Pump (ASHP) and photovoltaics (PVs) to assist in reducing non-renewable natural gas consumption for heating and hot water in various suitable locations. These include buildings on the main site and student residential houses (HMOs – Houses in Multiple Occupation).

- **Develop and launch a plan to reduce water consumption by 10 per cent by 2024.**

It is anticipated that measures to reduce consumption and simultaneously introduce use of harvested rainwater will play a combined role. Benchmarking data will be considered by the Environment Committee as one of their priorities for 2023-2024.

- **Update our environmental specification for all future building works, with a view to exceeding building regulations.**

All architects and consultants working with the College on building projects are made aware of the College's commitment to sustainability. Current industry standards/frameworks used for environmental buildings projects (such as Passivhaus, Breaam and EnerPhit) will always be considered for adoption when we commence buildings works.

The pace of change is significant, especially when it is related to product design, and so we will continue to engage with consultants so that we have the best possible understanding of emerging technologies that may work well for the College. This includes photovoltaic technology, battery storage of renewable energy, hot water storage and ASHPs, and how they may be fitted in listed buildings.

- **Audit the College's external land and property holdings in order to build a clear picture of where and how improvements can be made.**

This work continues, supported by the College's Net Zero Adviser and the Net Zero Strategy working party (which includes consultants from Evora).

The Housing and Property Manager, working with the Bursar and external property management consultants Bidwells, continues to engage with commercial tenants to promote sustainable behaviours and investment in their built environment.

## SDG 12: Responsible consumption and production



### Progress against our aims and targets

- **Maintain current zero waste to landfill status throughout 2024 and subsequent years for all College operations waste.**

All waste from kitchens and housekeeping is being sorted and the College has maintained its zero waste to landfill status for the past 4 years.

- **Increase the amount of waste that goes to recycling to 80 per cent by the end of 2022.**

Our current overall rate of recycling across the College is 62.12 per cent (calculated from the 6 month period July-December 2023). Prior to that we achieved 58.43 per cent in June to December 2022 and 74 per cent in January to May 2022. The addition of the waste stations across the College and external houses in early 2022 are likely to have impacted the figures. The Lower Park Street bin compound recycling rate is very slightly lower than before, at 64.74 per cent down from 65 per cent.

With the aim of increasing recycling rates to 80 per cent in 2024, this matter needs further consideration.

- **Eliminate single use plastics across the site by 2022.**

Single use plastic is no longer used for customer service and consumer operations. A limited amount of single use plastic continues to be used in the kitchens by our suppliers for purposes such as packaging. In 2024, it remains very difficult to eliminate this while observing food safety and hygiene legislation.

- **Develop purchasing guidelines, which include a product life cycle approach, and train key staff by 2022.**

This work remains outstanding and is a priority for 2024 as an element of the waste management review.

- **Reduce meat-based meals to 20 per cent, increase plant-based meals to 30 per cent, and increase vegetarian meals to 50 per cent by the end of 2021.**

On one day each week College food operations serve vegan and vegetarian food only, and on a second day each week offer fish and vegetarian options only. On other days, when meat and fish are provided, the vast majority is non-ruminant meat and sustainable fish.

Statistics from the College Cafeteria (Caff) only, from July 2022 to June 2023 show:

- Vegetarian main courses served – 10,879 (30 per cent)
  - Compared to 12,645 (36 per cent) in the previous year
- Plant-based main courses served – 7,723 (20 per cent)
  - Compared to 7,541 (21 per cent) in the previous year
- Fish main courses served – 5,950 (16 per cent)
  - Compared to 5,875 (17 per cent) in the previous year
- Meat main courses served – 12,758 (34 per cent)
  - Compared to 9,356 (26 per cent) in the previous year.



Trends have not yet become clear. We are paying close attention to this matter while we seek to understand what is driving meal selection choice.

- **Reduce ruminant meat-based meals to 10 per cent by the end of 2021 with a view to eliminate ruminant meat-based meals by the end of 2022 (original target).**
- **Reduce ruminant meat-based meals to 10 per cent across College catering operations. This excludes commercial activity, where we will continue to encourage non-ruminant meat options (new target).**

The Conference and Catering Office continues to work on reducing the amount of ruminant meat-based meals on offer in College. Ruminant meat is consumed very occasionally and is always accompanied by vegetarian or plant-based alternatives. Non-ruminant meat remains on offer and demand for this has increased in Caff over the past year.

In the last report, it was noted that during July 2021 - June 2022 no ruminant meat was served in Caff. Due to temporary menu changes, there was a small consumption (5 per cent) of ruminant meat in Caff during Michaelmas Term 2023. This data does not yet include other locations and other occasions such as Formal Hall. From Lent Term 2024 onwards, the percentage of ruminant meat served in Caff has returned to 0 per cent.

- **Introduce signage in our catering facilities to inform consumers about the provenance and sustainability of our ingredients.**

The College catering team offers a traffic light system to advise on the fat, salt, or sugar contents of all main dishes in Caff. Where possible, the provenance of produce is reported on menus. The sustainability vision is available on JNet for all College members to see. In future years, the aim is to incorporate further signage for the rest of the operation.

- **Implement a food waste monitoring and data collection system so reduction targets can be set.**

Caff has scraping stations where students and staff scrape their plates of leftover food and this food is then weighed and disposed of. A daily average of 3kg is being collected, which is a small amount, equivalent to less than five per cent of all Caff food plated.

This number does not include kitchen or servery waste; the monitoring system for production and waste per location is outstanding. The best way of monitoring and recording production waste in the kitchen is currently being considered, and next year we aim to report on wasted food per location. When safe to do so food is reused, for example meat cooked and safely chilled is served as jacket potato filling, and desserts kept under a safe buffet environment are reused in the Roost Café.

## SDG 13: Climate action



### Progress against our aims and targets

- **Aim to achieve Net Zero carbon status for Scope 1 and Scope 2 emissions by 2030, avoiding any carbon offsetting as part of any strategy, while recognising that we may be constrained by factors such as local electricity infrastructure, availability of technology, and serious disruption to essential College activities.**

The cost and non-financial feasibility of achieving Net Zero carbon status while avoiding any carbon offsetting is under discussion, with a College position to be taken in 2024.

Completing improvements to our existing buildings remains a key priority, and we acknowledge that this is essential to achieve our challenging targets. Winning hearts and minds within our community to embrace change, such as reducing the number of hours of heating per day, remains a priority. Preparing our community to enable change and accept disruption, such as fluidity in accommodation to facilitate building works, is essential if we are to achieve our targets.

The Maintenance Department is using recycled materials (where possible) for all works. Secondary or double glazing and draught doors are now installed across the College estate, subject to planning constraints.

- **Annual reporting on progress using the Science-Based Targets approach.**

Work on this aspect is in progress (see SDG 7 and SDG 11).

- **Develop a 'Green Hub' for events and training.**

The student-led 'Green Hub' project has been paused.

Student members have introduced an informal second-life scheme for the sharing of unwanted household items.



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