



WADHAM
COLLEGE
UNIVERSITY OF OXFORD

An aerial photograph of Wadham College, showing its historic stone buildings, a central green lawn, and surrounding trees. The text "Sustainability Strategy" is overlaid in white.

Sustainability Strategy

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1. Foreword from the Warden

We know that climate change is the greatest challenge of this century. Along with other universities and centres of research in many countries, Oxford is set to play a key role in developing technologies to meet this existential crisis for humanity and to find a viable future for the planet. At college level, the academic community at Wadham will play its part in this global research effort.

But as a college we also need to make our own community sustainable. This is an ethical imperative, a duty we owe the future generations of young people for whose education we were built. But it is also an academic challenge: to meet this crisis with urgency, we need to harness the ambition and innovation that made Wadham a centre of European science and experimentation in the 17th Century.

I am therefore delighted that the College has produced a comprehensive and hugely ambitious strategy for sustainability. As you will see, this is about much more than practical changes to heritage buildings, important as those are. The strategy covers everything from investment to water usage, academic travel to complex supply chains. In covering the full scope of carbon neutrality, it draws on expertise from our Fellows and many others. Like all ambitious climate change strategies, it is contingent: the technologies are still developing, metrics are difficult, capacity is constrained and, above all, most of this is unfunded. We know we will need to be flexible and alter our commitments against events. There will be many iterations of this strategy. But we know we must do this work and cannot wait until we have secured funding or found every solution before setting out what is necessary. At this moment in the College's history, we would rather make commitments and fall short than be unambitious.

Robert Hannigan
Warden



2. Introduction

It is imperative for now and into the future that sustainability underpins everything we do. Environmental, economic and social sustainability have continued to inform our decisions and our activities. For many years we have been working on a programme of sustainability improvements to reduce our emissions, as well as focusing on a range of activities to improve biodiversity. For example, we have been adding secondary glazing to listed buildings when affordable and conservation approval could be obtained, insulating loft spaces, during refurbishments and new builds – draught proofing, installing low water using toilets, Passive Infrared Sensors (PIR) sensors and Light-Emitting Diodes (LEDs), as well as purchasing low energy equipment. In the past five years we have expanded our sustainability improvement programme, allocating a dedicated budget of £100k a year to projects. We have installed our first set of solar panels, three electric boilers and an electric charging point on our main site. At our Dorothy Wadham Building, opened in 2019, we have installed 15 trees, a wide range of shrubs, bat boxes, and an energy efficient, combined heat and power boiler plant room which produces electricity as a by-product of producing heat.

More broadly, our students adopted ‘Meat Free Mondays’ over fifteen years ago, we have donated our leftover cooked food to a charity supporting the homeless and poorly housed in Oxford (thus also reducing food waste), our gardeners have been composting fresh fruit and vegetable trimmings from the main kitchen, and we have reused existing furniture in our refurbishments wherever possible. In terms of our investment approach, we have published our Statement on Ethical Investment setting out the College’s wider responsibilities and, amongst a list of areas we avoid directly investing in, we are clear that we do not directly invest in companies involved in coal or oil sands.

We recognise the need to do more, quickly, for the sake of our planet and humanity. We have set ambitious targets and, with our Fellows in Climate Science and Biodiversity, we are embracing this as an academic challenge to find solutions that meet climate and net outcome strategies.

Our key commitments:

- To develop action plans and policies to achieve **carbon net-zero** by 2035, aligned to the University of Oxford’s target, with interim targets set for 2030. We will use a science-based carbon emissions target which has been calculated on the scale of reductions required to keep global temperature increase below 2 degrees Celsius (ideally 1.5 degrees Celsius) above pre-industrial temperatures. We have chosen this approach because it is based on the science of climate change and is consistent with the Paris Agreement.
- To use our research expertise to advance and implement effective sustainability solutions that meet climate and net outcome strategies that can be shared at a local, national and international level.
- To deliver a new environmental sustainability engagement plan across the College to raise awareness and deliver behavioural change.
- To deliver estate improvement projects which result in a 20-30% biodiversity net gain by protecting existing habitats wherever possible and boosting ecological features over and above what has been affected.

- To work towards becoming nature positive in our supply chain.
- To avoid, reduce and recycle materials wherever possible.
- To periodically review our ethical criteria for investments, considering the views of other interested parties (for example alumni and students).
- To strengthen our relationships with other colleges, the University of Oxford, other universities, organisations and bodies, and our local communities, to address sustainability challenges.
- To publish an annual report on our progress and performance achievements against our action plans.

Using historic data as our baseline, we are establishing a roadmap in line with the protocols of the Science Based Target Initiative (SBTi) to achieve carbon net-zero. We are focusing on all three emission scopes:

- **Scope 1** emissions are our direct greenhouse gas emissions that occur from sources that we control, e.g. emissions associated with fuel combustion in boilers and for cooking.
- **Scope 2** emissions are indirect greenhouse gas emissions associated with our purchase of electricity.
- **Scope 3** emissions include all sources not within our scope 1 and 2 boundary. Scope 3 emissions, mainly relating to travel and transportation, represent the majority of our total greenhouse gas emissions. Our Scope 3 emissions are not easy to quantify but we recognise our responsibility for them and are determined to collect data to measure them, and seek ways to reduce them and offset them to be carbon net zero. We will focus on the following subset:
 - Business travel
 - Employee commuting
 - Waste
 - Supply chain

The challenge ahead is huge. Our most significant challenges include: financing investment; installing sufficient renewable energy in our historic site; removing gas completely from the College; scheduling in the projects around our normal activities.

Our Sustainability Strategy Group, including student representation, was established to develop this strategy and action plans. This group will continue to provide a co-ordinating role to meet the significant challenges, deliver results and annually measure and report on our progress, reporting to Finance Committee and Governing Body. As part of its work, the group will be responsible for the development and review of the following documents to help deliver this strategy:

- Energy and Sustainable Buildings Plan
- Environmental Sustainable Engagement Plan
- Biodiversity (Net Positive) Plan
- Waste Management and Recycling Plan
- College Travel Plan
- Supply Chain Plan
- Social Sociability Plan
- Carbon Offsetting Plan

The Sustainability Working Group and Sustainable Food Working Group will continue to have an operational focus on enabling and encouraging actions in the College.

We will continue our sustainability journey in an agile way with the aim of ensuring our activities contribute to global efforts and targets to secure a more sustainable future. It is also the collective responsibility and actions of all members of our College community that will be key to the successful delivery of our commitments.

Frances Lloyd
Domestic Bursar

3. Carbon (Net Zero)

3.1 Reductions in energy use (heating/lighting systems, insulation, new building design, self-generated energy)

Baseline Data

Carbon dioxide emissions	2021-22
Scope 1	906,875 KgCO ₂ e (906 TCO ₂ e)
Scope 2	329,000 KgCO ₂ e (329 TCO ₂ e)

We are committed to achieving **carbon net-zero** by 2035, aligned to the University of Oxford's target, with interim targets set for 2030. We will use a science-based carbon emissions target which has been calculated on the scale of reductions required to keep global temperature increase below 2 degrees Celsius (ideally 1.5 degrees Celsius) above pre-industrial temperatures. We have chosen this approach because it is based on the science of climate change and is consistent with the Paris Agreement.

Saving energy reduces our carbon emissions and our bills. The design of our buildings and how we use them have a significant impact on our Scope 1 and Scope 2 emissions. We have a mix of historic buildings, including the foundation buildings dating back to the seventeenth century, more modern buildings constructed in the twentieth century before regulations required higher standards of thermal efficiency (Library and Bowra staircases), and our newest buildings (Dorothy Wadham Building, Dr Lee Shau Kee Building and William Doo Undergraduate Centre). Many of our historic buildings in particular are thermally inefficient and require heating to a higher level, increasing our carbon emissions.

We have made some progress in reducing our energy usage through our sustainability programme to improve our current buildings and ensure that our new buildings are designed to more rigorous sustainability standards than current national building standards. During our refurbishment projects we have been draught proofing windows, installing secondary glazing, adding insulation, and replacing lights with LEDs. We have changed all the lights in the main Library, including the desk lights, to LEDs. The lights automatically dim when there is no activity in some areas, and the result has been savings of around 6.5 tonnes of carbon and £6,000 a year in electricity costs. Following listed building approval in 2012, we added secondary glazing to all the windows in the seventeenth century Donald Locke Staircase.

Sustainability was central to the construction of our new buildings. They have been designed to maximise natural light, there is minimal mechanical ventilation and the buildings on the main site have solar panels on their roofs. In early 2023 we introduced smart radiator valves and room sensors across several student accommodation areas as a pilot, to ensure that rooms are not heated when they are unoccupied and electricity usage is recorded. During October and November 2023, the College expanded the pilot and installed over 100 room sensors across 11 Staircases.

In October 2023, we completed a project to install electrical metering on every staircase on the main site to significantly improve data on electricity usage. This information will help us

to focus on the most energy intensive staircases. Before the project was completed, 85% of the electricity usage on the main site was served by one meter.

We need to do much more. We need to further improve the data we have on our energy consumption in each of our buildings, and, ideally in each room, to fully understand where we need to prioritise our limited resources to make the most impact. Currently, 85% of our gas consumption is monitored on one meter on our main site. We need to complete the roll out of smart radiator valves and rooms sensors across our estate. This data will be critically analysed and will help inform our sustainability plans.

During the summer 2023, we upgraded the insulation in a further 11 loft spaces on the main site. We need to complete the process of upgrading the insulation in all the remaining loft spaces to the highest affordable standards. The reroofing of the north range of our Front Quad in 2024 will continue this work. Where listed building consent can be obtained we will continue to add secondary glazing to the single glazed windows in our historic buildings and explore the possibility of improving wall and floor insulation properties.

We are committed to moving away from fossil fuels as soon as possible. Our Scope 1 emissions are currently high through gas usage for heating and hot water in 90% of our buildings (we also use gas for cooking in our main kitchen). We have 82 gas boilers across our estate in Oxford. Around 80% of the boilers are over 20 years old and are inefficient compared to new versions. We have taken the decision to replace failing gas boilers with electric boilers wherever possible. We have replaced 4 gas boilers with 3 electric boilers on our main site, including one in the Warden's Lodgings. Electric boilers are not the whole solution. They still contribute to our Scope 2 emissions, taking into account that some of the electricity supply comes from renewable generation, and we know that the current electricity supply to the College would not cope with the replacement of all our boilers with electric alternatives. We need to continue to reduce our energy usage and consider on-site renewable generation options. Decisions need to be carefully considered to ensure that the solutions are economically viable investments and meet our climate and net outcome strategies. We will work with our experts every step of the way.

Behavioural change can make a significant difference to reduce energy consumption without the need for financial investment. We are able to control the times when the heating is on. We have made changes to reduce these times with the aim of avoiding any significant impact on the comfort of our buildings. Our Estates Manager will continue to conduct thermal condition reports where there are concerns about low temperatures in particular rooms during the winter months.

College members can turn off lights, unplug electrical appliances when not in use, close curtains/blinds to retain heat at night, and turn the radiator dial down (where fitted) rather than opening windows when the heating is on. Behavioural change has been known to decrease energy consumption by a staggering 30% in some organisations. If we can achieve this, quickly, we will make a significant impact on our Scope 1 and 2 carbon emissions, reduce our need for alternative energy sources and save money to reinvest in sustainability and biodiversity improvements. College-wide, we will continue to engage our community in energy saving initiatives and share our progress.

Our commitments (in so far as we can within the constraints of affordability):

- To develop a new Energy and Sustainable Building Plan.

- Improve the monitoring of our gas and electricity consumption through the installation of more sub-meters.
- Continue to improve insulation (windows, roofs, doors and pipes)
- Reduce gas consumption year-on-year and, by 2035, have no gas appliances in our Oxford estate.
- Reduce electricity usage year-on-year.
- Generate more renewable energy, for example by installing more solar panels and potentially ground and/or air source heat pumps.
- Continue and improve on awareness raising and community engagement.

3.2 Reductions in College travel (students and staff, including international)

Baseline Data

Carbon emissions	2021-22
Scope 3	760,750 KgCO ₂ e (760 TCO ₂ e)

Sustainable travel is key to our strategy. Through a pilot travel survey conducted in 2020, we estimate that travel through business travel, and student and staff travel, is our biggest contributor to our Scope 3 carbon emissions. We are undertaking activities to reduce our impacts and help improve air quality.

We encourage our College members to walk, cycle or use public transport to travel to and from the College wherever possible. We are fortunate that there are good cycle routes within the city and links to the Park and Ride facilities. We provide secure, on-site cycle storage for College members at all our sites and have a salary sacrifice purchase scheme for staff to purchase a bicycle.

We have few parking spaces on-site. Many of our staff live outside Oxford and need to commute by public transport. We provide our staff with interest-free loans to buy season tickets to make their travel more affordable. We have a flexible working policy to enable staff to work from home for some of their contracted hours, where operationally possible and agreed by the line manager, reducing the emissions from commuting to work.

We do not own a College vehicle and arrange for our suppliers to deliver directly to our off-site properties. We use a local delivery company with an electric fleet to help us move items between our sites if we need to do so.

In September 2023, we joined 5 colleges to pilot a 'Final Mile' cargo bike scheme with Pedal and Post, based on Binsey Lane, to deliver parcels to the main site by bike.



The University of Oxford is introducing a staff salary sacrifice scheme for electric vehicles with the option of colleges in a shared service agreement with the University to participate.

For UK students, moving into and out of their accommodation, a car is often the most practical way to transport their belongings. Our term-time accommodation licence for our main site provides financial benefits to our students; however, we recognise this increases the number of car journeys and incurs significant carbon emissions. We have insufficient storage space on-site to offer vacation storage to all our students leaving at the end of term. As we rent the rooms during the vacations to continue to pay for costs, it is not possible for students to leave their belongings in their room. In our limited storage room on our main site, we prioritise free storage for our international students and students in receipt of Crankstart and Reuben bursaries. Our students on term-time licence agreements have the option of a full year licence agreement with financial savings and all students have the option of College-owned accommodation during the summer vacation.

International flights are a large contributor to our scope 3 carbon emissions. We understand they are necessary for our international students who are an important part of our diverse and inclusive community. We are also aware that they are necessary for some of our research, collaborations, conferences and alumni events. We accept that there will always be some air travel that contribute to our Scope 3 emissions. We will look to measure these emissions and work on ways to reduce and offset them.

Our commitments (in so far as we can within the constraints of affordability):

- Develop a new College Travel Plan which will include minimising business travel unless there is no suitable alternative.
- Annually collect data on our Scope 3 emissions from travel through a survey to all College members.
- Year-on-year reduction in carbon footprint associated with College-related travel.
- Consult College members on reducing travel and hold ‘Town Hall’ meetings to inform and engage.
- Offset emissions for essential international air travel.

3.3 Carbon sequestration through offsetting schemes

We will inevitably produce some carbon emissions that are unavoidable due to the nature of our College operations. Carbon offsetting schemes will only be used to achieve net-zero where we have done all we can reasonably do to reduce our emissions.

We are aware that some current offsetting schemes are controversial, as the activity may have happened anyway, or they emit more carbon than they save, or they result in biodiversity net losses. Before pursuing offsetting schemes, we will look to our own academics to help us to identify novel and cutting-edge schemes for sequestering carbon and offsetting our environmental impact that are robust to these challenges.

The following initiatives have been set up to support universities and colleges with their net-zero plans:

[Carbon Coalition | EAUC](#)

The Carbon Coalition is an initiative for universities and colleges to purchase carbon credits for offsetting residual carbon emissions which cannot be further reduced or as part of a net-zero plan to achieve a more ambitious target year.

[UK Universities Climate Network | \(uucn.ac.uk\)](https://uucn.ac.uk)

A group of over 85 universities and research centres working together to promote zero carbon, resilient future. The network enables collaborations with the UK academic sector to advance climate action nationally and internationally.

Our commitments (in so far as we can within the constraints of affordability):

- Develop a new Carbon Offsetting Plan.
- Use scientifically robust principles to justify which emissions can and cannot be offset and regularly reassess these.
- Only use certified offsetting schemes.
- Ensure that any offsets do not cause environmental or social harm and are cost-effective.
- Carefully consider nature-based offsets and those with net societal gains as a critical part of a range of offset solutions when deciding which options to choose.
- Include emissions from business travel and student flights as part of the College's emissions.
- Ensure learning resources are available for staff and students.

4. Biodiversity (Net Positive)

4.1 20%-30% Biodiversity Net Gain on new/upgraded buildings

The natural environment supports all life on the planet, including humans and human society. Nature is also good for mental and physical health and wellbeing in people, and provides indispensable ecosystem services like maintaining good air quality and resilience to flooding. Although certain sites and species are protected, the [State of Nature report](#), published in 2019, suggests that there has been a 13% decline in the average abundance of wildlife in the UK since the 1970s. There have been limited measures in place to value, maintain and enhance wildlife habitats beyond protected areas. As a result, many wildlife habitats and species continue to be lost during developments.

Biodiversity refers to the variety of all living organisms, including animals, insects, plants, bacteria and fungi. Biodiversity Net Gain (BNG) is an approach to development, and/or land management in the UK that aims to leave the natural environment in a measurably better state than it was beforehand. It is consistent with global policy, agreed in 2022, that the world must seek to halt and eventually reverse losses of biodiversity as soon as possible.

Under the Environment Act 2021, all planning permissions granted in England, except for small sites, will have to deliver at least 10% BNG from January 2024. BNG will be required for small sites from April 2024. BNG will be measured using Defra's biodiversity metric and habitats will need to be secured for at least 30 years. BNG can be achieved on-site, off-site or through a combination of both measures.

As part of the development of the McCall MacBain Graduate Centre in 2012, we installed a new roof top terrace garden, 'The Barbara Naylor Garden', transforming the area with a wide range of plants and a rich habitat for birds, pollinators and other species. The garden also provides a welcoming space for people to sit and relax under the pergolas. In 2021, as part of the development of our new buildings on our main site, the garden in our Webb Quad has been landscaped and rejuvenated with a new planting scheme with a range of new trees and drought-tolerant shrubs and perennials. The planting wraps around and through the paved areas and there are a range of seating areas for people to enjoy the garden.

We will continue to work hard to protect and enhance biodiversity as much as practicably possible when we undertake further building improvement or development projects.

Our commitments (in so far as we can within the constraints of affordability):

- To develop a new Biodiversity (Net Positive) Plan.
- To put nature and biodiversity net gain at the heart of our decision-making when undertaking further developments (new and upgrading buildings) on the College's sites to leave the natural environment with a biodiversity value at least 20-30% better than it was pre-development (i.e. a higher level of ambition than regulation requires).

4.2 Nature recovery on Wadham-controlled land (e.g. restoration projects) and buildings (e.g. green roofs)

Protecting and recovering natural habitats on Wadham-owned land wherever possible is an important strategy for the College to help tackle climate change and improve biodiversity. Furthermore, we will continue to play our part in helping to reconnect people with nature to help their health and wellbeing. We are aware that we need to be ambitious due to the urgent need to reverse the decline in habitats and ecosystems.

Our gardeners have been working hard to improve diversity across our sites, planting native trees and shrubs, reducing mowing, reducing hedgerow cutting, and reducing use of pesticides and herbicides. They have also planted an abundant range of pollination-friendly species across our gardens. On our main site, the gardeners have retained several areas of scrub to create habitats for different species, enabling wildlife corridors for hedgehogs and other animals, and the compost areas provide an area for some species to shelter in during the winter.

We encourage our members to relax, enjoy and be inspired in our beautiful gardens and, on most days, our Fellows' Garden, filled with herbaceous borders and an interesting tree collection, is also open to members of the public to do the same.

When we purchased the Iffley Road site in 2015 to build the Dorothy Wadham Building, for our second year undergraduates and some of our graduates, the main natural feature on the site was a single tree. As part of the development, we installed 15 trees (including Rowan, Beech, Malus, flowering Cherry), two green roofs, and borders full of shrubs, climbers and bulbs. We also installed a lawn and seating areas for students to enjoy the outdoor spaces, and bird and bat boxes. The boundaries have been designed to enable wildlife, such as hedgehogs, to move freely through our site.

During summer 2022, we joined a number of colleges in a biodiversity audit pilot conducted with the support of the Department of Zoology. Building on existing citizen science methodologies, baseline data was collected on different land cover types, trees, birds, insects and earthworms on our main site. The dashboard of our results are very interesting. For example, they show that our 163 trees cover 0.83 hectares and currently store 172.13 carbon (tonnes) in their vegetation biomass. Our mowed lawns cover a similar area, 0.82 hectares, and store 0.82 carbon (tonnes) in their vegetation biomass. Further carbon could be stored if our site contained water, meadows and uncut grass. A total of 11 bird species were identified during the survey, including the following birds on the RSPB's list for urgent or moderate conservation - Herring Gull, Great Black Backed Gulls, Yellow-legged gulls, and a Wren. The methodologies used to collect the data have been designed to be repeated so that the metrics can be re-measured in subsequent years. We will use the biodiversity audit to set targets to enhance the biodiversity on our main site, and we will roll out the survey across our other sites, including our sports ground.

Our commitments (in so far as we can within the constraints of affordability):

- Map areas of particular importance for biodiversity across Wadham-owned land, including our tenanted farmland and woodlands.

- Develop ambitious strategies to enhance nature recovery on our land through habitat creation, management or restoration, and investing in strategic solutions that make the land more sustainable and resilient to climate change.
- Include biodiversity priorities and nature recovery strategies in a new Biodiversity Plan. The plan will identify areas to focus for both species and their habitats; including the installation of more bird and bat boxes, hedgehog ‘houses’, more structures for insects to shelter, wildlife corridors, green roofs, and the possibility of introducing living walls, a pond or rain garden, and wilding areas. We will also look to work with our tenants and other land users towards shared goals.
- Undertake annual biodiversity audits.
- Work collaboratively with local partners and landowners to look to link the College’s sites to rural countryside through wildlife corridors.
- Partner with the Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust - <https://www.bbowt.org.uk/>

4.3 On a path towards Nature Positive in supply chains

Though the above measures tackle our direct impacts on biodiversity, we also have impacts on biodiversity globally through the impacts of the goods and services we buy. These indirect impacts can in some cases be much larger than our direct impacts, as shown in the [recent study](#) for Oxford University published in *Nature*, 2022. To go beyond direct UK Biodiversity Net Gain and contribute towards global nature recovery – that is, to be Nature Positive – Wadham will have to consider these indirect impacts too.

We therefore recognise our responsibility in carrying out our procurement activities in an environmentally and socially responsible manner. We are aware that it is also our responsibility to encourage our suppliers and contractors to protect nature and natural systems during the processes to provide products and services to us.

There are various tools and approaches our suppliers and contractors can use to deliver on commitments to protecting nature in the landscapes where they operate from, or where they source commodities from, e.g. timber or palm oil. By investing in nature-based solutions the suppliers and contractors will minimise environmental impacts, stop land conversion and deforestation, and increase supply chain resilience.

During procurement decision-making, we will consider how the suppliers are taking integrated action on climate and nature. These considerations will include:

1. Supply Chain

Have they mapped their supply chain? Do they know where the packaging waste is generated?

For example:

Food suppliers: Do they know where the products, ingredients and packaging come from?

Beverages: Do they know where beverages are produced and bottled?

Clothing and soft furnishings: Do they know where fibres are produced and processed? Have they evaluated the impact on the environment where the goods are being processed, including the wellbeing of local residents (e.g. noise, air and water pollution from the construction and operation of the factory producing the clothing).

2. Risk and Impact Assessment

Have they assessed the impacts and risks on nature? Have they prioritised issues to be addressed and set targets? Have they used certified tools, frameworks and best practices to get there?

For example:

Food suppliers: Do they know the risk of deforestation in food supply chains?

Fish suppliers: Have they evaluated the impacts on fish stocks and assessed the risk of species extinction?

Clothing and soft furnishings: Have they assessed water consumption and discharged pollution from fibre and textile production, and the impact on freshwater ecosystems.

3. Response Planning and Implementation

Have they developed response plans based on risk and impact assessments? Have they involved local communities and partners in formulating/implementing their response plans?

For example

Food and Beverages: Have they ensured that all suppliers are 100% free from deforestation?

Clothing: Do they work with their suppliers to implement sustainable water practices to avoid water pollution? Do they ensure the wellbeing of the people who work in the factory and in the local area?

Plastic Packaging: Have they redesigned their packaging for 100% recyclability?

We are a member of a joint purchasing framework with 22 colleges and the University, contributing to the costs of a Procurement Manager based in the University's Procurement Team. Purchasing decisions for goods and services through the framework routinely considers the environmental, social (including equality) and economic impacts, whilst taking a long-term view.

Our commitments (in so far as we can within the constraints of affordability):

- Develop a new Supply Chain Plan.
- Review the College's supply chains to improve the visibility of suppliers, particularly where activities are interrelated but not necessarily transparent, to understand their biodiversity strategy, environmental performance (including waste and water management) and social sustainability (including equality).
- Work with suppliers who share our ambitions to reduce carbon and nature impacts.
- Increase the use of local suppliers where possible.
- Collaborate with other colleges and the University to leverage products and services which have a lower carbon impact and higher nature positive impact.
- Monitor and report on activity in the supply chain.

4.4 Participation in Nature Positive Universities alliance

The United Nations Environment Programme (UNEP) is the leading global authority on the environment. Their mission is to inspire, inform, and enable nations and peoples to improve their quality of life without compromising that of future generations. UNEP works to address humanity's most pressing environmental challenges – from restoring the ozone layer to protecting the world's seas and promoting a green, inclusive economy.

Universities and colleges have a significant role in the path for nature-positivity. They create knowledge, networks, teach and inspire future leaders, and directly impact on the environment as consumers and landowners. Linking universities and colleges to collaborate for nature and ecosystem restoration has significant benefits for all, now and into the future.

UNEP and the University of Oxford are launching a global network of **Nature Positive Universities** in order to prompt the prioritization of nature and its restoration within the higher education sector; in their operations and supply chains, on campuses and within the cities where they operate. This network will form a major contribution to the United Nations Decade of Ecosystem Restoration, the post-2020 Biodiversity Framework and the Sustainable Development Goals.

Our commitments:

- To join and be an active member of the Alliance of Nature Positive Universities.

5. Waste (zero waste to landfill)

5.1 Reduce waste generated

Carbon dioxide emissions	2021-22
Scope 3	51,988 KgCO ₂ e (760 TCO ₂ e)

We produce a substantial amount of waste every year from all our sites in Oxford. Waste has a significant impact on the environment. We are committed to avoiding, reducing, reusing and recycling materials wherever possible.

We aim to design out or minimise waste during our activities. We look to retain items in place or repurpose them within our sites. We also consider the procurement of pre-used and upcycled products where possible. For example, most of the furniture in our student bedrooms on the main site have been renovated during the refurbishment programmes, rather than purchasing new items. We have also recently purchased some good quality, pre-used furniture where the previous furniture was beyond restoration. Where furniture, furnishings and equipment are no longer required, we redirect them to local charities, such as the British Heart Foundation and Emmaus House, a local charity supporting homeless people in Oxford.

To reduce the use of disposable cups in our waste stream, we have introduced Wadham Keep-Cups for College members to purchase at our Lodge and in the Refectory. Reusable cups are also available next to all our coffee machines. We do not sell water in plastic bottles. Water dispensers are located around the College. We fill our own glass water bottles for meetings and dining venues, and have introduced reusable glasses in our bar. We have significantly reduced our purchase of single use plastics.

We have moved to paperless invoices and committee papers are distributed electronically. Online versions of newsletters and magazines have reduced the number of hard copies circulated. The default setting on our photocopiers is set to print black and white and on both sides.

We know there is still more we can do. We are committed to best practice in reducing waste generation and seeking new ways to bring solutions into our overall approach to sustainability. We are considering the introduction of a food waste management system, e.g. Winnow, with a smart camera monitoring a bin on a set of scales in the Refectory to educate diners on how much food waste they are responsible for. The system will display the weight of waste and an estimated cost of the food that is being thrown away.

The key to reduced waste generation rests with our students, staff and visitors. We will grow our campaign working closely with our community to ensure there is collective responsibility for this important area to reduce our carbon emissions.

Our commitments:

- Develop a Waste Management and Recycling Plan
- Reduce our overall waste year-on-year.
- Reduce our overall food waste year-on-year.
- Improve the data on our food waste to help target initiatives to further reduce food waste.
- Eliminate the use of single-use plastics.

5.2 Recycling for residual waste

We are working hard to recycle as much of our residual waste as possible. Recycling bins are located in all bedrooms, offices and communal spaces. Our campaigns include information in newsletters, e-mails, posters, stands and talks. During Freshers' Week, we provide a talk to students on the importance of recycling and set up an information table during the Freshers' BBQ. We have also created an information board on recycling in the JCR. We partner with charities to ensure unwanted items from students departing at the end of term are donated, including unwanted leftover food, clothing and electrical items.

There are food waste bins in all student bedrooms and communal spaces on the main site, and in all kitchens at Merifield and the Dorothy Wadham Building.

Mixed recycling is taken to be sorted into separate materials at a recovery facility. Almost all of the glass is recycled in the UK and can be recycled infinitely with no loss of quality. Paper and cardboard is mainly recycled in the UK by being pulped and reprocessed into fresh paper products. Most of the plastics collected are also recycled in the UK. Our waste contractor collects many different types of plastics, including the thin stretchy films and black trays which are often not recycled in other local authorities. Metal tins are mostly recycled in the UK and can be back on supermarket shelves in less than 60 days.

Batteries can be left at the Lodge to be taken away for recycling at a specialist facility. Small electrical equipment can be left with our Housekeeping Department to be taken off-site to be broken down into constituent materials and recycled at a salvage facility. Old bedding materials are offered to animal charities.

We have redistributed our leftover cooked food to local charities supporting the homeless. We will look to continue our work with local partners so that leftover food is donated year-round where possible.

We know that around 30% of our general waste is made up of recyclable materials and food waste. We aim to reduce this figure to as close to 0% as possible. We will continue to grow initiatives to support and improve recycling rates.

Our commitments:

- Reduction of residual waste and maximising the amount of waste recycled are key parts of the new Waste Management and Recycling Plan.
- Year-on-year reduction in general waste generated and increase in recyclable waste through increased awareness and behavioural change.
- Reduction of food waste in the general waste bins.
- Monitor and report on our recycling rates.

5.3 Energy recovery from incineration for non-recyclables

We aim to minimise our non-recyclable waste as much as possible. We also committed to reducing the quantity of recyclable waste in our general waste (estimated to be around 30%).

When non-recyclable waste is taken from the College it does not go into landfill. Material in the general waste bins is taken to an Energy Recovery Facility (ERF) near Oxford where it is converted into energy. The facility generates enough electricity to power the equivalent of 60,000 homes. The facility engages with the wider community about energy recovery technology, working in partnership with the waste hierarchy to reduce, reuse and recycle waste.



Ardley ERF

Food in our food waste bins is taken to an anaerobic digestion plant near Oxford where it is processed in a series of large sealed vats ('digestors') where it is heated and stirred for 90 days. The methane gas produced by the process is piped to an on-site engine to generate a renewable source of electricity. The plant generates enough energy to power 4,200 homes. The processed food waste is a valuable liquid fertiliser sold to the farming industry.

Our commitments:

- Year-on-year reduction of recyclable material in our residual general waste.
- Ensure that our residual general waste does not go to landfill and is used for energy recovery wherever possible.
- Undertake waste audits.
- Monitor and report on the energy recovery from our residual waste.

6. Sustainable Food

There is an urgent need for sustainable food solutions to help prevent environmental damage through carbon emissions, soil degradation and negative impacts on biodiversity. There are also technical and social challenges to feeding a growing global population where food is currently inequitably distributed. We are aware that the sustainability of different food products is complex and information is evolving on what is sustainable and what is not. We will continue to tailor our approach as more information becomes available through leading institutions and organisations.

We are a member of Foodquad, a group purchasing organisation representing most Oxford colleges. Foodquad has appointed Foodbuy, wholly owned by Compass Group UK and Ireland. Compass are a world leader in food and food-related procurement and are working with Foodquad to maximise purchasing potentials. Compass aligns its sustainability strategy with the UN Sustainable Development Goals (SDGs) and are focused on contributing to nine of the SDGs to create a more sustainable world by 2030. They have a worldwide commitment to reach climate net zero by 2050. We will work closely with Foodquad to ensure our suppliers are operating in the most sustainable way with verifiable outputs. The majority of our food supplies are now delivered to the College in reusable crates or packaging.

We offer vegan and vegetarian options at every meal service. Our Students' Union adopted 'Meat Free Mondays' over 15 years ago. We have widened this approach to our lunch service in other areas. We have reduced red meat in our menus and look to use demonstrably sustainable fish in the majority of our fish dishes.

Every year in the UK nearly 7 million tonnes of edible food is thrown away. 30% of global greenhouse gases come from growing, harvesting and transporting food. Avoiding food waste where possible reduces the impact on climate change. Our meal booking system is used for SCR/staff lunch and student/SCR dinner to enable the kitchen to accurately cater for the number of diners signed in to help reduce food waste. The fruit and vegetables trimmings from the kitchen are composted on-site. In 2022, we set up a new Sustainable Food Working Group, with student representation, to work alongside our Food Committee.

Our commitments:

- Continue to increase sustainable and nutritional food offerings in the College.
- Engage with students, staff and visitors, as well as suppliers, on the College's commitment to serving sustainable food.
- Investigate on-site food growing, such as vegetables, herbs and more fruit.
- Ensure that the College's menus reflect the seasons where possible and monitor the use of non-seasonal produce.
- Ensure sustainability is considered in the awarding of contracts to food suppliers.
- Support environmentally-friendly farming, food/drink production and transportation in the selection of products.
- Ensure that meat and dairy is produced according to appropriate standards for animal welfare. Using demonstrably sustainable fish wherever possible.
- Reduce food deliveries to the College where possible.
- Maintaining Fairtrade status, supporting local suppliers and sustainable food projects.

7. Water use (reduce)

Baseline Data

Metric	2021-22
Water consumption	19,075m ³ (excluding rented houses)
Scope 3 carbon dioxide emissions	18,593 KgCO ₂ e (18 TCO ₂ e)

Saving water consumption reduces energy use and bills. It also reduces the impact on the local environment, and reduces carbon emission by using less energy to pump, heat and treat the water. Everyone needs water. The College's water consumption is high. In the College it is used for cooking, washing hands, showering and bathing, flushing toilets, cleaning, washing pots, washing clothes and gardening. Our hot water is mainly heated by gas boilers. We have electric boilers heating hot water in the Warden's Lodgings and the Donald Locke Staircase. In the new buildings on the main site, the hot water is partly heated from the solar panels on the roof. The Energy Savings Trust calculates that on average around 145 litres of water are used per head, every day. The power needed to heat the hot water accounts for 6% of all carbon emissions in the UK.

We are committed to saving water wherever possible to reduce costs and help reduce our carbon emissions. In 2021 we worked with Thames Water to complete a water savings survey on all our accommodation sites in Oxford and they helped implement a number of water saving measures.

We have 242 dual flush toilets and a further 169 single flush toilets with water saving devices in the cisterns. We are replacing the single flush toilets during staircase refurbishments. 80 out of 133 showers have water saving devices fitted. We are fitting further devices as part of a phased programme. 40 'traffic light' shower heads are in use; whilst the shower is running it emits a green light, after three minutes the light turns amber and then after a further minute it turns red. This indicates to the user how long they have been in the shower and is aimed at encouraging shorter showers. 5 uncontrolled urinals have been fitted with water saving devices. We have started a phased programme to insert a water saving device into taps to reduce the amount of water and increase pressure. 43 inserts have been fitted to taps so far.

We have replaced baths with showers during refurbishment programmes. We have retained a few baths in case they are required for students with medical needs. We encourage conference and bed and breakfast guests to reuse towels to reduce the number of towel changes during their stay. Our gardeners have planted more drought-resistant plants that require less watering. When plants need watering, the team use a watering can where practicable and limit the use of hose pipes as much as possible.

Our commitments:

- To include water reduction strategies in the new Energy and Sustainable Building Plan.
- Year-on-year reduction of water use from baseline data.
- Increased monitoring of water consumption across our 42 buildings.
- Continue explorations into grey water harvesting and rainwater harvesting.
- Increase the number of water butts in the gardens.
- Engage the community in water saving campaigns.

8. Finance & Investments

8.1 Responsible financial plans (Oxford Martin School Principles)

Net global emissions of carbon dioxide must reach zero to stabilise global temperatures. A team of researchers at the Oxford Martin School have published a set of scientifically-based tools for organisations to assess corporate strategy against climate change. They have published a set of Principles to provide a framework for engagement between climate-conscious investors and companies across the global economy.

Our commitments (in so far as we can within the constraints of affordability):

- To adopt the Oxford Martin Principles for Climate-Conscious Investment:
 - 1. Commit to reaching net zero emissions**
 - We are committed to reaching carbon net-zero by 2035.
 - We will publish a net zero transition plan, including Scope 1, 2 and 3 carbon emissions.
 - We will publish a plan for offsetting residual emissions which will include the offset mechanisms and how these will be invested.
 - We will continue to support initiatives and actions to advance research and knowledge exchange towards net-zero emissions.
 - 2. Profitable net-zero business model**
 - We will ensure that our financial plan supports our transition to reach net-zero and, once reached, continues to maintain this long-term.
 - Where zero-carbon substitutes exist in our supply chain, we will have a clear strategy and timescale for adopting them.
 - 3. Quantitative mid-term targets compatible**
 - We will set mid-term targets for 2030 that are relevant to net-zero. These targets will include the rate of reduction in carbon emissions to reach net-zero.
 - We will ensure our targets are compatible with the Paris Agreement.
 - We will monitor our progress against our targets and publish our results.
- To periodically review our ethical criteria for investments, considering the views of other interested parties (for example alumni and students).

To fund these aspirations there will need to be increased funding, either from state funding, from students and other users of the College functional estate, or from donations.

8.2 The role of Environmental, Social and Governance (ESG) investing

Ethical Investment Restrictions

The College's Statement on Ethical Investment provides information on its view on its wider responsibilities to invest ethically and avoid profiting from unethical activities. In line with University policy, the College does not invest directly in companies that earn a significant proportion of their income from illegal or controversial arms manufacturing, coal or oil sands, or tobacco. Information is sought on any indirect investments which may be of ethical concern (for example, fossil fuel extraction) and this is taken into account in portfolio allocations. The College actively engages with fund managers to promote more ethical standards. The College's full Statement on Ethical Investment is published on our website.

Sustainability of investments

ESG investing refers to the process of considering environmental, social and governance (ESG) factors when making investment decisions. ESG ratings are being applied to companies as a tool to help investors align investment portfolios with specific climate-objectives and strategies. ESG investing approaches can include a strategic re-orientation towards renewables, as well as processes to improve water use, waste management and impact on biodiversity. ESG investing may also guide investors and fund managers to make investment portfolios more resilient to climate transition risks and align with institutional values.

The College's investments include holdings in the Oxford University Endowment Fund (OUem). OUem has confirmed that they are incorporating ESG factors into the investment process as a key risk management tool, rather than a separate activity.

Our commitments (in so far as we can within the constraints of affordability):

- To periodically review our ethical criteria for investments, considering the views of other interested parties (for example alumni and students).
- To consider positive ESG impact investing approaches which meet our investment requirements, and where the outputs, such as carbon emissions reductions and the positive impact on biodiversity, are clear.
- To monitor the Oxford Endowment Fund's commitment to ESG investing.
- To continue to actively engage with all our fund managers to promote more ethical standards.

9. Awareness raising

9.1 Staff

Our staff continue to play a key role in our sustainability journey. We know many are passionate about sustainability and knowledgeable about the challenges we face. Some of the actions we have taken to make the College more sustainable have come from our staff. We are also aware that some staff with less knowledge still want to be involved and contribute to our shared goals.

Department heads are encouraged to discuss sustainability as a standing item at their department meetings and encourage team members to share their ideas and provide feedback on proposed solutions. Sustainability is also a standing item on the agenda for meetings of department heads chaired by the Domestic Bursar. Staff are represented on our Sustainability Strategy Working Group, responsible for the creation and delivery of this strategy. There are also staff representatives on the Sustainability Working Group and Sustainability Food Working Group.

During the winter months, weekly e-mails were sent to staff to remind them about energy saving tips, including turning the radiator to frost setting and closing the blind/curtain when they leave their office for the weekend. Our newsletters also contain sustainability-focused articles and reminders. Posters are displayed on noticeboards reminding staff about energy saving and recycling. We have joined the University's Green Impact initiative and continued to support the Green Action Week and Fairtrade Fortnight.

We will continue to expand our staff engagement programme as an important part of our sustainability strategy.

Our commitments:

- Develop a new Environmental Sustainable Engagement Plan with staff input.
- Introduce a new position of Sustainability Champion in each department.
- Increase sustainability information on our website and through social media.
- Continue to participate in Green Impact, Green Action Week and Fairtrade Fortnight.
- Increase opportunities to support staff to act more sustainably, e.g. increase in the number of commuter journeys undertaken by walking, cycling or public transport.

9.2 Students

We know that many of our current and prospective students are deeply engaged in sustainability and wish to do the right things to cut carbon emissions, restore habitats, reduce waste and save water to secure our planet for the future. We will continue to do as much as possible to encourage and grow engagement from our student body.

The Students' Union (SU) is represented on our Sustainability Strategy Working Group, responsible for the creation and delivery of this strategy. There are also SU representatives on the Sustainability Working Group and Sustainability Food Working Group.

The SU Ethics and Environment Reps organise student engagement activities, such as talks and workshops, and share information on sustainability to encourage participation. For example, they organised for an expert on sustainable fashion to give a talk to students in Hilary Term 2023. The SU sign up to the NUS Student Switch Off campaign and help encourage students to participate in the University's Green Action Week, Fairtrade Fortnight and the initiatives to recycle unwanted items when students are departing at the end of term.

There are various activities in Freshers' Week to engage students on sustainability, including a talk and a stand during the Freshers' BBQ. There is also a permanent information board on recycling in the JCR and information on our website.

We will continue to share with students, and our other stakeholders, that our shared aspirations come at a considerable cost. We will ensure that our students are aware that increasingly a proportion of their accommodation costs, as well as income from other sources, will be added to fund work in this important area. The rate that we can carry out many of our projects is constrained by obtaining funding.

Starting in October 2023, there will be a student environment rep in each staircase. Their role is to organise events that raise environmental awareness. They will set up a group of volunteers in their staircase who can help and support the arranged activities. Themes are likely to include re-using items and promoting recycling, energy and water saving, nature, and reducing food waste.

SU commitments:

- To support the development of a new Environmental Sustainable Engagement Plan with student input.
- Rebuilding the SU website, with a specific aim to include a section on the environment and sustainability. Areas will include recycling, responsible energy practices and how travel can impact scope 3 emissions.
- Run at least one SU-led session in Freshers' Week to make sure students are clear on recycling.
- Support awareness raising on how students can contribute to energy savings.
- Increase campaigns to raise student awareness and action on new sustainability targets that the College has agreed to (e.g. net zero).
- Increase the number of sustainable events and competitions each academic year.
- Promote/run at least one sustainable engagement survey each academic year.
- At least 2 students each year contributing to the Wadham Wire newsletter on their sustainable activities, including links to academic/research work where relevant.

9.3 Alumni community

Wadham College's Development Office runs an annual programme of events and fundraising activities for alumni in the UK and across the world. For many years, our alumni have expressed their commitment to the College's efforts to become carbon neutral. We have also seen a growing interest in the College's and the University's sustainability and climate change research. Alumni have helped fund a range of pioneering research, including the expansion of Prof. Nathalie Seddon's [Nature Based Solutions Initiative](#) (supported by the [Waterloo Foundation](#)). Thanks to a bequest from alumnus David Richards (PPE, 1961), Wadham has established the David Richards Scholarships in Climate Research and the David

Richards Fellowship in Physics and Climate Research. As part of the College's extensive [Access to Excellence](#) programme, an alumnus has funded the inaugural Wadham Climate Change Summer School, and we are seeing the first applications to Wadham and Oxford from pupils who came on the [August 2023 Climate Change Summer School](#). The College is also the co-founder of a climate tech accelerator, [Planet Positive Lab](#). In collaboration with [Founders Factory](#) (founded by Wadham alumnus Henry Lane Fox), Planet Fund and the College, Planet Positive Lab convenes the venturing and the academic communities in Oxford to create companies focused on building a more sustainable future for the planet.

The College is developing ambitious plans for securing Wadham's financial foundations over the coming years, and our comprehensive "Wadham for the World" campaign will include a significant target for advancing sustainability across the College community. We are bringing together expertise to make Wadham an exemplar college in tackling the practical implications of climate change for our historical buildings, and we are raising funds to expand the work of Fellows in climate change, sustainability and nature-based solutions.

Our commitments:

- To share our sustainability stories with our alumni community where possible.
- Increase opportunities for alumni to become involved in the College's sustainably activities and initiatives, including fundraising.

9.4 Wider network

We are committed to collaborating with our wider networks, including local communities and organisations, city and regional public bodies, businesses and the voluntary sector, to exchange knowledge and innovation to tackle long-term environmental, economic and social sustainability challenges.

Many of our staff live in our local communities and provide strong links to help us build on our current networks and provide opportunities to engage with these communities to overcome shared local challenges.

We will look for innovative ways to expand our engagements with our wider networks and for them to easily engage with us. We will also develop partnerships which make a positive impact and contribute to improving the lives of people.

Our commitments:

- Strengthen our relationships with our wider network to build collaborations to address environmental, economic and social sustainability challenges.