



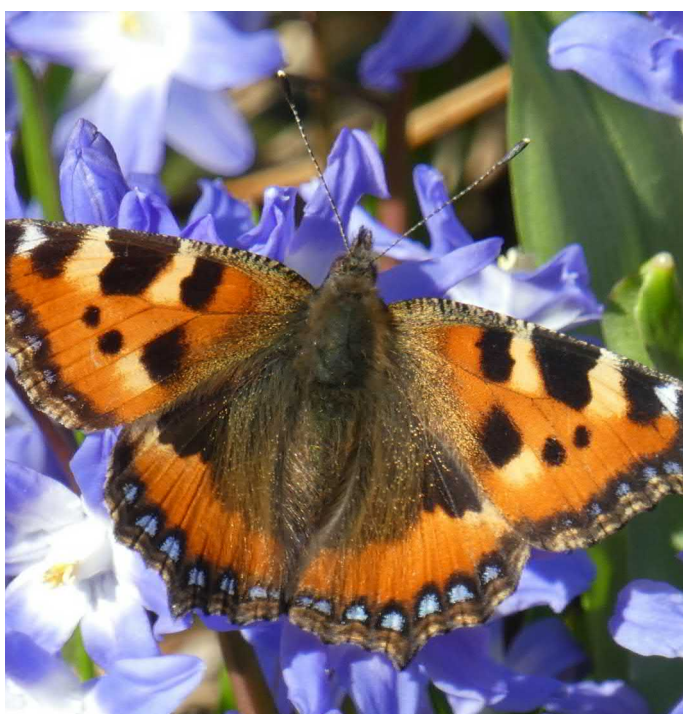
JESUS COLLEGE
CAMBRIDGE

Jesus College Sustainability Strategy 2020-2030



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Master's welcome

Welcome to our first Sustainability Strategy, which accompanies our new Responsible Investment Policy. The report will be updated every year, as we measure our progress against the targets set out in this document and develop our plans for the future.

Jesus College is a diverse community made up of undergraduates, postgraduates, Fellows and staff, from many different backgrounds and from across the world. Over 1,000 people live and work in our beautiful site in the heart of Cambridge. As a community, we are increasingly aware of the importance of doing our best to behave, invest and plan for the future in a more sustainable manner.

Our focus throughout 2019-21 has been on developing our first Sustainability Strategy and Responsible Investment Policy, while simultaneously making a wide range of practical improvements with immediate impact. We have hosted a range of events, consulting and engaging the College community and our wider network, in order to make the right decisions to improve both our built environment and behaviours across the community.

The University of Cambridge has pledged to achieve carbon neutrality by 2048, with a publicly stated ambition to achieve this by 2038. Jesus College is committed to minimising its carbon footprint, with an ambitious aim of achieving carbon zero status by 2030. Our commitment to sustainable practice has been recognised by the University of Cambridge's

environmental accreditation scheme, which celebrated our achievements with a 2019-20 Green Impact Gold Award. The Green Impact scheme supports and encourages departments and Colleges across the University in reducing their environmental impacts. The auditors said: "Jesus College is actively taking a role in reducing its environmental impact, more so within the catering system and within their green grounds. They are also actively engaging students and charities, which is amazing. We are particularly impressed by the A-Z sustainability guide, the wildlife pond, and the traffic light system in Hall."

The COVID-19 pandemic has forced us to find new ways to work. We have learnt just how much can be done without international travel or daily commutes, and the environment has shown some signs of improvement as a result. I hope that we can learn from this, and continue to explore ways of working which benefit the environment whilst also preserving our remarkable community spirit.

I would like to thank the Environment Committee and the many other people who have helped to drive and support change so far in the College. Some of the most significant benefits of our developing strategy may not be noticeable for years, but we hope that it will benefit the environment for decades.

Ms Sonita Alleyne OBE
Master of Jesus College
June 2021



Sustainability vision

Our vision is to be recognised globally as a leading academic institution where sustainability is intrinsic through engagement, collaboration and innovation. Every member of our community will understand and embrace the principles of sustainability and act as a catalyst for positive, sustainable change for generations.

Jesus College is one of the 31 Colleges, which together with the University, make up what the general public would call The University of Cambridge. It is an independent charitable educational institution and, as such, makes its own decisions about how it will implement its sustainability vision, often in parallel with the rest of the University.

The College currently has about 500 undergraduate and 400 postgraduate students, most of whom are full-time and living in accommodation managed by the College. There are around 150 Fellows and Research Associates and 200 staff, with a variety of working patterns.

The College also hosts a wide range of meetings, conferences, entertainment and educational events. This activity has many impacts on the environment, such as those associated with providing around 160,000 meals per year, and energy consumption – 719,000 m³ of gas and 1756 MWh of electricity (2019-2020 values). Implementing our sustainability vision at this scale, in historic buildings and without significant disruption to College operations, will present challenges and will take time.

Our strategy has 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).

Much of the initial effort has focused on quantifying our environmental impacts, establishing targets, and identifying timelines.



Tactical approach

We have developed our strategy around the United Nations (UN) 17 Sustainable Development Goals (SDGs). We have selected five of the 17 SDGs as priority areas in which we can have the greatest impact in the first few years. For each SDG, we will review what we have done so far, what we plan to do in the future and what our measurable targets are.

In time, the five SDGs will evolve, subject to our progress, scientific research and changes in the demand of our College community. We may expand to include additional SDGs in future versions of the Strategy through an annual review process.



We will also incorporate the University of Cambridge's Science Based Target model, which uses standardised emissions 'scopes' to measure Greenhouse Gas (GHG) emissions. It should be noted that sustainability involves more than GHG emissions. This approach will offer comparable data across the collegiate community, create a platform for sharing best practice and help to accelerate decision-making and action.

It is important to acknowledge that while this Sustainability Strategy was being developed, considerable work was already being undertaken towards these goals across the College estate. As we gather more accurate data on our environmental impact, we will continue to search for opportunities to make a cumulative, positive change and revisit our measurable targets.

Sustainable investment

The strategic management of the College financial portfolio contributes to our plans for a sustainable community and beyond. The changes required to realise Strand 1 will require significant financial resources and this factor will dictate the speed of some changes.

The College has developed a Responsible Investment Policy. Sustainability is one of the pillars of this policy, and represents one of our activities under Strand 2.

Priorities for 2021-22



Affordable and clean energy



Industry, innovation and infrastructure



Sustainable cities and communities



Responsible consumption and production



Climate action

SDG 7: Affordable and clean energy

Jesus College operates year-round, 24 hours a day. Some of our members are established within our community, and many others are more transient, meaning that establishing desirable behaviours centred on sustainable energy use and consumption must be a constant focus.

The College's main sources of energy are currently gas (mostly for heating) and electricity, which link to Climate Action (UN SDG goal 13) as they produce GHG emissions.

The Greenhouse Gas Protocol Initiative sets internationally accepted GHG accounting and reporting standards. It sets out three 'scopes' that are used across the education sector and other industries

Scope 1: Direct GHG emissions – emissions that occur from sources owned or controlled by the College.

Scope 2: Indirect GHG emissions from generated electricity purchased by the College.

Scope 3: All other indirect GHG emissions that occur from sources not owned or controlled by the College, but are a consequence of the College's activities.

The University of Cambridge has [committed to reduce its Scope 1 and Scope 2 emissions to zero by 2038](#).

Jesus College will achieve this more quickly – we aim to reduce our Scope 1 and Scope 2 emissions to net zero by 2030. The following three measures, which align with the three GHG scopes, will make a significant contribution to this goal.

1. Eliminate the direct use of fossil fuels.
2. Procure renewable energy and reduce the indirect emissions generated by purchased electricity as much as possible.
3. Reduce all other indirect emissions caused by the College's activities.

The College has control over the first two measures, and can achieve the third with the help of our community and partners.

Regarding Scope 2, the Colleges have a well-established procurement agreement in relation to

electricity from renewable sources. This does not mean that we can relax our efforts to reduce our electricity use, as current production capacity for renewable energy in the UK is a fraction of total demand. Anything we waste costs money which could otherwise be spent on sustainability improvements, and results in other members of society having access to a smaller supply of renewable electricity and therefore being forced to procure electricity derived from fossil fuels.

The demand for gas onsite (Scope 1) remains a serious challenge, with the local electricity infrastructure incapable of coping with estimated demand should the switch from gas to electrically powered systems occur quickly. Similarly, the availability of gas from renewable sources is currently very limited, and there remains controversy as to its environmental costs. There is also considerable cost and disruption involved in converting a gas-based heating and hot water system into a fully electric one.

We can reduce our consumption immediately. However, in the first instance, we need our students, Fellows and staff to think carefully about how they can reduce the demand for energy. A large number of small initiatives will be required to generate a cumulative impact, until major investment can be made towards the end of the decade. Some of these are identified in subsequent sections.



What we have done so far?

Solar energy

In 2012, the College installed 27 roof-mounted solar panels in Chapel Court. These preheat the hot water cylinders for Chapel Court. This system has produced 20 MWh of energy so far, reducing our Scope 1 emissions. We installed a further eight solar systems in 2014 in properties at Eden Street Backway, with Viessmann gas and solar boilers.

Ground source heating

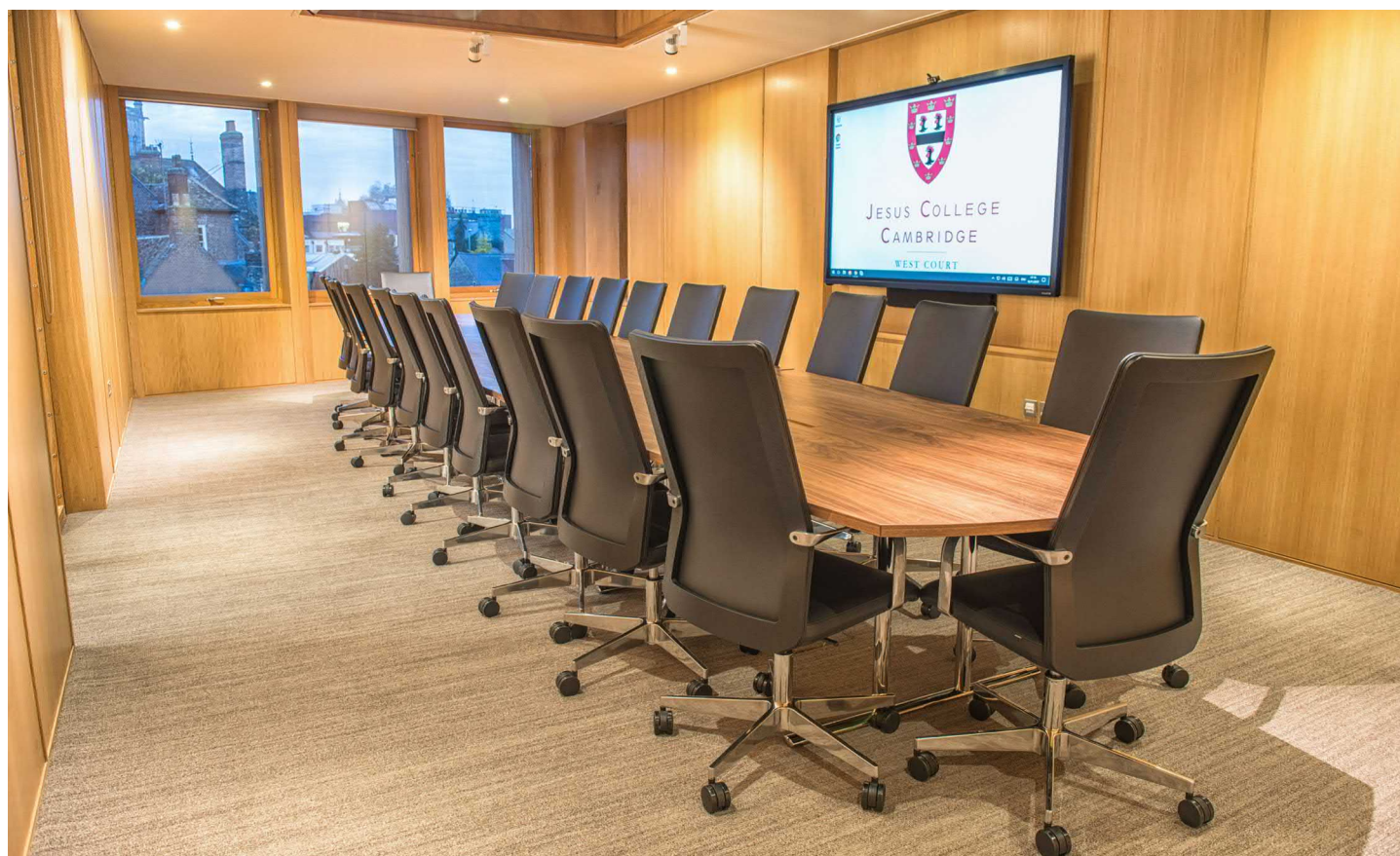
Ground source heat pumps (GSHPs) were installed under the Housekeeping car park off Jesus Lane in 2012. A GSHP works by circulating heat transfer fluid around pipes laid deep in the ground. This fluid absorbs the low-grade heat from the ground, which is then released at useful temperatures. The Chapel Court GSHP preheats hot water used in these buildings, reducing the consumption of gas. They have produced 1082 MWh of thermal energy to date, representing between 40% and 100% of the daily requirement for heating Chapel Court. This reduces our Scope 1 emissions.

LED lighting

All buildings refurbished since 2017 have been fitted with LED light bulbs to reduce energy consumption. Our newest buildings, the Forum and West Court, have only LED light fittings. Over the past two years, we have been gradually replacing halogen and less sustainable forms of lighting across the site, both outside and indoors. One particular project is in Chapel Court 14, where LED fittings installed in January 2020 will deliver an energy saving of 50%. This reduces our Scope 2 emissions.

Internal buildings audit

We have completed an internal buildings audit, identifying potential for improvement across the College site. This will allow us to calculate our consumption, emissions and potential reductions in carbon dioxide emissions using the models in the Science-Based Targets (SBT) Initiative, which have been adopted by the University. This framework allows us to compare our progress with other bodies and to share best practice.



What are our plans?

Electrical substation upgrades

In 2020, a new electrical substation was installed near the corner of Park and Lower Park Streets, with access to additional power anticipated in four years once the Park Street car park project is completed. In the summer of 2021, the substation at the maintenance and gardens building will be upgraded. Both of these initiatives are designed to increase electrical capacity to a part of the College that is highly occupied but has little spare capacity. The medium to longer-term aim is for the College to phase out Scope 1 emissions from student accommodation, which is a critical phase of work that will prove very disruptive and require considerable planning. These substations will play an integral role in this journey, with science-based targets helping to prioritise the scope and sequence of works.

Data collection

We lack accurate data on energy use and wastage in our historic buildings. The existing meters sometimes cover a large number of rooms used for different purposes at different times of the year, so we do not know which measures would produce the biggest reduction in emissions. In 2021, we will engage mechanical and electrical consultants to build on our internal buildings audit, using their equipment and expertise to establish where we need to act first.

This audit will take place alongside current improvements to our infrastructure, which are in progress now, and the sharing of experience across the collegiate community.

Kitchen project Ground Source Heat Pump

The introduction of a second GSHP rated at 360 kW as part of the kitchen project represents a significant investment and statement of intent, as well as reducing our Scope 1 emissions. This will be installed under the cricket outfield, and will provide all the heating, cooling and hot water required for the new main kitchen. The new kitchen will be run exclusively on electricity, with no demand for gas for cooking or heating, thereby not contributing to Scope 1 emissions. The ambition and scale of this solution is remarkable, and should be recognised as truly pioneering.

A similar approach has been adopted in the conversion of the Forum building, home to College catering during the main kitchen building works, which will become a meeting and events facility in 2022. Like the new kitchen, all cooking, heating and hot water equipment in the Forum is electric and therefore contributes zero Scope 1 emissions.

Solar panels

Subject to planning consent, infrastructure and confidence in return on investment, solar panels could be installed on more of the buildings onsite to further reduce our Scope 2 emissions. This could include the Library and Library Court, West Court and the Forum. Installation of solar panels on many of our buildings is restricted because of their location and Grade II listed status.



Reduction of electrical demand for lighting

The maintenance team will continue to replace light fittings with LEDs as part of an accelerated retrofitting programme, reducing our Scope 2 emissions. In some cases, this means replacing entire lighting systems and not just the bulb, which represents significant disruption and cost.

We are fitting motion sensors to rooms and corridors across the site, so that energy is used only when they are occupied and we do not have to rely on people turning lights off.

Sustainable infrastructure in future projects

The opportunity to install sustainable infrastructure in our buildings – including solar panels and ground source heat pumps – will be considered as part of all future upgrades and investments in our properties, both on and off the main College site. A recent example of this commitment is our collaboration with the Cambridge Institute for Sustainability Leadership (CISL). Six cohorts reviewed existing and proposed building projects, with a view to enhancing their environmental credentials.

Additional research is taking place to reduce Scope 1 and 2 emissions in residential student accommodation, such as Jesus Lane, with a focus on the following initiatives:

- Installing cavity walls to improve thermal and acoustic performance.
- Installing double-glazed windows to improve air-tightness and reduce heat loss.
- Replacing existing gas boilers with air source heat pumps and building heating management systems.
- Introducing renewable energy using photovoltaic panels on the roof, as part of a larger installation along this street.
- Installing a large communal district heating system.

These considerations will include calculating the impact on emissions expended in converting facilities to more efficient solutions, using an overall life cycle assessment.

Retrofitting existing buildings

The Quincentenary Library has also been assessed, with recommendations to improve thermal comfort and reduce Scope 1 and 2 emissions. These include plans to retain heat in the entrance by making sure the outer door is closed before the inner door opens, fenestration improvements, reviewing the current daylight controls and switching to LED bulbs where possible. Ventilation improvements could involve checking the integrity of roof vents and repairing as necessary, upgrading the motors and switching from battery to mains power. A mechanical ventilation system could be installed.

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.
- 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.
- Upgrade the electrical substation by the maintenance and gardens building.
- Ensure that 100% of our lights are LEDs by the end of 2024, via an accelerated refurbishment programme.
- Ensure that sustainability is considered in future infrastructure projects.
- Adopt the [University's Science Based Targets](#) approach and engage in sharing best practice.

SDG 9: Industry, innovation and infrastructure

We have a responsibility to develop our estate sustainably with regard to transport, energy, information and communication technology, respecting our surroundings and the local economy. Established in 1496, our estate includes examples of architecture from the 12th to the 21st centuries. Many of the properties contribute to the rich heritage of the city, and are listed as Grade I and Grade II. Any developments must respect the heritage of the College and the city, to preserve their unique places in history.

Cambridge is unusual for the UK in that a large proportion of student and staff travel associated with work and study is by foot and bicycle. However, development of the Addenbrooke's and West Cambridge sites, as well as the cost of housing in the Cambridge area, means that the need for sustainable transport is growing.

What have we done so far?

Transport

Every year we participate in an annual survey on transport, carried out by Cambridgeshire City Council. This project, Smart Journeys, maps out how far people travel to work and whether public transport options are available to them. The results of the most recent survey (2019, as 2020 was skipped due to the COVID-19 pandemic) show that 48% of staff drive alone to work (below the national average) and 57% of the total surveyed would consider an alternative to driving.

The College has been part of the Government's 'Cycle to Work' scheme since 2010. We have recently increased the amount of bicycle storage available onsite, as well as making shower, changing and laundry facilities available to encourage more people to cycle to work.

Building development

For all new developments, the College performs life-cycle analyses to assess the environmental and socioeconomic impacts on the local environment. An example of this was the design of **West Court**, which provides a venue for academic symposia, conferences, lectures and debates. It includes a beautiful dining room, a café bar and pavilion with adjoining terraces, and a private events space. West Court opened in

2017 and has already gained Venues of Excellence accreditation, awarded for high standards across areas including environmental impact.

We recently invited students from the Cambridge Institute for Sustainability Leadership to review individual properties and share their recommendations. Among the planned developments discussed was **Elm Street Living**, which we propose to build within the Kite Conservation Area in the historic centre of Cambridge. The students' recommendations were consistent with the brief we provided to the architect, and included reference to the use of recyclable materials and provision of a high standard of sustainable living with net carbon zero emissions. The inclusion of courtyard gardens, cycle storage and communal spaces all contribute to a design that complements the existing architecture of the local area.

The students also made recommendations for infrastructure and transport improvements to the **Waterhouse Building**, which we plan to develop in the coming years. They suggested we enlarge the current cycle storage and make it lockable, install a solar PV carport with integrated car chargers and dedicated car-pooling spaces in the car park, and instigate step challenges across the College community to promote walking.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



Information and communication technology

Developments in our use of information and communication technology have been accelerated by the COVID-19 pandemic. As a community, we are learning how to work together remotely. This will have long-lasting benefits in our plans for the future, particularly in reducing Scope 3 emissions.

What are our plans?

As part of a clear transport strategy, we will promote and incentivise use of public transport, bike riding and park and ride services. We are also following the University transport working party initiatives, with a view to updating our parking eligibility, and inspiring change within the College.

Including sustainability considerations in the choice of transport for academic activity is likely to require behavioural change for students, staff and Fellows. Many funding bodies are introducing such criteria. We will encourage each group to consider how sustainability can be included in their choices, and promote the incorporation of sustainability criteria in College-supported activities.

COVID-19 has accelerated discussions around flexible working, and we are exploring the possibilities for the future. For example, if administration-based staff all worked one day per week from home, our transport (Scope 3) emissions would reduce considerably. Exploring flexible working hours and promoting off-peak travel to work, complemented by working at home, will reduce both congestion at peak times and journey times. Virtual meeting for other activities is also being considered.

Planning permission has now been granted for eight properties in Elm Street. We are able to incorporate some of the measures suggested by the CISL students, many of which were part of the original designs. All the homes will have triple glazing, no gas, additional insulation and the materials used will be recyclable at the end of their life. Bike parking exceeds planning requirements, and electric bike charge points will be installed in courtyards where bikes will be stored. The properties on Elm Street will therefore generate zero Scope 1 emissions. Scope 2 emissions will be as low as possible from the start, and the designs will encourage behavioural change towards reducing Scope 3 emissions.

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.
- Achieve and maintain 60% of staff and Fellows using sustainable transport as their primary mode of transport when travelling to work by 2026.
- Commencing in 2022, launch a fifteen-year capital investment plan to improve the performance of our infrastructure, including electric, water, heating, insulation and waste initiatives.
- Engage with university stakeholders to capture and share data and scientific evidence to influence environmental initiatives to maximise the impact of innovation.



SDG 11: Sustainable cities and communities

Cities and communities are hubs for ideas, commerce, culture, science, social development and much more. We want the people in our community to be able to live, learn and work in a healthy and sustainable environment.

In addition to our plans for reducing GHG emissions through green energy, transport initiatives and building development, our green spaces benefit everyone in the College community in terms of mental and physical health. We enjoy a site of approximately 27 acres, with wildlife areas and an allotment.

To date our focus has been on the main College site and adjacent properties. There is considerable scope for extending our impact further afield via the College's property portfolio, by collective and collaborative improvements with other Colleges and local landowners.

We are conscious of our responsibilities as a substantial landowner and property developer. As the College develops its land and property holdings in Cambridge and beyond, it will be important to apply rigorous sustainability targets. We are committed to enhancing the College's reputation as a forward-thinking landowner and custodian of the environment.

What have we done so far?

Fabric

The maintenance team at the College is careful to reuse, repurpose or recycle everything removed from properties, including chairs, curtains, radiators, furniture and even toilets. When these cannot be reused in the College, local charities are pleased to take them. It is estimated that as many as 25 beds a year are donated to charities including the British Heart Foundation, Emmaus and Jimmy's Night Shelter.

Property maintenance includes fitting automatic door closers wherever possible to improve heat retention, installing insulation, fitting double or secondary glazing to windows, and fitting LED lights and automatic light switches wherever possible. Properties are fitted with Eco Plus boilers when they are replaced, and have loft insulation. We have posted signage in every property, encouraging occupants to turn lights and computers off when they leave the room, to close the windows and to turn down the heating.

Land

The College gardens promote biodiversity and sustainability. They are home to over 600 mature trees and over 1,000 saplings, including oak, chestnut, ash, cherry, field maple, hawthorn, elder rose, blackthorn, dogwood and beech trees. Many of the plants flower annually, and the gardens team use greenhouses onsite to ensure bulbs are reused. Wildlife diversity is encouraged by the provision of bat boxes, bird boxes and hedgehog houses, the wildlife pond and selecting plants for the wildflower areas.

Students enjoy the gardens and the wildlife areas. They say the woodland walk makes them feel relaxed and able to concentrate better on study, and they take their books to the orchard to read. The gardens are open to the general public, free of charge, whenever the College is open to visitors.

Most garden waste is recycled as compost. The College produces at least 10 tonnes of compost per year. A new and larger compost facility, completed in March 2021, is expected to triple this amount. Dead wood is chipped and spread on garden paths or is added to stick piles to encourage wildlife. From 2021, the potting compost will be entirely peat-free, which is better for the environment and for the long-term health of the soil.



Rainwater butts in the Fellows' Garden and a rainwater tank in the Master's Garden collect and store water, which is used during dry periods to water the gardens. This reduces the amount of fresh water consumed by the College.

The gardens team use electric power tools wherever possible, including battery powered trimmers, hedge cutters, chainsaws and blowers.

Community

The Bursar has been working closely with the Advisor to the University's Chief Financial Officer and the Responsible Investment Network Universities to make sure that sustainable finance is a central to the College's Investment Policy.

In November 2019, Jesus College hosted the conference 'Climate Change and the Endowment: Impact and Active Stewardship'. Attended by approximately 60 people including Fellows, students and representatives from different Colleges, this was one of a series of internal and external events exploring sustainable investment across the University.

We are committed to incorporating the [University's Science Based Targets](#) approach to measuring impact and target setting as a standalone College, and as a member of the collegiate community.

What are our plans?

The refurbishment programme will see additional secondary glazing installed in a range of buildings including student housing and offices. Increased LED lighting and outdoor furniture is planned for the gardens, both onsite and in student houses.

Additional water butts are planned for 2021 and more than 50 trees will be planted onsite this year, with additional hedging around the new compost facilities and the gardens compound.

Buildings are being assessed with a view to identifying where rainwater could be harvested for use in the gardens.

A wellness week for all College members will focus on physical and mental wellbeing, with activities designed to maximise use of the grounds.

Aims and targets

- Launch Responsible Investment Policy in 2021.
- Increase proactive internal and external communication on environmental issues.
- Adapt the students' A-Z guide to living sustainably at Jesus College, and publish for staff and Fellows.
- 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.
- Develop a clear services strategy across the site and our property portfolio by 2022.
- Develop and launch a plan to reduce water consumption by 10% by 2024.
- Update our environmental specification for all future building works, with a view to exceeding building regulations.
- Audit the College's external land and property holdings in order to build a clear picture of where and how improvements can be made.

Our gardens in numbers

27 acres of land

Over 600 mature trees

Over 1,000 saplings

Approximately 3,000 bulbs planted every year

10 tons of compost produced and used annually

3 hedgehog homes

5 foxes born onsite in 2020

100% potting compost peat-free

Planting target of 50+ trees/shrubs annually

SDG 12: Responsible consumption and production

The College is home to around 1,000 people, and welcomes thousands of visitors and delegates for meetings and conferences every year. This makes it a large consumer of resources and a significant producer of waste. Responsible resource use and waste management can reduce the College's Scope 3 emissions, with the help of individual behaviours.

What have we done so far?

Meeting and dining together is an important aspect of College life. By promoting a plant-based diet to our community, and reducing the availability of ruminant meat, we have already made significant progress in reducing Scope 3 emissions from food. Embracing scientific evidence from the University in regards to the production and consumption of food will remain a priority for the coming years.

In January 2020, the College introduced two meat-free days across all its catering venues. Tuesdays are meat-free, Fridays are fish-only and there is now a wider range of vegan options available. The College only sources fish from suppliers certified by the Marine Stewardship Council, and its main supplier has signed up to the Fishing for Litter campaign which means any litter caught in nets is collected and sorted for proper disposal or recycling. Formal and Grad Hall dinner menus now default to vegetarian options and the selection of non-seasonal food has been largely eliminated. Staff and students scrape their own plates at cafeteria sessions (in non-COVID times), which helps to measure food waste and inform the catering team.

The catering team have made great progress in reducing landfill waste. Pre-COVID, takeaway cutlery was changed to wood and all takeaway containers and coffee cups have been changed to biopolymer cardboard, to support composting. A compost bin has been added in the café for food waste and takeaway products.

In May 2021 the Change is on us! Campaign was launched. The aim of the campaign is to eliminate the use of all single-use, take-away food and drink containers on the College site. College members will have the choice to 'sit in' to eat, or use their own reusable take-away container. All pre-packaged 'grab and go' items such as simple sandwiches will remain packaged in compostable wrapping.

Plastic straws have been removed across the site, and the yoghurt brand has been changed to reduce plastic waste. We have also changed our chemical supplier, in order to achieve a 60% reduction in plastic container waste. The chemicals now used have a lower environmental impact.

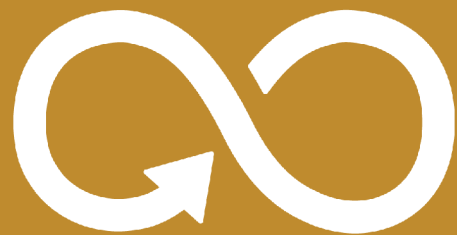
Takeaway containers are now more expensive, to encourage people to bring their own reusable containers instead. People are incentivised to buy "keep cups" for coffee and tea with a discount on drinks.

All sandwiches are made onsite, in order to reduce Scope 3 emissions resulting from packaging and delivery.

During the redevelopment of the Forum building, the maintenance team worked closely with the main contractors. They salvaged a considerable amount of building material, including timber, which has been reused to create back of house shelving and storage.

In the summer of 2020, seven student houses were upgraded using materials in storage from previous projects to reduce landfill waste.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



We have changed our waste collection service provider, and achieved our target of sending 0% of non-hazardous waste to landfill. Currently, 75% of College waste is recycled.

What are our plans?

We aspire to set an example, ensuring our procurement decisions meet high ethical standards and have the lowest possible environmental impact. In 2021, we will introduce a set of guidelines for sustainable procurement, including a product life cycle approach. This will provide a clear framework for suppliers that includes specific mandatory sustainable elements. These include only using recyclable packaging, reducing the frequency of deliveries, using electric vehicles where possible and promoting sustainable, seasonal and local produce. This framework will help to reduce our Scope 3 emissions.

Our conference business will be made more sustainable (once we resume post-lockdown) by offering a green conference package. Initiatives include reordering the conference menu to highlight the sustainable food options, with ruminant meat not appearing on the menu unless specifically requested. Bedrooms will be bookable with or without service for multi-night stays, and linen will be changed weekly unless otherwise requested.

The bins across all catering areas and offices will be reviewed, to ensure recycling is taking place across the whole site. This is a particular challenge for short-stay guests not familiar with our facilities. We aim to increase the percentage of waste that is recycled to 80%, and will achieve this with more community engagement and the creation of localised recycling points.

Signage in our catering facilities will inform consumers about the provenance and sustainability of all our ingredients.

We will also implement a food waste monitoring and data collection system, to better identify areas for potential reduction in waste. Where appropriate, pre-ordering of meals will be encouraged.

Aims and targets

- Maintain current zero waste to landfill status throughout 2021 and subsequent years for all College operations waste.
- Increase the amount of waste that goes to recycling to 80% by the end of 2022.
- Eliminate single use plastics across the site by 2022.
- Develop purchasing guidelines, which include a product life cycle approach, and train key staff by 2022.
- Reduce meat-based meals to 20%, increase plant-based meals to 30% and vegetarian meals to 50% by the end of 2021.
- Reduce ruminant meat-based meals to 10% by the end of 2021, with a view to eliminate ruminant meat-based meals by the end of 2022.
- Introduce signage in our catering facilities to inform consumers about the provenance and sustainability of our ingredients.
- Implement a food waste monitoring and data collection system so reduction targets can be set.



SDG 13: Climate action

Climate scientists are united in agreement that we must limit global temperature rise to 1.5°C or lower. If we fail to do so, the consequences will be profound and the implications for humanity and all other life forms will be severe.

Jesus College “is a place of education, religion, learning, and research” (Statute 1.1(a)), and this requires us to engage in the understanding of climate change and to prepare our current and future members on how to deal with it.

What have we done so far?

The College has instigated a fourfold approach:

1. Education – we have hosted a series of events and conferences in the past year to explore issues related to climate change. This has enabled us to benefit from expertise across the University when making plans for the College, working together to help the University achieve its goals collaboratively.
2. Infrastructure – a site-wide services audit has been completed, and plans are now in place to increase electrical capacity and phase out the use of fossil fuels.
3. Buildings – we are making rolling improvements to our buildings. Improved insulation, secondary glazing, lagging on pipework and motion sensors are some examples of initiatives that are continually being prioritised.
4. Behavioural change – the student A-Z guide to sustainable living, and numerous initiatives around catering and waste, have been designed to shape behaviours consciously and subconsciously. With new students, Fellows and staff arriving each year, clear, concise and regular communication of our ambitions and expectations are vital.

The College held its first Green Week in 2019, including a College discussion about how we respond to the climate crisis, a plant sale, a clothes swap, a vegan Formal and campaigning workshops. This proved a great way to engage the whole community, and we plan to repeat it annually.



What are our plans?

Given the scale of the challenge we face as a society, and the complexity in addressing climate action, a multi-faceted approach is required over the coming years.

We will monitor our progress on climate change using the Science-Based Targets methodology developed by the University. This will help us measure our performance, and identify new initiatives to respond to the latest science and data.

We will continue to work with experts from across the University, learning from others' best practice to accelerate decision-making and the implementation of new initiatives. This will aid in educating our community to make informed decisions that influence lifelong behaviours.

The Student A-Z guide to Sustainable Living will be adapted for staff, Fellows and Research Associates. Whilst the guide has been generated with climate change in mind, its remit encompasses many aspects of sustainability in the College.

Our progress towards the goals laid out in this Sustainability Strategy will be reviewed every term by the Environment Committee and reported to Council annually.

We will continue to place sustainability high on the agenda when planning all future developments to the College.

Launching the Responsible Investment Policy, including a timeline to divest from fossil fuel companies, is a significant milestone that will reinforce our commitment to tackling climate change.

Aims and targets

- Aim to achieve Net Zero carbon status for Scope 1 and 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.
- Annual reporting on progress using the Science-Based Targets approach.
- Launch a new A-Z guide for the whole College community.
- Develop a 'Green Hub' for events and training.



Governance

Jesus College has an active Environment Committee, with representatives from the Fellows and Research Associates, staff, and the Jesus College Student Union (JCSU) and graduate (MCR) Green Officers. It meets every Term to develop and share best practice with all College departments. The Committee reviews environmental policies, accompanying strategies and guidance. It also sets up working groups to consider and report on particular opportunities to reduce our environmental impact. The College Council receives reports from the Committee on progress, policies and targets in the College, and on the reports, recommendations and requirements from outside bodies (such as any acting under environmental legislation).

This first version of the Sustainability Strategy outlines our recent history and immediate intent. With time, experience and scientific data, it is envisaged that this document will evolve into a more statistical target-based paper, including increased focus on priorities from 2023-2030.

If you have any ideas about how to make Jesus College a more sustainable place to live, please email the Environment Committee via environment@jesus.cam.ac.uk.

Stakeholder engagement

The relationships between the different stakeholders within the College, with a wide range of views on the subject, is critical. Consultation and collaboration, using reliable data and science, will therefore be essential in order to prioritise and facilitate sustained change.

Maximising benefit from the University resources and talent pool is critical. We have strong relationships across the University, and will continue our collegiate approach to sharing best practice as a member of the University.

One example of our collaborative approach is our work with the Cambridge Institute for Sustainability Leadership (CISL) who helped us to consider how to manage our historic estate to achieve our ambitious sustainability targets for the future.

We have hosted a series of events in the College on subjects related to sustainability, which have allowed us to strengthen relationships and learn from experts from both the education and industry sectors.

The Bursar is a member of the University Finance Committee, which has oversight of the Cambridge University Endowment Fund, and sits on the Bursars Planning Sub-Committee, a key contact group for the development of planning policy in Cambridge. He contributes to discussions on responsible and sustainable investment involving the Colleges and the University, and leads a group of Colleges looking at sustainability in relation to their rural landholdings.

The Bursar will soon be taking up a position on the Finance Committee Financial Investments Sub-Committee until 2024 which includes financial oversight of CUEF.

The Domestic Bursar sits on the Bursars Environment Sub Committee, is a Trustee of the Cambridge Forum for the Construction Industry as well as being a member of the Cambridge University Transport Working Party. All of these groups provide access to leading information and trends, as well as the chance to influence decision-making across the city.



People working together for change

The success of our first Sustainability Strategy will depend on the level of sustained engagement we can achieve across the College community. If we are to achieve our sustainability goals, members of the College community will need to seek out and embrace opportunities to change individual daily habits and routine. Some changes may be small, with a focus on collective cumulative impact, while others will be more substantial and instantaneous.

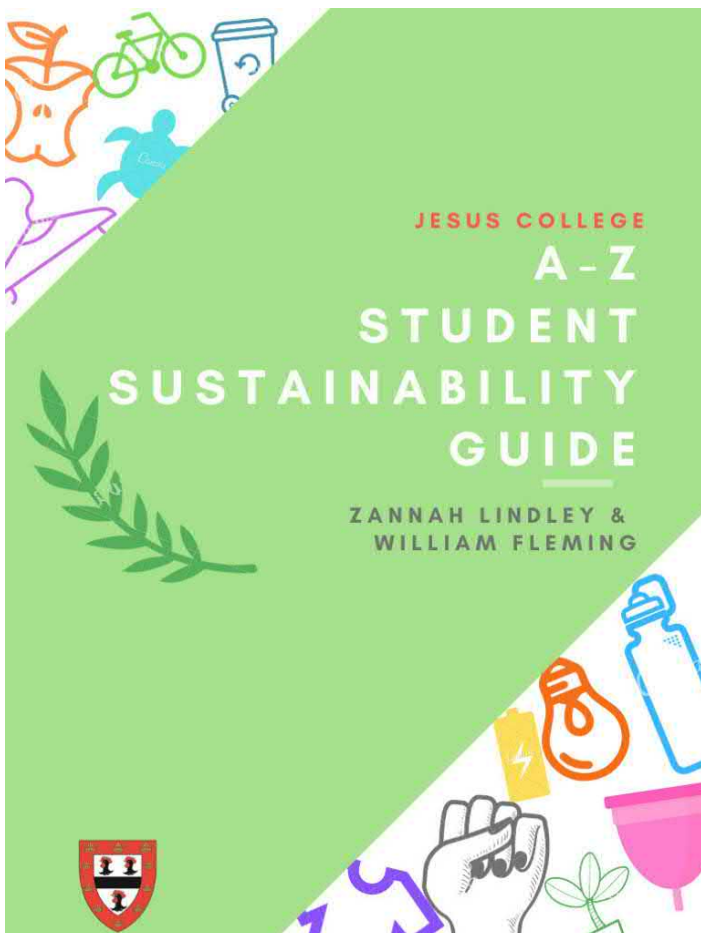
Plans to make Jesus College more sustainable have been moving ahead quickly in the past two years. In this section, we introduce a few of the people driving these changes.

Student A-Z guide

Students at Jesus College have shown strong commitment to increasing sustainability through change. Examples of the issues they have championed include changes to the College's investment portfolio, phasing out single use plastics and focusing on plant-based menus across the site.

Zannah Lindley and Will Fleming were the JCSU and MCR Green Officers in 2019. They produced an A-Z guide to living sustainably at Jesus College, running from 'A for Allotment' through to 'Z for Zero Waste'.

The guide can be found [on our website](#).



Interview with students Will and Zannah in 2019

How did the A-Z guide come about?

Will: It can be slow and difficult to change big things in an organisation, so we started by listing all the little things people can do every day to make the College more sustainable. If everyone disposed of rubbish correctly, for example, it would make a big difference to the amount we send to landfill.

Zannah: There was some confusion about environmental policies at College, so we made it easy for people to find out the details. For example, where to find composting bins and where to shop for sustainable products. It wasn't always easy finding the answers to our questions – sometimes nobody knew them! Writing the guide was a learning curve. We had positive feedback from people who found it interesting and funny, as well as useful.

Is the College making progress to become more sustainable?

Zannah: I was impressed last year by how much progress was made. The Catering team were particularly supportive in terms of making real changes to reducing waste, and helping to promote the A-Z guide. The Development team also supported the Environment Committee, running events such as the Green Week to bring people together and discuss the issues.

Will: The College has made some brave decisions in the past year, such as selling its direct investments in oil companies and installing heat pumps in the grounds. It's exciting to see bold changes being made.

What are the major challenges for the College in the future?

Zannah: Six months ago, I would have said the major challenge was to get the community engaged with change. However, I've been really pleased by how easily big changes have been accepted across the College community, such as the move towards a plant-based menu. Now I'd say a major challenge is developing the oldest buildings on the estate, whilst maintaining their character and heritage.

Will: A major challenge ahead is being confident enough to set ambitious targets. This is the right time for the College to be bold and confident about plans for the future.

Will you continue to campaign for a greener environment?

Zannah: I'm now part of the Cambridge University Student's Union Ethical Affairs Campaign, using my experience at Jesus College to try to make a wider impact. I'm hoping to start an MA in the autumn, and will continue to promote sustainability at the College.

Will: Yes, I will continue to campaign here at Jesus College. I'm pleased with the progress but we still have a long way to go!



Research into sustainability

Jesus College is proud of the research work of its Fellows, many of whom focus on areas affecting the UN's Sustainable Development Goals. Here is a glimpse into some of their work.

Dr Shailaja Fennell

Shailaja Fennell is Director of Research at Cambridge Central Asia Forum, a Reader in Regional Transformation and Economic Security, and a Fellow of Jesus College.



My current research work is working with communities that live in semi-arid regions (between 250-500 mm of annual rainfall) to investigate patterns of agricultural production and consumption.

A typical group of crops grown in these regions are from the group of highly variable small-seeded grasses, widely grown around the world as cereal crops/grains and known collectively as millets (some of which, such as barnyard millets or sorghum, are known as health foods in the Global North). The health benefits of millets arise from their particular characteristics: they are gluten-free and have low Glycaemic index (GI), making them suitable for diabetics, weight-watchers and people intolerant to wheat.

My research examines how innovative methods of cultivation and processing can be introduced into these communities, so that they can augment traditional practices to support current systems of cultivation and move toward sustainable food systems.

At College, I have appreciated the increase in vegetarian meals, and would be happy to participate in further consultations as I enjoy cooking and eating a wide range of global vegetarian foods. I have a particular interest in traditional cereals, including heritage varieties, and my current research compiles the typical millet-based meals eaten by communities in the Global South.

“We could move towards having a policy of banning use of single use plastics... by ensuring that there is provision of water fountains in every building.”

Further progress in Cambridge could be made in the areas of reduction of and recycling of waste. In particular, the University and College could move towards having a policy of banning use of single-use plastics, for example, ensuring that there is provision of water fountains in every building, so that staff and students can fill water bottles rather than buy water in plastic bottles. It is important that we recycle the kitchen waste in all College and University eateries into compost to use in the University and College gardens.

In addition, the College could discuss the rewilding of more of the gardens to allow the return of bees and butterflies.

Professor Koen Steemers

Koen Steemers is Professor of Sustainable Design and Director of Studies at Jesus College. His academic activities are focused on the environmental performance of buildings and cities.



I have researched energy efficient building and urban design for over 20 years. Currently, I study the impact OF users (their perception and behaviour) on the built environment (this has a major effect on the environmental performance of buildings) and ON users (implications of the built environment on health and wellbeing). This leads to opportunities to improve quality of life through design.

I sit on the Environment Committee, which is in its early stages, but has an urgency and a desire to make quick impacts. As a member of the Buildings Committee and Kitchen Development Planning Group, I have been involved with some exciting initiatives. Perhaps most impactful was the decision to install a large network of ground source heat exchangers, linked to a heat pump. This means that the College will be able to limit and ultimately avoid the use of natural gas (and its associated greenhouse gas emissions) to

heat its buildings. There are plans to develop the kitchens with ambitious environmental specifications, including the use of natural light, minimising food waste and using ground source heating for hot water.

The regular maintenance cycles of the College buildings offer ideal opportunities for environmental improvements, ranging from upgrading fabric with improved thermal insulation, to installing sensors and smart technology to limit energy demand.

We all make daily choices that can have a large impact when accumulated over the wider population; food choices, the clothes we buy and decisions about work and travel. Since the COVID-19 lockdown, life has become simpler and more focused on the essentials (and the environment has dramatically improved). Working from home is currently the norm, which reduces the pressure to travel for international conferences or to commute to supervisions and meetings (now we meet online).

“We all make daily choices that can have a large impact when accumulated over the wider population; food choices, the clothes we buy and decisions about work and travel”

Dr Ellen Quigley

Ellen Quigley is advisor to the Chief Financial Officer of the University (Responsible Investment), Senior Research Associate with the Centre for the Study of Existential Risk.



I hope that my area of research will have a positive impact on sustainability by helping to alter investment and corporate behaviour and various functions of the financial system. We want to see capital shifted away from environmentally destructive companies and towards regenerative alternatives. Jesus College is taking the right first steps by taking part in engagements with fund managers and its bank, working with other Colleges to change land management practices, and more. There is an opportunity for us to play a leadership role in this area and set an example for other Colleges to follow.

The changes to the College kitchen and catering have been encouraging. It is great that we are reducing food waste and offering a variety of good vegetarian and vegan food. I'd like to see beef and lamb off the menu completely, of course, as cutting out these meats would make a huge difference to our carbon emissions.

We need to make more systematic changes to our policies and rules in order to steer behaviour and create a new normal. We could incentivise land travel

over plane travel for conferences and meetings, by only funding train and Eurostar travel throughout Europe. We could incentivise bus travel by providing bus passes and changing our policy on parking to reduce the number of staff and Fellows commuting by car. I believe much of the latter is already underway, though, which is great.

Our researchers have an important part to play in aligning the College with this transition. Could new Fellows and PhD students be selected at least partly on the basis of how their work supports our vision for sustainability? Could we support all current associates to align their research with this vision?

“There is an opportunity for us to play a leadership role in this area and set an example for other Colleges to follow”

Educating and engaging the community is vitally important, and I think the best moment to do this is on arrival to Cambridge. People need to understand the basics of the energy, food, transport, and the financial system as soon as they join our community. Introductory training - say, a week-long crash course - could be made mandatory for new arrivals so that they can get involved, help the College achieve its goals, and take this knowledge into future roles.

Next steps

The College views this strategy as the beginning of a systematic approach to environmental sustainability across all College activities.

Our Responsible Investment Policy, which has been developed in parallel with this document, is an important part of our approach.

This strategy includes a highly ambitious aim of achieving carbon neutrality for Scope 1 and Scope 2 emissions by 2030, ahead of the University's aspirational date of 2038. There are constraints which currently affect our ability to achieve this aim, such as the capacity of services infrastructure which is beyond our control. Other key factors include the availability of technology in the near future, and the potential for serious disruption to essential College activities.

Nevertheless, the measures outlined in the strategy commit the College to do everything we possibly can to minimise our negative impacts on the environment. Our progress towards the targets outlined in this document will be reviewed every Term by the Environment Committee, and we aim to revise this publication as an Annual Sustainability Report.

Future revisions will include information from the College's external land and property holdings audit, with targets to improve sustainability across the College's estate.

Many of the targets set rely upon sustained changes in behaviour across the whole community. We look forward to working together to make Jesus College a more sustainable place to live, work and learn, both now and in the future.

The Environment Committee
Jesus College
June 2021





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Jesus College
Cambridge
CB5 8BL