

# **SUSTAINABILITY STRATEGY**

**CHURCHILL COLLEGE**

**UNIVERSITY OF CAMBRIDGE**

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## 1. Introduction

Uniquely amongst the Oxbridge colleges, Churchill College was founded as an institution with science and technology (the STEM subjects) at its heart: by statute, 70% of the fellowship and students must be in the STEM disciplines. It is therefore appropriate that we use the depth of our scientific knowhow to facilitate work around sustainability, be that with the fellowship, the staff or the entire student body. We know students care passionately about the climate crisis and are full of innovative ideas as well as deep commitment to making things work. Across the fellowship the research of many is directly linked to these issues. To take just a few words describing some of our fellows from our website:

- Dame Polly Courtice formerly led the Cambridge Institute for Sustainability Leadership and is a member of the Cambridgeshire and Peterborough Independent Commission on Climate;
- Professor Henning Sirringhaus is actively researching thermal energy harvesting and converting heat energy into more useful forms of energy, such as electricity;

- Professor Manish Chhowalla has demonstrated that it is possible to induce phase transformations in atomically thin materials and utilize phases with disparate properties for field effect transistors, catalysis, and energy storage;
- Professor Diane Coyle is an economist who has sat on the Natural Capital Committee;
- Professor Markus Kraft is the CARES Director for the Singapore-Cambridge CREATE Research Centre. In this centre he is also a principal investigator in the ‘Cambridge Centre for Carbon Reduction in Chemical Technology (C4T)’ programme.
- Dr Anna-Maria Kypraiou has been working on projects on the reduction of fuel consumption and fuel oil consumption uncertainty reduction in the maritime industries. Most recently, she worked on system energy optimisation and development of methods for fuel consumption reduction on very large crude carriers;
- Dr Matthew Agarwala leads the Bennett Institute’s Wealth Economy project, which seeks to transform economic measurement to better reflect sustainability, inequality, and human wellbeing.

As this shows, the depth of activity and expertise amongst our fellows in this space is impressive, not just in STEM but also in the social sciences. There is much to do and the work is urgent.

Our sustainability strategy is designed to build on our strengths to satisfy the existential crisis we are facing, and to ensure that all parts of our operation are considered and improved. We need to set ambitious targets and place ourselves as a leader amongst the colleges, so that others can learn from our experience. We need to speak to past generations of alumni, as well as the alumni of the future, carrying all of them with us on this important journey. Our success over the last years in the University’s Green Impact Awards are testament to the activity in the College and demonstrates our commitment: we have received the top level of award (Platinum) in each of the last four years, despite all the challenges of the pandemic.

We will constantly monitor our KPIs, refreshing them regularly, to ensure these keep stretching the College’s operations. This means not just investing in infrastructure, but in people and working on the mind-set of all who live or work here. As a specific example, over the past two summers, solar panels have been installed on two of the courts. By ensuring members of the maintenance team were trained to carry out the installation, we have both been able to cut costs substantially, but also given the team confidence and pride in what they are able to do. This work will continue over future years.

*Master, Professor Dame Athene Donald*

## 2. Our Strategic Priorities

- a. The basis of our strategy is formed using the United Nations (UN) 17 Sustainable Development Goals (SDGs ) with a notable focus on the following:

- 7) Affordable and Clean Energy
- 9) Industry, Innovation and Infrastructure
- 11) Sustainable Cities and Communities
- 12) Responsible Consumption and Production
- 13) Climate Action
- 15) Life on Land

- b. These goals focus on the areas where we recognise opportunities for the greatest gain and have informed our objectives and corresponding KPIs. Further details of these key goals can be found online within the dedicated UN Website found here:

<https://sdgs.un.org/goals>

- c. The Objectives and Key Performance Indicators (KPIs) are driven by the following key priorities as set out within the body of the report:

- Carbon and Energy
- Investment and ESG
- Built Environment and Operations
- Landscape and Ecology
- Travel
- Procurement

- d. This Strategy is designed to lead the College to its overarching sustainability ambitions with various key deadlines notably in relation to Carbon reduction. The evolving nature of the challenges and our continuing progress means that we plan to review this strategy annually.



### **3. Objectives and KPIs**

- a. The body of this report will set out our strategic sustainability objectives and corresponding Key Performance Indicators (KPIs). The objectives below are intended as specific strategic targets to fulfil the College's wider objectives as a centre of sustainability excellence and are intended to align where policy with the wider University of Cambridge aims. All data is based against 2019 baseline levels.
- b. The objectives are listed within each policy priority and a format for ongoing review is appended to the document (Appendix 1).

### **4. Governance**

- a. Given the vital importance of this strategy the College maintains a Sustainability Committee reporting directly to College Council and incorporating the work of sustainability student groups, operations groups and the Green Impact Sub-Group.
- b. The purpose of the Committee is to support the College to become an institutional leader in the development and introduction of sustainability by bringing together College wide expertise in the areas of sustainability notably including carbon foot-printing, carbon reduction and offsetting, development and installation of green technologies.





## 5. Carbon and Energy

SDG 7: Affordable and Clean Energy

SDG 13: Climate Action

### ***Our Objective***

*To reduce scope 1, 2 and 3 carbon emissions to zero.*

### ***Our KPIs***

- *Utilising the University's science-based targeting approach for carbon reduction, reduce all energy related carbon emissions to zero by 2038 with scope 1 and 2 emissions by 2030.*
- *Progress towards elimination of natural gas usage with elimination of natural gas consumption by 2030 (measured in kW/h per year) utilising innovative and forward looking solutions wherever possible.*
- *Commence monitoring of environmental conditions and energy usage across College in 2022 utilising innovative student led projects for data collection.*

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**What have we done so far?**

- Adopted the University's Science-based targeting (SBT) approach for carbon reduction which provides a framework for consistent forecasting and measuring of carbon for the College.
- We have removed several properties from fossil fuel usage through the switch to zero carbon fuels and investment in widespread insulation.
- We have not installed any new or replacement gas or oil-fired installations since 2019 with all new installations operating using heat pump and other greener technology.
- We use our estate to generate power with major investment in solar power generation targeting over two thirds of our demand. A number of projects have already been completed and further details can be found in our case studies section.



## 6. Investment and ESG

### *Our Objective*

The College believes it is important that its endowment is managed in a way that encourages decarbonisation and to mitigate against the risks associated with climate change in line with the goals of the Paris Agreement and the Glasgow Climate Pact.

As a ‘*Universal owner*’ (a very long-term investor who has an interest in the long-term health of the financial system as a whole and takes account of the long-term impact of its investment decisions on the economy and society) the College also has a role to play in influencing other investors, agents and actors who are involved in financial and property investments and seeks to collaborate with others to enable wider sectoral change.

### *Our KPIs*

The College has already eliminated meaningful fossil fuel exposure and holds no active funds with more than 1% exposure and is committed only to:

- (i) invest through investment managers whose aims are consistent with the College’s investment objectives targeting net zero carbon in our financial investments by 2038;
- (ii) engage with investment managers to encourage pro-active participation in coalitions with other investors on environmental, social and governance (ESG) issues;
- (iii) seek to ensure that human wellbeing, environmental sustainability, energy efficiency and biodiversity are respected and advanced;
- (iv) use its influence along with other Colleges to place active pressure on the banking sector and seek best practice in terms of environmental impact from its bank.

Gifts of shares in companies whose output, pollutes or degrades the environment will not be accepted.

## 7. Built Environment and Operations

*SDG 11: Sustainable cities and communities*

*SDG 12: Responsible consumption and production*

### **Our Objective**

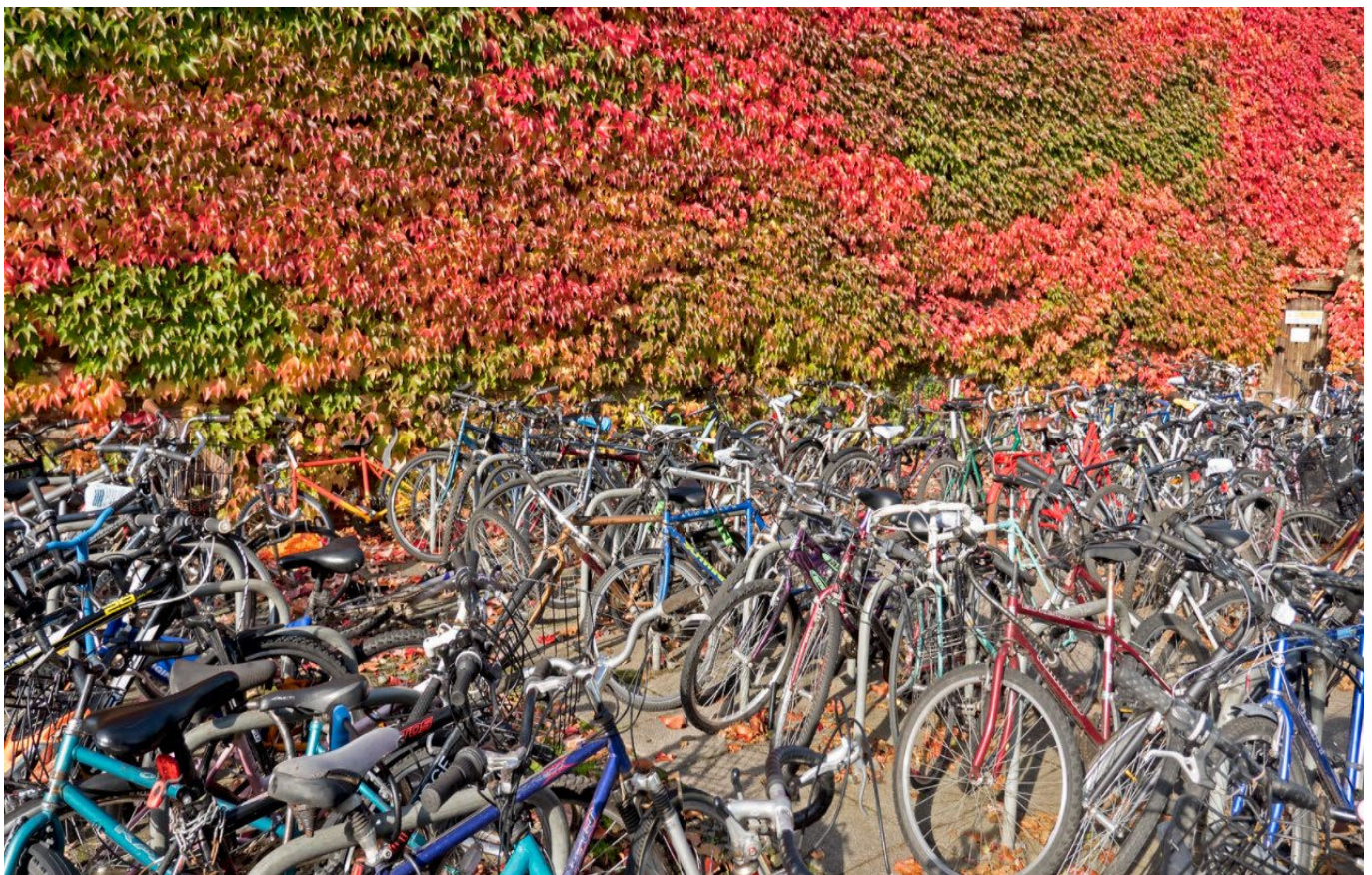
*To reduce the environmental sustainability impacts of our operations and buildings.*

### **Our KPIs**

- *Reduce water consumption by 20% by 2030.*
  - *In 2022, adopt a strategic approach to the use of the existing estate through more efficient use of buildings and space and increasing the use of shared facilities as opposed to demolition and new construction.*
  - *To send zero non-hazardous waste to landfill by 2025 incorporating the implementation of an innovative recycling strategy to provide protocols for the management of waste materials across all operations notably including catering, housekeeping and construction.*
  - *Develop and implement at least 12 significant innovations across the built environment and operations each year.*
  - *Eliminate all single use items such as paper cups and plastic cutlery by 2022/23. This may include the selection of higher cost but higher quality items with longer lifespans.*
  - *Ensure carbon budgeting is applied consistently across medium and large projects and adopt mechanisms for simpler carbon budgeting for smaller and reactive projects and operations in 2022/23.*
  - *Minimising paper usage as far as possible with an 80% reduction against 2018/19 levels by 2022/23. Where paper (and timber) are used preferentially sourcing all timber and paper from Forest Stewardship Council-certified suppliers and requiring our preferred contractors to do likewise.*
  - *Develop a Sustainable Food Policy that aims to minimise the indirect biodiversity impacts of the food that we purchase. For example, through adopting Marine Stewardship Council standards within 2022/23.*
  - *Reduce power used for lighting as far as possible with installation of LED fittings and motion sensor activation to remaining all viable spaces by 2022/23. Note approximately 98% of lights are already LED.*
  - *Implement digital signage installation across site notably for key variable information such as room availability and menus by 2022/23.*
  - *Reduce the use of chemical cleaning products and bleaches by 20% by 2022/23.*
- 

**What have we done so far?**

- We are consistently recognised at the National Union of Students' Green Impact Awards with Platinum level awards.
- We have made a wide range of changes in our use of materials often involving simple switches such as moving to concentrated, plant based non-bleach cleaning products. We use several waste materials in the construction of furniture such as using waste wood for desks.
- All of our waste is already recycled or used to generate power but we are adopting waste compaction to majorly reduce the number of collections and significantly reducing the number of refuse lorry journeys. Further details can be found in our case studies section.



## 8. Landscape and Ecology

*SDG 13: Climate Action*

*SDG 13: Life on Land*

### **Our Objective**

*To limit all negative ecological impacts and instead have a strongly positive affect on biodiversity and natural landscapes.*

### **Our KPIs**

- *Reach and maintain 1,100 trees on the campus by 2024 from the base level of 840.*
  - *Introduce and maintain a rolling programme of wildlife and landscape training and education*
  - *Obtain Hedgehog Friendly Campus Accreditation in 2022/23.*
  - *Develop wildlife ponds at two or more campus locations seeking educational and volunteering input wherever possible in 202/23.*
  - *Develop and maintain a biodiversity plan and species register informing local and national conservation stakeholders.*
  - *Expand meadowing and wildlife habitat to cover an additional five acres on campus by 2025.*
- 

### **What have we done so far?**

- A 10% increase in the total tree numbers on site with a strong emphasis on native species since 2019.
- Continuing our work to support our plant conservation work through our Plant Heritage National Collection Holder status.
- Eliminated all pesticide and herbicide usage.
- Establishment of several beehives.
- In 2021 alone we planted twenty thousand native bulbs with the support of hundreds of volunteers.





## 9. Travel

*SDG 9: Industry, Innovation and Infrastructure*

### **Our Objective**

*To provide viable and accessible sustainable travel options for staff, Fellows and students for travel to work, travel at work and travel for work which results in a reduction of carbon emissions.*

### **Our KPIs**

- *Electrification of operations vehicle and plant fleet by 2025 and installation of EV charging points serving a third of all parking spaces by 2024 to encourage the use of more sustainable alternatives to petrol and diesel vehicles.*
- *Implementation of improved options for staff and students to travel between College and University sites via sustainable transport notably electric vehicles and bicycles before 2023.*
- *Implementation and supply of technology to support remote working and attendance at events and meetings in 2022/23. Notably including installation of improved video-conferencing and hybrid meeting facilities and the provision of support on how to use them.*
- *Introduction of a Sustainable Travel Policy incorporating our agile working policy and environmental impact travel assessment which encourages and supports our community to make greener traveling decisions both on land and by air.*

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### **What have we done so far?**

- We only use electric tools, plant and vehicles across a significant majority of the operation including within Gardens, Maintenance and Housekeeping teams.
- The College site has fifteen electric vehicle charging stations.
- We are considering the use of other electric vehicles such as E-Scooters for use on the Churchill Road and potentially within Cambridge. Our growing photo-voltaic power generating capacity means these could be charged without the use of fossil fuels.



## 10. Procurement

*SDG 12: Responsible consumption and production*

### **Our Objective**

*To positively influence the sustainability performance of suppliers and the sustainability credentials of the goods and services that we purchase.*

### **Our KPIs**

- *Extend compliance with Churchill College Procurement Guidelines to all purchasing teams and provide appropriate training and guidance to purchasers/procurers to ultimately reach ISO 20400 standards for Sustainable Procurement.*
  - *Ensure procurement of goods consistently includes ESG factors such as social sustainability, carbon and locality within scoring criteria within 2022/23. This may include a focus on key supplier accreditation such as Fairtrade.*
  - *Develop and implement a supplier engagement programme to promote continual improvements by both suppliers and College purchasers. Programme to focus on four key long-term suppliers in 2022/23.*
- 

### **What have we done so far?**

- We are committed to engaging with our full supply chain in an environmentally and socially responsible way. This means that when procuring any goods or services we ensure that the whole supply chain are able to evidence their commitment to sustainability.
- We adhere to the Department for Environment, Food and Rural Affairs guidance on sustainable procurement for a number of different sectors (e.g. cleaning products, electrical goods, furniture, etc.).
- We always look to simplify and localise our produce supply chains. This work has resulted in our forming direct commercial relationships with a number of local farms generally in Cambridgeshire and neighbouring counties.

## 11. Progress and Review

The College will review KPI progress annually.

The Objectives will be reviewed annually by College Council and the relevant College Committees. This review will assess the progress as well as the continuing suitability of the Objectives and KPIs.

Appendix 1 entails a format for progress and review reporting.

# Appendix 1 – Objectives Review Schedule – May 2024

Behind Schedule
In Progress
Complete

SC-2024-008 – Appendix 1

## Carbon and Energy

No.	Objective	KPI	Evidence / Commentary	RAG
1.1	To reduce scope 1, 2 and 3 carbon emissions to zero.	Utilising the University’s science-based targeting approach for carbon reduction, reduce all energy related carbon emissions to zero by 2038 with scope 1 and 2 emissions by 2030.	The College is procuring advice and seeking funding to develop a site wide decarbonisation plan to be completed in late 2024/early 2025. This plan will provide a prioritised, costed programme of potential works to achieve the College’s aspirations. This will build on significant progress to date using solar PV, Air Source Heat Pumps and wider Enerphit principles for recent refurbishments.	A
1.2		Progress towards elimination of natural gas usage with elimination of natural gas consumption by 2030 (measured in kW/h per year) utilising innovative and forward-looking solutions wherever possible.	The College now has solar PV on North/ South/ West/ Cowan Courts, Study Centre, 68/70/72 Storey’s Way and staff car park garages with total capacity of c250kw. It also has air source heat pumps (ASHP) and Mechanical Ventilation with Heat Recovery (MVHR) at 36a/36b/70/72 Storey’s Way, and 2 no. Sheppard Flats. The College kitchens have removed gas cooking where possible. The decarbonisation plan will identify future projects where maximum benefit can be achieved to eliminate use of natural gas. For heating season 2024/25, reduced flow temperatures for the district heat network will be trialled.	A
1.3		Commence monitoring of environmental conditions and energy usage across College in 2022 utilising innovative student led projects for data collection.	The monitoring project commenced with c100 sensors in use across the College and it is planned to roll out more across the whole site. Data has been collected but not across whole site due to security concern about connecting sensors to the wifi network. This has now been resolved and so the project roll out can progress. Smart thermostatic valves and electrical sockets have been installed in staircases 2, 33, 44 and 45 ready for connection when the ‘next generation’ sensors are installed in the near future.	R

## Appendix 1 – Objectives Review Schedule – May 2024

Behind Schedule
In Progress
Complete

### Built Environment and Operations

No.	Objective	KPI	Evidence / Commentary	RAG
2.1	To reduce the environmental sustainability impacts of our operations and buildings.	Reduce water consumption by 20% by 2030.	Major refurbishments have included installations of water saving technologies and removal of redundant pipework dead-legs and unused sanitary appliances. Specifications for future refurbishment and repair/maintenance will require the use of low water usage devices such as aerated taps and shower heads. The decarbonisation plan will review and reset the baseline for monitoring against. Low water consumption laundry equipment is being considered at end of current contract.	A
2.2		In 2022, adopt a strategic approach to the use of the existing estate through more efficient use of buildings and space and increasing the use of shared facilities as opposed to demolition and new construction.	An estates strategy is being developed alongside the decarbonisation plan for adoption in late 2024/early 2025 to identify future needs and opportunities. This will help inform future decisions on projects such as the Churchill Road and Archives projects. Refurbishments of 36a/b, 70, 72, 76 and Whittinghame Lodge, Storey's Way, demonstrate the commitment to reuse of buildings more efficiently (eg, additional bedrooms) and to higher sustainability standards such as Enerphit principles.	A
2.3		To send zero non-hazardous waste to landfill by 2025 incorporating the implementation of an innovative recycling strategy to provide protocols for the management of waste materials across all operations notably including catering, housekeeping and construction.	KPI Complete. The College does not send any non-hazardous waste to landfill, predominantly due to our wide-ranging recycling policies. The use of on-site waste compactors has also significantly reduced waste collections with resultant reduction in vehicle travel to and from site.	G
2.4		Develop and implement at least 12 significant innovations across the built environment and operations each year.	Ongoing work but innovations across operations and projects such as waste compactors, sensor/smart control for heating, further solar PV and green roof installations are progressing as well as working towards improving the College's Green Impact award rating. Some specific examples are: <ul style="list-style-type: none"> <li>- Move to undiluted cleaning and handwash products reducing packaging, storage, transport costs and waste.</li> <li>- Installed smart thermostatic radiator valves and power sockets ready for use with sensor technology to reduce energy use and improve comfort for residents.</li> </ul>	A

## Appendix 1 – Objectives Review Schedule – May 2024

Behind Schedule
In Progress
Complete

No.	Objective	KPI	Evidence / Commentary	RAG
			<ul style="list-style-type: none"> <li>- Green roof installation being developed for main cycle shed which will remove asbestos as well as improve biodiversity.</li> <li>- Move to electric 'Gator' vehicle for Grounds and Gardens and new equipment is electric wherever possible.</li> <li>- Use of tablets by Safety &amp; Compliance for undertaking inspections and recording issues directly into Jira, improving asset management and possible duplication of work.</li> <li>- Re-roofed South Court with significant insulation upgrade and addition of solar PV to build on existing renewable energy.</li> <li>- Incorporated ASHP and MVHR at 36a/b Storey's Way to further decarbonise the College.</li> <li>- Upgrade of main electrical switchgear across the site to allow for future increase in renewable energy such as solar PV.</li> <li>- Move to smart metering across the site to allow better monitoring in the future.</li> <li>- Active ventilation system in Creative Workshops to adjust to environmental conditions internally and externally.</li> <li>- Use of SuDS wildflower turf by West Court which contains species that help break up the soil and tolerate drought conditions.</li> <li>- New, more energy efficient servery counter installed in dining room.</li> </ul>	
2.5		Eliminate all single use items such as paper cups and plastic cutlery by 2022/23. This may include the selection of higher cost but higher quality items with longer lifespans.	Single use items have been significantly reduced with the removal of single plastic use cups although compostable paper cups are available in the Buttery. Additional charges are made for single use cups to encourage use of reusable cups.	G
2.6		Ensure carbon budgeting is applied consistently across medium and large projects and adopt mechanisms for simpler carbon budgeting for smaller and reactive projects and operations in 2022/23.	The decarbonisation plan will identify a range of different sized projects prioritised on optimising sustainability and energy benefits. This will include both capital and planned preventative maintenance works.	A
2.7		Minimising paper usage as far as possible with an 80% reduction against 2018/19 levels by 2022/23. Where paper (and timber) are used preferentially sourcing all timber and paper from Forest Stewardship Council-certified suppliers and requiring our preferred contractors to do likewise.	Significant reduction was achieved since 2022 through the implementation of electronic issue tracker systems and removal of most personal printers. Hybrid working also helped to reduce printing but further monitoring and assessment is ongoing to ensure that paper use doesn't increase with more people back in the office.	A

## Appendix 1 – Objectives Review Schedule – May 2024

Behind Schedule
In Progress
Complete

No.	Objective	KPI	Evidence / Commentary	RAG
2.8		Develop a Sustainable Food Policy that aims to minimise the indirect biodiversity impacts of the food that we purchase. For example, through adopting Marine Stewardship Council standards within 2022/23.	Sustainable food policy in place including the adaption of key standards and carbon labelling for menu choices both on the digital displays and on the website.	G
2.9		Reduce power used for lighting as far as possible with installation of LED fittings and motion sensor activation to remaining all viable spaces by 2022/23. Note approximately 98% of lights are already LED.	Nearly all College lighting is now LED where suitable replacements are available. Further assessment will be undertaken to identify if opportunity remains, primarily for external lighting and bulb replacement in Court rooms.	A
2.10		Implement digital signage installation across site notably for key variable information such as room availability and menus by 2022/23.	Digital menu signage has been installed in the servery and other digital signage for various purposes are in locations such as the Buttery, housekeeping area. There are further plans for digital signage for the maintenance workshop to help manage workload. Expanding the use of digital signage for room availability is to be explored further with our software suppliers.	A
2.11		Reduce the use of chemical cleaning products and bleaches by 20% by 2022/23.	KPI Complete. No bleaches are in use by housekeeping and where possible we use plant-based cleaning materials. Some liquid products now used are concentrated, soluble and diluted on site, significantly reducing weight, packaging, storage and transport costs/impact.	G

## Appendix 1 – Objectives Review Schedule – May 2024

Behind Schedule
In Progress
Complete

### Landscape and Ecology

No.	Objective	KPI	Evidence / Commentary	RAG
4.1	To limit all negative ecological impacts and instead have a strongly positive affect on biodiversity and natural landscapes.	Reach and maintain 1,100 trees on the site by 2024 from the base level of 840.	Ongoing supply issues since 2016 have impacted this but we have increased these to 950 trees on site with a further 25 due to be planted by end of the year. As supply issues ease, the target should be achievable but over a slightly longer time period through to 2028.	A
4.2		Introduce and maintain a rolling programme of wildlife and landscape training and education.	Several team members have undertaken formal wildlife or landscape training including whole department hedgehog awareness training. The wider College has been encouraged to participate in events such as the Big Garden Birdwatch and bulb planting. The College also participates in the National Garden Scheme open days.	G
4.3		Obtain Hedgehog Friendly Campus Accreditation in 2022/23.	The College achieved the “bronze” Hedgehog Friendly Campus accreditation level and this will be maintained and improved upon but without further formal assessment (due to increased cost of assessment).	G
4.4		Develop wildlife ponds at two or more campus locations seeking educational and volunteering input wherever possible in 2022/23.	Potential locations for wildlife ponds have been considered in areas suitable for community input and engagement. Previous locations proposed are not ideal/suitable due to overhanging trees or tree root proximity and so additional locations are being considered, e.g. garden of 68 Storey’s Way and replanting the pond in the Fellows Garden outside the Cockcroft Room with native, wildlife-friendly planting. The Churchill Road project will be very landscape and biodiversity led with potential for new ponds and using the sustainable drainage proposed to support this.	A
4.5		Develop and maintain a biodiversity plan and species register informing local and national conservation stakeholders.	A plant species survey has been undertaken to inform a biodiversity plan and produce a species register to inform local and national conservation stakeholders. A biodiversity plan is now being developed to sit alongside the species register and publish these on the website once approved. A further survey of birds/moths/butterflies is also proposed and developing collaboration with the College’s Sustainability By-Fellow.	A
4.6		Expand meadowing and wildlife habitat to cover an additional five acres on campus by 2025.	The 2025 target has been met. This included wildflowers but also an array of native bulbs through a mix of large, dedicated areas, smaller	G



## Appendix 1 – Objectives Review Schedule – May 2024

Behind Schedule
In Progress
Complete

No.	Objective	KPI	Evidence / Commentary	RAG
			infill spaces and for example leaving areas under tree canopies unmown.	

### Travel

No.	Objective	KPI	Evidence / Commentary	RAG
5.1	To provide viable and accessible sustainable travel options for staff, Fellows and students for travel to work, travel at work and travel for work which results in a reduction of carbon emissions.	Electrification of operations vehicle and plant fleet by 2025 and installation of EV charging points serving a third of all parking spaces by 2024 to encourage the use of more sustainable alternatives to petrol and diesel vehicles.	<p>The College now has an electric van and 2 'Gator' type electric vehicles. Where possible and products available, Grounds and Gardens use electric plant/equipment. The diesel maintenance van will be replaced with electric at the end of its lease.</p> <p>There are 15 EV chargers installed across the College car parks, c7% of all spaces. These are currently lightly used and no demand for further installations at present. A discounted EV charging agreement is available to College members to encourage use of EVs. This will be regularly reviewed and the target can be reset as demand changes.</p>	G
5.2		Implementation of improved options for staff and students to travel between College and University sites via sustainable transport notably electric vehicles and bicycles in 2023.	A new electric bus service started in 2023 with discounted rates for University Card holders (staff and students) running from West Cambridge to Addenbrookes. The College has pool bikes available for staff and students to borrow.	A
5.3		Implementation and supply of technology to support remote working and attendance at events and meetings in 2022/23. Notably including installation of improved video-conferencing and hybrid meeting facilities and the provision of support on how to use them.	Our video conferencing and hybrid meeting technology has been significantly improved with room bespoke solutions across several key College meeting rooms as well as more portable solutions. We have just added Bluetooth connectivity options to simplify digital connections for presenters and meeting hosts.	G
5.4		Introduction of a Sustainable Travel Policy incorporating our agile working policy and environmental impact travel assessment which	Further work is required to undertake various surveys with College members to inform and then develop the Sustainable Travel Policy.	R

## Appendix 1 – Objectives Review Schedule – May 2024

Behind Schedule
In Progress
Complete

No.	Objective	KPI	Evidence / Commentary	RAG
		encourages and supports our community to make greener traveling decisions both on land and by air.		

### Procurement

No.	Objective	KPI	Evidence / Commentary	RAG
6.1	To provide viable and accessible sustainable travel options for staff, Fellows and students for travel to work, travel at work and travel for work which results in a reduction of carbon emissions.	Extend compliance with Churchill College Procurement Guidelines to all purchasing teams and provide appropriate training and guidance to purchasers/procurers to ultimately reach ISO 20400 standards for Sustainable Procurement.	Guidelines are now employed across the operational and estates teams with work ongoing to expand this to the remaining purchasing teams. These procurement guidelines are now incorporated into the College Procurement Procedures committing to sustainable procurement.	A
6.2		Ensure procurement of goods consistently includes ESG factors such as social sustainability, carbon and locality within scoring criteria within 2022/23. This may include a focus on key supplier accreditation such as Fairtrade.	KPI Complete	G
6.3		Develop and implement a supplier engagement programme to promote continual improvements by both suppliers and College purchasers. Programme to focus on four key long-term suppliers in 2022/23.	KPI Complete	G

## **Appendix 2 – Case Studies**

**CASE STUDY 1: 72 Storeys' Way Project Refurbishment**

**CASE STUDY 2: Solar Power Project**

**CASE STUDY 3: Volunteer Ecology Project**

**CASE STUDY 4: Waste and Recycling Project**

### **CASE STUDY 1: 72 Storeys' Way Project Refurbishment**

72 Storey's Way is a large early 20<sup>th</sup> century arts and crafts style building to the north side the main site. The building is home to postgraduate residents and is the latest building to be repaired and refurbished in the cyclical capital projects schedule. In addition to these practical requirements the project presented an opportunity to significantly improve the energy performance of the building and, as with all our building projects, to eliminate fossil fuels.

Drawing on the knowledge and the expertise developed from recent similar projects such as the refurbishments at 70 Storey's Way and Whittinghame Lodge the team were eager to go even further at 72. The building was almost entirely uninsulated and the windows a combination of ill-fitting late 20<sup>th</sup> century single glazed casements and failed UPV-C units. The project included installation of extensive insulation and new sustainably sourced timber framed double glazed windows ultimately exceeding modern regulatory standards despite the building's age. This retrofitting enabled the installation of an air source heat pump system replacing the energy intensive and aged gas fired boilers. The new system eliminates the use of fossil fuels but is also much less energy intensive using less than a fifth of the energy required by the inefficient previous system.

Further efficiencies were achieved with the installation of a heat recovery system. The system is designed to utilise excess heat and redistribute it within the building whilst also supplying fresh air and managing humidity.

Solar power panels have been installed to the viable south facing pitches of the building's roof forecast to generate up to 80% of the power required by the residents.

## CASE STUDY 2: Solar Power Project

The College estate is uniquely well positioned to benefit from solar power generation. We have 20,000sqm of flat roof space on our main site alone and the majority are suitable for solar power generation. The project is made possible by the work of our skilled in-house teams. In 2020 our electrical team trained in the installation and maintenance of solar panels and their input ensures we deliver high quality, economically viable projects.

The photo below shows an aerial view of a part of our West Court Solar Power Installations. Completed in 2021 the project represented the first phase of a four-stage project to generate significant solar power on all of our buildings. When all phases are complete the project will generate over two thirds of the College's power.



The second phase of the project will be completed in Summer 2022 at our North Court buildings, but other smaller projects are happening all year round to stores, garages and smaller residential buildings. The photos below show some recent in progress work.





### CASE STUDY 3: Volunteer Ecology Project

Our main site is more than 50 acres in total and the majority of this space is garden, grounds or sports fields. We have been working to further improve the biodiversity of our site with the introduction of several additional acres of tree planting, native wildflowers and bulbs.

In 2021 alone this rolling project succeeding in planting over 30,000 bulbs and wildflower plants due greatly to the hard work of over 150 volunteers from across the College community. The project is ongoing but we have already seen species of flora and fauna return to the site or appear for the first time. We have joined a wider collegiate ecology survey and have seen significantly greater species diversity on site.

In 2022 the project is moving to the areas adjacent to the football and rugby pitches with planned volunteer days scheduled in the Spring and Autumn.





**CASE STUDY 4: Waste and Recycling Project**

In a single year the College generates over 100 tonnes of waste which is entirely either recycled or used to produce power. None of our waste enters landfill. The college will continue to encourage all of our community to minimise waste, through careful choice of packaging and trying to ensure that the correct bins are used for the correct materials.

The college is looking at other ways in which to improve our waste protocols and to this end we have adopted the use of compactor machines. The machines compact the waste so that three tons of waste can be collected per machine per collection. Prior to this project there were over 600 waste collections per year. By using compactors waste collections have dropped four-fold. This reduction in vehicle movements significantly reduces heavy vehicle traffic on site but also in the local area reducing air pollution and further reducing carbon emissions from our supply chain.