# CANTERBURY CHRIST CHURCH UNIVERSITY

# OUR RESPONSE TO THE CLIMATE EMERGENCY
# Report on Phase 2:
# Establishing baselines and strategic approaches to emissions reductions.

## A. INTRODUCTION & CONTEXT

*Our Response to the Climate Emergency*, approved by the Governing Body in November 2021 (copy available on request), set out an ethical, socially and inter-generationally just strategy to make a meaningful contribution to the UK's carbon reduction strategy and targets. Its focus includes reducing carbon both within our own operations and in our wider value chain (minimising the carbon impacts of our business), as well as developing education, research and advocacy to enable others to do so (maximising potential benefit) (Figure 1.)

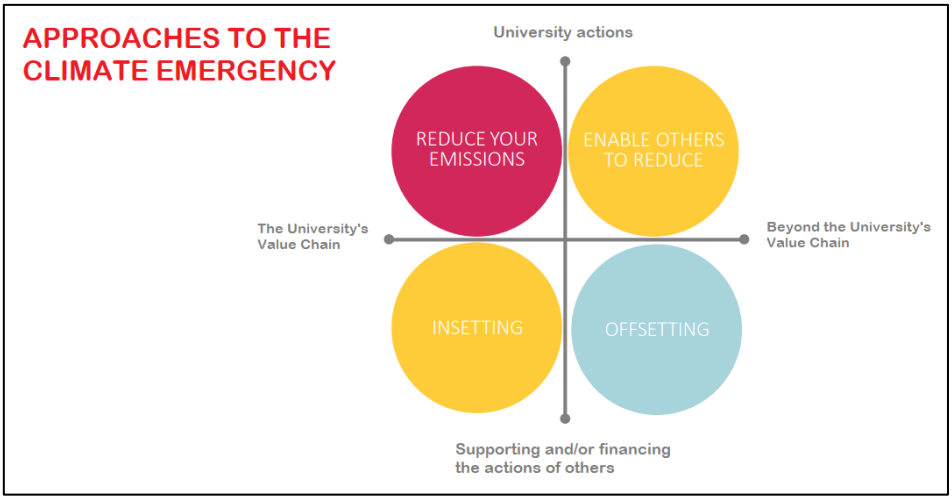



Figure 1. Setting priorities for reducing and enabling emissions reductions. Adapted from ©Quantis[1]

We set out three commitments across the five areas of our carbon footprint, broadly defined: (i) to take responsibility for our indirect emissions within our value chain (procurement, student commuting and homeworking, student commuting); (ii) to continue to reduce our direct emissions (utilities and waste, business travel); (iii) to be a change agent in enabling others to reduce their emissions (education, research and advocacy).

It was recognised in November 2021 that CCCU had already made significant progress during the implementation of its first Carbon Management Plan. During this first phase, which extended from 2010 to 2021, the University had halved its direct emissions.

However, *Our Response to the Climate Emergency* recognised that in order to implement a significant and meaningful response we would need to establish baseline carbon footprints in each of the four emissions areas, as well as establish our approach to enabling others to reduce emissions through our education research and advocacy. Consequently, the

[1] https://quantis-intl.com/wp-content/uploads/2020/05/absolute-zero_slidedeck_final-copie-nxpowerlite.pdf

Governing Body agreed that Phase 2 of *Our Response to the Climate Emergency* (Nov 2021 – Nov 2023), would establish our baseline emissions, and develop a strategic approach to reducing them, alongside a strategy for leveraging our education, research and advocacy.

To oversee the Phase 2 work, a Climate Emergency Strategy Implementation Group was formed with representation from each of the five areas of our carbon footprint, along with designated SMT sponsorship.

***Context***

It is important to set this Phase 2 report within the wider societal and higher education sector context of wholesale Net Zero planning, which is very much in its infancy.

During the last two years there has been a significant mobilisation of higher education sector experience and initiative towards achieving Net Zero, in which we have taken a proactive leadership role. Most notably, in July 2023 the Climate Commission for UK Higher and Further Education, of which Universities UK is a sponsor, published the following frameworks and guidance: Climate Commission Principles for Net Zero emissions - priorities and recommendations[2]; EAUC Standardised Carbon Emissions Framework (SCEF)[3]; 'Cost of Net Zero Calculator'[4].

However, despite this progress and momentum, the higher education sector continues to face multiple competing challenges that directly impact on its ability to deliver the level and extent of changes required.

Furthermore, while this report highlights significant progress that has been made in establishing baselines and a proposed strategic approach to deliver on our climate commitment to achieve Net Zero, this longitudinal agenda, extending significantly beyond the timescale of even Vision 2030, continues to compete for attention with more immediate institutional concerns at the macro (eg, financial sustainability), meso (eg. cyber-security) and micro (eg the daily business of teaching, learning and research) levels.

[2] https://www.eauc.org.uk/climate_commission
[3] https://www.eauc.org.uk/scef
[4] https://www.eauc.org.uk/the_cost_of_net_zero

## B. OUR 2022/2023 EMISSIONS BASELINE

The key output of Phase 2 of *Our Response to the Climate Emergency* is the calculation of baselines across the four emissions areas of our carbon footprint. It has not yet been possible to calculate the impact of the fifth area, education research and advocacy.

The University's total carbon footprint for the Academic Year 2022/23 has been calculated at **45,190 $tCO_2e$**.

Table 1 illustrates the composition of this total footprint in relation to the three commitments made in *Our Response to the Climate Emergency*, and shows: (a) that our indirect emissions, totalling 42,026 tCO2e (93%), dwarf our direct emissions; (b) that procurement is a much more significant proportional contributor than originally estimated in 2020/21.

**TABLE 1: THE COMPOSITION OF OUR CARBON FOOTPRINT**

| | Preliminary estimate (2020/21) | Calculated Baseline (2022/23) | |
|---|---|---|---|
| | % | tCO2e | % |
| *(i) Taking Responsibility for our Indirect Emissions* | | | |
| (1) Procurement (incl. construction & refurb) | 45% | 32,969 | **73%** |
| (2) Student & Staff Commuting | 35% | 9,057 | **20%** |
| *(ii) Continuing to Reduce our Direct Emissions* | | | |
| (3) Utilities (electricity, gas. water) & waste | 15% | 2,666 | **6%** |
| (4) Business travel | 5% | 498 | **1%** |
| *(iii) Being a Change Agent – enabling others to reduce* | | | |
| (5) Education, Research and Advocacy | positive effect that reduces tCO2e (not yet possible to calculate) | | |
| **TOTAL** | | **45,190** | |

However, there are some important caveats to the calculations presented in Table 1, and these are set out in the following sections, together with further details of the composition of the figures and their implications for our strategic approach to reducing our carbon footprint.

### *(i) Taking Responsibility for our Indirect Emissions*

(1) PROCUREMENT - **32,969 tCO2e** ***(73%)***

The procurement figure, which comprises by far the largest area (73%) of our institutional emissions, has been calculated after two exclusions to avoid double counting:

- A nominal 38,048 tCO2e that can be calculated as attributable to the activities of our academic partners (eg, Global Banking School, London School of Commerce, Elizabeth School London, UK Management College, Stratford College) has been excluded. This figure has been excluded because, although technically within our value chain, these partners are providers of higher education in their own right, and any evaluation of the carbon footprint of the higher education sector would separately include them and their emissions in their own right. Consequently, to include them in our emissions footprint would be to 'double-count' their impact. Nevertheless, through our partnership Memoranda of Understanding, and the work of our UK Partnerships and Apprenticeships Unit, as part of our own climate commitment we will include expectations that our partners' carbon footprints are monitored and minimised.

- Utilities, waste and business travel are reported separately (with more direct measures), so are excluded from the procurement calculations.

Procurement would also usually include the carbon impact of the capital costs of *one-off* major construction and refurbishment projects (in previous years, this would have included the construction and equipping of the Verena Holmes and Daphne Oram buildings). However, no major construction or refurbishment projects were undertaken in 2022/23, so the figure includes only the carbon impact of the recurrent revenue and capital costs of ongoing estate maintenance. This means that that the figure represents a 'true baseline' of business as usual, but also that a separate consideration of the *one-off* carbon impacts of future construction and refurbishment projects will need to be considered separately.

The baseline for procurement has been established using the *Higher Education Supply Chain Emissions Tool (HESCET)*. This tool converts spend with suppliers into DEFRA[5] commodity-based emissions using nationally established commodity conversion factors, which are updated annually. This means there is a direct correlation between spend and emissions: the more goods and services purchased, the more $CO_2e$ is assumed to be emitted.

Table 2 shows that the University's top 14 spend categories account for 70% of procurement emissions (51% of total university emissions), with IT-related procurement accounting for 46% of procurement emissions, which represents 34% of total university emissions.

There are two clear options and strategies to reduce procurement emissions:

(a) ***Reduce overall volume of spend*** – this will have a resultant direct reduction in emissions, and can be directly captured by the HESCET tool
(b) ***Reduce emissions per spend*** – this involves seeking to switch to more carbon efficient suppliers, and/or influencing suppliers to be more carbon efficient. This cannot be captured by the HESCET tool and requires a shift to using a nascent Supplier Emissions Tool.

[5] Department for Environment, Food and Rural Affairs

**TABLE 2: THE UNIVERSITY'S TOP 14 PROCUREMENT SPEND CATEGORIES BY SMT AREA**

| ***SMT AREA*** <br> ***(top 14 procurement categories)*** | Spend | tCO2e | SMT Area (tCO2e) | SMT Area (% tCO2e) |
|---|---|---|---|---|
| **INFORMATION TECHNOLOGY** | | | **15,159** | **46.0%** |
| Licenses (incl. Software) | £4,982,942 | 7,486 | | |
| IT Systems | £15,451,735 | 6,501 | | |
| Laptop & Desktop PCs | £1,441,638 | 859 | | |
| Audio Visual Equipment | £439,465 | 313 | | |
| **ESTATES & FACILITIES** | | | **3,616** | **11.0%** |
| Catering Stock – Food | £581,102 | 1,432 | | |
| Rent – Buildings | £7,044,588 | 1,187 | | |
| Temp. Staff - Professional Services | £1,757,851 | 666 | | |
| Building Work - External Contractor | £1,208,578 | 331 | | |
| **FACULTIES** | | | **2,110** | **6.4%** |
| Medical & Scientific Equipment | £680,115 | 1,325 | | |
| Advanced Procedural Skills Centre | £403,000 | 785 | | |
| **INTERNATIONAL** | | | **1,141** | **3.5%** |
| Commission to Agents | £3,009,523 | 1,141 | | |
| **FINANCE** | | | **948** | **2.9%** |
| Bank Interest | £2,501,963 | 948 | | |
| **EDUCATION & STUDENT EXPERIENCE** | | | **346** | **1.0%** |
| Electronic Publications | £1,497,148 | 346 | | |
| **TOTAL FOR TOP 14 CATEGORIES** | **£40,999,648** | | **23,320** | **70.7%** |
| REMAINING PROCUREMENT | £15,870,732 | | 9,649 | 29.3% |
| **INSTITUTIONAL TOTAL** | **£56,870,380** | | **32,969** | **100.0%** |

There is a lack of expertise, both across the sector and within the University, to develop reduction strategies based on the categories of output from the HESCET tool. For many spend categories it is not clear how CO2e is generated, and therefore it is difficult to put mitigation measures in place. For example, one of the University's top 14 spend categories is temporary staff, for which it is not immediately clear where the emissions are produced so reduction strategies cannot yet be developed. This is a sector wide issue, but work is being undertaken by the EAUC[6] and the HEPA[7] to develop and share knowledge and best practice.

[6] Association for Sustainability Leadership in Education
[7] Higher Education Procurement Academy

Measurement and monitoring using the HESCET tool is limited because it will only show reductions in emissions if the volume of spend is reduced ((a) above), although clear targets can, and in many cases should, be set for this. However, the university has also been participating in an exploratory project to develop a Supplier Emissions Tool, which more accurately establishes emissions for individual suppliers, and will allow procurement decisions to include a direct assessment of product emissions along with all other procurement criteria. An increasing number of suppliers to the higher education sector are participating in the development of this tool, and when a critical mass is reached, it is proposed that the tool will be used to re-base procurement emissions, and to set targets that will incorporate reductions in emissions per spend ((b) above).

One strategy for procurement is to set activity-based targets alongside any outcome-based targets that might be set. Examples could include:

- Percentage of contracts where $CO_2e$ is considered in the procurement process.
- Percentage of 'contract owners' who have received $CO_2e$ emissions training.
- Percentage of top emitting suppliers who have a carbon management plan.

However, to support and deliver such targets, it will be important to make university-wide changes to University procurement policy and processes, including: (i) mandatory consideration of the CO2e impacts of contracts by procurement decision makers, particularly in our highest emitting procurement areas such as IT; (ii) close contract management to monitor suppliers throughout the lifetime of a contract (due to be rolled out on 2023/24). In addition, specific sector expertise and resource within the procurement team will be necessary to support the delivery of reductions.

(2) STUDENT AND STAFF COMMUTING – **9,057 tCO2e** ***(20%)***

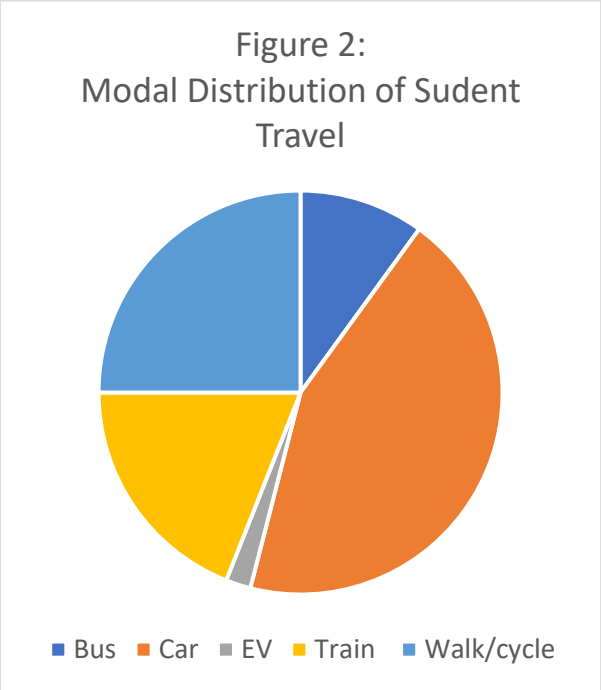
STUDENT COMMUTING – **6,800 tCO2e** ***(15%)***

The student commuting baseline has been established following a comprehensive review of the academic and policy literatures, statistical analysis of existing CCCU datasets, evaluation of transport accessibility (including travel distance by mode) using TRACC Travel Time Analysis software, a quantitative student travel behaviour survey and analysis of HESA registration data on student addresses. Full details of the methodology are available in a separate Technical Report.

The student travel behaviour survey (n=803) identified how our students travel to Campus. The 'modal distribution' of such student travel is shown in figure 2.

The percentage of the sample travelling by the four carbon emitting modes (ie, excluding walking and cycling) was applied to: a) TRACC analysis of the HESA registration data (n=10,595) and b) TRACC analysis of student survey data. This revealed average travel time, distance and consequent CO2e emissions per mode, per year, using UK government conversion factors for 2023. We have taken the mean average of the two analyses as the baseline for the yearly emissions from daily student commuting.

The analysis highlights the following:




a) Our emissions from student commuting are likely to be substantially higher than other UK HEIs, because we have significantly more commuter students than the national average and our campuses are substantially less accessible by sustainable modes (largely due to the geography of the region and the available travel routes).
b) Whilst the number of commuter students overall has remained relatively consistent between 2015-2021, we expect an increase in commuter students post-pandemic and in response to CCCU recruitment patterns which predict an increase in students who are more likely to be commuters.
c) Emissions from student commuting are likely to increase because the number of commuter students is likely to increase, and because commuter students are significantly more likely to travel to campus by car (see (a)).
d) Travel behaviour is extremely complex. Factors that influence choice of mode and route, including caring responsibilities, paid work and trip chaining (for example, taking the children to school on the way to work, or going to the gym on the way home), need to be accounted for in future analyses.

The analysis focuses on commuter students (those whose 'home' and 'term-time' addresses are the same), and therefore does not include the carbon footprint of the travel generated by non-commuter students' relocation to the University at the beginning and end of each term, semester or year. Sector benchmarks have suggested that, when international students are included in this calculation, such travel could account for up to 10-15% of a higher education institution's carbon footprint[8].

STAFF COMMUTING AND HOMEWORKING – **2,257 tCO2e** ***(5%)***

The staff commuting baseline has been established utilising an analysis of staff postcode data, split by academic and professional services staff, estimates from Human Resources and Organisational Development about numbers of days spent on campus per annum, TRACC Travel Time Analysis, and national data on the proportion of trips undertaken by travel mode[9]. It is supplemented by a calculation of an estimate for the carbon footprint of

[8] A nascent *Student Relocation Travel Emissions Calculator* is being developed and tested by the University of Aberdeen and, if fully validated, this may allow future calculations of student relocation to be calculated and included.
[9] It has not been possible or feasible to undertake a staff travel mode survey. We continue to work with colleagues in UCU to explore the best method and timing for such a survey and hope to enhance the analysis with data from such a survey in the future.

homeworking for those days that staff do not commute to campus using DEFRA's combined homeworking emissions factor[10].

The postcode of every member of staff, current as of 7 September 2023, split into academic/professional services staff, was entered into the TRACC software. Travel distances were calculated for travel from home postcode to the Campus, in 5km bands. From this, the total distance that would be covered in a single outward trip, by all staff, if every member of staff travelled to the Canterbury campus by four carbon emitting modes, was calculated. $CO_2e$ emissions were then calculated, using UK government conversion factors for greenhouse gas emissions[11], for a single return journey.

To calculate total emissions from the staff commute, we assume that, on average, there are 221 workable days per year[12]. Data from Human Resources and Organisational Development at CCCU[13] estimates that, on average, staff make 3.8 return journeys to campus per week. On average, therefore, each full-time equivalent member of staff will make 168 return journeys to campus per year.

These calculations suggest that our baseline for staff commuting is between 593 and 2,841 $tCO_2e$ per year. Taking modal distribution data from the Department for Transport, we calculate that the total emissions from staff commuting are 2004.08 $tCO_2e$ (Table 3).

Additionally, the commuting baseline is supplemented with a calculation for the carbon footprint of homeworking on the days that staff do not commute to work[14] of 253.24 tCO2e (Table 3). This shows that a daily commute has roughly two and a half times the carbon footprint of a day spent working from home.

The combined emissions for staff commuting and homeworking are **2,257.32 tCO2e** (Table 3). This represents 5% of our total emissions profile.

There are four clear options and strategies to reduce both student and staff commuting emissions:

a) **Reduce** the number of journeys
b) **Re-mode** to a lower emitting mode of transport
c) **Re-route** to a shorter or less carbon emitting route (eg with less time in stationary traffic)
d) **Re-time** to a time when journeys would take less time and/or spend less time in stationary traffic.

[10] Circular Ecology (2023). The Carbon Emissions of Homeworking and Office Working. https://circularecology.com/news/the-carbon-emissions-of-homeworking-and-office-working
[11] Department for Energy Security and Net Zero. 2023. Greenhouse gas reporting: conversion factors 2023. Available online, via: https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2023, viewed 15 September 2023. Factors used are for Business travel: Average car; Average local bus; National rail.
[12] 365 days per year, minus weekend, bank holidays, statutory days and an average of 30 days paid annual leave.
[13] This was calculated in response to a request from the University and Colleges Employers Association (UCEA)
[14] 221 workable days, multiplied by the proportion of days homeworking (1.2 days out of every 5), multiplied by the number of working hours in a day (7.4 hours), multiplied by the DEFRA combined homeworking emissions factor (0.33378 kgCO2e per hour per person), multiplied by the number of staff employed in 2022/23 (1,933).

**TABLE 3: TOTAL EMMISSIONS FROM STAFF COMMUTING AND HOMEWORKING**

| | Bus | Car | EV | Train |
|---|---|---|---|---|
| Single outward journey | 5.085 | 8.454 | 6.209 | 1.765 |
| Return journey | 10.17 | 16.908 | 12.418 | 3.53 |
| 168 days per year | 1708.56 | 2840.54 | 2086.22 | 593.04 |
| % mode use for commuting national population (all trips[15]) | 7 | 61 | 5 | 8 |
| **Total emissions by mode** | **119.60** | **1732.73** | **104.31** | **47.44** |
| **Total staff commuting emissions** | | | | **2,004.08** |
| **Total staff homeworking emissions** | | | | **253.24** |
| **TOTAL EMISSIONS FROM STAFF COMMUTING AND HOMEWORKING** | | | | **2,257.32** |

Significant reductions in emissions from student commuting (and to a lesser extent, staff commuting) are unlikely to be achievable through re-moding or re-routing journeys, because it is not possible for many of our students (circa 66%) to travel to campus in a reasonable time (less than 1 hour) by sustainable modes. For students, targeting reducing and/or re-timing journeys may be the most productive approach, but this would require a much wider institutional strategy for student attendance on campus (see section C).

Continual monitoring and analysis of the composition of the student and staff body, and their travel preferences and behaviours, will be essential to any approach that seeks to effectively reduce emissions derived from student and staff commuting.

***(ii) Continuing to Reduce our Direct Emissions***

(3) UTILITIES & WASTE – **2,666 tCO2e** ***(6%)***

The Utilities and Waste baseline for 2022-23 has been provided through Streamlined Energy and Carbon Reporting (SECR), which is a statutory requirement for all organisations over a certain size. Emissions for Water and Waste have been included in this category as their emissions are very low (less than 1%) and do not merit separate consideration.

This baseline for 2022-23 provides the first stable post-pandemic view of energy use across a settled estate[16]. In the context of an overall decline in utilities and waste (scope 1 & 2)

[15] Department for Transport. 2023. Statistical dataset: mode of travel. Available online, via: https://www.gov.uk/government/statistical-data-sets/nts03-modal-comparisons#mode-by-purpose, viewed 12/10/2023. DfT does not record fuel type. SMMT data suggest that EVs account for 3% of cars in the UK, therefore we have assumed that 3% car commute trips are by EV. SSMT. 2023. UK Mortorparc data 2022. Available online, via: https://media.smmt.co.uk/uk-motorparc-data-2022/, viewed 12/10/2023.

[16] The estate is now 'settled and stable' following a period in which significant acquisitions (the former prison site), disposals (of numerous leased and owned assets) and construction (eg Daphne Oram and Verena Holmes) took place

emissions, there has been a significant reduction in scope 2 (purchased electricity) since 2019 when the institution switched to 100% renewably generated electricity (on-shore wind) (Figure 4).

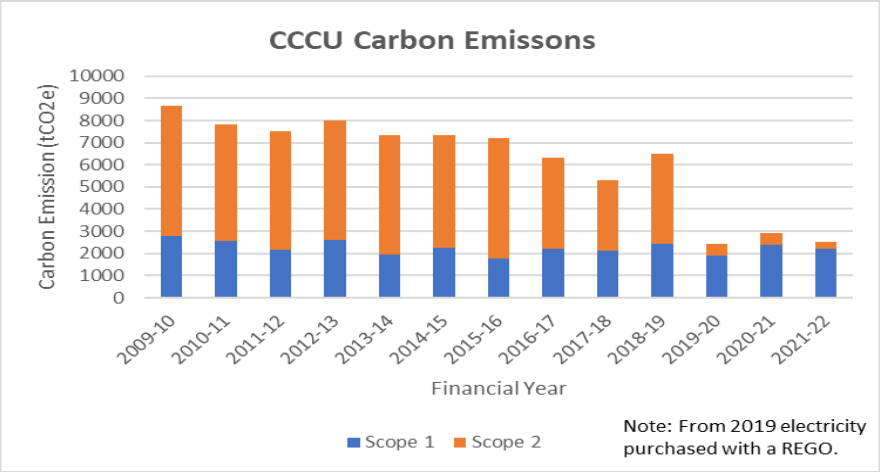



Figure 4. Scope 1 & 2 emissions from the University estate since 2010

The priority now is to focus on reductions in Scope 1 emissions (locally burnt fuel), for which there are two clear options and strategies to reduce emissions:

(a) ***Change the fuel source*** to a less carbon emitting fuel
(b) ***Reduce energy usage*** resulting in a reduction in carbon emissions

The dependence on gas for heating (a dependency that will be difficult to change without wider technological advances and supplier changes) means that the potential for reductions through (a) above is limited. Consequently, the focus needs to be on (b).

Figure 4 shows that there have been only very limited reductions in actual energy usage. Lighting has been identified as an immediate focus for energy reduction strategies given the obsolescence of existing fluorescent lighting and the projected benefits of their replacement with LEDs (up to 70% energy saving).

The recently completed Heat Decarbonisation Plan, undertaken for the University by The Green Consultancy, suggests a number of potential changes that could be made to the central heating plant to reduce the use of natural gas. Additionally, consideration needs to be given to the thermal efficiency of each existing building, its projected lifespan, and consideration of the priority for either full-scale refurbishment or replacement.

However, there are a number of operational initiatives that can be considered to reduce energy usage. These include:

- Set a lower temperature point for the estate, in terms of heating provision (currently 21$^{o}$c) and water storage (currently 60$^{o}$c)
- Maximise space utilisation and timetabling to focus the use of the estate into core hours, and consolidate evening and weekend usage into energy efficient buildings
- Reduce building open hours

- More extensive automated powering down of equipment and spaces when they are not being used

(4) BUSINESS TRAVEL – **498 tCO2e *(1%)***

Business travel emissions have been calculated annually for the past 10 years, using a combination of mileage from staff expenses claims, ledger spend and emissions data for air and rail travel from our travel provider, Key Travel.

Figures 5 shows a comparison of emissions across five categories of business travel from the full last pre- (2018/19) and first post- (2022/23) pandemic academic years. This shows significant reductions (65% total) in business travel in four of five categories, with the only growth being in student placement travel. Much of this is attributable to the acceleration, and acceptance, during the pandemic of technologies that facilitate online meetings. However, it remains possible that there may still be a post-pandemic 'bounce-back' of business travel volumes in future years.

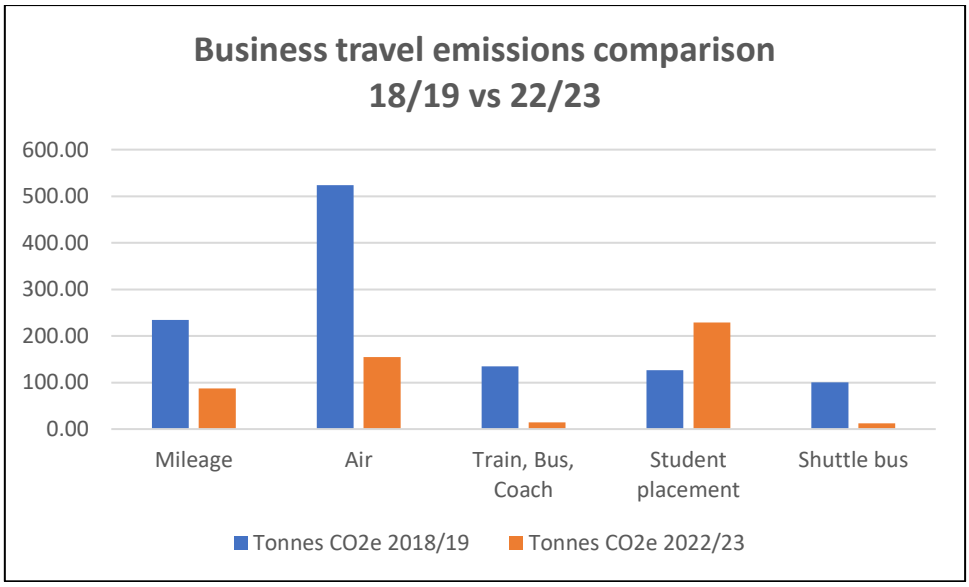



Figure 5. Emissions comparison for the two full pre and post pandemic years.

To guard against a post pandemic 'rebound' effect, and to support business travel decisions going forward, new business travel guidance has been developed focusing on two key decisions, which represent the clear options and strategies to reduce business travel emissions:

a) **Is travel necessary?** – this is based on an assessment of the strategic value of in-person attendance, and whether there are realistic opportunities for online attendance.
b) **What is the lowest emitting form of travel that can reasonably be taken?** – this is based on a balanced consideration of the following four criteria:
   i. *Carbon efficiency* (referring to the distance-based travel hierarchy)
   ii. *Time efficiency and opportunity cost* (the time it takes and what is being lost through time away, including personal circumstances)

iii. *Strategic efficiency* (eg, it takes a long time but is worth it because of gaining new insights, networking opportunities, connecting with research colleagues, etc.)
iv. *Financial cost*

A key element in understanding how further travel guidance may be developed and implemented is to understand 'reason for travel' and to establish volumes of travel against various travel purposes. Following several delays in 2022/23, the collection of this data across staff expenses claims (StaffSpace) and Key Travel is being comprehensively implemented in 2023/24.

***(ii) Being a Change Agent – enabling others to reduce their emissions***

(5) EDUCATION, RESEARCH & ADVOCACY – **no calculation yet possible** ***(reduces emissions)***

Education, Research and Advocacy provide the greatest potential opportunity for positive impact on a sustainable future and the climate emergency. Canterbury Christ Church University graduates over 3,000 students each year from its directly delivered provision, and the latest Graduate Outcomes survey shows that a greater proportion of these students are in work 15 months after graduation than at any other large, multi-subject UK University. With more than half of graduates employed in Kent and Medway, this is a significant opportunity to positively impact climate literacy and advocacy in the local and regional workforce, and climate action in the local and regional economy.

The results of the 2021 Research Excellence Framework (REF 2021) showed that Canterbury Christ Church University quadrupled the proportion of its research impact that is considered to be 'world-leading' (the highest possible rating), with our impact case studies demonstrating that the impacts of our research reached over 6 million people, or more than 10% of the UK population, through changes to policy, practice and training in the public, private and third sectors. Furthermore, these impacts resulted from 'systems changes', meaning that their reach will extend beyond those currently feeling the benefits to future generations in the years to come. This experience of delivering impacts that result in systemic change is a major opportunity to positively influence climate policy and practice that will genuinely shape sustainable futures.

Since *Our Response to the Climate Emergency* was approved by the Governing body in November 2021, we have launched the Academy for Sustainable Futures (March 2022), to which Professor Obas (John) Ebohon was appointed as the Inaugural Dean in the Summer of 2023 to lead our work on education, research and advocacy. The Academy team worked throughout 2022 and 2023 to support the development of the University's new strategic framework, Vision 2030, which has at its heart a commitment to Shape Sustainable Futures. In practice, this means committing to *'making meaningful improvements in human and environmental wellbeing, beyond harm reduction, now and in the future'*.

This commitment is currently being enacted through key initiatives to implement our Learning and Teaching Strategy and our Research, Enterprise and Innovation Strategy, the two underpinning academic strategies for Vision 2030. Central to the former are current initiatives to redesign our Academic Framework, which sets the parameters within which all of our courses will be designed, and to Review our Academic Portfolio, which will set out our substantive academic course offer. The Academic Framework will determine how sustainability and climate education are embedded in all of our courses in a way that is relevant to both the subject being studied and the industries and sectors in which our students seek to develop careers, thus further enhancing the employability of our graduates. Building on embedment across all courses, the Academic Portfolio Review will

explore and establish opportunities for substantive course offers relevant to sustainability and climate education.

The Research, Enterprise and Innovation Strategy sets stretching targets for growth, including a 50% increase in research active staff by 2028, and a further increase in the volume, quality and reach of our research impact, as measured by REF 2028. It also sets targets, measured through the national Knowledge Exchange Framework, to build on our ranking in the top 20% of Universities (the highest ranking possible) for our Public and Community Engagement, as well as to grow our work with business, the public and third sectors. To deliver these targets, fifteen subject clusters that have been identified for submission to REF 2028 are currently developing five-year strategies for outputs and impacts. These strategies, that stretch across health, education, humanities, culture, politics, law, management, science and engineering, will identify and establish our strengths and delivery ambitions to ensure that, firstly, the way we undertake our research is sustainable and, secondly, that the research we undertake maximises its positive impacts on sustainability outcomes and the climate emergency.

The above workstreams for our curriculum and our research will both complete in Spring 2024, and will be central to supporting the education, research and advocacy strand of Phase 3 of *Our Response to the Climate Emergency*.

## C. STRATEGIC APPROACHES TO EMISSIONS REDUCTIONS

An important priority during Phase 2 has been to identify approaches that will be most efficient in making a meaningful contribution to the UK's carbon reduction strategy and targets. This has involved identifying our largest areas of 'influenceable behaviours', and considering strategic approaches to deliver changes in those behaviours.

The analysis in section B suggests that there are FOUR focused strategic approaches that Canterbury Christ Church University could implement to make a meaningful contribution to the UK's carbon reduction strategy and targets through *Our Response to the Climate Emergency*.

Firstly, two strategic approaches that will ***MINIMISE THE CARBON IMPACTS OF OUR BUSINESS*** are:

***(1) Focus on the reduction of CO2e emissions attributable to IT procurement***

IT procurement comprises **more than one third** of Canterbury Christ Church University's carbon footprint. As such, a focused CO2e reduction strategy should consider both the CO2e implications of procurement decisions for IT, and IT policy decisions that have implications for procurement.

***(2) Develop a focused student attendance and campus strategy***

An approach to student attendance that sought to ensure all of our students attend campus twice a week would address areas that currently comprise **more than one quarter** of Canterbury Christ Church University's carbon footprint. It would have the following benefits for CO2e reduction: (a) a reduction in student commuting volumes; (b) a more efficient use of the estate focused on intense use of buildings during core hours (9am-5pm Monday to Saturday). It would also have the advantage of delivering on other key Vision 2030 commitments, such as developing a vibrant campus environment (40% of our students would be on campus at any one time) and an enhanced student experience. It is also likely to increase student attendance, as the student commuting survey data showed that 90% of students scheduled to attend three days per week or less attended all their scheduled sessions, whereas 30% of those scheduled to attend four days, and 41% of those scheduled to attend five days did not attend all sessions. Nevertheless, delivering this approach will take considerable co-ordination across a range of strategic projects, including time-tabling and workload-profiling. These projects are currently underway, under the governance of the University's Strategic Projects Board.

Secondly, two strategic approaches that will ***MAXMISE OUR POSITIVE IMPACT*** are:

***(3) Meaningfully embed sustainability and climate education in the curriculum***

Integrating sustainability and climate education with subject specific knowledge and employability outcomes that focus on the needs of the industries and sectors in which our students wish to develop careers will not only create the *'climate advocates of the future'*, but will more clearly position Canterbury Christ Church University in the recruitment market as the University for *Shaping Sustainable Futures*, as well as enhancing the employability of our graduates.

***(4) Monitor and maximise the sustainability and climate impact of our research***

REF 2014 showed the reach and significance of the impact of our research, with just four of our submitted impact case studies shown to collectively reach more than 10% of the UK population. In the next REF, Canterbury Christ Church University should be able to demonstrate that: (a) the way our research is conducted is sustainable and minimises CO2e emissions; (b) our research into sustainability and climate change is significant and impactful; (c) all of our research considers what insights it might provide that impact sustainability and the climate emergency.

## D. SUMMARY, CONCLUSION AND NEXT STEPS

The work during Phase 2 of *Our Response to the Climate Emergency* has: (a) established baseline calculations for both our indirect and direct CO2e emissions that will enable the University to minimise the carbon impacts of its business; (b) laid the foundation for approaches to our education, research and advocacy that will enable the University to maximise its positive impact.

FOUR focused strategic approaches have been identified, two of which will collectively address 60% or our emissions, and two of which will ensure that we maximise the positive sustainability and climate impacts of our students and our research.

The ***immediate next step*** is to develop specific primary targets to deliver the four focussed strategic approaches set out in section C (whilst also ensuring, through the development of secondary targets, that emissions reductions in other areas are not overlooked). It is proposed that these are reported to the Governing Body at its March 2024 meeting.

The ***medium-term next step*** is to develop and deliver an implementation plan to minimise the carbon impacts of our business, and maximise our positive impacts, against the primary and secondary targets that will be set. It is proposed that this implementation plan is also reported to the Governing Body at its March 2024 meeting.