Environment and Climate Emergency Year-End Achievements Report 2020/21

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Overview:	This document has been developed to present the achievements made in the context of the Environment and Climate Emergency during the academic year 2020/21.
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Linked policies:	E&CE Policy Statement

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1. Executive Summary

Targets and Carbon Data

1.1. The University of Exeter declared an Environment and Climate Emergency (E&CE) in May 2019 with publication of the Environment and Climate Emergency Working Group White Paper following in November of the same year. From this, a series of data driven carbon reduction targets were derived and aggregated to achieve Carbon Net Zero by 2030.

1.2. A 10-year delivery plan and 5-step journey have been developed to create a phased programme of work, against which our staff, students and all our stakeholders can evaluate progress.

1.3. Considerable work has been undertaken throughout 20/21 to improve the coverage and accuracy of the data across all themes and as a result, it has been necessary to restate the 2018/19 baseline because of the improvements in data capture. The revised 2018/19 baseline footprint has now been calculated to be 92,157 tCO$_2$e.

1.4. Through a combination of active carbon management projects and passive external impacts such as the Covid-19 pandemic and supply-chain carbon reduction, the University of Exeter exceeded the planned in-year target of 4.5% and achieved a total carbon reduction of 19% compared with the 2018/19 baseline.

1.5. The largest reduction was seen in Travel, which saw an 85% carbon emissions reduction. Significant reductions were also seen in emissions arising from Water and Waste which saw respective carbon reductions of 68% and 38%. Investments saw a rise of 6% compared to the 2018/19 baseline due to an increase in the University cash balance.

1.6. The categories Energy and Bought Goods and Services saw respective carbon reductions of 2% and 6% compared with the 2018/19 baseline. The response to the Covid-19 pandemic has see a combination of carbon reductions and increases within both categories, with a net reduction achieved in each.

5-Step Journey

1.7. Step 1 of the 5-step journey: Building the Foundations was completed in 2021. The main outcomes of this step was a baseline of data assessed by both accuracy and coverage and quarterly cascade of carbon scorecards by College and Department to help inform and raise awareness of the carbon profile for different parts of the University. Alongside the scorecards (see Appendix H); internal carbon workshops, departmental targets and recommendations have been delivered.

1.8. Step 2: Operation Carbon Strategy, commenced in August 2021 and will continue through the next academic year. This step will focus on benchmarking our progress against internal plans and programmes as well as external ratings such as AUDE Sustainable Leadership Scorecard, Times HE Awards and People and Planet criteria. In addition, Climate related Thematic Forums will become embedded and ongoing development of College and Professional Service level Climate Actions Plans and pan-university carbon reduction projects will continue.

Policy and Project Progression

1.9. The Environment and Climate Emergency Working Group White Paper outlined recommendations for a deadline to achieve Net Zero and a summary of actions to assist in meeting the Net Zero goal.

1.10. Subsequent internal review has since seen the Working Group target of 2050 accelerate to 2030. Leading actions have been identified in the E&CE Policy; 44 key policy statements were identified and review of each of these activities is being tracked, evaluated, and reported to the newly formed E&CE Group. In 2020/21 38% progress was achieved.

2. Our Carbon Footprint

Carbon Profile

2.1.   There has been a clear impact on the carbon profile since 2018/19 due to response of the Covid-19 pandemic. Figure 1 shows the carbon profiles for the baseline year 2018/19 and for 2021/22 categorised by theme and by scope.

2.2.   Key comparisons are listed below;

- An increase in emissions within the Bought Goods and Services category due to increased procurement of covid-safe products and materials such as sanitiser, screens, masks, and safety/protection equipment, alongside operational purchases to facilitate remote working.
- An increase in coverage of carbon from the Investments category was established to include Pensions, Cash in Banks and Spin-out companies.
- Data for many new waste streams were captured, including chemical waste, clinical waste and sanitary waste separations.
- Energy increased due to building conditioning requirements associated with Covid-safety, including increased ventilation and heating demands
- Travel reduced by 85% due to Covid-travel restrictions
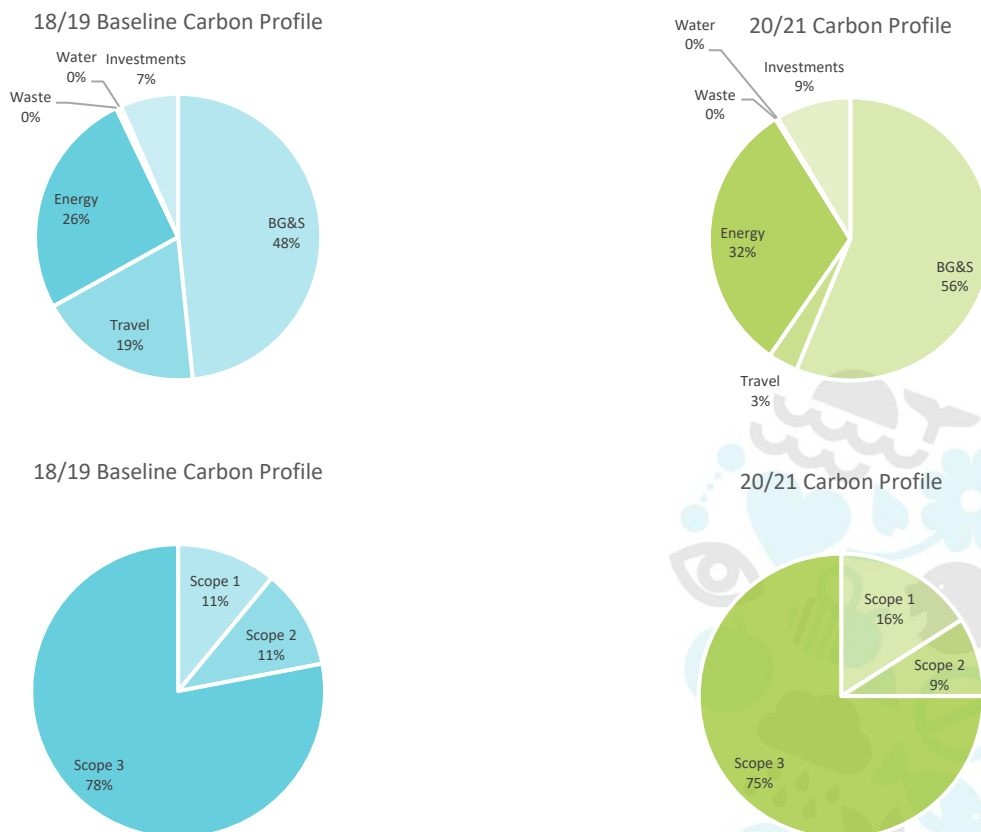
Figure 1. University of Exeter carbon profile migration from 2018/19 Baseline year to 2020/21.

2.3.   The baseline footprint against which future comparisons will be made has now been calculated has been restated to 92,157 tCO$_2$e to reflect the increased accuracy and coverage of data.

2.4.   In 2020/2021 the Bought Goods and Services (BGS) category saw a reduction of 6%, but this remains the largest contributor to the overall footprint, now accounting for 56% of total carbon emissions.

2.5.   The BGS, Energy, Travel categories are expected to continue to fluctuate in subsequent years, as students and staff return to campus, new restrictions and best practice becomes established and it is anticipated that the new 'normal' baseline may take a number of years to configure.

2.6. Investments still offer a noticeable 9% contribution to the University's footprint following a net increase of 400 tCO₂e due to a noticeable difference in cash balance.

2.7. Waste and Water both account for <1% of the overall carbon footprint each but are both important in the context of the Environment and Climate Emergency. Waste can be very damaging to the local environment via pollution, contamination and impact on biodiversity and natural capital.

2.8. Water consumption must be limited to reduce the University's impact on the water cycle and University reliance on natural resources. Further, it should be noted that embodied water consumption is not widely considered as an environmental metric and not currently accounted for. The 68% reduction in Water emissions can be attributed to reduced occupancy on campus and a 60% reduction in the carbon factors associated with water supply and treatment.

2.9. Contributions from Travel have dropped from 19% to 3% following a net 14,996 tCO2e reduction in carbon emissions since the baseline year 2018/19, see Figure 3. Whilst efforts have been made to reduce emissions arising from both business and local travel (explored later in this report), the greatest factor has been the national and international travel restrictions arising from the Covid-19 pandemic.

2.10. The breakdown by Carbon Emissions Scope is also provided for reference in Figure 1. The scope definitions are provided below:

Scope 1 carbon emissions are those that arise from the direct burning of fuel as part of an organisation's operations, typically to power vehicles and generators, or to condition buildings.

Scope 2 carbon emissions are those generated to deliver purchased electricity as required. Contributions can include a range of operations including equipment power, building conditioning and EV charging.

Scope 3 carbon emissions account for all indirect carbon emissions that arise from our supply chain, both upstream and downstream. The largest contributors to this category are the embodied carbon of our bought goods and services, and contributions from commuting and business travel.

Planned In-Year Carbon Reduction Targets

2.11. 2020/21 was expected to bring a reduction in carbon emissions of 3.9% from the baseline of 2018/19, equating to 3,206 tCO2. Figure 2 shows the reduction targets by the 6 key carbon reduction categories.
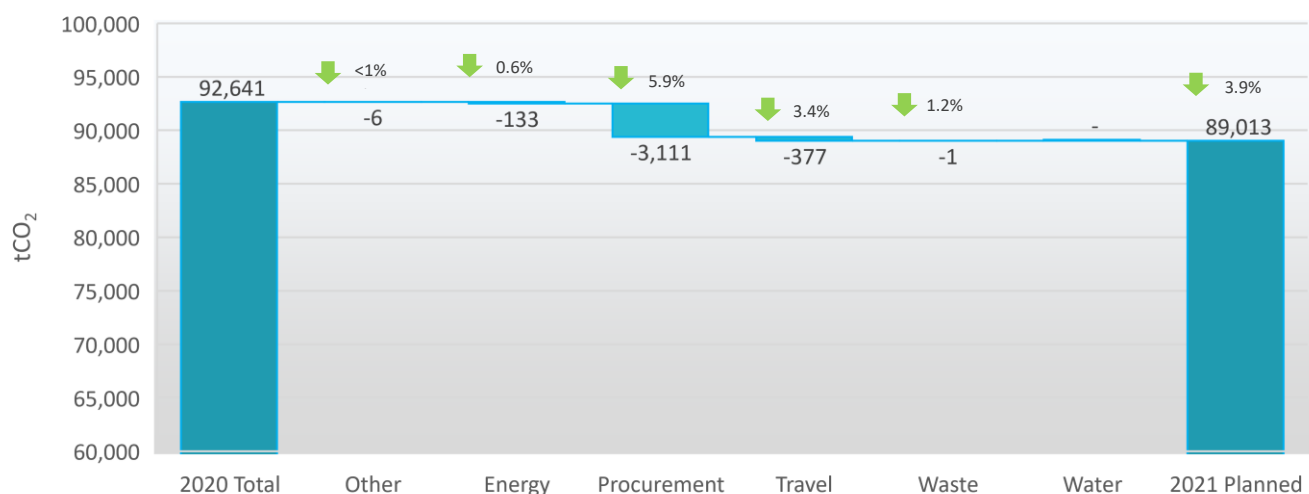
Figure 2. Carbon reduction targets by category to achieve the necessary 3.9% in-year expectation for 2020/21. NB: The baseline figure has been restated since these targets were put in place, but the % targets have defined target review.

2.12. Procurement was targeted to deliver the largest reduction (3,111 tCO₂e) due to its contribution to the overall footprint. The remaining 517 tonnes was expected to arise across the other 5 carbon categories.

2.13. Figure 3 presents the carbon variation for 2020/21 against the baseline year 2018/19, and the previous year 2019/20. It's important to compare carbon footprints against a representative baseline footprint, as

well as recent years that reflect recent operational behaviour, especially in light of the Covid-19 pandemic.

Figure 3. In-year carbon variation for 2020/21 by category. Values are relative to the Baseline Footprint (2018/19).

3. Our Carbon Targets and Policy

Targets Overview

3.1.   The E&CE Working Group outlined 4 goals outlined here in Figure 3.

Goal 1
To be carbon net zero for Scope 1 and 2 emissions by 2040 via a front-loaded approach to reduce emissions by 75% by 2030

Goal 2
To ensure we have data analytics so that we can reduce scope 3 emissions by 50% by 2030 with a plan to reach net zero by 2050, whilst aiming to respond faster (by 2040)

Goal 3
To pursue a policy of 'environmental net gain' on our estates, and to use our research and education to deliver environmental net gain within region, country and across the globe

Goal 4
To be in the top five Universities in national sustainability rankings within sector by 2025, and in the top three Russell Group Universities
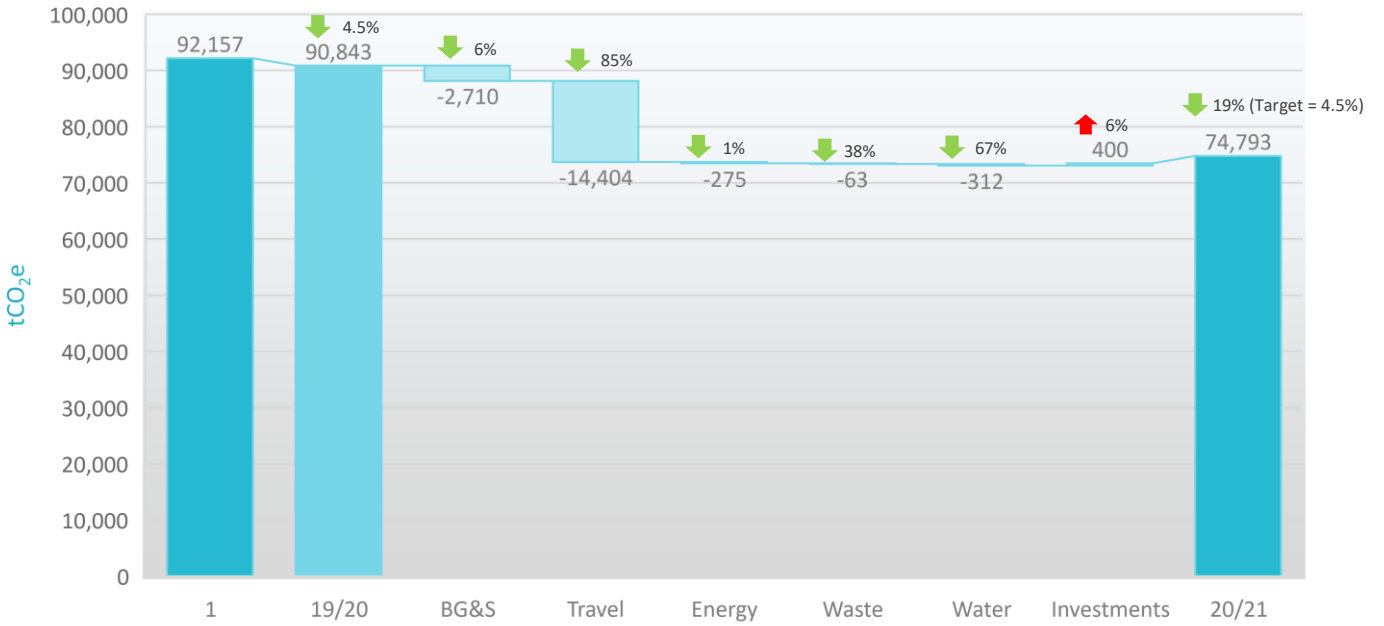
Figure 3. 4 key goals outlined in the Environment and Climate Working Group Report, 2019, form the basis for future carbon E&CE targets.

3.2.   A ten-year delivery plan has been developed to meet the Net Zero Target by 2030 following recognition that the initial targets were not onerous enough to adequately respond to the Environment and Climate Emergency. The refreshed carbon emissions trajectory is shown below in Figure 4.
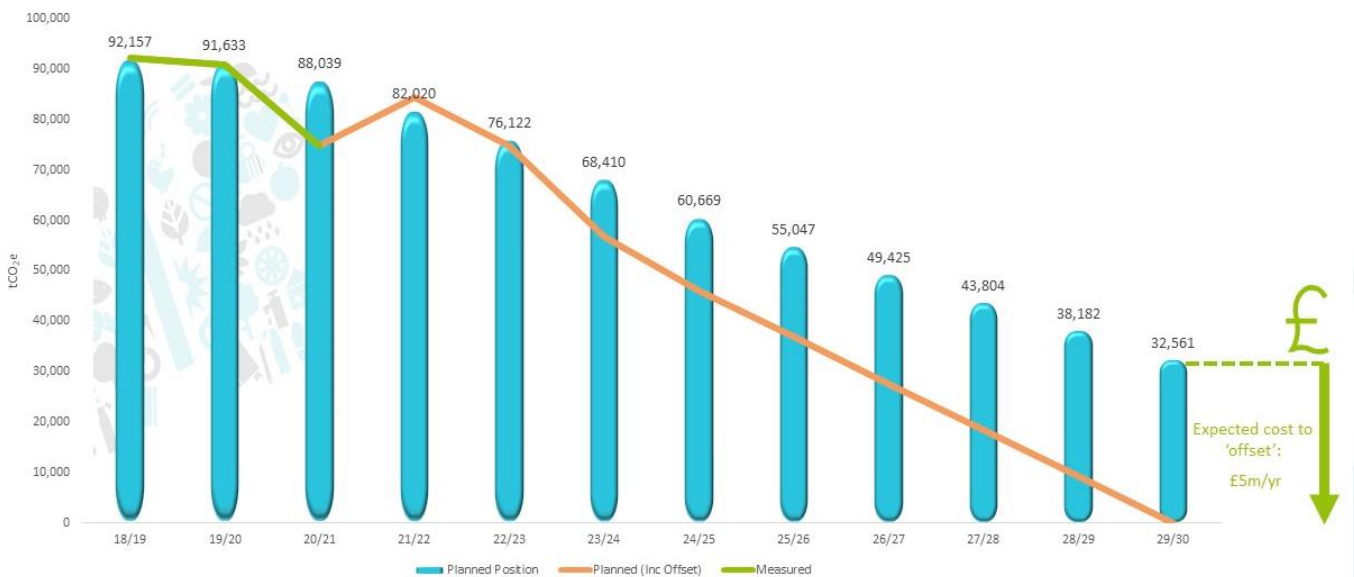
Figure 4. The revised carbon emissions reduction trajectory following the accelerated Net Zero by 2030 target.

3.3.   From 2030, the residual carbon will need to be managed to deliver our Net Zero target. This will require carbon to be removed from the atmosphere via nature-based solutions, natural offsets, and technological carbon sequestration. The development for how we handle our residual carbon is set to be published later in 2022.

3.4.   This consideration adds a significant cost element for the University from 2024/25, where Natural Offset solutions are first expected to be introduced. From 2030, this is likely to cost the University £5m based on current market prices of £150/tCO_2e. There is a widespread recognition that this could increase significantly, highlighting the important of prioritising carbon reduction and low-carbon alternatives.

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3.5.   The University of Exeter approach prioritises carbon and environmental impact reduction, low-carbon and low impact alternatives before finally managing the residual footprint, as presented in Figure 4.

Carbon Reduction
•Behavioural change and operational efficiency omit carbon from University activity

Low-Carbon Alternatives
•Innovation and technological advances provide low-carbon alternatives to everyday practices

Environmental Net Gain
•Sustainable management of our residual carbon footprint through methods that promote improvements to natural capital as well as carbon offset and sequestration

Figure 4. 3-Stage hierarchy approach to achieving Net Zero.

Policy Progress

3.6.   The Environment and Climate Emergency Policy identifies 44 policy statements which became a focus for delivery in 2020/21.

3.7.   The 44 statements have been summarised into the 14 sections presented in Figure 5, and during 2021 38% of the activities were complete, exceeding the 20% progression target in place for the 5-year plan.
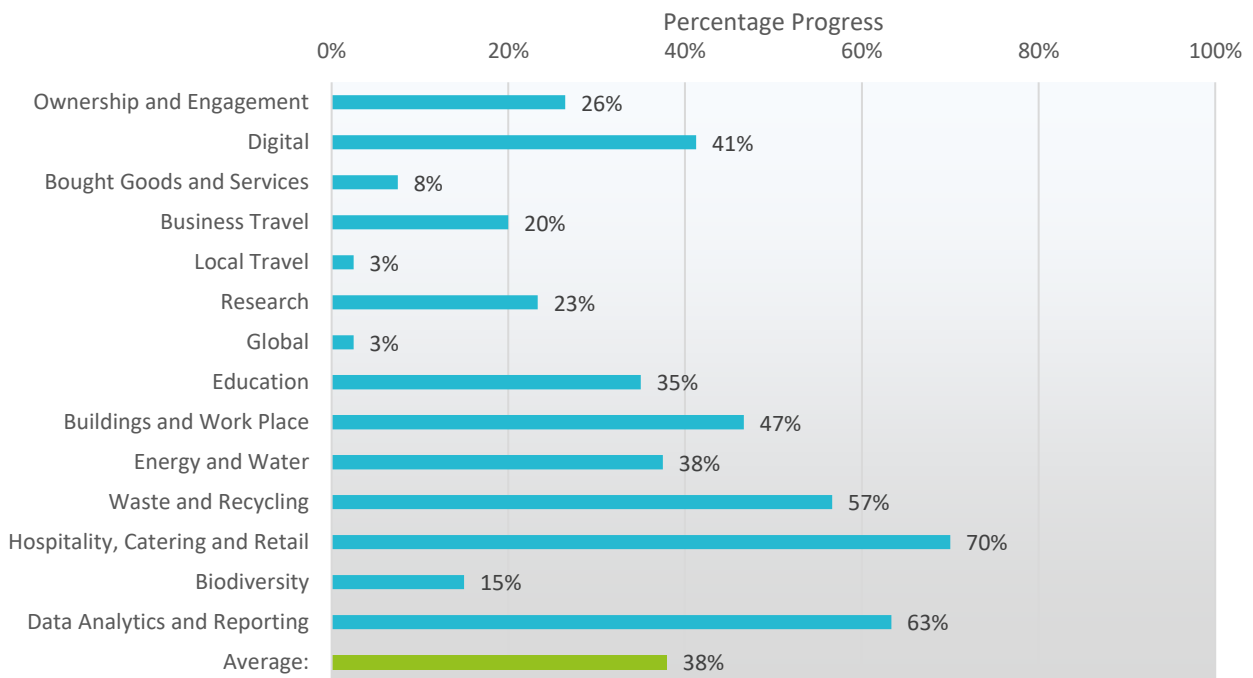
Figure 5. Policy progression by category from the E&CE Policy Statement, 2020.

3.8.   The Covid-19 pandemic has presented unforeseen challenges across many areas, but it has also accelerated some beneficial behaviours in the context of the E&CE.

3.9.   Hospitality, Catering and Retail has seen a 78% progression of policy, demonstrating the significant efforts made in this area. Two policies in this area are already fully implemented: 100% reduction in non-

compostable single food-to-go packaging, and a "Meat Second" policy promoting sustainable plant-based substitutes. All single-use plastic has been removed from University-controlled catering outlets and replaced with compostable materials.

3.10. Data Analytics and Reporting has also seen positive progress in relation to policy implementation. The data reporting team exceeded the target of 80% accuracy and met the target of 100% coverage, delivering confidence in the data University of Exeter are using to inform decisions. Team Sigma is now being used as a data hosting and reporting platform to automate KPIs and provide clear and informative data reports. A Carbon Evaluation methodology has also been drafted to determine the embodied carbon impact of carbon reduction projects, business cases and strategic decision.

3.11. Carbon reduction has been realised to both Business Travel and Local Travel with respective progression of 20% and 3%. Remote events such as Create Your Future and Grand Challenges have reduced carbon by at least 23 tCO_2e through reduced commutes and printing savings. However, these savings were largely due to 'Essential-only travel Policy' and restrictions from Covid. Efforts will now be made to ensure a sustainable emergence from lockdown through a Green Recovery.

3.12. A revised Environmental and Sustainable Procurement Policy has been developed in collaboration with the E&CE team. A low-value devolved purchasing checklist and a list of tools around the Modern Slavery Act 2015 (both supported by HEPA) has been made available to all staff members on our website. This will help guide them when making day to day purchases.

3.13. The continued progress of policy implementation will be presented in periodic KPI dashboard updates published by the E&CE Team. The E&CE Policy is subject to review annually.

Project Progress

3.14. Funding has been dedicated to progressing Low Carbon Commitment projects that address challenges identified in core policies. Projects are focussed on reducing carbon and promoting low-carbon alternatives in line with the 3-stage strategy for reaching Net Zero.

3.15. Initiatives have been categorised in line with carbon categories to give a portfolio of projects defined over the next 10 years for each of the following: Bought Goods and Services, Energy, Travel, Waste, Water and Investments.

3.16. Table 1 overleaf presents the key outcomes, by category, that were achieved during 2020/21 from the Low Carbon Commitment (LCC) Projects.

Table 1. Key outcomes achieved from LCC Projects 2020/21.

Theme	Project / Initiative	Delivered Outcomes
Bought Goods and Services	Targeted 5% Carbon Reduction from 2018/19 baseline through targeted suppliers	Training and additional purchasing tools provided to procurement staff alongside policy release to improve sustainability consideration in day to day purchasing Partnership with HEPA to allow training course access for all university staff 20% award criteria for sustainability in all invitations to tender and inclusion of sustainability within year catalogue plans improving our supply chain accountability
	ISO:20400 Gap Analysis	Active Sustainability has conducted a gap analysis on our behalf to identify where improvements can be made against the ISO:20400 standard. A score of 2.59 out of 5.0 was achieved.
Energy	Pan-university LEAF roll out to research labs	LEAF accreditation achieved for more than 50% of labs. Exeter University Sustainable Lab Group established. Over 150 staff and students engaged with LEAF workshops. Research freezers turned up to 70°C from 80°C leading to estimated 21% energy savings (per unit) and 2.4 tCO$_2$e/yr saved.
	Development of internal Sustainable Design Guide for the built environment	Sustainable Design Guide completed by external consultants specific to University of Exeter estate. Internal sign off now underway expected early next year.
	Thermal Modelling carried out on Amory building to inform Decarbonisation Programme	Modelling complete and results inputted into overall Scope 1 and 2 decarbonisation plan to offer an informed long-term approach to carbon reduction.
	Hydraulic modelling of Amory Building	Feed heat decarbonisation plan and optimise heating/cooling systems
Travel	Facilitate Sustainable Travel	Interactive Business Travel decision tool published for staff use Animation produced to outline business travel agents, rationale, and available support
	Local Travel carbon reduction	Purchase of a range of secure cycle shelters to be installed at four key locations on Streatham Campus. 3 no. cycle lockers for a series of trial locations on Streatham Campus. 3 no. cycle lockers for an installation at Penryn Campus. NB: For every km made through active transport rather than a car, 0.017 tCO$_2$e is saved. 0.015 tCO$_2$e is saved if this km is travelled via train.
Waste	Improved campus signage	New interior waste signage designed and ordered for phase one of new campus-wide waste signage to increase segregation and reduce contamination.
	Additional bin installations	Glass recycling added to exterior of Forum Building to increase recycling contribution and divert from non-recyclable waste stream. Additional benefits extend to cost savings due to high-cost non-recyclable waste streams.
	Waste A-Z Publication	New guidance published for staff and student audience to publicise the Waste Hierarchy; Reduce, Reuse, Recycle. Encourages waste consideration at purchase stage, reducing embodied carbon contributions.
Water	Internal Water Strategy	Development of internal water strategy to outline methods of sustainable resource management.
	Review of Water markets	Internal review into the water markets to develop a long-term purchasing strategy
Investments	Diverge away from carbon-intense investment opportunities	10% of investment portfolio directly support low-carbon transition (up from 2.8% in 2019) 33% reduction in carbon from investments managed by Rathbone Investments. Increase arises from Cash in Bank proportion.

Education

3.17.   Embedding the Sustainable Development Goals (SDGs) into the University of Exeter's course portfolio was a focus of 2020/21 and will continue to feature in future plans. An audit of SDG alignment in modules undertaken in 2020/21 by student interns will provide a baseline for comparison and starting point for the programme of work required. This will be pursued through the Education Executive Committee and Taught Faculty Board in 2021/22. The newly developed Periodic Portfolio Review process also offers opportunity to pilot approaches to improving the embedding of SDGs and carbon literacy in our curriculum.

3.18.   A clear focus on embedding SDGs in the curriculum is also included in the draft delivery plans for relevant sections of the new University 2030 Strategy. The university is working hard via the Education Thematic Forum and Transformative Education Project to measure the contributions towards the SDGs across our entire module portfolio. Further work is being undertaken to provide opportunities for students to contribute to our Net Zero progress, including dedicated budget allocation for student-led initiatives.

3.19.   Low-carbon alternatives to international field courses was also trialled to evaluate and review benefits in terms of environmental impact and accessibility for students (especially the most disadvantaged students in our community), alongside additional benefits. A task and finish group within the Education Thematic Forum is now being developed to pursue sustainable field trips through to realise these benefits.

4. Stakeholder Engagement

2021/21 Overview

4.1.   Staff, students, and other stakeholders play a crucial role in delivering an E&CE agenda and all strands of our engagement add value to this. Our climate action plans working groups and thematic forums involve staff and students in departmental and pan-University action. Our behaviour change projects, such as the Green Rewards campaign, enables individuals to take ownership and drives individual, team and university-wide action. Student partnership projects, internships and placements support further learning and career development, whilst also progressing the agenda in key areas of interest for the University and students.

4.2.   To achieve the University's E&CE response ambitions and to reduce the environmental impact of our operations everyone needs to play their part as individuals, teams and colleges, through action in our offices, labs, buildings, working practices, and through learning opportunities.

2020/21 Highlights

4.3.   **Societies Sustainability Alliance**: This new group – bringing together representatives from over 15 societies, the E&CE team and the Students' Guild – launched this year; holding regular meetings and partnering on projects to drive E&CE action and support student involvement in decision-making.

4.4.   **Climate Companion Pack**: Launch of a digital Climate Companion Pack for students that was developed in consultation with students. In 2020/21 the pack had over 1,000 visitors and received over 4,000 views. It has been refreshed ahead of the 2021/22 academic year with student support via the Professional Pathways to Marketing programme.

4.5.   **SDG Teach In Success**: The SDG Teach In campaign calls upon educators to include the SDGS within their teaching, learning and assessment during the campaign and in 20/21 Exeter topped the leader board on both categories; number of colleagues pledging and the percentage of students reached.

4.6.   **Events delivered digitally on campus:**

    4.6.1. **Sustainability week**: Delivered a week-long programme of events across the Exeter and Cornwall campuses; partnering with societies, The Guild/SU and external organisations

    4.6.2. **Festival of Discovery**: Introduced new monthly evening events delivered in partnership with the Be the Change society (term 1 only due to Covid-19)

4.7.   **Green rewards** – 900 sign-ups, 47,000 actions completed and estimated 50 tCO$_2$e emissions reduction achieved to date.

Student Contribution

4.8.   Student research projects offer an excellent way to find solutions to E&CE challenges whilst also enhancing student education.

4.9.   Students have contributed important findings that have informed strategy and decision making through research projects within CEMPS, Business and ESS colleges across degree courses including Engineering, Business Analytics, and others.

4.10.   Topics of research projects have included, but are not limited to:

    4.10.1.   Carbon emissions incurred through procurement

    4.10.2.   Themographic inspection of university buildings

    4.10.3.   Energy and Procurement Business Systems and the resulting carbon emissions

    4.10.4.   Effectiveness of communication channels for behavioural change

    4.10.5.   Campus commuting travel data and carbon mapping and analysis of business air travel

    4.10.6.   Waste reduction strategies across campus

    4.10.7.   Support in the development of the E&CE Climate Companion Pack

5. Performance Benchmarking

5.1.   Sustainability benchmarking forms an important aspect of our E&CE programme. This helps the identification of opportunities for improvement. Sustainability rankings and awards provide an opportunity to compare progress against the wider sector, shining a light on best practice techniques and facilitating opportunities for collaboration. They also provide public recognition of our E&CE commitments to current and prospective students, staff and the general public, bolstering University of Exeter's reputation as a leading institution for Environment and Sustainability action.

5.2.   Our benchmarking portfolio currently consists of annual submissions to the following rankings; Sustainability Leadership Scorecard, Times Higher Education Impact Rankings and the People and Planet University League. Awards include: Green Gown, AUDE and Times Higher Education. A status summary can be found below Table 2 including our target position for 21/22.

Table 2. University of Exeter performance status against key benchmarks and awards, and target programme for the academic year 2021/22

Benchmark	2019/20 Status		2020/21 Status	21/22 Target	
Sustainability Leadership Scorecard	BRONZE (45%; 262 points)	▲	SILVER (68%; 389 points)	**GOLD** (73%; 419 points)	**FEB 21**
Times Higher Education Impact Ranking	N/A	▲	63rd in the world 15th for Climate Action	**Top 50 overall position** **Top 10 for Climate Action**	**APR 21**
People & Planet University League	36th – 2:1 Class	-	*CANCELLED*	**Top 20 – 1st Class**	**NOV 21**
SDG Teach-In	7th for Educators Pledged (15 individuals) 8th for Students Reached (2.2% of total students)	▲	1st for Educators Pledged (96 individuals) 1st for Students Reached (40.9% of total students)	**Retain top position**	**FEB 21**
Green Gown Awards	N/A	▲	1 x Stage 1 Submission	**Award recipient** 4 x Stage 2 Submissions	**NOV 21**
Times Higher Education Award	N/A	-	N/A	**Award recipient** 1 x Nomination	**NOV 21**
AUDE Awards	N/A	▲	Highly Commended 1 x award	**Award recipient** Awaiting launch	**APR 21**

Sustainability Leadership Scorecard

5.3.   SLS is a self-assessment framework which aims to guide institutions striving to embed sustainability and social responsibility pan-University. University of Exeter's first submission in the 19/20 academic year achieved 'Bronze' accreditation (45%; 262 points) and, following review with E&CE Board, set the ambitious target of 'Silver' for 20/21 and 'Gold' by 21/22.

5.4.   Over the last year significant progress has been made in regard to the climate emergency agenda, resulting in a 127 point increase, taking us to a strong 'Silver' accreditation (68%; 389 points). Significant point increases were attributed to the Sustainable Procurement Policy and Sustainable Design guide for construction.

5.5.   Highest scoring areas were:

  5.5.1. Health and Wellbeing

  5.5.2. Construction and Renovation

  5.5.3. Business and Industry Interface

  5.5.4. Climate Change Adaptation

  5.5.5. Leadership

5.6.   Lowest scoring areas were:

  5.6.1. Water

  5.6.2. Student engagement

  5.6.3. Research

  5.6.4. Resource Efficiency and Waste

  5.6.5. Learning and Teaching

  5.6.6. Procurement

5.7.   The SLS Framework 'Link to the Curriculum' is our lowest scoring area and therefore rectifying this will be a major component of our 21/22 improvement plan.

People and Planet University League

5.8. People & Planet is a UK student network that produces a sustainability ranking of UK institutions known as the University League. The last iteration of the League took place in 2019. Assessment is split 50:50 between public website assessment and data drawn directly from the HESA Estates Management Record. In June 2021 People & Planet re-launched the League with minor amends to the scoring methodology. People & Planet have conducted the first assessment however final ranking results will not be available until Nov 2021.

5.9. The first assessment has brought to light some 'quick wins' to increase our future scoring, including the adoption of accreditations such as becoming a Living Wage Foundation employer and becoming a direct affiliate of Electronics Watch. The University League has a focus on ethical investment and banking, and therefore highlights our need to go beyond our divestment from fossil fuels and begin reinvesting our funds in renewable energy projects.

Times Higher Education Rankings

5.10. The Times Higher Education Impact Rankings is a global performance table that assesses institutions against the 17 UN Sustainable Development Goals. The overall ranking comprises 1,117 universities from 94 countries/regions. To be included in the ranking institutions must submit to a minimum of 4 SDGs, one of which must be SDG 17 Partnerships for the goals. We submitted to all 17 SDGs for the 2021 rankings, our highest scoring 3 (+SDG 17) contributed to our overall position.

5.11. Our emphasis will be upon progressing targets related to operations, outreach and collaboration as it is these we have greatest control over. This includes reducing water consumption and increasing water reuse, improving waste tracking and increasing proportion recycled, and increasing the proportion of energy from low-carbon sources. Additionally, we aim to participate in cross-sectoral dialogue about the SDGs and partake in international collaboration on gathering and measuring data for the SDGs.

Sustainable Development Goal Teach-In

5.12. The SDG Teach In is a campaign run by Students Organising for Sustainability (SOS-UK) since 2018, which aims to encourage educators of all kinds to incorporate the Sustainable Development Goals into all teaching, learning and assessment.

5.13. The 2021 campaign ran over a fortnight and included the involvement of 496 educators, 47,292 students and 48 educational institutions (including schools, universities, colleges, students' unions and training providers), however 92% of participants were from the higher education sector. University of Exeter achieved top position for both leader boards, recognising both the practice already taking place at the University to embed the SDGs and the appetite to ensure the SDGs form a key part of all students learning.

5.14. Improvement for 2021/22 will include the recruitment of a communication lead for the E&CE Team and further progression of our work to embed the SDGs throughout the entire institution to ensure we are in a strong position for the 2021/22 campaign.

AUDE Awards

5.15. AUDE (Association of the University Directors of Estates) holds an annual awards ceremony to highlight some of the fantastic estates and facilities teams and projects taking place in the higher education sector. We applied to the 'Reaching Higher' category, which recognises institutions who have gone above and beyond the usual realm of their institution for the benefit of their local community. We were 'Highly Commended' for our submission capturing our staff and student led approach to tackling the Climate Emergency.

6. Targets for 2021/22

6.1. Moving to Step 2 of the 5-Step Journey: Operational Carbon Strategy means focusing on carbon reduction initiatives that make use of and build upon the outcomes of Building the Foundations. It's often mistaken that Operational Carbon relates only to Scope 1 and 2 carbon emissions, but the University of Exeter is committed to addressing all carbon Scopes (Scope 1, Scope 2 and Scope 3) by reducing carbon and environmental emissions from Bought Goods and Services across our supply chain, as well as limiting emissions growth from Waste, Water and Travel.

Figure 6 shows the carbon targets for 2021/22 by category.

Figure 6. Carbon reduction targets to achieve a cumulative 11% emissions reduction beyond the 2018/19 baseline footprint. Figures presented relative to baseline year 2018/19.

Appendix A: Bought Goods and Services Summary

In year targets: 5% Reduction from 18/19 Baseline

	Baseline	Planned YE position	Actual YE position
Carbon tonnes	45,871	43,577.45	43,161
% saving	-	5%	6%

Footprint: 43,161 tCO$_2$e

↓ 2,710 tCO$_2$e
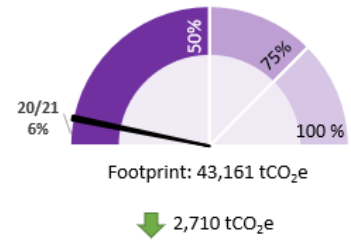
DATA PROGRESS IN 2020/2021

A data review project was implemented towards improving the data set and analysis we can conduct which completed the following:

- Mapped UNSPSC codes to previous 75 DEFRA categories to remain relevant for an HE institution; this included re-mapping codes which previously didn't fall in the categories applicable to them;
- Modified the 10 benchmarking categories to better reflect University procurement categories and group the more relevant sub categories;
- Mapped 37 additional UNSPSC codes that were missing in the HESCET tool to ensure full coverage;
- The 1-1 remapping allows the analysis of CO2 and DEFRA category by individual supplier;
- Developed a thorough list of suppliers that must be omitted from Bought Goods and Services data as they are already accounted for in either Scope 1 or 2 data, therefore eliminating the risk of double counting.

The data cleansing process has been significantly improved and allowed for all spend to be fully categorised, moving from over £3.6mil (equivalent of 1,562 tCO$_2$e) uncategorised spend in 19/20 to no uncategorised data in 20/21.

As outlined within 'section 6', a proposal has been drafted to develop a higher-education specific set of carbon factors, thus enabling the higher education sector to take better control of its carbon emissions through improved accuracy of its carbon reporting. Collaboration is essential for this project to ensure a reputable set of carbon factors can be published.

Across all data capture, accuracy has now increased from 70% to 88% and coverage is now 100%, up from 95%.

5% REDUCTION IN CARBON FOOTPRINT

2020/21 saw a 5% reduction in carbon footprint in this category from the previous year with a 6% reduction against 2018/19 baseline. It is recognised that variation in the footprint associated with Bought Goods and Services, like other themes, arise due to the response to the Covid-19 pandemic, rather than active carbon management.

The top purchasing category continues to be Hard Facilities Management, holding a 29% portion of the total spend. This category includes all on-site building and construction and simultaneously saw the highest reduction in carbon footprint at 32% compared to 2019/20 academic year. The Professional Services category saw a small increase of 2% year on year as the University continued tackling measures to fight Covid-19, especially with the addition of offering vaccinations along with testing across campuses.

The Soft Facilities Management category (includes catering, retail and transport) was the second highest reduction at 20%, predominantly owing to the lack of students and staff on campus throughout 19/20 due to measures implemented for working and learning remotely. IT also dropped 12% as the requirement for purchasing of equipment to enable remote working slowed down compared to the start of the pandemic in 19/20.

COLLEGE/SERVICE FOOTPRINT ANALYSIS AND TRENDS

When split by College/Service, the data demonstrates 95% of the footprint comes down to only 10 departments, with Estate Services and spend derived from research grants (across all colleges) in the top two positions.

BGS Carbon Profile

Pie chart:
- Soft FM 9%
- Hard FM 29%
- IT 17%
- Research & Lab 22%
- Professional Services 23%
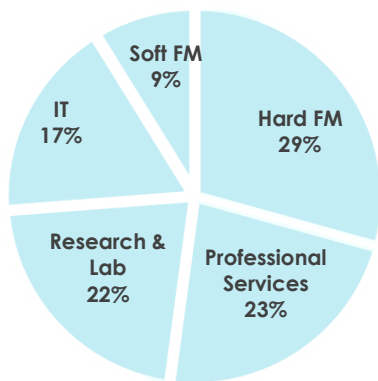
Top Carbon Footprint (College / Services)

Top 10	College/Services	Total Carbon, tCO2e	% of total BGS carbon
1	Estate Services	14,975	35%
2	Research Grants	5,994	14%
3	CLES	4,986	11%
4	Exeter IT	3,632	9%
5	PS General	2,457	6%
6	CIOSS (ex. Estates)	2,157	5%
7	CEMPS	2,154	5%
8	CMH	2,107	5%
9	Education and Student Support	1,738	4%
10	Marketing/Recruitment/Comms/Global	611	1 %
	Total	**40,811**	**95%**

Next Steps: Intentions for 2021/22

There are three focus points for Bought Goods & Services in 21/22:

1. Continuing the collaboration with AS and run activities necessary to close the gap towards being compliant with ISO 20400:2017. Some of these activities will include but are not limited to:
   a. Develop Sustainable Procurement SMART targets & ensure Sustainable Policy alignment
   b. Conduct a risk and opportunity analysis (heat mapping) for all areas of spend, suppliers and spend value categories
   c. Strengthen contract management
   d. Develop a long-term Sustainable Procurement Strategy to accompany our Policy
2. Focus on collecting supplier-specific carbon factors for high-spend suppliers such that these carbon hotspots can be prioritised with regard to supply chain carbon reduction.
3. Increase engagement with our supply chain through NPF and further support their development of climate action plans, sustainable strategies, and commitment to our NET ZERO targets.
4. A carbon reduction of 3,504 tCO_2e is required in the year 2021/22.

Appendix B: Energy Summary

In year targets:

	Baseline	Planned YE position	Actual YE position
Carbon tonnes	24,574	22,085	24,158
% saving	-	0.6%	2%

Footprint: 24,158 tCO$_2$e

↓ 283 tCO$_2$e
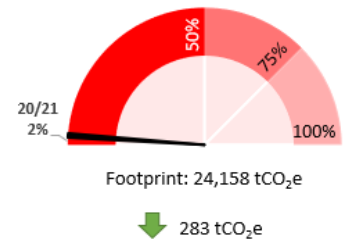
Data progress in 2020/2021

- Reduced occupancy relating to the Covid-19 Pandemic resulted in a decrease in both electricity consumption and fuel usage from fleet vehicles. However, a significant increase in gas and oil consumption arose from the requirement to increase heating and ventilation within buildings

Commentary on Initiatives Savings projects

- Development of Sustainable Design Guide for use across all built environment projects
- To ensure all New Build/Refurbishment and minor works projects address the E&CE
- Reduced Carbon emission across all including embedded carbon

Action take /Carbon avoided

Low Carbon Initiative	Summary	College / Dept	Carbon Saved / Outcome Achieved
1. Sustainable Design Guide	New Guide for New Build/Refurbishment & minor work projects	Estates Services	Standard Design Guide based on industry best practice and consultant input to govern future built environment projects.
2. Heat Decarbonisation Strategy	Development of transition plan for the University Gas heating network to renewable fuel.	Estates Services	Detailed status review and plan for future decarbonisation of our gas network, aligning to best practice, industry response and maintenance plan.
3. LEAF – Laboratory Efficiency Assessment Framework	Roll out of LEAF accreditation across Labs	Technical Services	20 tCO2e saved through energy saving measures, and waste and procurement practices arising from LEAF recommendations.

Fuel Break Down -

Top 10	Fuel	Total Consumption, kWh	Carbon Footprint, tCO$_2$e	% total energy consumption
1	Electricity	39,808,462	11,596	41.44%
2	Gas	56,054,697	12,024	58.36%
3	Oil	194,642	537	0.20%

Top Energy Consumers (College / Services) -

	College/Service	Carbon Footprint, tCO$_2$e	% of total energy carbon
1	CIOSS (ex Estates)	3,868	23%
2	CLES	3,724	22%
3	CEMPS	1,721	10%
4	CMH	1,207	7%
5	ESS	1,205	7%
6	EIT	1,118	7%
7	Penryn	1,114	7%
8	Estates	961	6%
9	HUMS	572	3%
10	SSIS	413	2%

## Next Steps: Intentions for 2021/22

- Development of Heat Decarbonisation Programme for Scope 1 and 2 to determine a costed strategy for significant carbon reduction
- Continued development of Solar PV installations to continue to reduce our reliance on grid electricity
- A carbon reduction of 686 tCO$_2$e is required in the year 2021/22.

Appendix C: Travel Summary

In year targets: 434 tCO2 (0.53% from total footprint baseline)

Business travel	Baseline	Planned YE position	Actual YE position
Carbon tonnes	11,398	10,828	794
% saving		3.4%	93%

Commuting	Baseline	Planned YE position	Actual YE position
Carbon tonnes	6,213	5,902	1,821
% saving		3.4%	71%
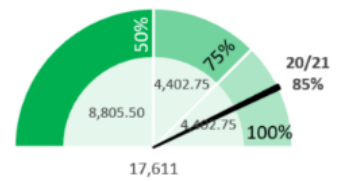
Data progress in 2020/2021

- **Business travel:**
  - The 93% reduction from baseline is primarily the result of Covid-related restrictions on travel, with the greatest reductions seen in International travel.
  - We have established clearer processes for capturing data and receive regular reports from travel management companies and finance on travel being undertaken. We have improved the accuracy through aligning the conversion factors used for deriving carbon from distance and spend against those used by others in the HE sector.
- **Commuting:**
  - The 71% reduction from baseline is the result of reduced occupancy on campus and associated travel as a result of Covid-related home-working, online teaching etc.
  - Adjustments were made that reflected travel behaviour changes observed more widely during the pandemic; with some modal shift away from shared modes (public transport and car sharing) towards single car usage and active travel.

Commentary on Initiatives Savings projects

- **Business travel:**
  - The University has integrated carbon reduction commitments in to key travel policy documentation – 'International Travel Policy' and 'Principles of Essential Travel' – prioritising low carbon alternatives and establishing an 'essential travel only' policy aligned to carbon reduction targets. We have also created an interactive decision tree and short animation to support the communication and delivery of future reductions.
- **Commuting:**
  - The savings seen this year resulted from reductions in campus occupancy due to Covid-related restrictions and guidance.
  - Health and safety concerns have seen reductions in shared mobility services and usage during the pandemic; and the University relaxed car parking restrictions throughout 2020/21 partly in response to this.

Business Travel: by category and year (tonnes CO2e)

Travel category	18/19	19/20	20/21
Air	8,483	4,616	357
Land - Road	700	436	156
Land - Rail	422	219	8
Sea	6	1	8
Hotels and accommodation	1,787	1,149	266
Total Business excluding air	2,915	1,805	437
Total Business including air	**11,398**	**6,422**	**794**

Commuting: by travel mode and year (tonnes CO2e)

Travel mode	18/19	19/20	20/21
Bus - Staff	243	192	26
Bus - Student	370	256	61
Car - Staff	3,492	2,721	936
Car - Student	1,273	880	697
Car Share - Staff	410	321	44
Car Share - Student	52	36	9
Motorbike - Staff	9	7	2
Motorbike - Student	-	-	-
Rail - Staff	152	110	14
Rail - Student	212	136	32
Total	**6,213**	**4,657**	**1,821**

Next Steps: Intentions for 2021/22

In 2021/22 it is expected that the level of both business and commuting travel will increase and move back towards pre-Covid levels. The rate and extent of change are dependent on many variables but the following identifies some key considerations.

- **Business Travel:** The University's carbon reduction commitments and 'essential travel only' policy will become the main factor limiting travel. Ownership and adherence to this will be key to delivering the targeted savings; as well as ensuring that new tools and processes align with it.
- **Commuting:** Commitment to limiting the return of carbon emissions from commuting through promoting remote/hybrid working and facilitating low-carbon travel modes.

A carbon increase of 11,753 tCO$_2$e is acceptable in the year 2021/22.

Appendix D: Waste Summary

In year targets:

	Baseline	Planned YE position	Actual YE position
Carbon tonnes	1,213	101	102
% saving	-	1.2%	38%

20/21 38%

50%

75%

100%

Footprint: 102 tCO$_2$e

⬇ 63 tCO$_2$e
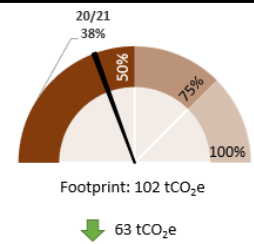
Data progress in 2020/2021
- We now have 100% coverage and 80% accuracy for Exeter with some relatively small improvements to be made for Penryn.
- Where possible we have implemented the monthly submission of MI from all suppliers.
- Construction waste will now be fully accounted for, monthly, during all projects.

Commentary on Initiatives Savings projects
- The Waste A-Z was prioritised to further capture the attention of all waste producers regarding the Waste Hierarchy, and Warp-It to further utilise and enable the headliners – Reduce & Reuse.
- They will draw more focus on non-procurement and realise more reuse.

Low Carbon Initiative	Summary	College / Dept	Carbon Saved / Outcome Achieved
1. Waste A - Z	A refreshed and updated document with emphasis on the waste hierarchy in order to encourage better habits with further waste reduction and reuse, increase recycling where appropriate and lessen non-recyclables.	Pan-university	Ongoing
2. Warp-It	Platform opened to external charitable organisations in order for them to benefit from our unwanted goods and increase our level of reuse.	Pan-university	Ongoing

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Waste Stream Break Down -

Top 10	Waste Stream	Total Waste, tonnes	Carbon Footprint	% of waste carbon
1	Commercial and Industrial (General)	755.97	45.91	45%
2	Municipal	463.98	28.15	28%
3	Plasterboard	461.55	9.83	10%
4	Soils	165.5	2.92	3%
5	Mixed Metals	75.67	0.08	0%
6	Wood	65.75	1.36	1%
7	Food and Drink	64.27	1.47	1%
8	Cardboard	58.62	1.25	1%
9	Dry Mixed Recyclables	41.34	0.88	1%
10	Glass	32.2	0.67	1%

Top Waste Contributors (College / Services) -

	College/Service	Total Waste, tonnes	Carbon Footprint	% of total waste carbon
1	ES	1629	81	80%
2	CLES	97	2.7	3%
3	CIOSS (ex ES)	96	2.74	3%
4	ESS	80	2.2	2%
5	CEMPS	79	2.2	2%
6	CMH	68	1.9	2%
7	HUMS	51	1.4	1%
8	SSIS	47	1.3	1%
9	UEBS	36	1.0	1%
10	MRCG	36	1.0	1%

### Next Steps: Intentions for 2021/22
The development of a formal process and programme for reuse, giving a detailed insight into the mechanics of the Waste Hierarchy, it's power when fully adhered to, as well as the negative impact when it's not. Incorporated into the program will be the benefits and launch of Exeter Student Warp-It and a streamlining and merger of the Moving On process.
A carbon increase of 45 tCO$_2$e is acceptable in the year 2021/22.

Appendix E: Water Summary

In-year targets:

	Baseline	Planned YE position	Actual YE position
Carbon tonnes	468	468	137
% saving	-	-	68%

Footprint: 43,161 tCO$_2$e

⬇ 2,710 tCO$_2$e
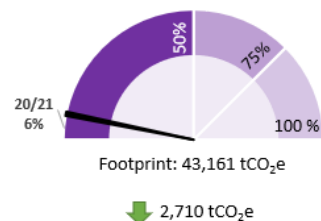
Data progress in 2020/2021
- Reduced occupancy across the University has seen a reduction in water consumption
- Carbon Factors for water supply and treatment saw a 60% reduction

Commentary on Initiatives Savings projects
The initiatives for 2020/21 have been focused on key strategic development to ensure the University has a robust water management strategy and retail supplier to develop a long-term water reduction programme to meets its E&CE targets.

Action taken / Carbon avoided

Low Carbon Initiative	Summary	College / Dept	Carbon Saved / Outcome Achieved
1 Water Management Strategy	Developed an internal Water Strategy to define future Water management. Draft completed and awaiting approval for implementation in year 2021/22.	Estates Services	Centralised strategy to be rolled out pan-university.
2 Feasibility of Water Retailer Switch	Feasibility study looking into the current and expected future water markets.	Estates Services	Feasibility study results to inform future supplier purchasing with potential for water, carbon and £47,000 savings.

Water Use Break Down -

Top 10	Use Category	Total Consumption, litres	Carbon Footprint	% of total waste carbon
1	Water Treatment	234,370.55	98.15	65%
2	Water Supply	126,199.52	53.76	35%

Top Water Consumption (College / Services) -

|	College/Service	Total Consumption, litres	Carbon Footprint	% of total waste carbon
1	CLES	110,976	46.7	31%
2	CEMPS	65,507	27.6	18%
3	CMH	40,170	16.9	11%
4	CIOSS (ex ES)	34,818	14.7	10%
5	ESS	23,630	9.9	7%
6	ES	23,428	9.9	6%
7	HUMS	13,764	5.8	4%
8	SSIS	11,038	4.6	3%
9	Penryn PS	7,903	3.3	2%
10	EIT	7,502	3.2	2%

Next Steps: Intentions for 2021/22
- Development and definition regarding scope and ownership of Water reduction initiatives.
- Switching supplier to a more sustainable, considerate option to save water, money and carbon.
- A carbon increase of 178 tCO$_2$e is acceptable in the year 2021/22.

Appendix F: Investments Summary

In-year targets:

	Baseline	Planned YE position	Actual YE position
Carbon tonnes	4,585	-	6,594
% saving	-	-	+6%

Footprint: 6,594 tCO$_2$e

↑ 400 tCO$_2$e
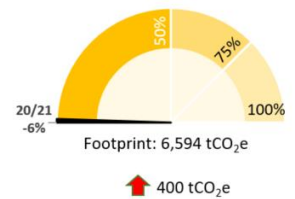
Data progress in 2020/2021

- All parts of the university's investments are now included in the footprint
    - Rathbones – Actual tCO$_2$e from annual report
    - Spin-Out Companies – Estimated tCO$_2$e based on £ invested
    - Pensions – Estimated tCO$_2$e based on current £ valuation
    - Cash in Bank – Estimated tCO$_2$e based on current £ valuation

	£	tCO$_2$e
Cash	125,671,000	3,979
Pensions	35,177,000	1,114
Spin Out	200,000	6
Rathbones	47,243,691	1,496

- Carbon arising from investments managed by Rathbones Greenbank Investments reduced by 33% compared to previous year
- Carbon accounting methods for the University's remaining investments (i.e. Pensions, Cash in Bank, Spin out companies etc.) are very complex and require high levels of estimation. However, progress has been made in improving this methodology over the past year and will continue until the required standards of accuracy have been achieved

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Commentary on Initiatives Savings projects

Rathbones

- Weighted Average Carbon Intensity of the portfolios to the end July 2021 showed a yearly decrease in carbon intensity over the last two years, though with a slower improvement in the latest year. We saw some of the most carbon intensive companies decrease at a notable rate which combined with sale of specific high intensity holdings, contributed to this overall reduction. Companies held across both years were more likely to show some level of decarbonisation than to stay stagnant or to become more carbon intensive.
- There was a significant decrease in the carbon footprint over the year. This was due in part to reductions in emissions by some of the holdings, the sale of a higher emitting stock. The metric is tied to valuation so significant swings in equity markets can result in changes to the carbon footprint. Both the portfolio and the benchmarks saw significant decreases, whereas performance was much more stable on an intensity basis. This suggests that changes in valuation played a role in reducing this figure. In this instance, it is key to look at the performance relative to the benchmark and in both cases the portfolio improved in the last year – moving from 65% to 68% less than the FTSE 350 and from 32% to 40% less than the MSCI World.
- By July 2021, the portfolio has circa 10% invested in companies that directly support a low-carbon transition (2.8% in July 2019 and 7.5% in July 2020). We define these as investments with a major link to climate mitigation technologies or renewable/low-carbon energy development. The portfolio also contains many investments that indirectly support a low carbon economy. For example, those which are reducing their own GHG emissions year-on-year, those which have committed to sourcing increasing amounts of renewable energy, or those which provide technology, products or services that facilitate the transition.

Cash in Bank

- By 31st July 2021, 42% of our cash holdings were in ESG products. This included notice accounts with relationship banks or money market funds where the funder has provided an ESG investment framework. We continue to review our cash holdings from a counterparty credit worthy perspective whilst also aspiring to switch to greener, short term investment choices where available in the market. This is pronominally in the money market field. We intend to undergo a review with our investment manager over the coming months.
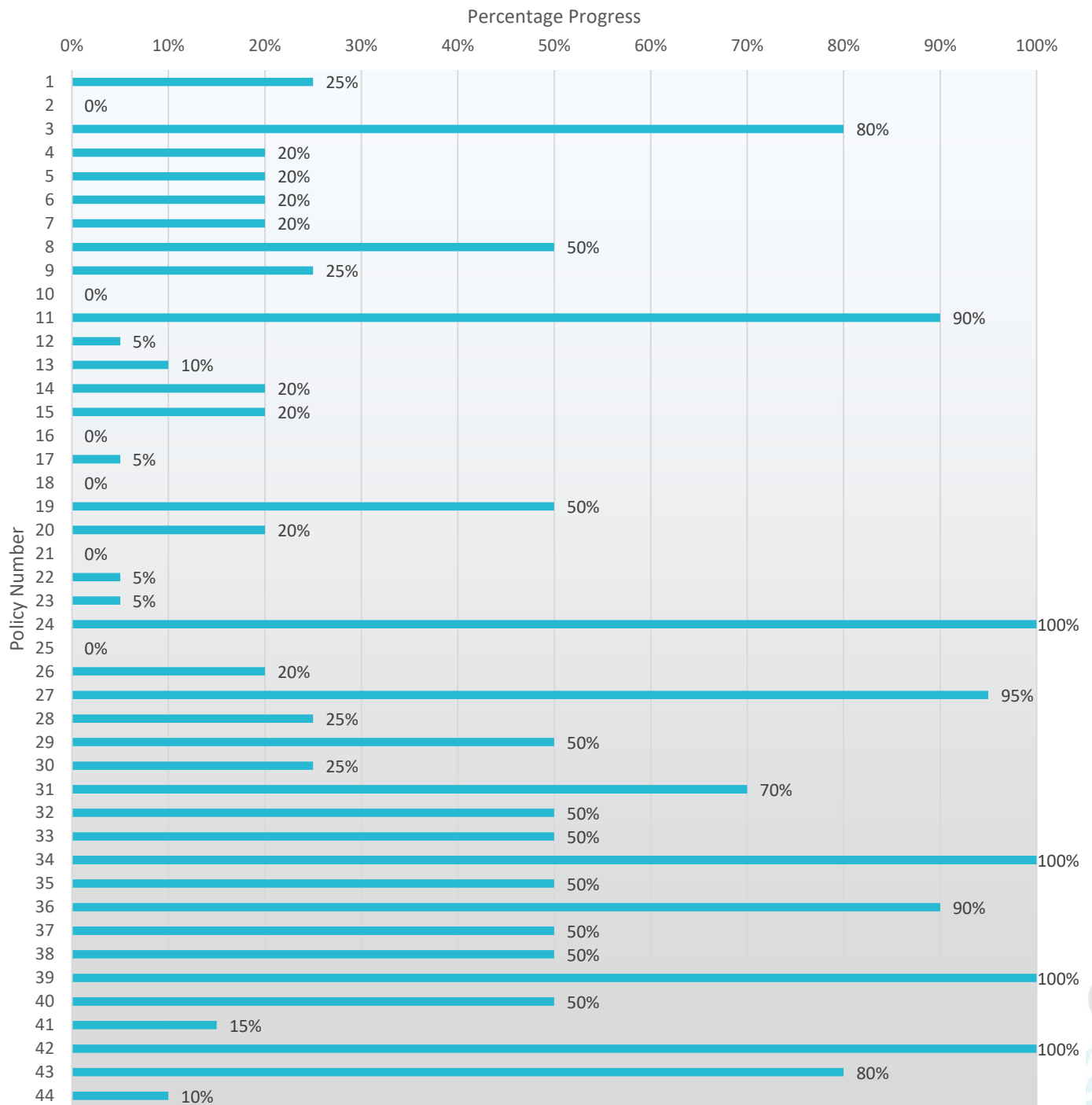
Top 5	Company	Total Carbon, tCO2e	% of total Investments carbon
1	Renewi	512.70	8%
2	SSE	252.43	4%
3	DS Smith	225.75	3%
4	National Grid	150.90	2%
5	Keller	104.29	2%

	tCO$_2$e	WACI per £mil	Portfolio value (£)	WACI Coverage
18/19	1,834	127.16	32,348,508	67%
19/20	2,234	113.62	38,489,413	87%
20/21	1,496	109.31	47,243,691	92%

Next Steps: Intentions for 2021/22

- Quantitative summary inclusive of expected carbon savings
- Quantify Pensions and Cash in Bank carbon
- A carbon reduction of 162 tCO$_2$e is required in the year 2021/22.

Percentage Progress — bar chart of Policy Number vs. Percentage Progress:

Policy Number	Percentage Progress
1	25%
2	0%
3	80%
4	20%
5	20%
6	20%
7	20%
8	50%
9	25%
10	0%
11	90%
12	5%
13	10%
14	20%
15	20%
16	0%
17	5%
18	0%
19	50%
20	20%
21	0%
22	5%
23	5%
24	100%
25	0%
26	20%
27	95%
28	25%
29	50%
30	25%
31	70%
32	50%
33	50%
34	100%
35	50%
36	90%
37	50%
38	50%
39	100%
40	50%
41	15%
42	100%
43	80%
44	10%

Policy Number	Description
1	All areas of activity across the University shall be responsible for the delivery of the E&CE policy and targets through their day to day work; via governance and risk reporting, developing and delivering Climate Action Plans which will be tracked by quarterly carbon scorecard reporting
2	Adoption of the policy to act as an enabler for transformational culture change across all areas of the University to accelerate and drive environmental and climate conscious business decisions and outcomes
3	*Implement* mandatory Carbon Literacy training for all staff and students
4	**Renew and promote flexible working policy**
5	**E&CE requirement on VCEG / Procurement Activity / Spend papers (incorporating lifecycle thinking)**
6	College Climate Action Plans developed, delivered and driven across teams and departments to meet /if not exceed in year targets and goals to reduce College level footprint

Policy Number	Description
7	Professional Service Climate Action Plans developed, delivered and driven across teams and departments to meet /if not exceed in year targets and goals to reduce Professional Service level footprint
8	*Enable up to* **60% 'Off Campus' working.**
9	Invest in technology to enable 50% reduction in business travel carbon, e.g. including off campus working e.g. video conferencing, virtual field courses, on line conferencing etc.
10	Implement a policy to deliver zero carbon footprint in IT equipment, data processing and services, including end of life waste recycling of equipment
11	**95% reduction in paper / non-essential printing (giving consideration to reasonable adjustments)**
12	*Implement* a policy that all new travel, procurement and spend requests have environmental and carbon impact/benefit and all contracts & tender renewals include environmental and carbon impact/benefit specifications, including IT, digital and in-house production,
13	Establish a policy requiring local, sustainable sources and practices from all producers and suppliers e.g. best environmental/welfare practice animal products, sustainable palm oil.
14	**Reduce non-essential business travel carbon footprint by 50% (stretch goal 75%), through adoption of low carbon travel alternatives and policy of 'essential travel only'.**
15	Incentivise sustainable travel e.g. low carbon / slow travel
16	Improve and incentivise active travel e.g. improve pedestrian access points; more sheltered and secure cycle storage, preferential parking off campus, preferential routes for walking/cycling, preferential rates for parking of EV vehicles, and improved access catering for all abilities.
17	Provide 50% parking as E-charging points for cars and bikes (vans, fleet, other E vehicles)
18	*Implement* a 'Sustainable Research Framework' to steer all research practice.
19	*Implement* Laboratory Efficiency Assessment Framework (LEAF) accreditation
20	*Reduce* minus 80 freezers set points by 10 degrees
21	Develop 'climate-compatible global partnership activities' with aligned core values to help the university achieve carbon neutrality.
22	Embed Environment & Climate Emergency considerations into College Global Plans and International Student Recruitment operations, and establish a strategy to share this approach to international partner institutions, students and prospective students'
23	Embed Sustainable Development Goals and Climate Emergency across all courses, including integration of carbon literacy training into the curriculum *and* **launch of Student Climate Emergency Companion Pack**
24	Continue blended learning opportunities; through the use of digital/ online teaching (i.e. off campus working)
25	Require justification of all international field courses offering long-haul options, and look for alternative low carbon alternatives – 50% carbon footprint
26	Maximise onsite renewable sources and procure 100% renewable energy supplies
27	Adopt Sustainable Design guide for New build/Refurbishment maintenance of Buildings
28	Improve environmental and energy performance of buildings through capital spend programmes to meet best practice standards
29	Only purchase equipment with high energy efficiency ratings and low WLC embodied environmental impact e.g. A+++
30	*Implement* 50% water use reduction.
31	95% reduction in single use plastic packaging
32	85% recycling or all waste
33	Campus wide waste recuse / recycling programme
34	**100% reduction in non-compostable single food-to-go plastic packaging.**
35	95% reduction in single use plastic packaging
36	95% reduction in paper / printing (giving consideration to reasonable adjustments)
37	85% recycling of waste
38	Environmental and carbon impact/benefit required for all contracts, specifications, tenders
39	*Implement* a Meat second policy
40	*Implement local, sustainable sources and practices for producers and suppliers e.g. best environmental/welfare practice animal products, sustainable palm oil, low carbon footprint*
41	Establish net positive plan for Woodland, Wetland and Campus wide biodiversity
42	80% accuracy, 100% coverage
43	Quarterly Carbon Scorecard Reporting / Target Performance tracking (to be made publically available)
44	Adopt life cycle thinking and analysis in the evaluation of savings to achieve lowest environmental and carbon footprint from our actions and decisions