



Swansea
University
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Sustainability
Cynaliadwyedd



PATH TO ZERO – DECARBONISATION REPORT

2022 - 2023



CONTENTS



INTRODUCTION

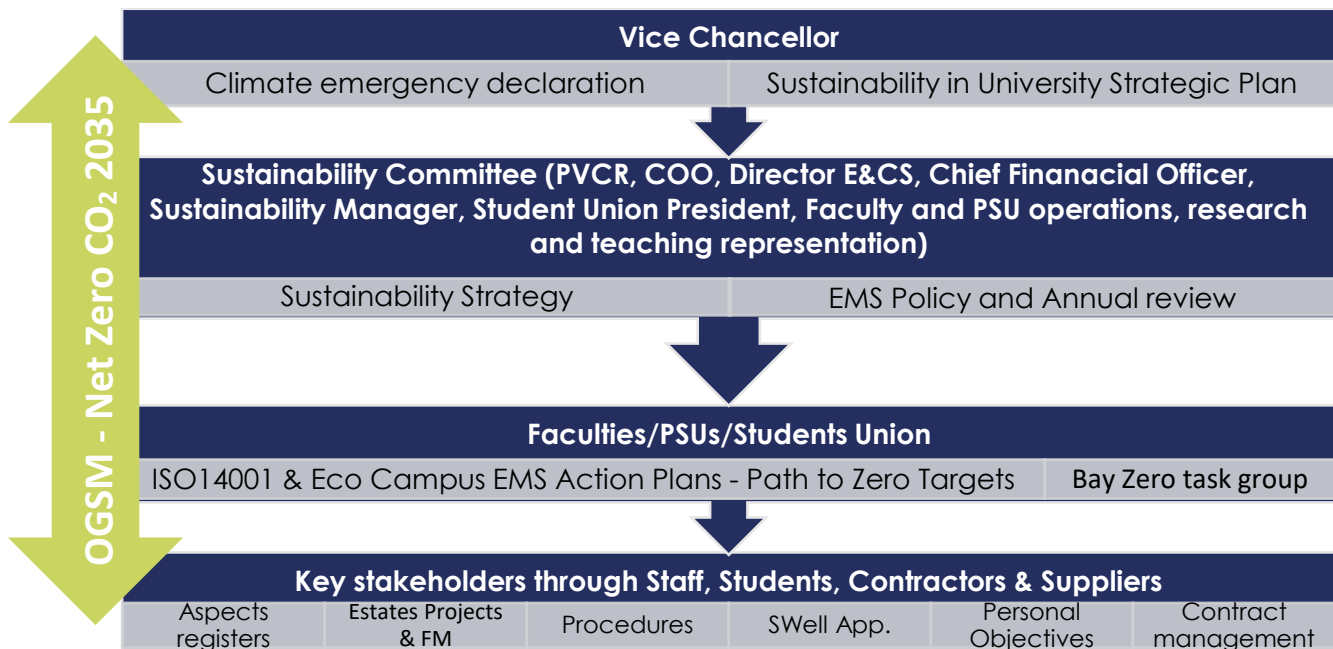
In October 2019, Swansea University declared a Climate Emergency and committed to being Zero Carbon by 2035.¹

Our [Sustainability and Climate Emergency Plan 2020 - 2025](#) clearly defines our climate emergency targets.

In June 2022 the university published a comprehensive science-based Decarbonisation Action Plan identifying interventions required on our path to zero by 2023. This report was produced in partnership with the Carbon Trust and Welsh Government Energy Service: [Decarb Action Plan Summary Report](#).

This Path to Zero annual report, provides an overview and update on our progress, outlining our emissions and performance against our decarbonisation targets and intervention plans.

GOVERNANCE



OGSM = OBJECTIVES, GOALS, STRATEGIES AND MEASURES

¹ Net Zero in scope 1 & 2 as per <https://www.sdgaccord.org/climateletter>

DRIVERS

NET ZERO CO₂

Key drivers for carbon management and change at Swansea University include:

International and National Regulation

- 2005 Kyoto Protocol, UK government set targets in CO₂ reduction, 34% by 2020 and 80% by 2050 (1990 baseline).
- 2016 UK and 195 countries deal to tackle climate change, the Paris Agreement commits international community to reduce GHG emissions to avoid the most severe impacts of climate change.
- 2019 IPCC (Intergovernmental Panel on Climate Change) issues report on impacts of a 1.5°C raise in temperatures highlighting need for urgent climate change mitigation.
- 2021 COP26 signing of the Glasgow Climate Pact and agreeing the Paris Rulebook – Movement towards measurable actions for lowering emissions, improve resilience and provide finance for rapid intervention for 1.5°C goal.
- 2022 at COP27: Countries reaffirmed their commitment to limit global temperature rise to 1.5°C. Agreement to provide loss and damage funding for vulnerable countries. Accountability on commitments made by sectors, businesses and institutions. Pathway created to align finance towards low emissions and climate resilient development.
- 2023 at CO28: funding for loss and damage announced and acknowledged fossil fuels root cause of climate change, with an agreement by countries to transition away from fossil fuels in energy systems, in just, orderly and equitable manner, accelerating action in this decade, to achieve net zero by 2050 in line with science.

Relevant legislation

- Climate Change Act
- Environment (Wales) Act (net zero 2050)
- Energy Performance of Buildings Regulations
- The Climate Change (Carbon Budgets & Interim Emissions Targets) (Wales) Regulations
- Guidance: [Public sector net zero reporting guide](#)
- Guidance: [Standardised Carbon Emissions Reporting Framework](#)

Reputation

- Climate Emergency Declaration and Zero Carbon Commitment, ISO14001, Green League, People and Planet, 2019 Campus protests and climate strikes.

Economic and Financial

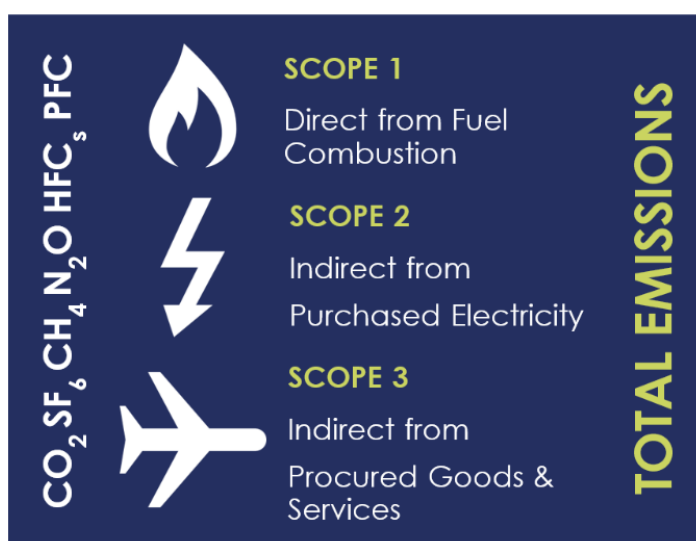
- Revenue & Energy Resilience - Savings on bottom-line and risk from increasing and volatile energy costs
- Research and Innovation (Partners e.g. SPECIFIC)
- HEFCW – Requirements
- HESA – Estates Management Records (EMR)

PERFORMANCE

The **boundaries of data** capture for the calculation of Scope 1 and 2 emissions encompass facilities where the University is sole utility procurer. The university follows GHG Protocol, HE/FE sector and Welsh Government Net Zero Public Sector guidance for scoping and reporting all emissions including scope 3. This includes: Singleton Park Campus buildings, student residences, Singleton Lodge, Bay Campus buildings excluding residences, Sketty Sports Centre and Pavilion.

In 2015 the University, previously a single campus based at Singleton Park, undertook a 65 acre expansion project opening the Bay Campus, becoming a dual campus university. The Bay campus on the East approach to Swansea City Centre, is a mixture of academic and research buildings which increased the total floor area by 51,574m². Due to this substantial change it was agreed by Higher Education Funding Council Wales (HEFCW) and Swansea University, that **2015 – 2016 would be recognised as the institutions representative carbon management baseline year** ([HEFCW carbon management policy](#)).

TOTAL EMISSIONS TARGETS AND PERFORMANCE



Scope 1 and 2 target: Zero carbon for direct emissions (scope 1 and 2) by **2035**, with at least a 70% reduction by 2030². On average 5% reduction annually.

Scope 3 target: Achieve (on average) a 2.5% year on year reduction in scope 3 emissions, 50% by **2035** (35% by 2030)². On average 2.5% reduction annually.

Annual decarbonisation budget: £3m, Estates and Campus Services, Net Zero budget reviewed and set annually and subject to financial Sustainability and external funding sources.

² Emissions are tracked against targets from [our HEFCW agreed 2015/16 baseline year](#).

Summary of Path to Zero performance

Emissions tCO2e	Total Scope 1 & 2 tCO2e	Reduction Target %	Total Scope 3 tCO2e	Reduction Target %
15/16 Baseline	17,603	0	90,260	0
16/17 Actual	18,270	-5%	77,514	-2.5%
17/18 Actual	16,152	-10%	46,669	-5.0%
18/19 Actual	15,170	-15%	40,019	-7.5%
19/20 Actual	12,866	-20%	37,433	-10.0%
20/21 Actual	13,247	-25%	34,364	-12.5%
21/22 Actual	11,685	-30%	75,595	-15.0%
22/23 Actual	12,142	-31%	83,554	-7.0%
22/23 Target	11,442	-35%	74,464	-17.5%
24/25 Target	9,681	-45%	69,951	-22.5%
29/30 Target	5,281	-70%	58,669	-35.0%
35/36 Target	0	-100%	45,130	-50.0%
Performance				
22/23 Actual vs Target	700	6%	9,090	12%
Change Since prev. yr	457	4%	7,959	11%
Change Since 2015:	-5,460	-31%	-6,706	-7%

OBSEVATIONS:

SCOPE 1 & 2 EMISSIONS:

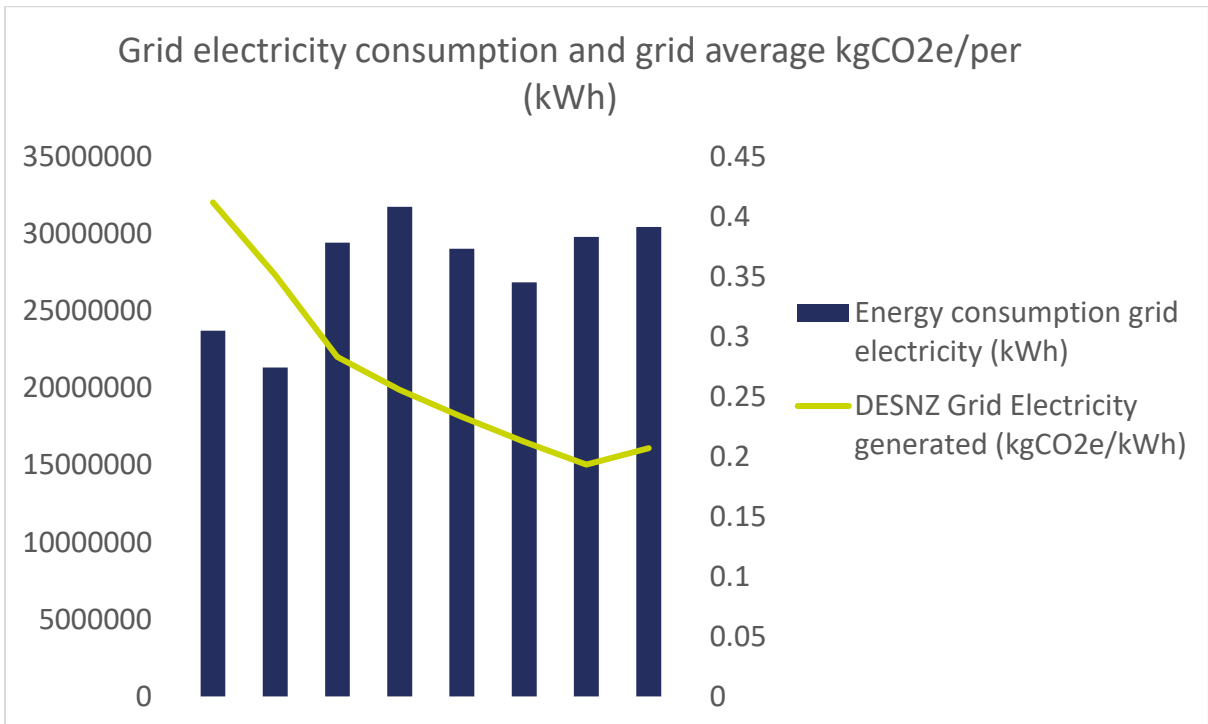
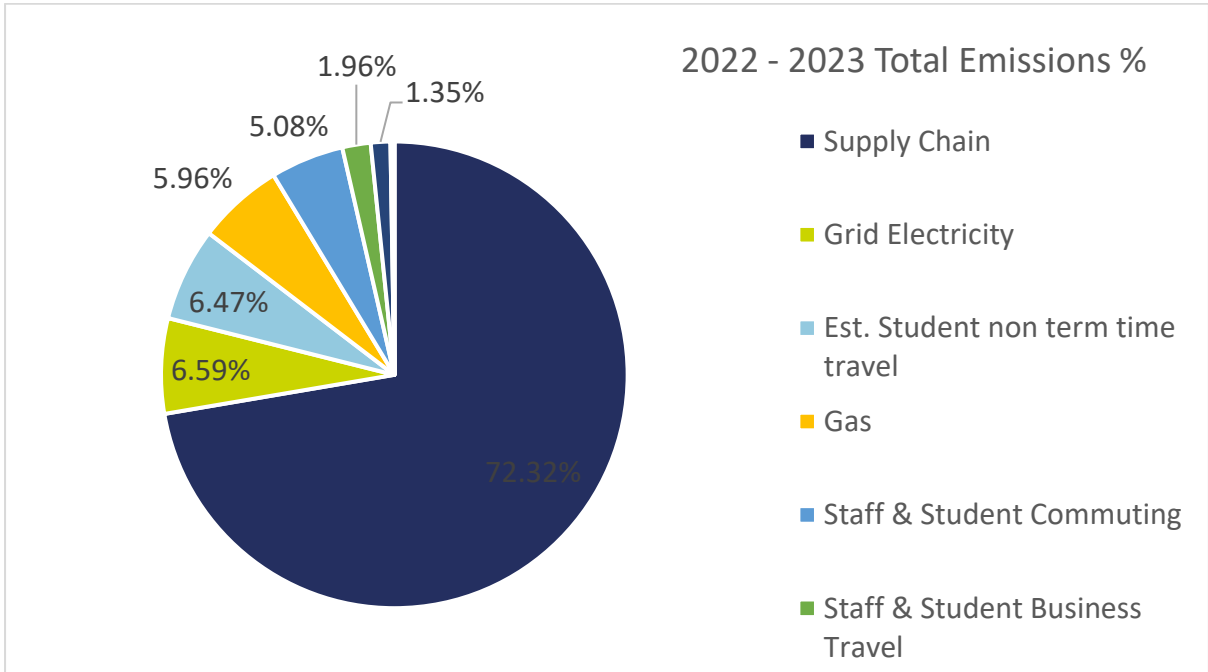
Increase in 2022/23 compared to the previous year. A result of increased energy consumption (2%) and grid electricity carbon intensity (7%).

31% reduction in scope 1&2 emissions since 2015/16, against net zero target of 35% by 2022/23 slightly behind plan.

SCOPE 3 EMISSIONS:

Increase in 2022/23 compared to the previous year. This is due to improved accuracy and wider scope of emissions estimates, whilst there were also increases in supply chain expenditure.

7% reduction in scope 3 emissions since 2015/16 against the 17% reduction by 2035/36 and therefore behind plan.

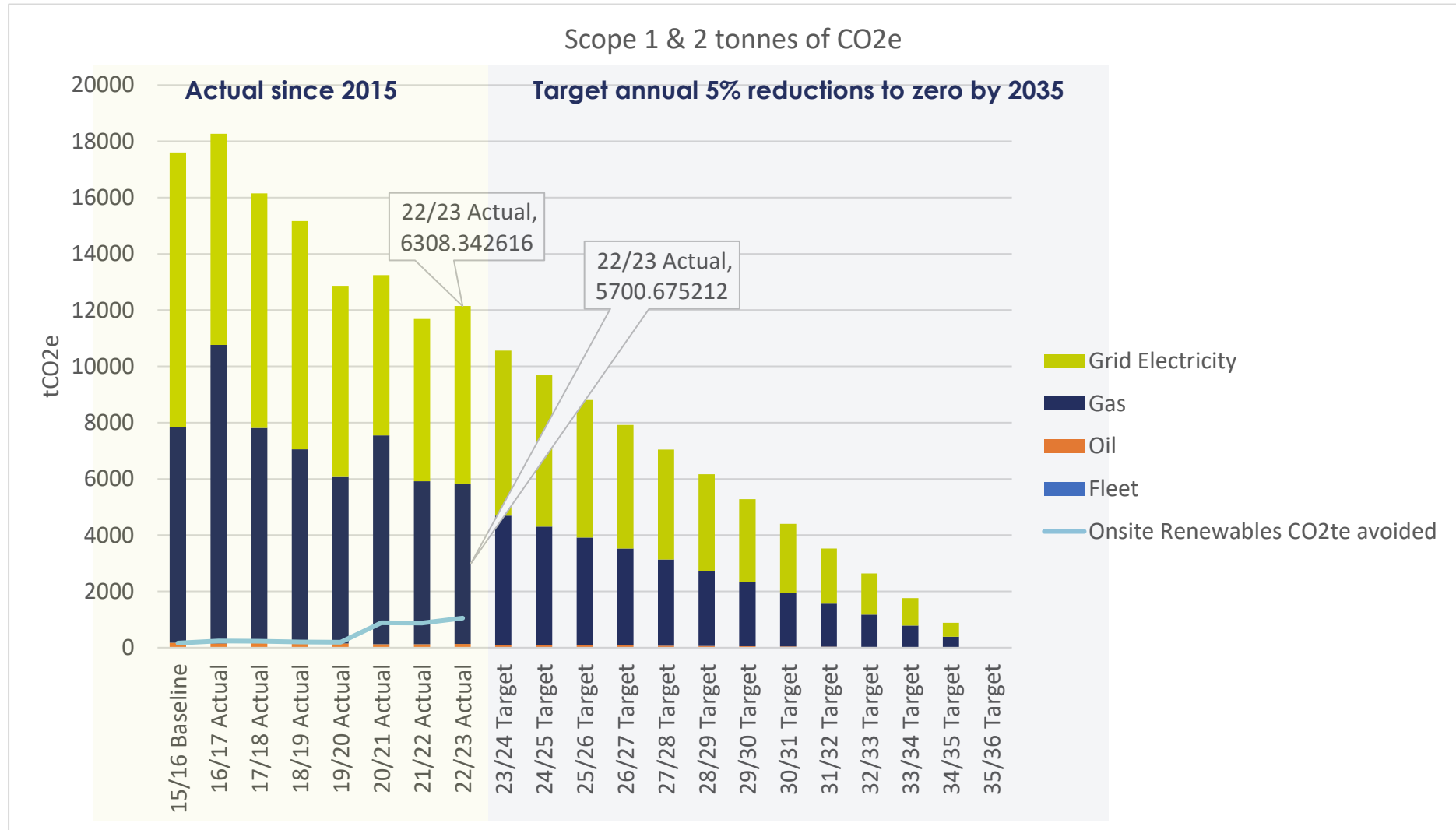


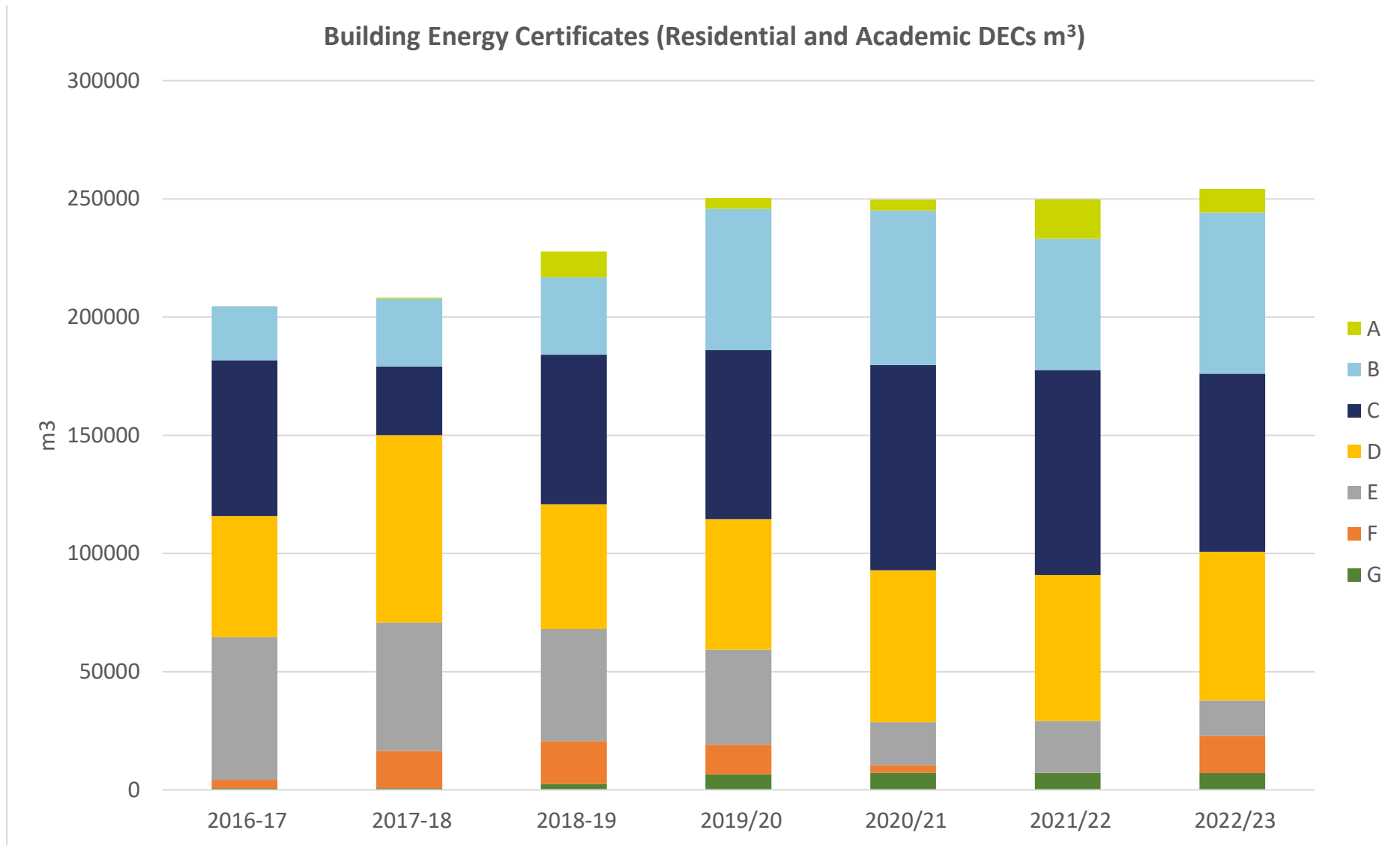
SCOPE 1 & 2

2022/23 Scope 1 & 2 emissions are slightly behind our Path to Zero target of -35% reduction at -31%. Principally due to an increase in kWh of grid electricity consumed and an increase in national grid electricity carbon intensity. University decarbonisation interventions for fleet, gas heating, light and power systems have contributed to reductions, despite increases in overall tonnes of CO₂e emissions when compared to the previous year.

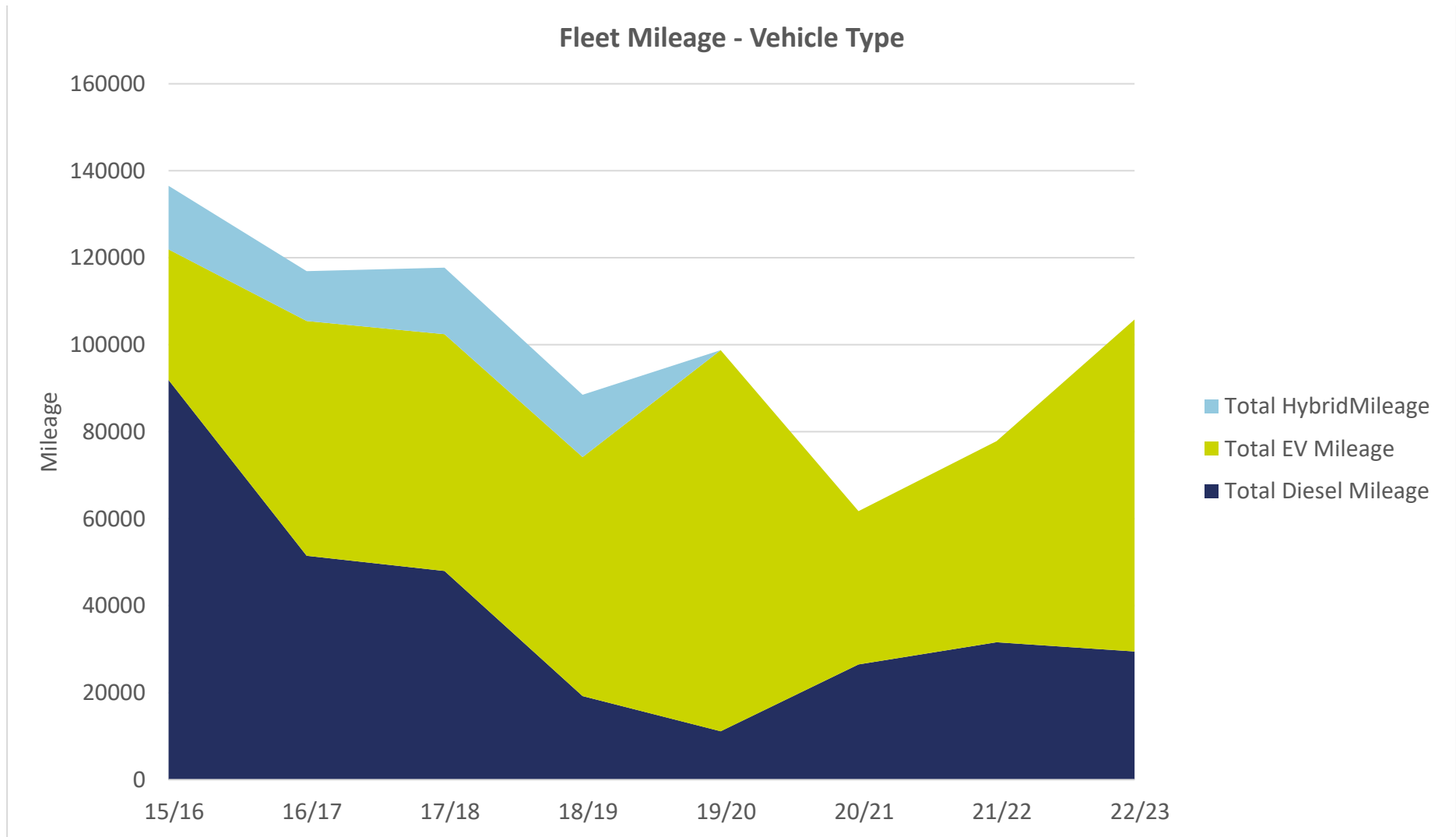
Summary of 2015 - 2023 performance

Emissions tCO ₂ e	Scope 1 tCO ₂ e			Scope 2 tCO ₂ e		Total Scope 1 & 2 tCO ₂ e	Reduction Target %
	Gas	Fleet	Oil	Grid Electricity	Onsite Renewables CO ₂ te avoided		
15/16 Baseline	7,649	18	162	9,774	163	17,603	0
16/17 Actual	10,617	10	139	7,505	235	18,270	-5%
17/18 Actual	7,654	9	153	8,335	230	16,152	-10%
18/19 Actual	6,871	4	175	8,120	203	15,170	-15%
19/20 Actual	5,944	2	151	6,770	194	12,866	-20%
20/21 Actual	7,424	5	115	5,703	880	13,247	-25%
21/22 Actual	5,796	6	117	5,766	877	11,685	-30%
22/23 Actual	5,701	5	128	6,308	1,051	12,142	-31%
22/23 Target	5,278	12	112	6,744		11,442	-35%
23/24 Target	4,589	11	97	5,864		10,562	-40%
24/25 Target	4,207	10	89	5,375		9,681	-45%
30/31 Target	1,912	4	41	2,443		4,401	-75%
35/36 Target	0	0	0	0		0	-100%
Performance							
22/23 Actual vs Target	423	-7	16	-435	1,051	700	6%
Change Since prev. yr	-95	0	10	542	174	457	4%
Change Since 2015:	-2,371	-12	-35	-3,465	888	-5,460	-31%





Fleet Mileage - Vehicle Type



Emissions tCO2e	Scope 3 tCO2e								Total Scope 3 tCO2e	Reduction Target %
	Waste	Water Supply	Wastewater	Supply Chain	Staff & Student Business Travel	Staff & Student Commuting	Est. Student non term time travel	Est. student external accommodation		
15/16 Baseline	41	96	192	51,024	291	3,312	33,478	1,825	90,260	0
16/17 Actual	27	98	191	38,770	372	2,753	33,478	1,825	77,514	-2.5%
17/18 Actual	27	99	195	32,063	1,342	6,104	5,014	1,825	46,669	-5.0%
18/19 Actual	24	86	168	25,500	1,780	5,994	4,642	1,825	40,019	-7.5%
19/20 Actual	21	82	161	26,120	1,200	3,552	4,470	1,825	37,433	-10.0%
20/21 Actual	12	30	52	24,352	82	3,635	4,376	1,825	34,364	-12.5%
21/22 Actual	17	33	57	63,826	1,199	3,658	4,979	1,825	75,595	-15.0%
22/23 Actual	29	45	48	69,208	1,880	4,859	6,189	1,296	83,554	-7.0%
22/23 Target	34	79	159	42,094	240	2,733	27,619	1,506	74,464	-17.5%
23/24 Target	33	77	154	40,819	233	2,650	26,782	1,460	72,208	-20.0%
24/25 Target	32	75	149	39,543	226	2,567	25,945	1,415	69,951	-22.5%
30/31 Target	26	60	120	31,890	182	2,070	20,924	1,141	56,412	-37.5%
35/36 Target	21	48	96	25,512	146	1,656	16,739	913	45,130	-50.0%
Performance										
22/23 Actual vs Target	-5	-35	-110	27,113	1,640	2,127	-21,430	-210	9,090	12%
Change Since prev. yr	12	12	-9	5,382	681	1,201	1,210	-529	7,959	11%
Change Since 2015:	-12	-52	-144	18,184	1,589	1,547	-27,289	-529	-6,706	-7%

SCOPE 3

Summary of 2025 – 2023 performance.

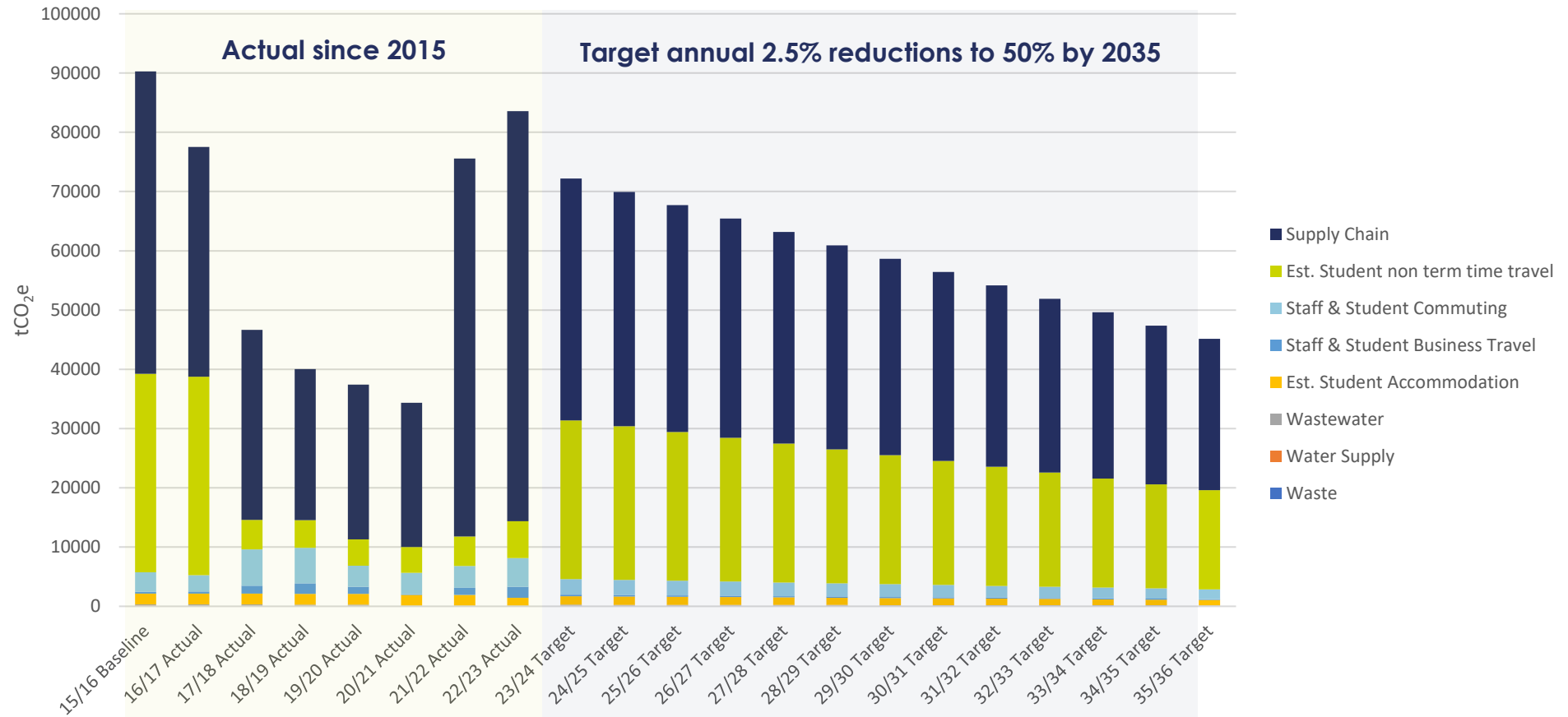
Scope 3 emissions increased by 11% in 2022/23 versus the previous year, but maintained a decreased of 7% since the 2015/16 baseline year. Improvements to the methods used to calculate supply chain ([Higher Education supply chain emissions tool \(HESCET\)](#))¹ increased expenditure and travel emissions all contributed to the rise.

Since baselining in 2015 there has been a 7% decrease in scope 3 emissions. This is behind the 2022 – 2023 planned reduction target of 17.5%.

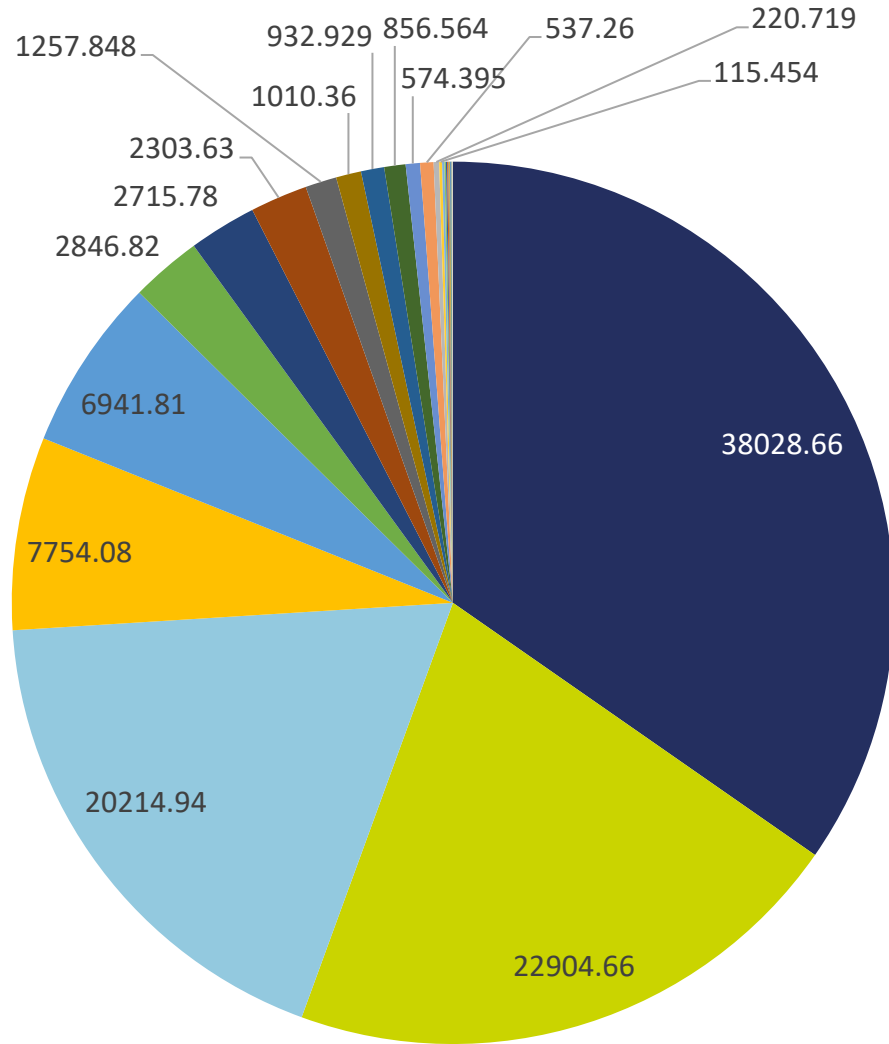
Supply chain, business travel and commuting emissions are all currently behind the reduction targets for 2022/23.

Student non termtime travel, external student accommodation, waste, water and wastewater emissions continue to be ahead of targeted reductions.

Scope 3



2022/ 2023 Scope 3 emission sub categories tCO₂e

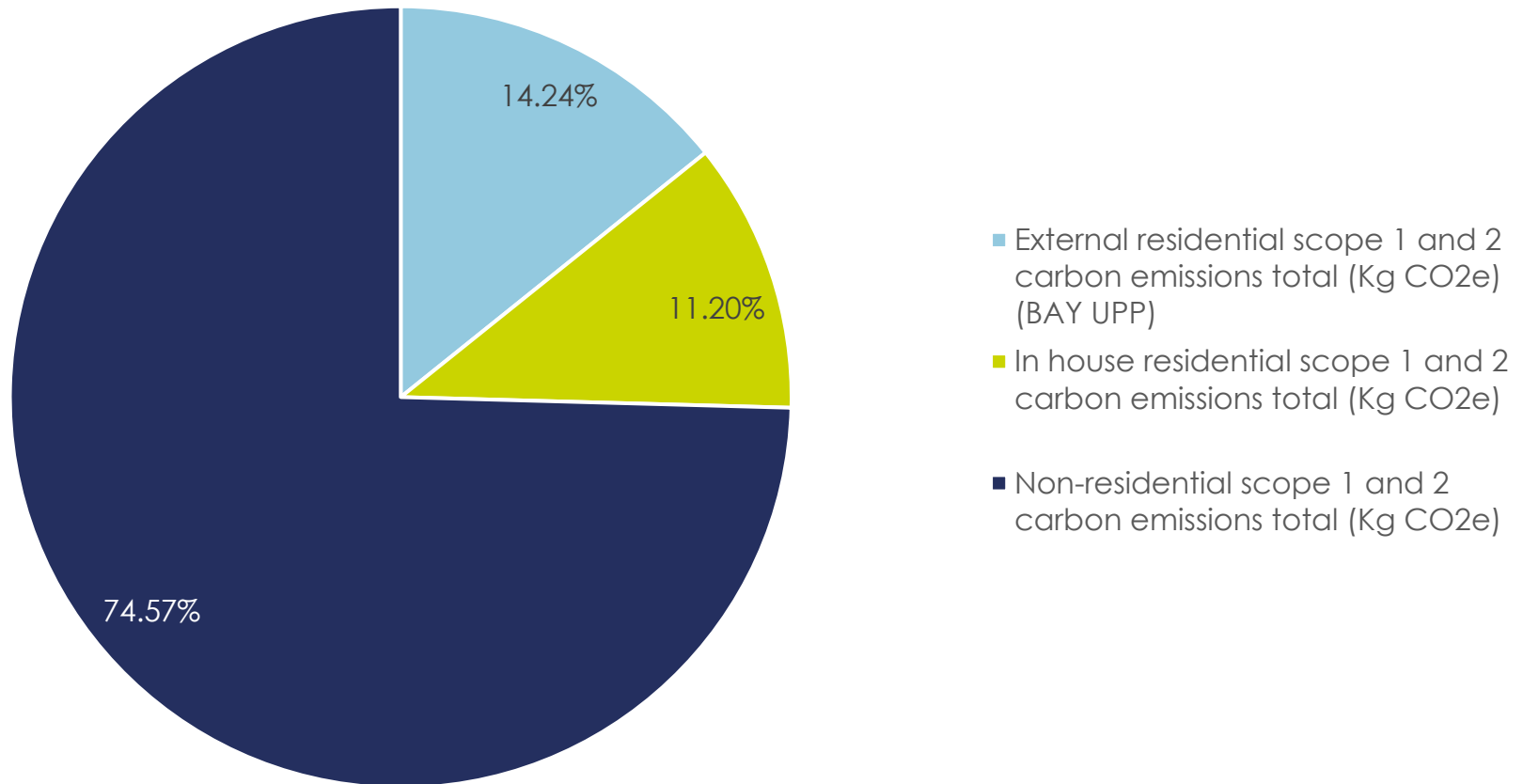


- supply chain medical and precision instruments
- supply chain business services
- supply chain information and communication technologies
- supply chain other procurement
- supply chain construction
- supply chain other manufactured products
- supply chain food and catering
- students commuting by public bus
- students commuting by car
- supply chain paper products
- business travel air
- staff commuting by car
- business travel ferry
- supply chain manufactured fuels, chemicals, and gases
- students commuting by rail
- staff commuting by public bus
- business travel grey fleet
- students commuting by motorcycle or moped
- wastewater treatment
- water supply
- business travel leased pools cars
- business travel rail
- waste
- supply chain unclassified
- business travel taxi
- staff commuting by rail
- students commuting by taxi
- staff commuting by taxi
- staff commuting by motorcycle or moped
- students commuting by air
- business travel public bus
- staff commuting by air
- supply chain waste and water

SCOPE 1 & 2 KPIs

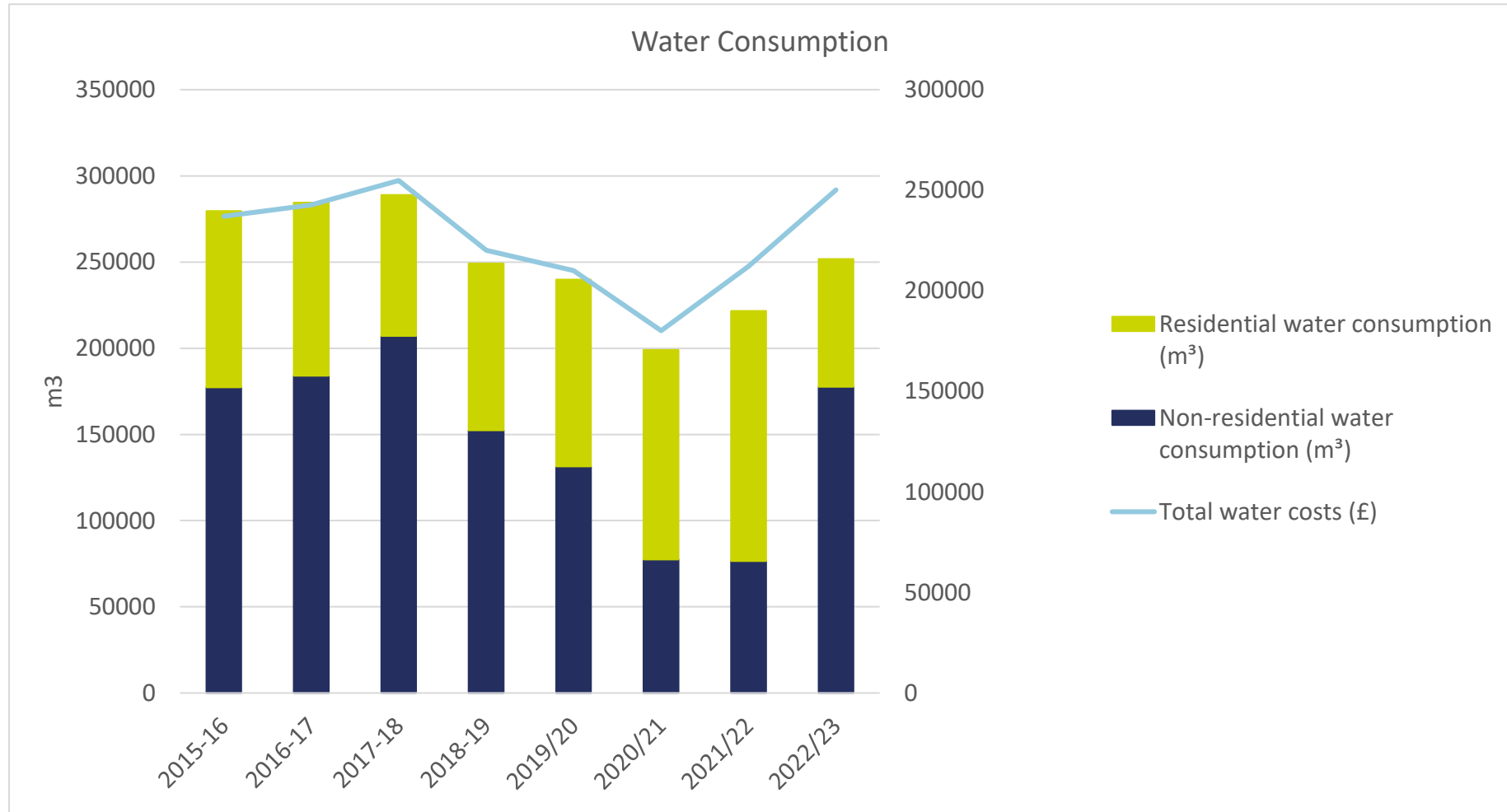
KPI	35/36 Target	25/26 Target	Annual difference A Vs T	22/23 Actual	22/23 Target	2015/16 Baseline
	100%	50%			35%	
Total scope 1 and 2 carbon emissions (Kg CO2e)	0	8,792,367	6.2%	12,142,061	11,430,077	17,602,509
Non-residential scope 1 and 2 carbon emissions total (Kg CO2e)	0	7,211,389	12.6%	10,552,191	9,374,805	14,422,778
In house residential scope 1 and 2 carbon emissions total (Kg CO2e)	0	1,580,979	-22.9%	1,584,383	2,055,272	3,161,957
External residential scope 1 and 2 carbon emissions total (Kg CO2e) (BAY UPP)				1,296,360		
Total scope 1 and 2 carbon emissions (kgCO2e) /m2	0.00	35.16	1.7%	46.48	45.70	70.31
Total non-Residential scope 1 and 2 carbon emissions (kgCo2e) /FTE student	0.00	483.17	2.9%	646.40	628.13	966.35
Total scope 1 and 2 carbon emissions (kgCO2e) /£1m	0.000	0.030	-23.8%	0.029	0.04	0.059
Total scope 1 and 2 carbon emissions (kgCo2e) /FTE Staff + Students	0.00	504.50	-14.8%	558.96	655.86	1,009.01
Total residential scope 1 and 2 carbon emissions (kgCO2e) /bed spaces	0.00	704.54	-2.4%	893.62	915.90	1,409.07

Percentage of total Scope 1 & 2 carbon emissions attributed to residential accommodation (in house and external)



WATER

University water consumption targets are aligned with the scope 3 emissions targets of a 50% reduction by 2035 from a 2015 baseline year. The university is currently ahead of target with -21% reduction against a target of -15% by 2021/22.



PLAN

PLEASE SEE LINK BELOW:



DECARBONISATION ACTION PLAN – 2022/23 UPDATE

MEASURE	PERIOD	OWNER	SCOPE	TARGET REDUCTION	FUNDING/ COSTS	COST £
SYSTEMS - ENABLERS						
EMS & Eco Campus	Ongoing	Sustainability and SU teams	1, 2 & 3	All	Sustainability	£1,000
*Carbon Trust – Path to Zero action plan (CE 15. Transition Plan)	Complete 2021/22	Carbon and Energy Manager & Sustainability	1 & 2	Oil, Gas, F-Gas, Diesel, Electricity	Sustainability	£48,000
Net Zero Vision	2022/23	Sustainability & ISS	1, 2 & 3	All	HEFCW (Sustainability)	£150,000
E-Carbon Literacy Training Development	2022/23	Sustainability & Climate Change Network	1, 2 & 3	All	HEFCW (Sustainability)	£50,000
RENEWABLES						
Existing on campus renewables	Ongoing	E&CS	1, 2 & 3	Grid Electricity, gas and water	Various	
Solar PV (Elec) Project (1800 roof mounted panels)	Complete 2022/23	Carbon and Energy Manager, E&CS	2	Grid Electricity	SALIX	£1,750,000
Y Twyni - Solar PV (Elec), Battery and EV chargers (x5) Project	Complete 2022/24	FSE & E&CS	2	Grid Electricity	Research	£500,000
CISM - 3 x Horizontal wind turbines & solar PV	Complete 2022/25	FSE & E&CS	2	Grid Electricity	Research	£1,500,000
Sport Centre - Solar PV array upgrade	2023 - 2024	E&CS Energy and Carbon Manager	2	Grid Electricity	E&CS	£100,000
Explore CPPA opportunities	2023 – 2024	E&CS Energy and Carbon Manager	1 & 2	Grid Electricity & Gas	E&CS	
Consider opportunities to Increase On campus direct wire renewables (Bay and Singleton Campus)	2022 - 2024	E&CS Energy and Carbon Manager	1 & 2	Grid Electricity & Gas	E&CS	
SUBTOTAL						£4,099,000

PATH TO ZERO REPORT 2022 - 2023



MEASURE	PERIOD	OWNER	SCOPE	TARGET REDUCTION	FUNDING/ COSTS	COST £
EFFICIENCIES						
Pilot Net Zero Ready Building – Haldane refurbishment (Air Source Heat Pump & Efficient glazing and smart LED lighting)	2022 - 2023	E&CS Project Officer	1 & 2	Gas & Grid Electricity	E&CS	
Pilot Net Zero Ready Building – Fulton refurbishment (BRE or RICS)	2023 - 2025	E&CS Project Officer	1, 2 & 3	All	E&CS	
Pilot Heating system replacement/decarbonisation - Faraday lecture block	2024 - 2025	E&CS Project Officer	1	Gas	E&CS	
General Lighting Upgrades /Controls (T12 & T8 fluorescent to LED) Faraday, Glyndwr, Wallace.	Complete 2022/23	E&CS Energy and Carbon Manager	2	Grid Electricity	E&CS	£328,000
Heat decarbonisation study Singleton campus	2023 - 2024	E&CS Energy and Carbon Manager	1, 2 & 3	Gas	E&CS	£114,000
Wales National Pool decarbonisation study and action plan (heat, equipment efficiencies, pool covers, building fabric improvements)	2022 - 2023	E&CS Energy and Carbon Manager	1, 2 & 3	Grid Electricity, gas and water	WGES	Subject to report
LED Lighting Singleton & Bay (Elec) project	Complete 2022/23	E&CS Energy and Carbon Manager	2	Grid Electricity	Salix	£1,750,000
LED Lighting Singleton & Bay (Elec) project	Complete 2022/23	E&CS Energy and Carbon Manager	2	Grid Electricity	E&CS	£117,000
Residences BMS Controls improvement project	Complete 2022/23	E&CS BMS Manager	1	Grid Electricity, gas and water	Salix	£157,000
Capital heating system efficiencies and upgrades	Ongoing	E&CS Energy and Carbon Manager	1 & 2	Grid Electricity and gas	E&CS	
General BMS upgrades	Ongoing	E&CS BMS Manager	1 & 2	Grid Electricity, gas and water	E&CS	£50,000
General sub meter upgrades	Ongoing	E&CS BMS Manager	1 & 2	Grid Electricity, gas and water	E&CS	£20,000
Projects building refurbishments with energy efficiency (BRE Fit-Out/ RICS SKA)	2023 - 2025	E&CS Project Officer	1 & 2	Grid Electricity, gas and water	Capital	Fulton Pilot
General fleet improvements	Ongoing	E&CS Sustainable Travel Officer	1	Diesel & Petrol	Devolved	
EV Fleet charging hub Singleton campus	2023 - 2024	E&CS Project Officer	1	Diesel & Petrol	E&CS	
EV Public charging hub Singleton campus	2023 - 2024	E&CS Sustainable Travel Officer	1	Diesel & Petrol	E&CS	
General building rationalisation	Ongoing	Director E&CS	1 & 2	Grid Electricity, gas and water	Capital	
SUBTOTAL						£2,536,000

PATH TO ZERO REPORT 2022 - 2023



MEASURE	PERIOD	OWNER	SCOPE	TARGET REDUCTION	FUNDING/ COSTS	COST £
TRAVEL						
<u>Our Travel Strategy commitments</u>	2021 - 2025	Sustainable Travel Officer, Sustainability, E&CS	1 & 3	Diesel & Petrol Wellbeing	Sustainability	
Santander Bike Scheme	Annual	E&CS Sustainable Travel Officer	3	Diesel & Petrol Wellbeing	Sustainability contribution	£25,000
Bike to Work & EV Car Salary Sacrifice Schemes	Ongoing	Sustainability & HR	3	Diesel & Petrol Wellbeing	NA	
SWell Travel Buddy app.	Annual	E&CS Sustainable Travel Officer	3	Diesel & Petrol Wellbeing	Sustainability	£3,000
British Cycling Ride Leaders training and led rides	Annual	E&CS Sustainable Travel Officer	3	Diesel & Petrol Wellbeing	British cycling	£3,000
British Cycling in house Ride Leader Training for staff & On road cycle training and activities to support access to active travel for disabled students	Annual	E&CS Sustainable Travel Officer	3	Diesel & Petrol Wellbeing	Sustainability	£2,000
Tusker Car scheme (including ULEVs)	Ongoing	Sustainability & HR	3	Diesel & Petrol Wellbeing	NA	
Student Union and Student Travel Training	Ongoing	Sustainability & SU	3	Diesel & Petrol Wellbeing	Sustainability	
Discounted staff and student annual and term time bus passes	Ongoing	E&CS Sustainable Travel Officer	3	Diesel & Petrol Wellbeing	Sustainability	
Free bus travel for HSV students (645)	Ongoing	E&CS Sustainable Travel Officer	3	Diesel & Petrol Wellbeing	Sustainability	£199,000
Bike Maintenance workshops	Ongoing	E&CS Sustainable Travel Officer	3	Diesel & Petrol Wellbeing	External partners	
Dr bike and bike roadshow	Ongoing	E&CS Sustainable Travel Officer	3	Diesel & Petrol Wellbeing	External partners	
Bike, Safety Switch on event (lights, locks, Hi-Viz.)	Annual	E&CS Sustainable Travel Officer	3	Diesel & Petrol Wellbeing	Sustainability	£3,500
Discounted bike purchase	Ongoing	E&CS Sustainable Travel Officer	3	Diesel & Petrol Wellbeing	Local providers	
SUBTOTAL						£235,500

PATH TO ZERO REPORT 2022 - 2023



MEASURE	PERIOD	OWNER	SCOPE	TARGET REDUCTION	FUNDING/ COSTS	COST £
WASTE						
<u>Our Working Environment Strategy - Waste and Recycling commitments</u>	2021 - 2025	Waste and Recycling Officer, Sustainability, E&CS	3	All	Sustainability	
WARP-IT	Ongoing		3	All	Sustainability	
Zero Waste to Landfill Carbon Trust Accreditation	Complete 2022/23					
WATER						
Sports village independent water supply and efficiency improvements	2024 - 2026	E&CS Energy and Carbon Manager	3	Water	TBC	
PROCUREMENT						
LEAF	Ongoing	Sustainability and Faculties (Environment Officers)	1, 2 & 3	All	Sustainability	
Tender and Contract requirements	Ongoing	Procurement and Sustainability Officers	1, 2 & 3	All	Various	
Net Positive Futures Supplier Engagement Tool	Ongoing	Procurement and Sustainability Officers	3	All	HEFCW - HEPCW	
ENGAGEMENT						
SOS SWITCH OFF – Residences engagement	Ongoing	E&CS Sustainability Officer	1, 2 & 3	Grid Electricity, gas and water	Sustainability	£5,850
SWell – Staff and Student engagement support	Ongoing		1, 2 & 3	All	HEFCW - Wellbeing	£30,000
OFFSETING						
<u>Offsetting trial - FSE Biosciences</u>	2023 - 2024	FSE Prof. & E&CS Sustainability Manager	All	All	Sustainability	
<u>Our Natural Environment strategy - Biodiversity Commitments</u>	Ongoing	E&CS Biodiversity Officer Sustainability			Sustainability	
SUBTOTAL						£35,850
GRANDTOTAL						£6,906,353



Glyndwr solar array, part of 1800 panel install



Y Twyni 5 x EV chargers



Haldane Building, air source heat pump



CISM Building 3x Crossflow wind turbines

SUSTAINABILITY STRATEGY 2021 – 2025

OUR CLIMATE EMERGENCY SUCCESSES AND COMMITMENTS

OUR KEY SUCCESSES (2016-2020)



STRATEGIC

We declared a Climate Emergency in 2019 and signed the **Global Universities and Colleges Climate Letter**

Responding to the Climate Emergency – in our operations, teaching, research and Civic Mission - is now a core commitment of the University's **Strategic Vision and Purpose**

Divestment of our endowments from all fossil fuel holdings and associated activities in 2019

CARBON MANAGEMENT

Negotiations (with regulators) to adopt an **emissions baseline of 2015/16** compared to most institutions' use of 2005 or 2010 – meaning our targets are more ambitious

A publicly available **Carbon Management Plan** for scope 1, 2 and 3 emissions has been published since 2016

Achieved a 100% score for Carbon Management in the 2019 Guardian-published **People and Planet University League**

Developed the **"Path to Zero"** concept and approach for stakeholder engagement around the Climate Emergency

Developed new **corporate procedures** as part of the EMS around key climate impacts including F-gases, waste, business travel and printing

Reduced total University carbon emissions by **9,276 tonnes of carbon dioxide equivalent (CO₂e)** since baselining (scope 1, 2 and 3), against a backdrop of a growing university (FTE staff and student headcount and teaching space)

Reduced building, utility and fleet, scope 1 and 2 carbon emissions by **2,432 tonnes of CO₂e** since baselining, against a backdrop of a growing teaching space

INFRASTRUCTURE

16% drop in CO₂e from electricity consumption since 2015/16 on target for zero carbon by 2035

All three new buildings in 18/19 achieved BREEAM

Excellent – **The College, Computational Foundry and Engineering North**

CHP electricity power output increased from 1.3MWh to 1.7MWh and heat output increased from 0.5MW to 1.5MW

£1M investment in small and medium scale energy efficiency projects, including LED lighting, heating controls and utility metering

All individual buildings sub-metered for recording utility use and **consumption dashboards** developed within the Building Management System

Building Energy Performance Rating (DEC Score) improved from **85 in 2016** to **78 in 2020**

Solar PV installed capacity increased from 50KW to 490KW with **2,670,052 kWh of renewable energy generated since 2015/16**, avoiding 376 tonnes CO₂e and saving £330,000 of imported grid electricity

ENGAGEMENT

First university in Wales to actively engage students in **The Student Energy Project (TSEP)** at our Singleton halls, which challenged and educated student residents to reduce energy, carbon emissions and costs. TSEP recorded an annual 4% reduction in electricity consumption, equating to **60,000 kWh and £6k of savings**

Switch off campaign run every year with up to 7.5% energy reduction. Since 2015/16 we have engaged over 200 staff and student volunteers in an energy waste hunt, returning to buildings after dark to check and challenge staff and student energy conservation efforts

Visualised management of energy through **Energy Dashboards** to provide staff with information on utility use within buildings

Through the bespoke, award-winning **SWell engagement app**, we engaged over 50% of staff and have nudged behaviours towards lowering our individual and collective carbon footprints, with over 400,000 positive actions completed including: using energy hungry appliances efficiently, reporting equipment faults and leaks, choosing sustainable and active travel methods, avoiding waste and purchasing less

Through the annual **Energy Week** campaign, we have collaborated with the Students' Union to raise awareness on practical ways to save money and reduce carbon footprints, facilitating student-led campus workshops, pop-up games and stalls

Through the **HEAR recognised Sustainability Award**, Week of Work, Go Wales and SPIN placements, we have provided employability skills for over 900 students. This has supported extracurricular engagements in reducing climate impacts through a range of projects including tree planting, water conservation, recycling, avoiding single use plastics, energy conservation and renewable energy generation

OUR KEY COMMITMENTS (2021-2025)



CARBON MANAGEMENT

- CE 1. **Scope 1 and 2:** Be **zero carbon** for direct emissions (scope 1 and 2) by 2035, with at least a 70% reduction by 2030 (from 2015/16)
- CE 2. Implement the **Path to Zero** local engagement programme of work to achieve (on average) a 5% year on year reduction in scope 1 and 2 emissions including allocating and setting out clearly how Faculties, PSUs and stakeholders can contribute to emissions reduction
- CE 3. **Scope 3:** Achieve (on average) a 2.5% year on year reduction in scope 3 emissions, 50% by 2035 (35% by 2030)
- CE 4. Develop a programme of work for defining and achieving **scope 3 sub-targets and monitoring programmes** including: business travel, staff and student commuting, waste, water, food and drink, and procurement
- CE 5. Shift **cultural working norms** to increase sharing of offices, hot desking, home and remote working, where practicable and in line with business needs, and adoption of digital platforms to allow optimum use of available space

INFRASTRUCTURE

- CE 6. 1 MW of **renewable wind** electricity capacity installed at Bay Campus subject to planning, funding and other considerations
- CE 7. A further 300KW of **renewable Solar PV** electricity capacity installed at Bay Campus
- CE 8. A further 1MW of **renewable Solar PV** electricity capacity installed at Singleton Campus
- CE 9. 2MW of low carbon **Power & Heat** capacity installed at Singleton Campus

CE 10. Work with **Welsh Government Energy Service (WGES)** in developing our infrastructure planning to reduce carbon emissions

CE 11. Adopt a minimum requirement for achievement of **BREEAM Refurbishment and Fit Out (RFO)** standard or **RICS SKA rating** associated with university projects

ADAPTATION

CE 12. A scheme will be developed to enable offsetting of our **unavoidable scope 3** emissions, considering potential verification standards (including but not limited to Gold Standard (GS), ISO 14064 and GHGP)

CROSS-CUTTING ACTIVITIES – COMMITMENTS

GOVERNANCE, MANAGEMENT, DECISION-MAKING



- CE 13. We will develop a simple but comprehensive corporate **Sustainability and Climate Emergency Impact Assessment** by which the University is able to consider whole life costs and the “**climate proofing**” of strategies and policies, investments, grant applications, new projects and initiatives
- CE 14. We will facilitate a **Climate Emergency Working Group** (staff and students) to discuss and plan the introduction and delivery of low carbon operations on our campuses
- CE 15. Develop a **budget profile and programme** for scope 1 and 2 zero carbon from 2035 by the end of 2021 (our detailed transition plan)
- CE 16. **Explore funding** with university partners to enable a sequence of investments that decarbonise the energy we use (both small and large scale interventions) and enhance how we run the campus as a smart, integrated, local energy system to enable us to meet our targets
- CE 17. Develop Faculty and PSU based scope 1, 2 and 3 targets as part of their **Sustainability Action Plans (SAPs)** that are reviewed quarterly and reported through an annual management review
- CE 18. Continually improve carbon data reporting and agree **SMART targets** for reducing specific

scope 3 carbon emissions with relevant supply chain contractors and service providers

- CE 19. We will become **explicit and transparent** about areas of our operations and work that have a high carbon impact and ensure these areas make a net contribution towards meeting carbon targets and the UN SDGs

LEARNING, CAPACITY, SKILLS



- CE 20. Develop a **carbon literacy toolkit**, to enable staff and students to reduce impact from their activities, research and the spaces they use on campus
- CE 21. Support and **develop opportunities to educate, upskill and train** members of the staff and student population and the wider community in relation to carbon management and reducing our individual and collective carbon footprint
- CE 22. Explore opportunities available to develop climate emergency **training packages** as an online resource
- CE 23. Integrate climate emergency and carbon management commitments and aspirations into the **Student Sustainability Award**
- CE 24. Develop a series of learning modules as part of a university-wide **climate emergency outreach programme**, aimed at local feeder primary and secondary schools, colleges and community groups, supported by Discovery and other partners

COMMUNICATION, ENGAGEMENT, INVOLVEMENT



- CE 25. Draw on **teaching and research** to help find solutions and inspire behavioural change for our university, wider community and beyond
- CE 26. Continue to be an active steering group member of **Low Carbon Swansea Bay**, working in partnership to help deliver a climate emergency response for the Swansea Bay area

- CE 27. Deliver a student and staff engagement programme for carbon reduction and wellbeing that will achieve a **10% reduction in carbon emissions** and be aligned with the University Wellbeing Strategy
- CE 28. Support **Students' Union** societies' extracurricular efforts in this area (e.g. Environment and Ethics, Conservation and Ecology, Tree and People and Planet)
- CE 29. Integrate requirements for climate emergency and carbon management responsibilities and reporting requirements into **job descriptions** for relevant roles across the University
- CE 30. Pursue the inclusion of a **sustainability and climate emergency induction** as a key requirement for all new and returning students

OUR CONTRIBUTION TO OTHER GOALS

WELLBEING AND HUMAN HEALTH



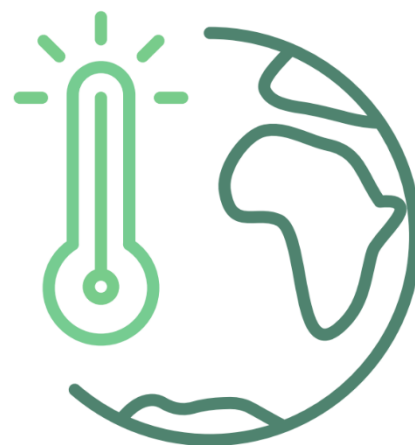
- CE 31. Maximise the co-benefits of reducing carbon emissions, climate change adaptation and improving human wellbeing in our work to achieve the Public Health Wales **Corporate Health Standard Gold and Platinum** award and to support the University Wellbeing Strategy

WELLBEING OF FUTURE GENERATIONS



- NI 4. Levels of nitrogen dioxide (NO₂) pollution in the air
- NI 11. Percentage of businesses which are innovation-active
- NI 12. Capacity (in MW) of renewable energy equipment installed
- NI 13. Concentration of carbon and organic matter in soil
- NI 14. The Ecological Footprint of Wales

- NI 15. Amount of waste generated that is not recycled, per person
- NI 29. Mean mental wellbeing score for people
- NI 32. Number of properties (homes and businesses) at medium or high risk of flooding from rivers and the sea
- NI 41. Emissions of greenhouse gases within Wales
- NI 42. Emissions of greenhouse gases attributed to the consumption of global goods and services in Wales
- NI 46. The Social Return On Investment (SROI) of Welsh partnerships within Wales and outside of the UK that are working towards the United Nations Sustainable Development Goals



UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS



<p>3 GOOD HEALTH AND WELL-BEING</p> 	<p>7 AFFORDABLE AND CLEAN ENERGY</p> 	<p>8 DECENT WORK AND ECONOMIC GROWTH</p> 
<p>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</p> 	<p>11 SUSTAINABLE CITIES AND COMMUNITIES</p> 	<p>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</p> 
<p>13 CLIMATE ACTION</p> 	<p>17 PARTNERSHIPS FOR THE GOALS</p> 	

**FULL ANNUAL CARBON EMISSIONS DATA REPORTED
ON HESA EMR: [HTTPS://WWW.HESA.AC.UK/DATA-
AND-ANALYSIS/ESTATES](https://www.hesa.ac.uk/data-and-analysis/estates)**

GET INVOLVED:

**[HTTPS://WWW.SWANSEA.AC.UK/SUSTAINABILITY/GET-
INVOLVED/](https://www.swansea.ac.uk/sustainability/get-involved/)**

CONTACT THE SUSTAINABILITY TEAM:

**[HTTPS://WWW.SWANSEA.AC.UK/SUSTAINABILITY/CO
NTACT-US/](https://www.swansea.ac.uk/sustainability/contact-us/)**

SWANSEA UNIVERSITY SUSTAINABILITY STRATEGY:

**[HTTPS://ONLINE.FLIPPINGBOOK.COM/VIEW/8981576
23/](https://online.flippingbook.com/view/898157623/)**

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