



University of Essex

Environmental Audits Report

2026

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Introduction

This report provides a summary of recent environmental audits, up to and including 2024-25, to demonstrate the areas that we are reviewing, monitoring and improving on. Where applicable we have provided scope 1, 2 or 3 emissions, but also share other information as we recognise that carbon emissions are not the only measure of environmental impact. Other documents to refer to include the Sustainability Sub-Strategy 2021-28, Carbon Report, Sustainability Report and Carbon Management Plan, which can be found on our website.

This report covers seven key areas:

- Waste management, recycling and reuse
- Travel and transport
- Sustainable procurement
- Biodiversity
- Utilities (gas, electricity, water)
- Emissions and discharges
- Construction and refurbishment

Waste Management, Recycling and Reuse

We track our waste data on a monthly basis, recording this information for performance monitoring, as well as submitting data to the [HESA Estates Management Record](#). We use several waste management contractors for different waste types. Our main contractors are Veolia (Colchester) and Biffa (Southend and Loughton) for treatment of dry mixed recycling, general waste, food waste and glass, while smaller contractors are used for specialist collections, including WEEE, metal, hazardous/chemical waste, offensive waste, dog waste etc.

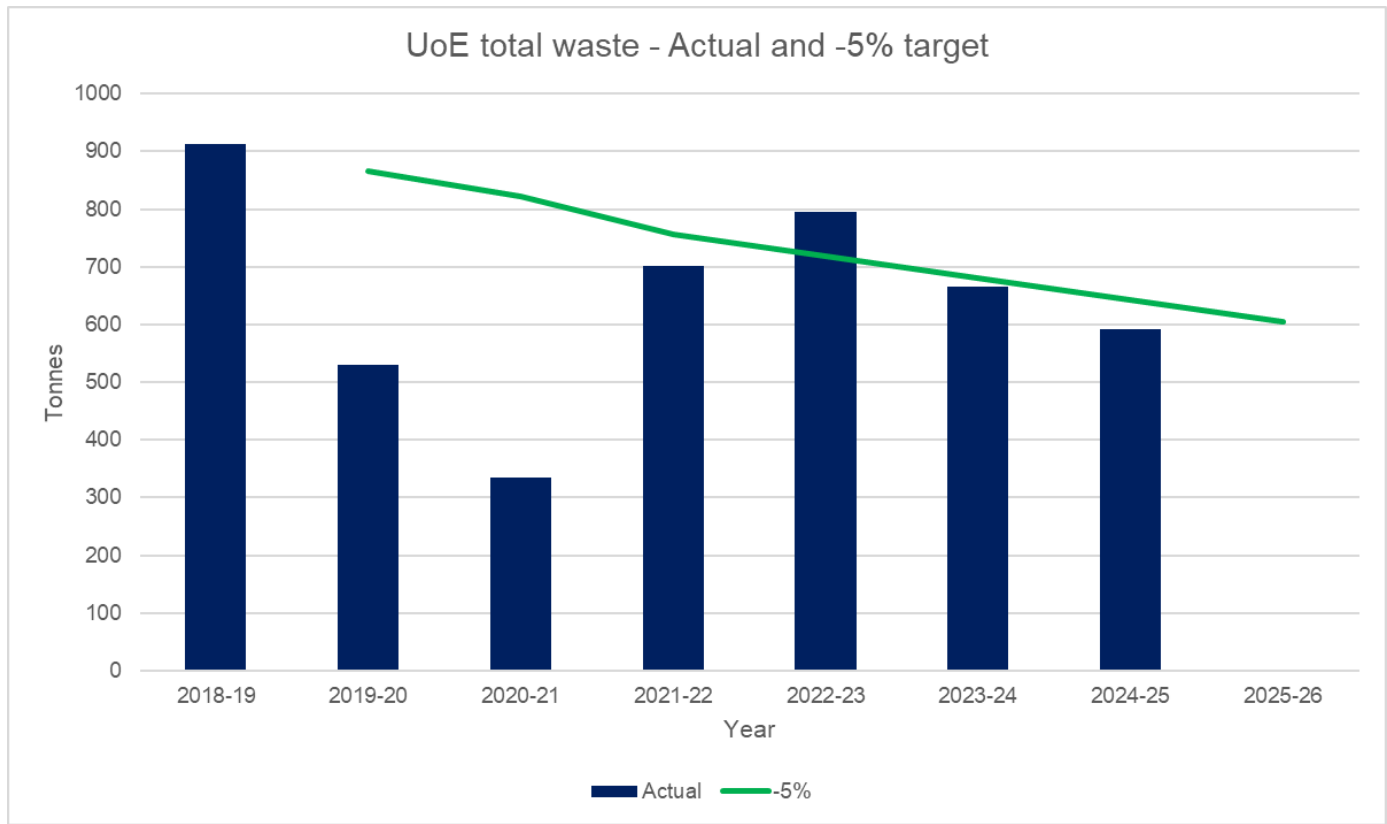
In addition to monitoring data regularly, we also conduct ad-hoc audits as necessary, to monitor the provision of facilities and identify any opportunities for improvements.

Our [Waste and Recycling Policy](#) sets out approaches to waste management and the expectations of our community in playing their part.

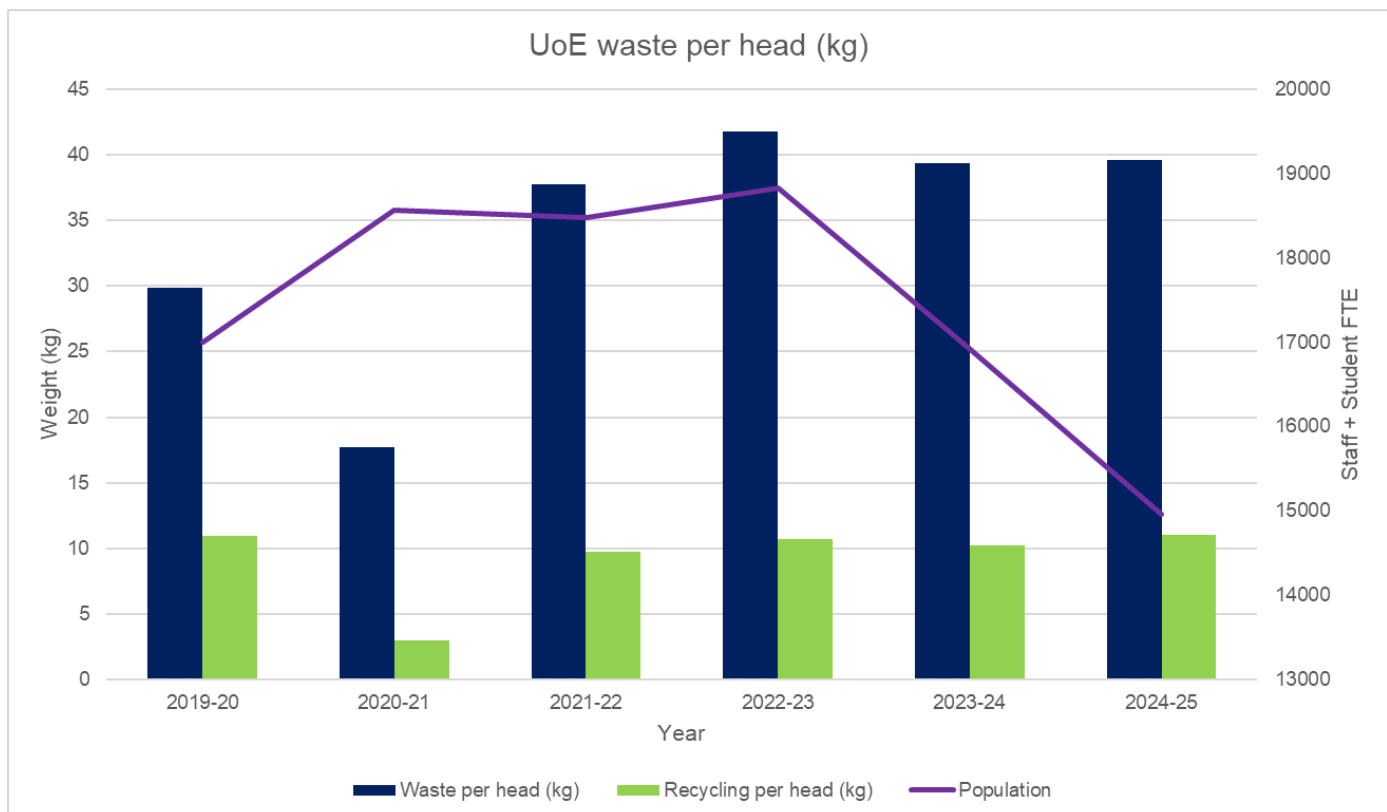
As much as possible, we reuse furniture across our campuses, to avoid useable items being disposed of.

In our [Sustainability Sub-Strategy 2021-28](#) we have set a number of waste and recycling targets, including reducing our total waste by 5% year on year (KPI 19) and reaching 50% recycling by the 2026-27 academic year (KPI 22).

The graph below shows progress to date against KPI 19:



The graph below shows our total waste and recycling per head in tonnes:



Waste Treatments

Our waste contractors ensure that all our waste is treated appropriately and in line with UK regulations. Wherever possible, we separate our waste types on site to ensure they are being recycled and reused. Our waste is treated in the following ways:

- Recycling
- Anaerobic digestion (food waste)
- Incineration to produce energy
- Composting (grounds waste)
- Reuse (furniture; managed internally)

This table details our waste treatments across 2022-23 to 2024-25 for all waste types (including reuse, classified as recycling).

Treatment (tonnes)	2022-23	2023-24	2024-25
Recycled	321.25	249.59	201.27
Anaerobic digestion	39.74	33.45	48.00
Landfill	6.20	22.33	3.57
Incinerated to create energy	632.32	562.35	490.93

Additional documents, with more detailed summaries of waste collection types, can be found on our website.

Travel and Transport

We run a travel survey annually, to better understand the mode splits of our community, which supports our planning for travel and transport initiatives. Results from the November 2025 survey are below, alongside 2023 and 2024 results. 466 responses were received in 2025. As different people respond each year, it is tricky to make precise year-on-year comparisons, however it does help give a representation that shapes communications and initiatives. Through the Modeshift STARS accreditation Essex is rated as 'Good'.

Mode	Count	% 2025	% 2024	% 2023
Bus	89	19.1%	11%	17.9%
Car share (driver)	40	8.58%	4.8%	Not asked
Car share (passenger)	12	2.56%	1.2%	Not asked
Cycle	70	15.02%	7.5%	7.3%
Drive alone	175	37.6%	29.4%	26.3%
Drive alone (EV)	0	-	1.9%	Not asked
Drive alone (Hybrid)	0	-	1.9%	Not asked
Ebike	0	-	0.7%	Not asked
EScooter	0	-	1.0%	1.0%
Get dropped off	3	0.64%	0.7%	1.2%

London Underground	0	-	0.8%	0.5%
Motorcycle	4	0.86%	0.8%	0.3%
Taxi	2	0.43%	0.2%	Not asked
Train	27	5.79%	4.9%	2.9%
Walk	32	6.87%	33.1%	33.8%
Other	9	1.93%	0.2%	0.2%

Sustainable Procurement

Each year the Southern Universities Purchasing Consortium (SUPC) provides us with an estimate of our scope 3 emissions from our spending activities for the previous financial year. To calculate Scope 3 for monitoring and reporting purposes, spend against each Procurement HE code is mapped to a defined list of DEFRA categories for which conversion factors - calculating value to carbon - are allocated. This data is then input to the Higher Education Supply Chain Emissions tool (HESCET) in order for a Scope 3 report to be produced. Please note that this tool includes scope 3 emissions from capital goods and transportation to the University.

The table below details the estimated tonnes of carbon emissions (tCO₂e) associated with our spend across each category. Data is provided for the last five years. Information will be updated annually once it has been received from SUPC.

It is acknowledged that spend-based calculations are not a perfect measure for scope 3 emissions, however this is the best available methodology at present. We continue to monitor guidance for the sector and will track scope 3 for procurement via the most appropriate means. The table below details our scope 3 emissions for spend, split by category:

Category (tCO ₂ e)	2020-21	2021-22	2022-23	2023-24	2024-25
Business services	5,615	9,468	16,172	12,819	9,571
Paper products	361	191	136	216	274
Other manufactured products	887	1,373	1,170	1,125	1,329
Manufactured fuels, chemicals and glasses	12	102	150	185	143
Food and catering	0	107	391	14	12
Construction	286	470	583	907	600
Information and communication technologies	6,299	8,290	8,303	11,018	12,718
Waste and water	221	126	208	193	137
Medical and precision instruments	7,955	2,731	6,365	9,582	3,609
Other procurement	2,428	3,757	2,695	4,178	1,868
Unclassified	3,946	3,460	3,415	903	869
Total	28,009	30,076	39,593	41,141	31,131

Biodiversity

Our approach to biodiversity is one of nature positivity. Wherever possible we ensure that flora and fauna are supported to live alongside our (human!) community.

In 2022 a [Carbon Sequestration Report](#) was produced to establish the CO₂ absorbed by university-owned land per year. At that time it was estimated that the Colchester Campus sequesters 424 tCO₂e each year, with the potential to reach 578 tCO₂e annually if some changes to land management techniques are adopted.

We are now conducting regular biodiversity audits, including those most recently conducted by ecologists (2023) comprising UK Habitat Classification Survey, veteran tree survey, reptile surveys and bat activity surveys, and an assessment of the changes of habitats and species distribution over time.

Set in [Wivenhoe Park](#), the Colchester Campus is home to approximately 100 veteran trees, including multiple oaks at least 400 years old, cedar of Lebanon, sweet chestnut, silver birch, field maple, alder, sycamore and false acacia.

Tree audits are carried out annually, with the health of trees and any maintenance recorded in a database by the Grounds Team, who monitor any changes.

A small number of common lizards are found on site. Seven bat species including pipistrelle, noctule, serotine and brown long-eared are present. Other species activity at the Colchester Campus include Muntjac deer, mallards, coots, moorhens, Egyptian geese and Canada geese, cormorants, weasels, rabbits, hedgehogs, kestrels, squirrels, woodpeckers and many more.

Habitats include meadows, acid grassland, lakes, woodland, scrub, amenity grassland and hedgerow. For wildlife, we provide bat, bird and hedgehog boxes. Log piles are retained to support species habitats. Where larger trees have died back, these are maintained safely to provide habitats for a range of creatures, rather than felling (unless it is unsafe to leave it in situ).

Utilities (gas, electricity, water)

Our utilities usage is tracked on a monthly basis, with detailed data monitored in Tableau for trends, changes and anomalies. For gas and electricity this is measured in kWh, and water is m³. The table below shows this data for the last four years:

Utility	Campus	2021-22	2022-23	2023-24	2024-25
Electricity (kWh)	Colchester	16,848,289	17,259,330	15,796,729	14,758,212
	Southend	2,921,178	2,934,784	2,580,375	2,134,658
	Loughton	360,336	360,899	319,887	399,180
	Total	20,129,803	20,555,013	18,696,991	17,292,050
Gas (kWh)	Colchester	31,596,530	27,778,192	21,567,149	19,838,796
	Southend	2,714,180	2,479,426	2,464,345	2,229,900

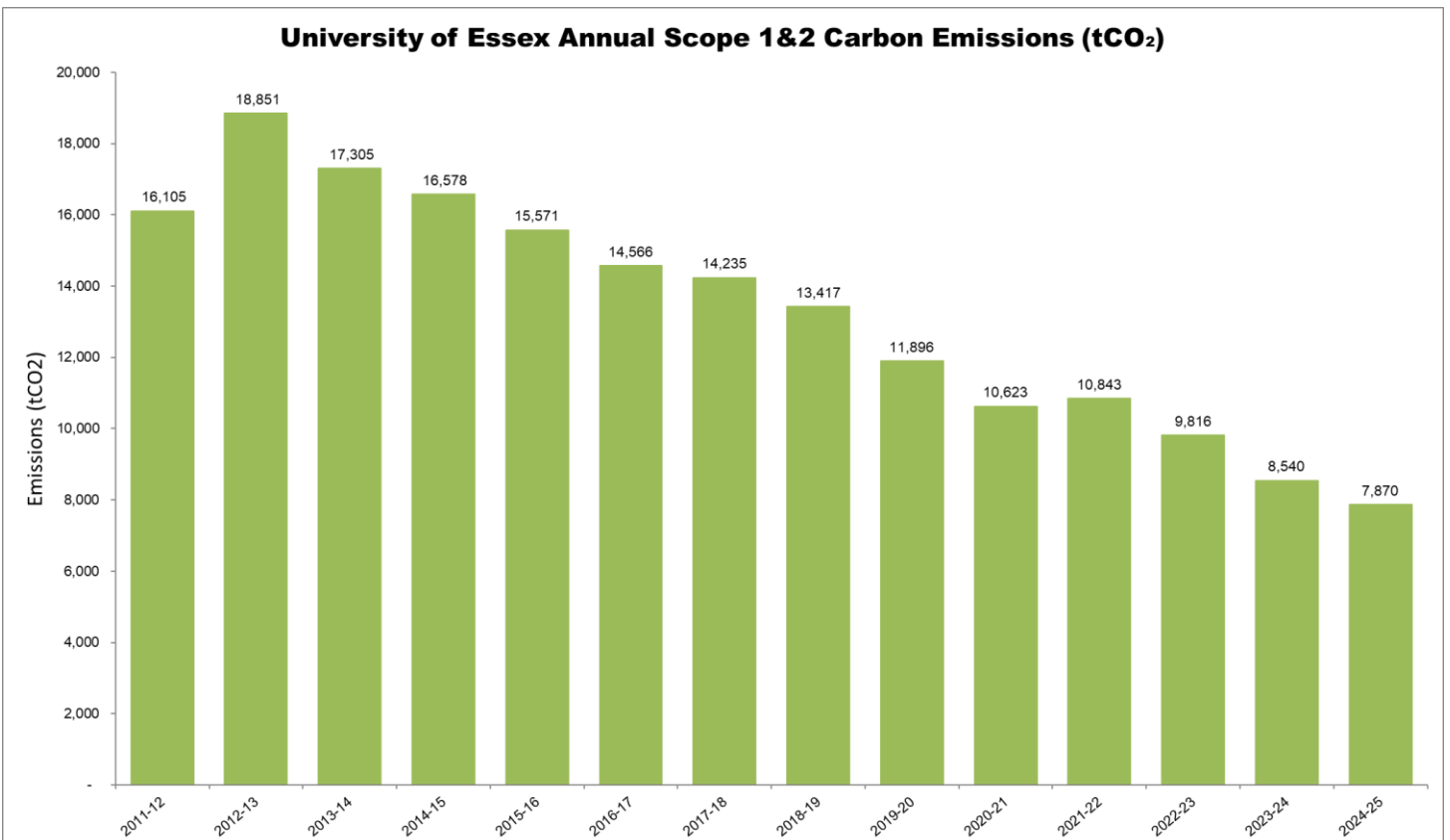
	Loughton	524,332	520,625	403,333	427,826
	Total	34,835,042	30,778,243	24,434,827	22,496,521
Water (m ³)	Colchester	140,261	180,619	158,520	160,429
	Southend	22,058	26,310	37,157	33,177
	Loughton	3,713	3,696	3,487	2,953
	Total	166,032	210,625	199,164	196,558

We also generate some of our own electricity from solar PV installations. Annual totals are shown below. The marked increases in the most recent years are due to new solar PV installations coming online. Our target is to reach 25% generation by 2028.

	2021-22	2022-23	2023-24	2024-25
Solar PV generation (kWh)	296,767	372,693	843,622	1,056,600
Proportion of total electricity used	1.45%	1.78%	4.32%	8%

Emissions and Discharges

Our target is to achieve net zero scope 1 and 2 carbon emissions by 2035, with an interim target of 7,500 tonnes by 2030; we are currently on target to achieve this target early. Our emissions peaked in 2012-13 at just under 19,000 tonnes, and the graph below shows our trajectory since, which demonstrates a steady downward trend. This has been achieved through decarbonisation projects and energy efficiency/optimisation, as well as ongoing decarbonisation of the National Grid (electricity).



We also calculate our annual scope 3 emissions for a number of categories, using the Greenhouse Gas Protocol guidance. [Our annual Carbon Report provides the most detailed overview of our scope 1, 2 and 3 emissions.](#)

The energy use and carbon emissions for our owned accommodation (scope 1 and 2) are as follows:

	2021-22	2022-23	2023-24	2024-25
Electricity (kWh)	7,240,561.56	7,399,804.68	6,730,916.40	5,912,504.5
Gas (kWh)	13,933,378.00	12,311,297.2	9,773,930.80	7,724,043.6
Carbon emissions (total tCO2e)	3,943.58	3,783.40	3,575	2,657.9

The energy use and carbon emissions for externally operated accommodation (scope 3) are as follows. This includes the Quays, Copse, Meadows, and Pastures*:

	2021-22	2022-23	2023-24	2024-25
Electricity (kWh)	1,933,378	2,205,822	4,397,787	6,401,202*
Gas (kWh)	5,837,256	6,611,436	6,668,350	5,609,655
Carbon emissions (total tCO2e)	1,479.68	1,989.40	2,130.50	1,875.97

*The Pastures opened in Autumn 2023, and does not use gas.

Construction and Refurbishment

At the University of Essex we are committed to responsible construction and refurbishment. All our new build and refurbishment projects are assessed for sustainability performance and impacts, with BREEAM ‘very good’ as the minimum rating expected for major building projects. Any new building must incorporate 15% renewables, which is increased where funding allows.

We have a preference to invest in FSC certified furniture that complies with our ethical purchasing commitments.

Details of the estimated carbon savings of recent projects are listed in the table below.

Project	Information	Environmental impacts
Solar PV phase 1	This project contributes to onsite renewable energy generation at Colchester Campus. Panels now installed on: Computing HSC SSRC	Estimated 559,600 kWh electricity generation annually. 116 tCO ₂ e saved annually.

	Library lower level 2001 Ivor Crewe Network Building	
Solar PV phase 2	Over 1,500 solar PV panels have been installed at South Courts accommodation.	Estimated 614,477 kWh electricity generation annually. 138 tCO _{2e} saved annually.
Tap restrictors and replacements	Replacing taps and adding restrictors to existing taps to lower the water flow rate, saving water and lowering gas needed to heat hot water.	Estimated 10,471 m ³ water savings annually. Estimated 244,437 kWh gas annually. Total estimated cost savings (water and gas) £49,360 annually.
Low flow shower heads	Installation of eco shower heads with a reduced flow rate of 8 litres per minute. 1200 units have been installed in South Courts accommodation.	Estimated 28,290 m ³ of water usage avoided annually. 40 tCO _{2e} saved annually.
LED lighting upgrades	Upgrades to replace traditional lighting to LED bulbs across three campuses to reduce energy use by 40%. LED lighting has been upgraded across two sites in Colchester and three sites in Southend.	Estimated 514,259 kWh of electricity usage avoided annually. 107 tCO _{2e} saved annually.
Student Union (SU) shop fridge replacements	Installation of doors on fridges to reduce energy wastage. Completed July 2023.	Estimated 100,000 kWh of electricity usage avoided annually. 21 tCO _{2e} saved annually.
Adjustments to heating/cooling temperatures and timings	The University has adopted, and aims to maintain, a comfortable temperature set point (as set out in the Energy Management Policy) during the building's predominant occupancy hours, to provide a suitable environment for its occupants and to maximise energy reduction, cost savings and our	Estimated 3,483,447 kWh of gas usage avoided annually. 655 tCO _{2e} saved annually.

	commitment to being net zero scope1 and 2 carbon emissions by 2035.	
Comfort cooling sensors	<p>Presence Infrared (PIR) sensors installed to AC units to switch off/on heating based on room occupancy.</p> <p>38 units have been installed in Constable Building (Kaplan).</p>	<p>Estimated 86,656 kWh of electricity usage avoided annually.</p> <p>18 tCO₂e saved annually.</p>

END

Prepared by the Sustainability Team June 2026

Data sourced from teams including Sustainability, Procurement, Travel & Transport, Accommodation, Grounds, Soft FM Services and Estates.

Review date: June 2027