

Shropshire Council Climate Strategy

Carbon Monitoring Report 2025

FINAL-REVIEW

Compiled by Strategy and Organisational Development, supported by;



Department for
Energy Security
& Net Zero



www.shropshire.gov.uk
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1. Introduction

Shropshire Council began monitoring its carbon footprint in 2019. This report updates the Council's carbon footprint highlighting any changes against the baseline and previous year's monitoring. The report helps address the following initial key questions:

- 1.1 What is Shropshire Council's latest corporate carbon footprint (2025)?
[NET carbon emissions \(2025\) \$\approx\$ 40 ktCO₂e. Where 1k = 1'000 tonnes CO₂ equivalent.](#)
- 1.2 How has this changed from that the Council's baseline year (2019)?
[NET emissions have reduced by over a third - 35% \(-22 ktCO₂e\) over seven years.](#)
- 1.3 How have the Council's emissions changed from the previous the year (2024)?
[NET emissions have reduced by around 20% \(-10 ktCO₂e\).](#)
- 1.4 What initiatives have helped to achieve this?
[Projects reflect activities from all directorates across the whole organisation::](#)
 - [Commissioning and procurement \(all services\).](#)
 - [Council property, schools and social housing decarbonisation.](#)
 - [Highways and transport decarbonisation.](#)
 - [Biochar and Pyrolysis \(carbon capture, storage\).](#)
 - [Staff engagement: Carbon Literacy, website and e-learning.](#)
 - [Circular economy, reduce, reuse, recycle.](#)
- 1.5 What other factors have had an influence?
[Recent changes in service delivery, assets, and working arrangements.](#)
- 1.6 Is the Council 'on track' for net-zero by 2030?
[It looks unlikely, due to the emission reduction gradient required \(see p4, p8\).](#)
- 1.7 What are the economic benefits of net-zero? [Please see Annex C \(p21\).](#)
- 1.8 How has Shropshire Council helped decarbonise the county as a whole?
[As part of its regulatory role, policies and partnership work including Shropshire Climate Action, Marches Energy Agency, Affordable Warmth and the Marches Growth Hub.](#)
- 1.9 What additional activities, policies, support for community climate action, are planned?
[A continuation of Carbon Literacy Training, partnerships such as Marches Forward and Shropshire Climate Action. Robust Environmental and Social Governance policies.](#)
- 1.10 The report outlines current and planned projects addressing the carbon gap, stressing the importance of focusing efforts where emissions are highest.
- 1.11 To reach net zero by 2030 now requires an annual reduction of around 16% per year, therefore decarbonisation needs to be continuous and progressive towards that goal.
- 1.12 Following [COP30](#) hosted in Belém, Brazil, the UK has united with countries globally to re-affirm efforts to keep average global temperature increases to well below 2°C.
- 1.13 You may view the [Climate Dashboard](#) which shows the Council's carbon footprint and other environmental key performance indicators (KPI's). Further information about the Council's response to the Climate Emergency is available on [Shropshire Climate Action](#).



2. Carbon pathway

2.1 The challenge of getting to net-zero is best illustrated with a projection. Shropshire Council has been on a bumpy journey so far (dark green dashed line). The pandemic year is evidential in the data. Three pathways are shown (NET emissions):

- a) A gradual slope (-5% per year) to achieve net zero by 2040. (red).
- b) A medium slope (-8% per year) to achieve net zero by 2035. (amber).
- c) A rapid descent (-16% per year) to achieve net zero by 2030. (green).

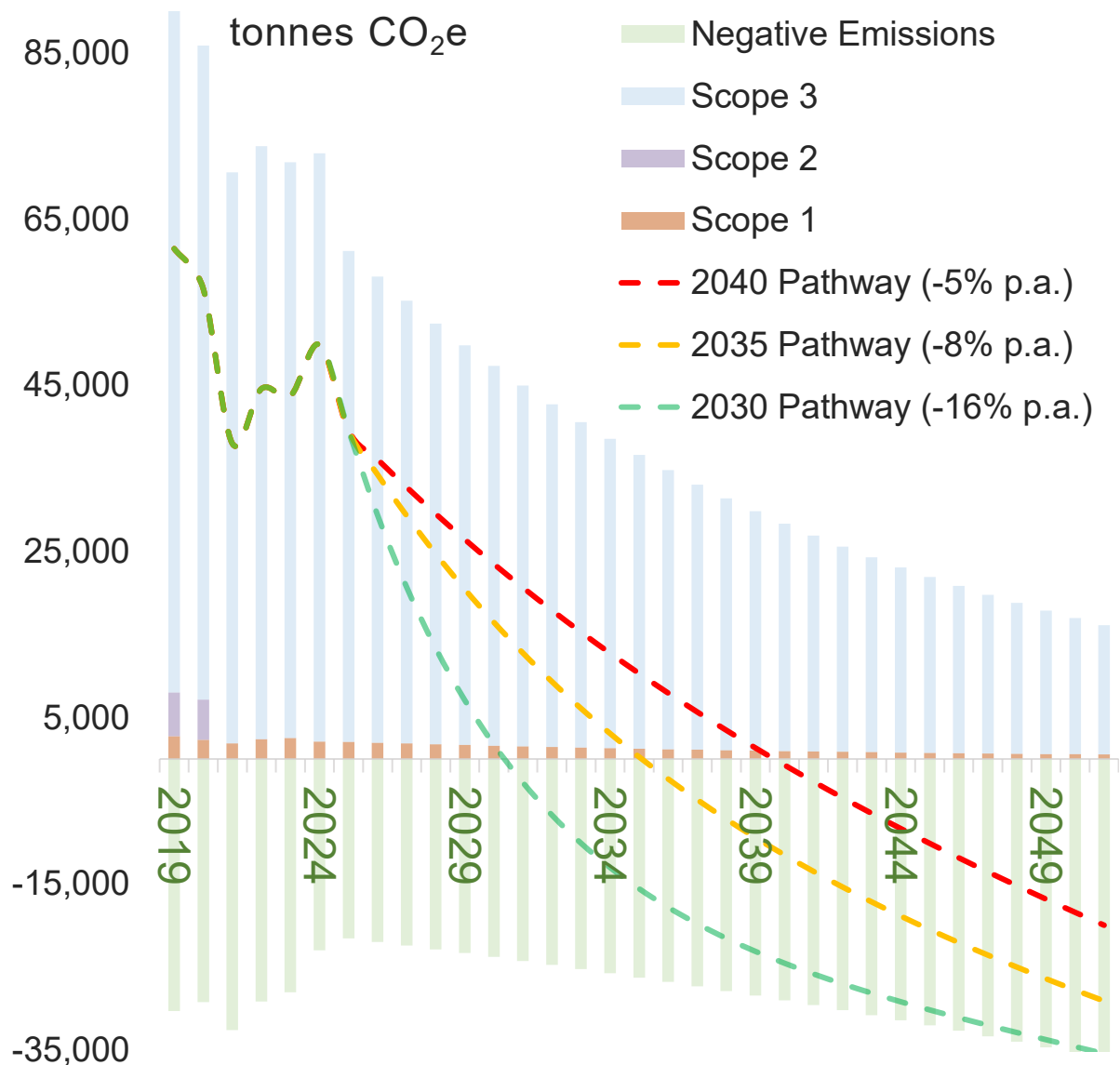


Figure 1 Carbon reduction pathway

2.2 The illustration shows negative emissions as light-green shaded bars below the base of Scope 1 (brown). Assumed increased negative offsets (2% year-on-year) via carbon capture and storage to help negate the remaining gross emissions.



3. Carbon monitoring method

- 3.1 Shropshire Council is reporting its performance for the financial year 2025 using the LGA [Greenhouse Gas Accounting Tool](#). Scopes (1,2,3) data as outlined in the [FAQs](#).
- 3.2 Scope boundaries as per the [GHG Protocol \(Corporate Standard\)](#) methodology and latest UK Government Guidelines.
- 3.3 For the purposes of carbon reporting across the local authority corporate operations the following categories have been identified for each emissions scope and category:-

Table 1 All scopes (defined in LGA GHG accounting tool)

<i>Emissions scope</i>	<i>Emission source (ref. LGA)</i>	<i>Detail</i>
Scope 1	<ul style="list-style-type: none"> Building's heating. Authority's Fleet. 	Corporate and public buildings. (kWh gas, oil or L of fuel).
Scope 2	<ul style="list-style-type: none"> Electricity consumed - Buildings and streetlighting. 	Green tariff (zero carbon) supported by efficiency measures.
Scope 3 (internal)	<ul style="list-style-type: none"> Staff Business Travel. Staff Commuting. Home working. Water use and disposal. Waste from own operations. 	Staff expense mileage and commuting estimate. Working from home (energy est.). Water consumption (m3). Commercial recycling (own operations) with Veolia.
Scope 3 (outsourced)	<ul style="list-style-type: none"> Leisure facilities/centres. PFI (ext. managed sites). Schools (Council maintained). Social housing - STAR. Highways maintenance (Kier). Health & social care – OF * Legal & financial – OF * ICT & BPO – OF * Civil Defence – OF * 	Leisure operators' utility data. PFI = Private finance initiative, (externally managed buildings). STAR housing and Schools are estimated based on their energy certificates & local averages. Highways data from Kier Ltd. *Outsourced suppliers and service providers are estimated using Oxygen Finance (Insights Carbon).
Negative or avoided emissions	<ul style="list-style-type: none"> Carbon capture & storage. Domestic recycling** 	Council land: trees & vegetation. Domestic waste data supplied by Veolia (2025 WRATE Report).

* OF = [Insights Carbon - Oxygen Finance](#) (online procurement analytical dashboard).

** Material recovery (MRF) and Energy from Waste (EfW).



4. Corporate emissions trend

- 4.1 To date, a total of seven years' emissions has been compiled using the same methodology to make a fair comparison against the baseline (2019).

Table 2 Corporate emissions (five years shown)

Scope	FY2021	FY2022	FY2023	FY2024	FY2025	Last yr. Change	7-Year Change
Scope 1	1,894	2,392	2,539	2,080	2,072	0%	-24%
Scope 2	0	0	0	0	0	0%	0%
Scope 3	68,734	71,383	69,289	70,842	59,075	-16%	-29%
GROSS	70,629	73,775	78,517	72,922	61,147	-15%	-33%
Negative emissions	-32,643	-29,208	-28,102	-23,018	-21,808	5%	28%
NET	37,985	44,567	50,415	49,904	39,839	-20%	-35%

Annual change in performance (FY24 to FY25)

- 4.2 The overall decrease in net emissions is due to the following:
- GROSS: (15% decrease compared to FY24).
 - Decrease in spend across service areas (estimate based on spend).
 - Notably Health & social care (adults and children's).
 - Rationalisation of schools (LA maintained) – due to academisation.
 - Improvements in STAR housing stock and social housing.
 - Some corrections and improvements in methodology and data.
- 4.3 Like all local authorities, the Council's carbon performance monitoring has been influenced by the Covid pandemic, which is evident in the data. The 2025 Carbon Monitoring Report shows the corporate net emissions (40 ktCO₂e) have decreased by 20% compared to the previous year and a 33% reduction in gross corporate emissions since 2019; demonstrating the Council's commitment to carbon reductions.
- 4.4 During the Covid pandemic, carbon emissions dropped for several reasons:
- Reduced building and vehicle use.
 - Decreased service delivery and spending.
 - Changes in public behavior.
 - Temporary shutdowns and rationalization.

These factors combined to produce the notable reduction in the Council's corporate net emissions observed in the 2021 Carbon Monitoring Report data.



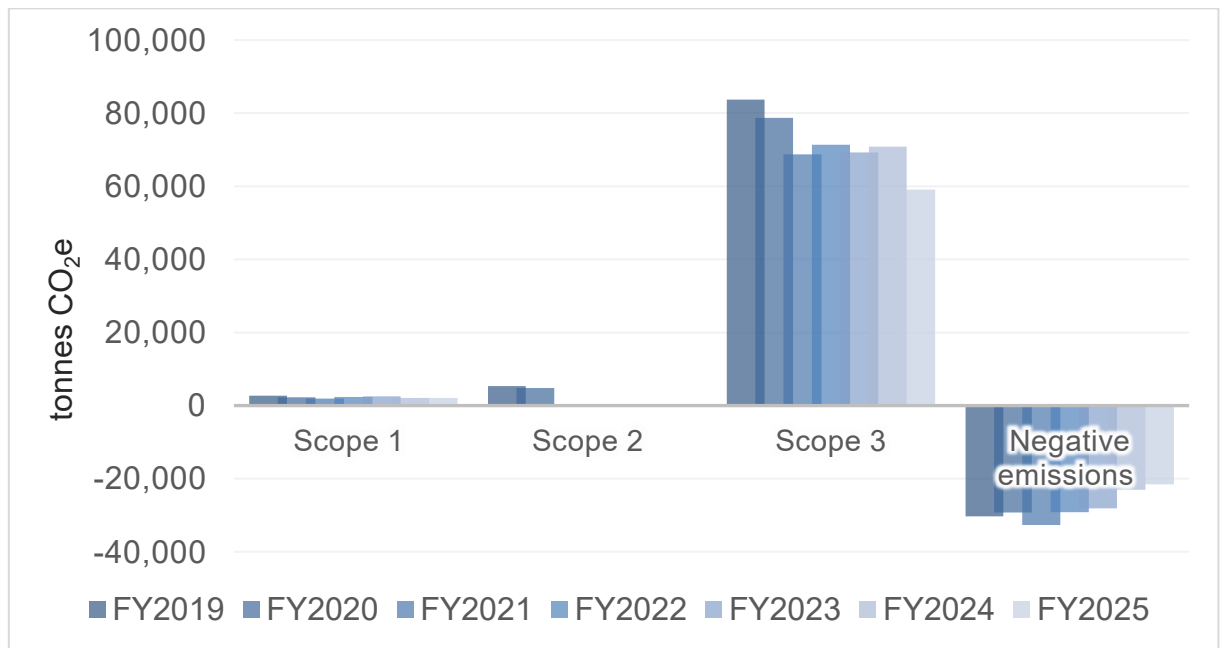


Figure 2 All emissions (seven-year dataset)

- 4.5 Scope 1 emissions have reduced by 24% over seven years. Shropshire Council's buildings and vehicles are being used less compared to the previous years, in addition to efficiency improvements and rationalisation.

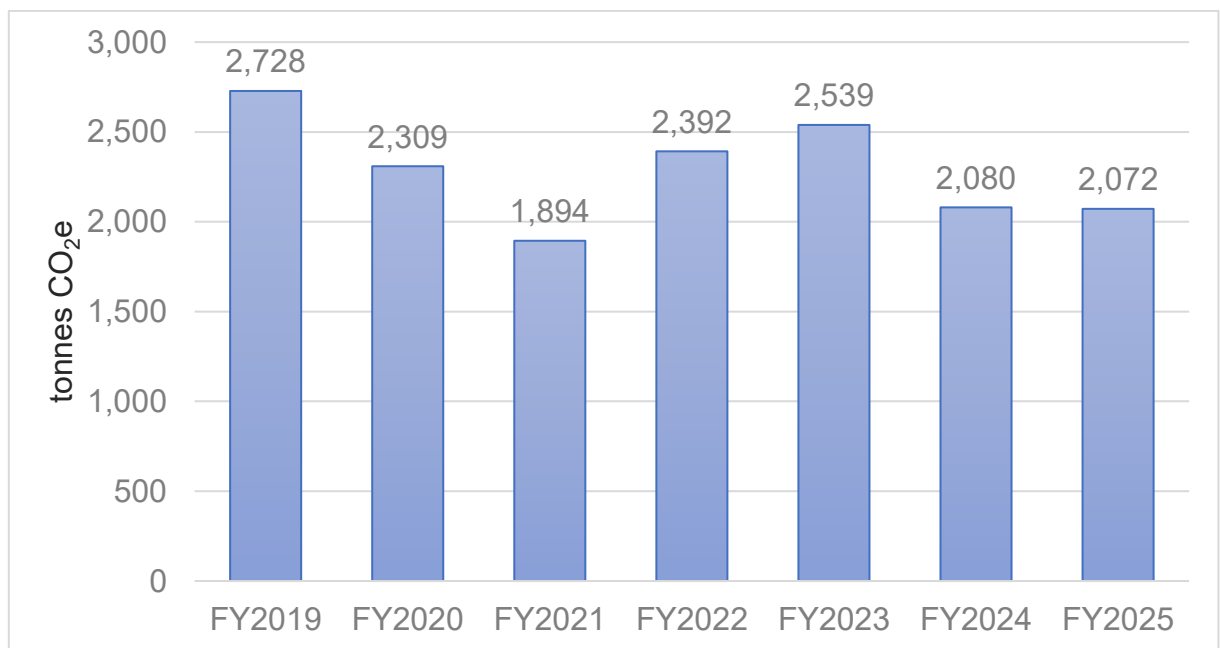


Figure 3 Scope 1 (seven-year dataset)

- 4.6 Scope 2 emissions became zero in 2020 due to a zero-carbon electric tariff. The Council recognise that reducing energy consumption is important from a cost perspective and Asset Management is progressing to make efficiency savings as part of the Council's Carbon Reduction Programme.
- 4.7 Scope 3 emissions have reduced by 29% over seven years. However, the estimate relies on supplier spend in addition to measured data. Reductions likely reflect improvements in service delivery and efficiency.



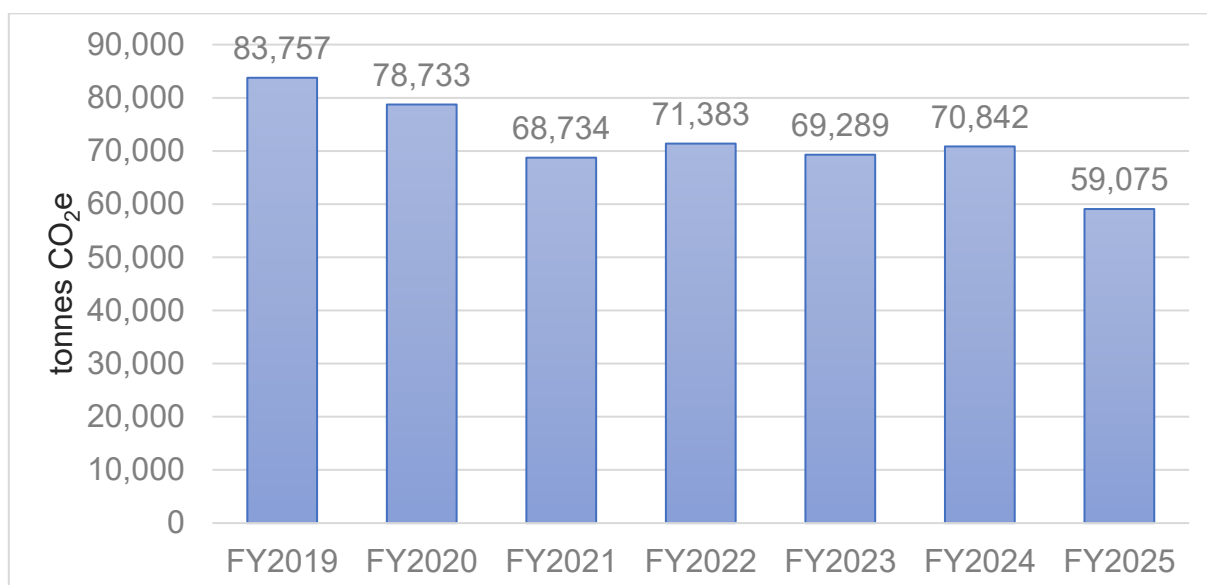


Figure 4 Scope 3 (seven-year dataset)

- 4.8 Negative emission sets: have come down by 28% over seven years, reflecting changes in the domestic waste recycling contract with Veolia, but also changes in natural carbon sinks on Council's land. With new Pyrolysis plants coming online and carbon capture in biochar, "carbon sinks" or negative emissions will likely improve going forwards.

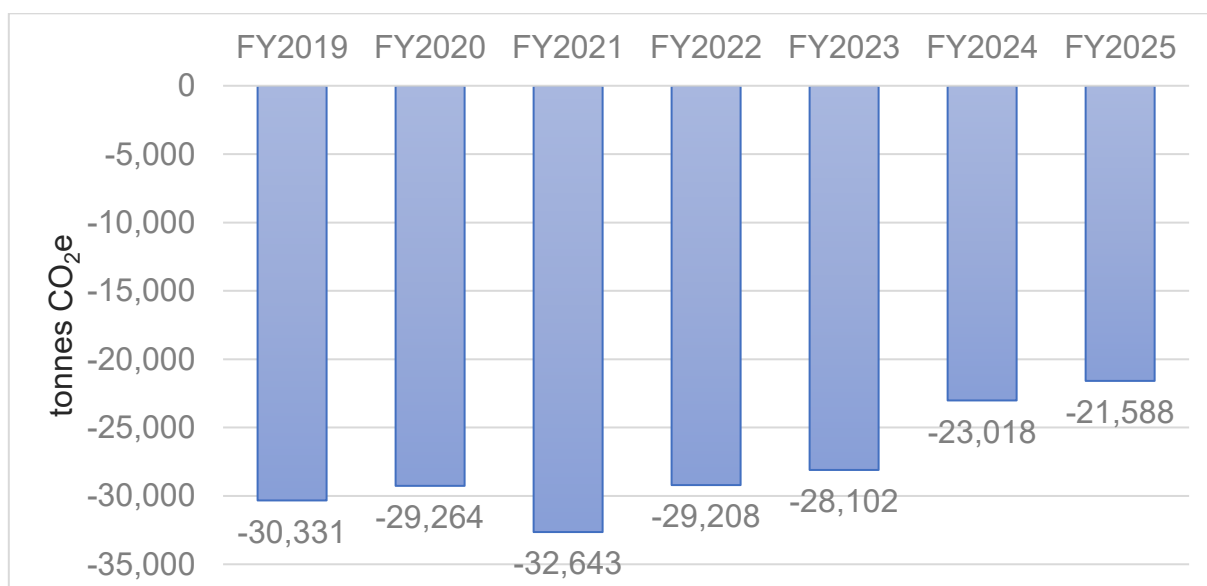


Figure 5 Negative emissions (seven-year dataset)

Is the Council 'on track' to achieve net zero by 2030?

- 4.9 Despite the 35% decrease in net emissions (22 ktCO₂e) over a seven-year period, it is unlikely the Council will meet its target (since it would now require a steep 16% year-on-year reductions for the next five years). With on average 5% reductions every year since 2019, the organisation is currently on a pathway to reach net-zero by around 2040.
- 4.10 Buildings and transport programmes in addition to renewable energy and carbon capture and storage are all helping towards the Council's net zero goal.
- 4.11 The Council has improved its scope 3 supply chain emissions estimate, and performance monitoring will be refined as more data becomes available.



5. Carbon footprint – summary

- 5.1 The gross emissions across all the local authority corporate operations amount to 62 ktCO₂e (the majority of this is classed as Scope 3). This is about 2% of the county total.
- 5.2 Scope 1 (direct emissions) are from public and administrative buildings (1.2 ktCO₂e) with fossil fuels used for heating and the transport fleet (0.9 ktCO₂e).
- 5.3 Scope 3 makes up most of the emissions; ranked highest to lowest. Health and social care (33.8 ktCO₂e), social housing (10.1 ktCO₂e), LA maintained schools (3.3 ktCO₂e) then leisure centres (2.6 ktCO₂e) and well-to-tank: (2.2 ktCO₂e).
- 5.4 Collectively travel and transport and travel accounts for 3.5 ktCO₂e so it is important to decarbonise this sector, through electrification and active travel.

Table 3 Corporate gross emissions by scope

Scope	Emissions source	GHG (tCO ₂ e)	% of Gross
Scope 1	Corporate heating	1,224	2%
	Transport fleet	848	1%
Scope 2	Electricity	0	0%
Scope 3 (internal)	Well To Tank *	2,215	4%
	Staff Commuting	2,026	3%
	Staff Business Travel	702	1%
	Home working	428	1%
Scope 3 (external)	Health & social care – OF **	33,788	55%
	Social housing - STAR	10,083	16%
	Schools (LA maintained)	3,256	5%
	Leisure centres	2,584	4%
	Legal & financial – OF **	1,787	1%
	Highways maintenance (Kier)	1,292	2%
	ICT & BPO – OF **	791	1%
	PFI (ext. managed sites)	318	1%

- 5.5 * New data provided by LGA GHG accounting tool Well to tank; calculated automatically and accounts for transport, distribution to the point where the fuel or utility is used.
- 5.6 **Oxygen Finance data was substituted where data is unavailable in-house or from the Council's suppliers: [Insights Carbon - Oxygen Finance](#). One benefit is that the platform reports both spend and carbon emissions by market, supplier and service category.
- 5.7

Table 4 Scope 3 as a percentage of Gross

97%	of GROSS = Scope 3
87%	of GROSS = Outsourced Scope 3



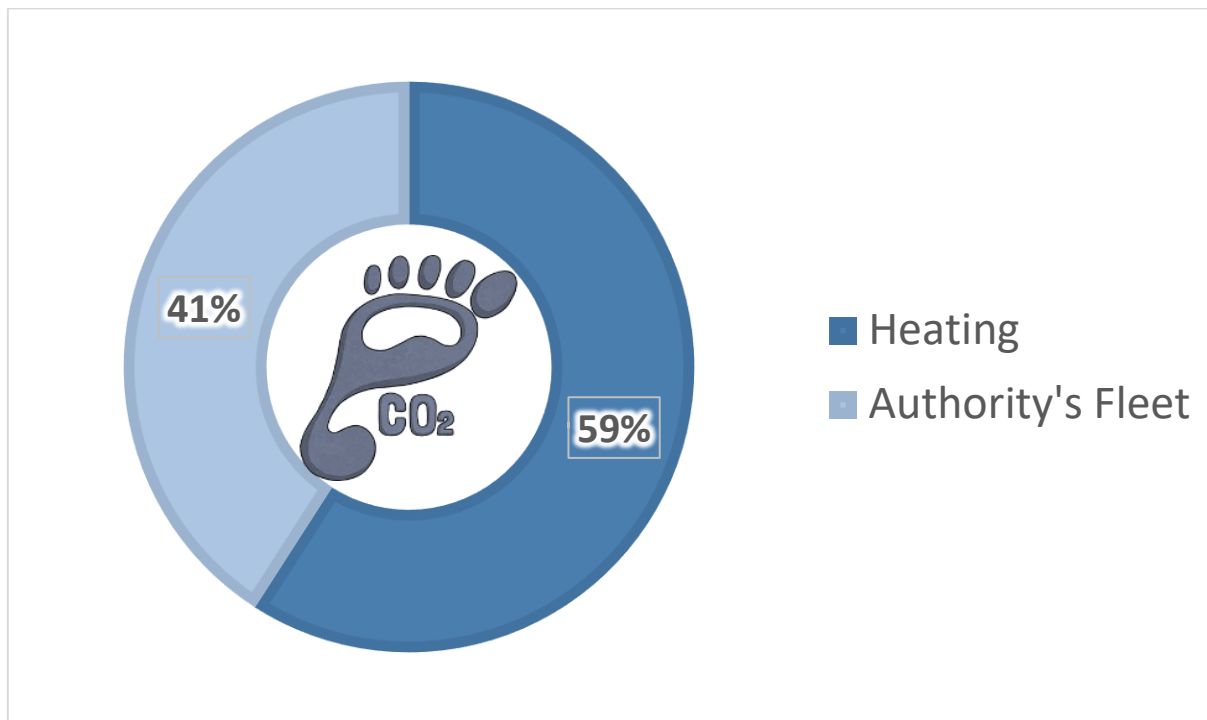


Figure 6 Scope 1 (direct) emissions = 2 ktCO₂e

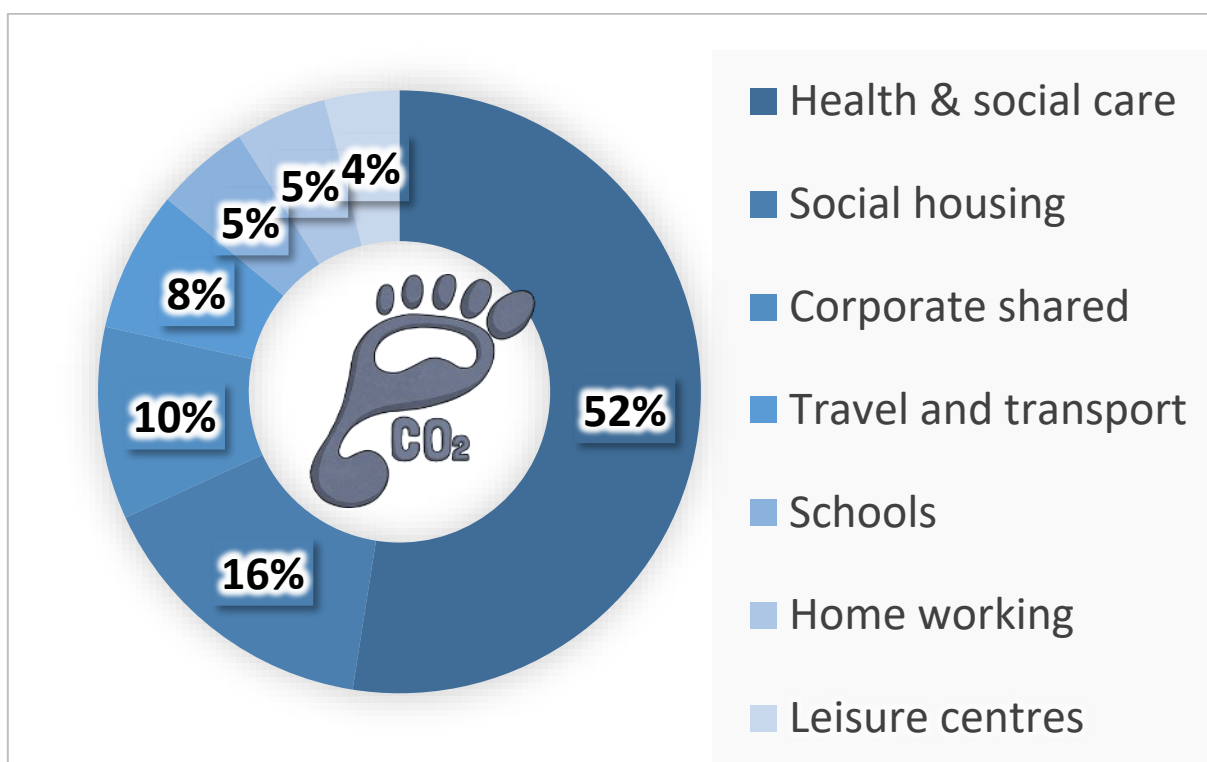


Figure 7 Corporate gross emissions = 62 ktCO₂e

Figure 7 presents emissions broken down by “end use”. To make the chart clearer, the first four categories consolidate multiple datasets, reducing the number of segments displayed. For instance, “Corporate shared” brings together all emissions linked to the management of the Council’s buildings and associated administrative functions.

Schools carbon budgets

- 5.8 Table 5 below shows the carbon footprint associated with local authority-maintained schools only (academy trusts and independents are excluded). Suggested target annual reductions of 8% per year up until 2035.

Table 5 Maintained school carbon budgets (tCO₂e)

Service	2025	2026	2027	2028	2029	2030	Reduce/yr.
LA Schools	3,256	2,996	2,756	2,535	2,333	2,146	-8%

- 5.9 As of Jan 2025 there were 151 State-Funded schools in Shropshire of which

- 127 Primary (76 LA Maintained and 51 Academy) .
- 20 Secondary (2 LA Maintained and 18 Academy) .
- 1 All Through School (Academy) .
- 3 Special Schools (all Academy) .
- 1 PRU (LA Maintained) .

Seventy six primary schools and one secondary school are maintained by the Council; these may be decarbonized via private frameworks and sector support such as:- [Climate Ambassadors](#), [Lets Go Zero](#), [WME Framework](#).

- 5.10 Schools are responsible to commission and publish display energy certificates (DEC's) which depending on the size get renewed annually.
- 5.11 The academisation of schools means that the local authority will be responsible for fewer primary and secondary schools over time.
- 5.12 All Shropshire state schools are estimated to be responsible for around 16 ktCO₂e.

Leisure centre carbon budgets

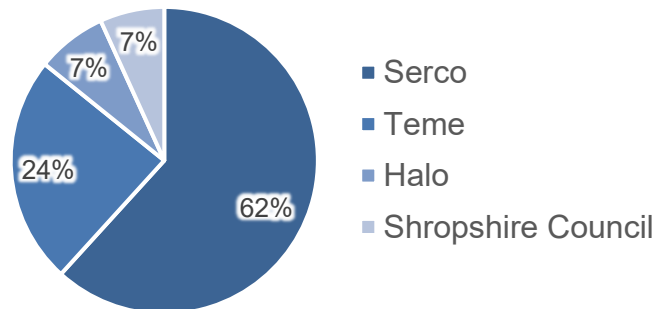
- 5.13 Table 6 below shows the collective carbon footprint associated with local authority-operated or funded leisure facilities in Shropshire with 8% reductions until 2035.

Table 6 Leisure centre carbon budgets (tCO₂e)

Service	2025	2026	2027	2028	2029	2030	Reduce/yr.
LA Leisure	2,584	2,377	2,187	2,012	1,851	1,703	-8%

- 5.14 Asset consolidation will impact on the overall emissions going forwards.
- 5.15 The majority of leisure facilities are managed by external operators who purchase utilities independently to Shropshire Council. Display energy certificates (DEC's) should always be referred to and operators are legally obliged to make them publicly visible.
- 5.16 Leisure centre emissions by operator (total utility spend was around £1.4m per year).

Operator	GHG (tCO ₂ e)
Serco	1,595
Teme	621
Halo	191
Shropshire Council	176
Grand Total	2,584



6. Directorate emissions

Shared resources

- 6.1 Carbon budgeting and setting targets needs to represent the impact of controllable and fixed activities associated with service delivery. Shared delivery footprint should be distributed fairly across the service areas (Table 7).
- 6.2 The shared carbon footprint associated with all service delivery is as follows:

Table 7 Shared service delivery emissions

<i>Category</i>	<i>tCO₂e/yr.</i>	<i>Data source / assumption</i>
Staff home energy	428	40% staff WFH (20% of home energy)
Staff travel	2,728	Business and commute estimate
Corporate management	5,756	Based on Oxygen Finance est.
ICT & technology services	791	Based on Oxygen Finance est.
TOTAL	9,702	Associated with all service delivery

Directorate carbon budgets

- 6.3 Whilst the Council's emissions represent only 2% of county total, Council services can influence up to a third of countywide territorial emissions by enacting regulatory policies in domestic, industry & commerce, and transport sectors.
- 6.4 Table 8 below shows the carbon footprint associated with each directorate, together with countywide emissions influenced. They are ranked highest to lowest emissions for each sector together with a target annual reduction (10%). The county sector emissions below are identified as the closest match to the associated directorate.

Table 8 Directorate influence on County (ktCO₂e)

<i>Directorate responsibility</i>	<i>Council (ktCO₂e)</i>	<i>Council reduce/yr.</i>	<i>County (ktCO₂e)</i>	<i>County reduce/yr.</i>
Strategy	-21.8	-1.09	1,262	100k
Commissioning	23.4	1.88	81	8k
Care & Wellbeing	20.2	0.61	n/a	n/a
Children & young people	13.6	0.41	n/a	n/a
Communities & customer	10.1	0.30	362	35k
Enabling	8.9	0.27	n/a	n/a
Infrastructure	3.7	0.11	632	60k

Please see Annex B – Directorate budget methodology p20 for an explanation on how the budgets have been allocated to each service. This may need further refinement to ensure the emissions and responsibility is apportioned fairly.



Directorate carbon reduction targets

6.5 Table 9 presents each service's carbon footprint and annual reductions of between 3 and 8% (depending on service) to 2030, ranked by emissions. See also Annex B (p20).

Table 9 Directorate targets (tCO₂e)

Directorate	2024	2025	2026	2027	2028	2029
Strategy	-21,808	-22,898	-23,988	-25,079	-26,169	-27,260
Commissioning	23,434	21,559	19,684	17,810	15,935	14,060
Care & Wellbeing	20,178	19,572	17,698	15,823	13,948	12,074
Children & yng. ppl.	13,610	13,202	11,327	9,453	7,578	5,703
Communities & cust.	10,083	9,781	7,906	6,031	4,156	2,282
Enabling	8,920	8,652	6,778	4,903	3,028	1,154
Infrastructure	3,718	3,607	1,732	-143	-2,017	-3,892

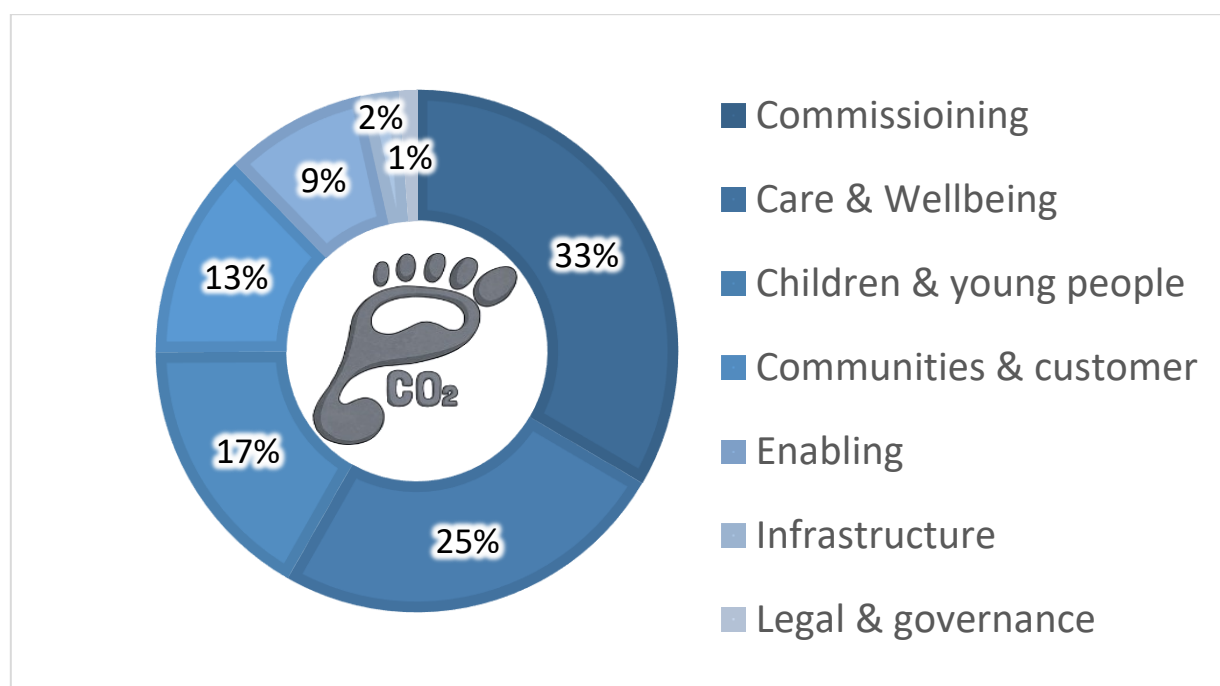


Figure 8 Corporate gross emissions by directorate 2025

6.6 Service emissions will improve with measured datasets becoming available.

Carbon intensity metrics

6.7 **Staff carbon intensity = 14 tCO₂e /employee.** This is the Council's NET emissions apportioned to each staff member (FTE in 2025).

6.8 **Financial carbon intensity = 0.17 kgCO₂e/£ .** This is the Council's NET emissions divided by the total commissioned spend in 2025. (About the weight of a medium apple):



7. Negative or avoided emissions

- 7.1 The methodology for calculating how much carbon is stored through land management: Mapping Carbon Emissions & Removals in Land Use.
- 7.2 In terms of the whole county (3,197km²) Shropshire has about 15% tree cover. Of this, 9% consists of younger woodland and the other 6% is woodland that is at least one-hundred years old. Most of the remaining land is believed to be permanent grassland, which produces very little carbon emissions or absorption (Table 10):

Table 10 Countywide carbon stored/emitted in land-use

<i>LULUCF Net Emissions</i>	<i>Emissions (ktCO₂/yr.)</i>
Forest land	-183
Cropland	+ 95
Grassland	-114
Settlements	+ 12
Peatland	+107
Bioenergy crops	-0.7
Other	1.3
NET TOTAL	-83

- 7.3 For Council managed land and projects, an estimated -7,139 tCO₂ is sequestered per year by natural carbon sinks across 2,494 hectares (ha) as follows (Table 11):

Table 11 Carbon stored in Council-land

<i>Land use / category</i>	<i>Area (ha)</i>	<i>tCO₂/yr.</i>	<i>Reference</i>
Countryside sites	479	- 2,894	Approximate figures as habitats for all holdings aren't known.
Other freehold	1,667	- 2,928	
Leasehold	203	- 353	
Trees planted prior to Climate emergency	Varied (unknown)	- 420	Trees planted since 2010, but not hedgerows.
Trees planted after climate emergency	Varied (unknown)	- 431	No trees planted for the period
NET TOTAL	2,494 hectares	- 7,139	
Claimed after declaring the Climate Emergency		- 431	

- 7.4 Only large areas outside the countryside, like the Old Riverbeds, are counted separately. Shropshire Council has not measured changes in carbon storage for hedgerows or individual trees. Carbon storage differs widely by habitat, tree type, soil, and land management. The organisation does not hold reliable information for Council-owned land from before 2019.



Circular economy

- 7.5 Sustainable waste management avoids emissions through the reuse of materials to offset the carbon impact of manufacturing newly extracted materials (Table 12).

Table 12 Sustainable waste management (avoided emissions)

<i>Recycling and reuse</i>	<i>tCO₂e/yr.</i>	<i>Reference</i>
Domestic recycling	-14,669	Net emissions: WRATE assessment Veolia (May 2025 report)
Commercial recycling	-84	Shropshire Council Commercial Movement Analysis Report 24/25
Warp It (material reuse)	-38	<u>Shropshire performance metrics</u>

Negative or avoided emissions summary

- 7.6 Revisions to the domestic recycling model (WRATE) and the methods for calculating material recovery have resulted in a lower overall estimate of avoided emissions. Furthermore, as the national electricity grid becomes greener, the carbon emissions avoided by energy generated from waste (EfW) are now less significant than in the past.
- 7.7 Since the Council declared a climate emergency, over one-hundred thousand trees have been planted on Council land to help absorb carbon dioxide. However, the number of new tree planting projects has gone down, and there is now less Council land available for planting. As a result, the amount of naturally stored carbon by plants and trees each year has decreased the overall natural carbon sinks as shown in Table 13.

Table 13 Corporate negative or avoided emissions (2025)

<i>Negative (or avoided) emissions</i>	<i>tCO₂e/yr.</i>	<i>Percent</i>
Material reuse (avoided emissions) *	- 38	0%
Commercial waste contract (avoided...)*	- 84	0%
Domestic waste contract (avoided...)	- 14,669	68%
Natural carbon sinks	- 7,139	32%
Negative emissions total	- 21,930	100%

*Counted as part of Scope 3 (in-house measured data).



8. County emissions

- 8.1 Shropshire Council's corporate (organisational) emissions make up about 2% of the County total, but its regulatory policies affect roughly a third of all territorial emissions countywide. Table 14 presents the projected county emissions for 2025, derived from an analysis of the trends observed over the past five years, given that the latest available government data is from 2023.

Table 14 County emissions 2025 (est. from 2023 GOV data)

<i>Shropshire County 2025</i>	<i>2,387 ktCO₂e</i>	<i>% of County</i>
Agriculture	1,035	43%
Transport	632	26%
Domestic	362	15%
Industry & commerce	227	10%
Waste Management	81	3%
Public Sector	49	2%

Data source = UK GHG emissions: local authority and regional.

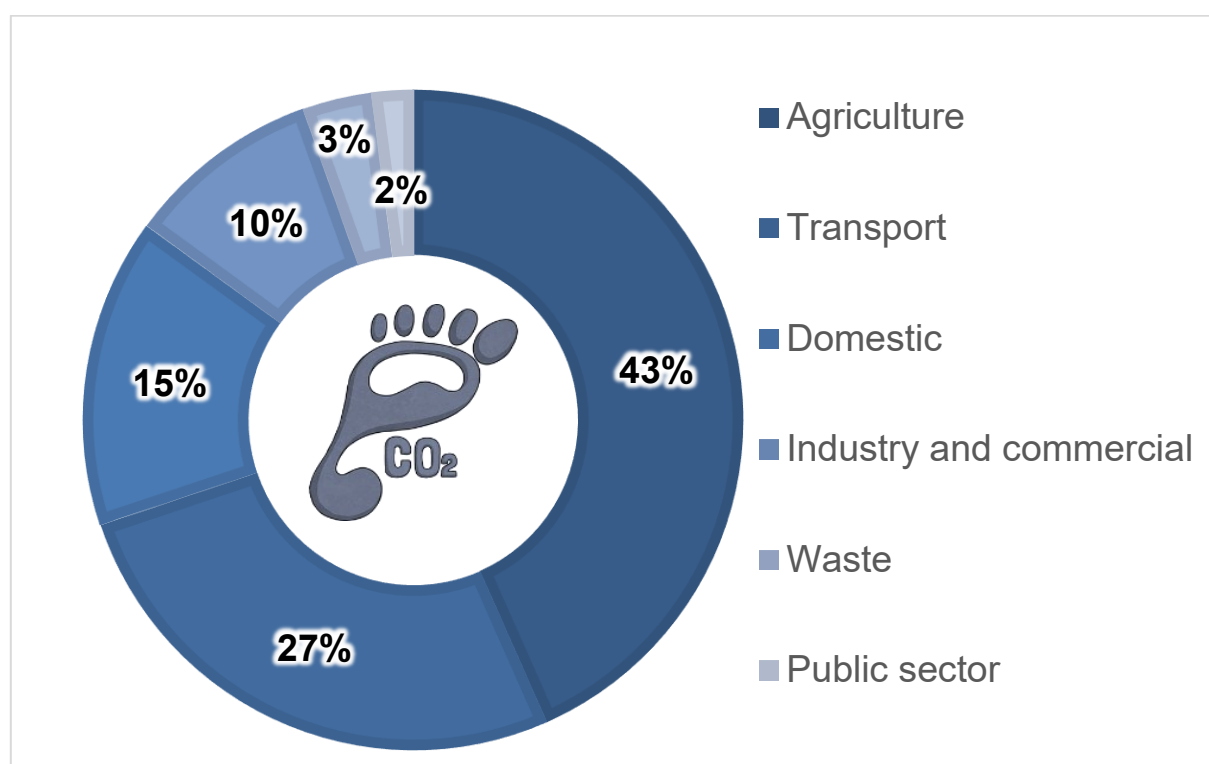


Figure 9 County emissions 2025 (est. from 2023 GOV data)

- 8.2 UK local authorities are responsible for around a third of county emissions through planning and regulatory roles. For Shropshire's total of 2,387 ktCO₂e, this equates to at least 788 ktCO₂e for the Council, with the remaining 1,599 ktCO₂e attributed to national policies and other stakeholders.



Household emissions

- 8.3 Households account for 15% of Shropshire's emissions, with an estimated 143,827 homes and 337,732 residents in 2025. The average carbon footprint in Shropshire is projected at 19 tCO₂e per household and 8 tCO₂e per person, based on the latest available data. A complete set of personal carbon emissions are shown (Table 15).

Table 15 Domestic emissions 2025 (projected)

<i>Domestic only</i>	<i>County total (ktCO₂e)</i>	<i>Per person (tCO₂e)</i>	<i>Household (tCO₂e)</i>	<i>As a %</i>
Stuff**	632	1.9	4.4	23%
Diet**	931	2.8	6.5	34%
Transport*	442	1.3	3.1	16%
Heating*	275	0.8	1.9	10%
Flights**	366	1.1	2.5	13%
Electric*	87	0.3	0.6	3%
TOTAL	2,733	8	19	100%

*Primary data source = [UK GHG emissions: local authority and regional - GOV](#).

**Secondary = [ONS 2025](#), [Heatable](#), [ESCEO](#), DEFRA (food, goods and flights).

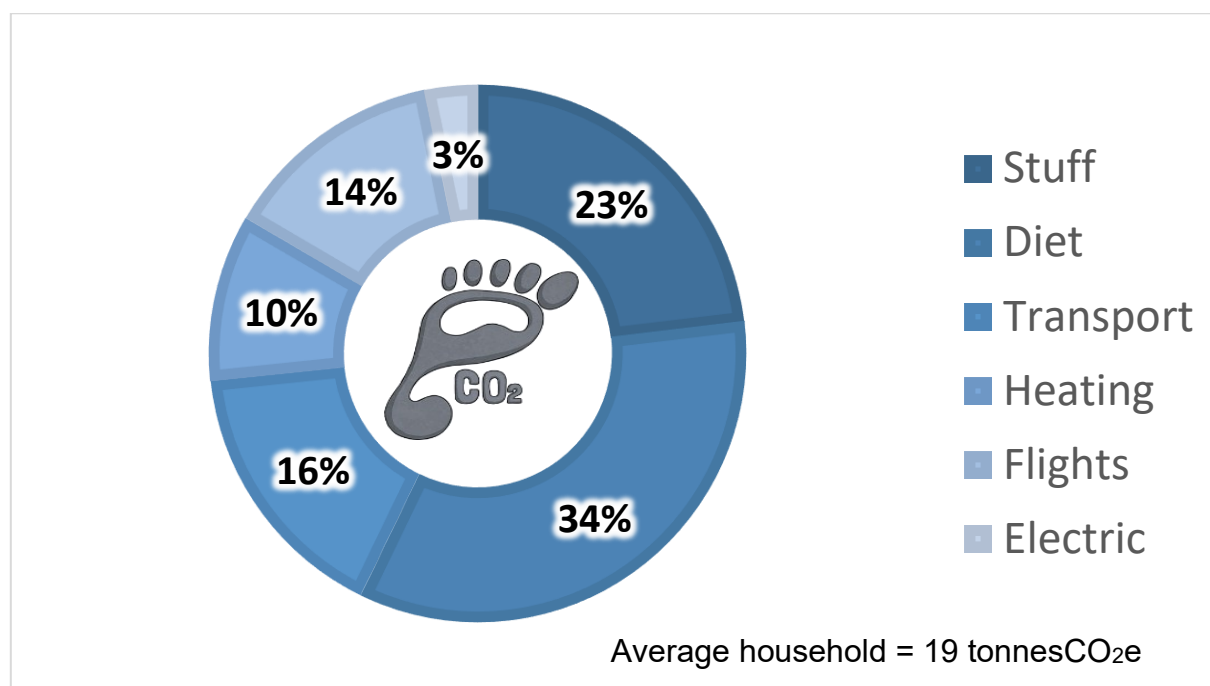


Figure 10 Shropshire household emissions 2025 (projected)

You may measure your own carbon footprint using the [WWF Footprint Calculator](#).



9. Project register

Table 16 Live projects (funding, approval in place)

<i>Project</i>	<i>Summary</i>	<i>Strategy Theme</i>	<i>Benefits (tCO₂e, £s)</i>	<i>Corporate or countywide?</i>
Maesbury Solar Farm (Oswestry)	2MW solar farm on former landfill, private wire.	Power Up Energy	600 tCO ₂ /yr. £300k (est.)	Both
Biochar Joint Venture Plant	Investment in pyrolysis <u>Biochar from pyrolysis</u>	Power Up Carbon Capture	960 tCO ₂ /yr. £133k/yr.	Corporate
Biochar demonstrator	Construction of an automated pyrolysis and biochar Ludlow.	Power Up Carbon Capture	2 ktCO ₂ /yr. £385k/yr.	Both
Corporate roof solar PV	Solar PV on corporate Buildings and schools	Power Up Energy	300 tCO ₂ /yr. £250k/yr.	Corporate
Property (PSS) Sustainability	A three-tiered strategy to decarbonise & uplift estate.	Power Down Buildings	500 tCO ₂ /yr. £100k/yr.	Corporate
Carbon Reduction Programme Board	Collaboration, best practice to embed decarbonisation.	Power Down Buildings	500 tCO ₂ /yr. £100k/yr.	Corporate
Low Carbon Skills and PSDS	Secured £3m to decarbonise. assets inc. swimming pools.	Power Down Buildings	tCO ₂ , £/yr.	Corporate
Leisure Decarbonisation	Completion of Whitchurch Swimming Pool, all electric.	Power Down Buildings	8 tCO ₂ /y £10k/yr	Both
Affordable Warmth	Retrofit scheme for low-income households	Buildings	tCO ₂ , £/yr.	Countywide
Authority fleet decarbonisation	2 electric bus services. 22 EVs, 25 hybrids.	Power Down Transport	100 tCO ₂ /yr. ~50 vehicles	Countywide
Highways decarbonisation	LED streetlamps (complete). Low carbon surfacing.	Power Down Resource efficiency	190 tCO ₂ /yr. £300k/yr.	Countywide
EV Charging Infrastructure	~180 Charge points installed Car parks and on-street.	Power Down Transport	tCO ₂ , £/yr.	Both
Active Travel	100 E-bikes hire service.	Power Down Transport	5 tCO ₂ , £/yr.	Both
Marches Growth	Net zero support for commerce.	Power Down Buildings	tCO ₂ , £/yr.	Countywide
Carbon monitoring	Annual carbon monitoring, accounting service.	Governance Engagement	tCO ₂ , £/yr. (all projects)	Corporate
Warp It (reuse)	Re-use and repurposing Shared online platform.	Resource efficiency	160 tCO ₂ £240k.	Both

The combined value of sixteen live projects is estimated to be £1.3m revenue (income plus savings) and mitigating 4.5ktCO₂e in greenhouse gas emissions.



Table 17 Planned projects (subject to funding, approval)

<i>Project</i>	<i>Summary</i>	<i>Strategy Theme</i>	<i>Est. Benefits (tCO₂e, £s)</i>	<i>Corporate or countywide?</i>
Local Area Energy Plan and local capacity	Property/land for solar, wind, hydro and bioenergy	Power Up Energy	4ktCO ₂ , £3m/yr.	Countywide
Heat network – Sundorne	Feasibility for pyrolysis to heat corporate buildings	Power Up Energy	tCO ₂ , £/yr.	Both
STAR housing 1,300 Homes	£20 million funding retrofit; heating, insulation, solar.	Power Down Buildings	10 ktCO ₂ /yr. £250k/yr.	Countywide
Staff home efficiency	Support efficiency improvements / green finance.	Power Down Buildings	1 ktCO ₂ /yr.	Both
Heat Decarbonisation Plans	Secured LCSF to deliver 16 HDP's and 3 Feasibility studies.	Power Down Buildings	37 tCO ₂ /yr. £50k/yr.	Corporate
Leisure Heat Decarbonisation	Secured PSDS decarbonisation SpArC.	Power Down Buildings	273 tCO ₂ /yr. £22k /yr.	Both
School Decarbonisation	Oxon Primary School, decarb project : PV/LED.	Power Down Buildings	20 tCO ₂ /yr. £13k	Both
Utility-electric optimisation	Max demand review of current capacity.	Power Down Buildings	£100k/yr. .	Corporate
Property heating optimisation	BMS utilisation programme.	Power Down Buildings	200 tCO ₂ , £100/yr	Corporate
Public Rapid Chargers	Feasibility for Council-owned 'rapid chargers'	Power Down Transport	tCO ₂ , £/yr.	Countywide
Authority fleet decarbonisation	Continue with the EV and hybrid rollout plus HVO.	Power Down Transport	0.8 ktCO ₂ /yr.	Corporate
Active travel (Highways)	Low traffic neighbourhoods and safe cycle routes.	Power Down Transport	tCO ₂ , £/yr.	Countywide
Waste Minimisation	Recycling and reuse strategy to improve circular economy.	Power Down Resources	tCO ₂ , £/yr.	Countywide
Zero Ask	Survey top 100 suppliers, ESG* & data provision .	Engagement Governance	10 ktCO ₂ , £5m/yr.	Both
Carbon Literacy Climate Training	Roll out training to key services and e-module.	Engagement Governance	10 ktCO ₂ £5m/yr.	Corporate
Up-skill services (sector guidance)	Develop staff deliverable project capability.	Engagement Governance	3 ktCO ₂ £250k/yr.	Corporate
Climate Challenge (culture change)	Identify champions: energy, travel and circular economy.	Engagement Governance	5 ktCO ₂ £1m/yr.	Corporate
Climate Strategy Refresh	Five-year FFP review of evidence, policy.	Engagement Governance	0.5 ktCO ₂ £250k/yr.	Corporate
Climate Resilience & Adaptation Plan	Adaptation plan to identify local climate impacts and controls	Adaptation & Resilience	0 ktCO ₂ £5m/yr.	Both

*Environmental and Social Governance.

The combined value (income plus savings) of nineteen planned projects is potentially up to £15m and mitigating up to 35ktCO₂e/yr in greenhouse gas emissions.

Annex A - Reporting and data issues

Exclusions (due to insufficient data)

- 10.1 The following datasets have been excluded until more data becomes available:
- Community Transport and public transport operators.
 - Fugitive emissions F gases.
 - Building construction & repairs (embodied carbon and delivery).
 - Contracts and KPIs need to be reviewed with the suppliers for data provision.
- 10.2 Oxygen Finance (OF) data was substituted where measured data is unavailable: [Insights Carbon - Oxygen Finance](#), which reports financial spend too.
- Care homes (estimate substituted from Oxygen Finance - OF).
 - Temporary accommodation (estimate substituted from OF).
 - IT - purchased goods and consumables (estimate substituted from OF).
- 10.3 The following has been excluded due to no operational/financial control:-
- Independent schools and academy trusts.
 - Commercial or residential leases (own metering arrangements).
 - Staff pension (for legal reasons a separate governing body; see below).

Shropshire County Pension Fund

- 10.4 Please refer to [Shropshire County Pension Fund](#) for their latest reports:-
[Climate-related Financial Disclosures \(TCFD\)](#) and [Climate change](#).

Annex B – Directorate budget methodology

The directorate carbon-budgets have been developed from those outlined in 2020 to reflect the new directorate labels and allocated based on a few assumptions (Table 18).

Table 18 Directorate emissions sources and method

<i>Directorate label</i>	<i>Description of data source allocation</i>
Strategy	Maintaining and increasing negative emission sets
Commissioning	Gross emissions minus all other categories
Care & Wellbeing	Estimated to be 60% of health and social care (OF*)
Children & young people	Estimated to be 40% of health and social care (OF*)
Communities & customer	Social housing only (STAR Housing)
Enabling	Workforce, leisure services, ICT, PFI buildings
Infrastructure	Utilities, commercial waste, highways maintenance
Legal & governance	Legal and finance, civil defence (OF*)

*Estimated based on [Oxygen Finance market sector report](#) for the financial year.



Annex C – Opportunities and risks summary

What are the economic benefits for the Council?

- 11.1 The value of live projects (Table 16) is around £1.3m revenue and 5ktCO₂e savings/yr.
- 11.2 The value of planned projects (Table 17) is £15m and saving up to 35ktCO₂e/yr.
- 11.3 As part of the planned projects, it is estimated that £1m can be saved simply by operational improvements (10% savings secured by staff engagement alone) and with targeted capital investment in assets, a further £2m could be saved per year.
- 11.4 If the Council uses just 1% of its land for renewable energy, it could make £5 million a year and cover all its own energy needs. The investment would pay for itself in about five years, thanks to a mix of solar, wind, and bioenergy (about 10MW in total).

Table 19 Value from renewable energy on Council land

<i>Annual value (£ p.a.)</i>	<i>£5m</i>
Carbon Saving	4 ktCO ₂ e
Capital cost	£16m
Operating cost (£ p.a.)	£0.3m
Payback period (yrs.)	5

What are the economic risks for the Council?

- 11.5 Apart from non-financial benefits, maintaining the status quo implies not benefiting from extra income from renewable energy and potential savings from corporate efficiency. It also reflects negatively on corporate reputation and use of public finances.
- 11.6 Climate change is already costing the organisation about £10 million each year. In the future, these costs could rise to £170 million for the Council and £600 million across the county by 2090, especially if average temperatures go up by 3°C. This would lead to more extreme weather events like heatwaves, floods, and storms. These estimates are based on a study from the [London School of Economics about the cost of climate change in the UK](#). If the Council utilizes free tools such LCAT and the LGA Risk Matrix to create clear, science-based plans and actions for each of its services, it can help reduce the risks from climate change and protect its finances over the long term.
- 11.7 Finally, the financial cost of offsetting to achieve net-zero should be considered: The cost of carbon offsets in the UK varies significantly: the UK's regulated Emissions Trading Scheme (ETS) has a price of £42 per tonne CO₂e in 2025.
- 11.8 If the Council wanted to go net-zero today by offsetting using bought carbon credits it could cost £1.7m per year. Alternatively, this sum could be invested in local “carbon-insetting” : home-grown Pyrolysis technology to sequester CO₂e and produce biochar.

