Shropshire Council

Towards Net-Zero Carbon

Corporate Climate Strategy

Climate Change Task Force
November 2020

1. Introduction

1.1. This purpose of this document is to outline a strategy to reduce Shropshire Council's corporate carbon footprint and promote adaptation measures to increase the resilience of the Council's services.

1.2. Shropshire Council declared a climate emergency in May 2019 and agreed a Strategy Framework in December 2019 which established the objective of net-zero corporate carbon performance by 2030. The Strategy Framework also identified the risks posed by the climate crisis to Council services, together with information about the Council's direct carbon footprint and the actions and initiatives which were already being undertaken to reduce this. Finally, it also set out a set of key principles to guide the Council's actions.

1.3. Measures to reduce Shropshire Council's carbon footprint and adapt service delivery to address the impacts of extreme weather events will significantly reduce financial risk and generate very real savings to the public finances in the medium to long term as well as delivering on our corporate responsibilities to the environment and our communities. Placing the initial focus on our corporate performance allows the Council to 'lead by example', using its direct and indirect influence to foster a positive response to the challenge of the Climate Emergency by other public and private sector organisations.

1.5 Preparation of the Strategy has drawn on community engagement through the Council's quarterly Sustainability Forum and summarises the best available information about the Council's current direct and indirect carbon emissions and identifies the scale of reductions and residual offsetting which will be required to reach our objective of net-zero performance by 2030. The Action Plan element of the document reflects the findings of a community engagement workshop in February 2020 and identifies a range of potential actions and a pipeline of specific projects to help deliver progress.

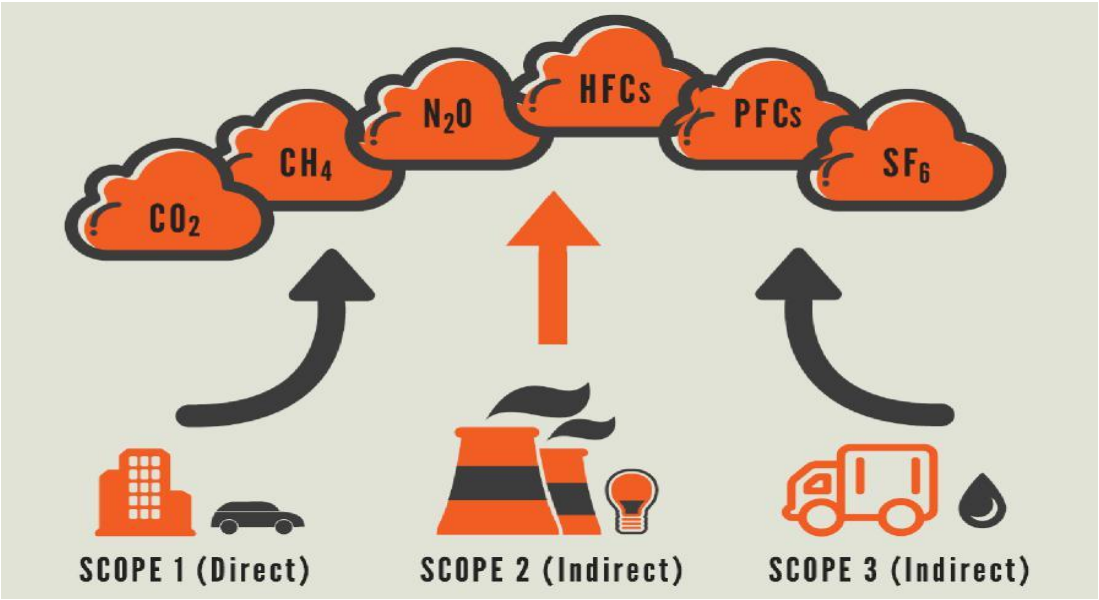
1.6 However, we are facing a climate emergency and urgent action is therefore required. This is a fast-moving area of work and information about climate change, carbon performance and management technologies are changing all the time. In these circumstances it is not proposed to hold a formal consultation process on the Strategy, but instead to treat the corporate Strategy as a 'live' document and issue a general invitation for comments and suggestions for amendment which can be taken into account as part of an annual monitoring and review process. More detailed background information available at: https://www.shropshire.gov.uk/climate-change-and-sustainability/

2. Shropshire Council's Carbon Performance

The Greenhouse Gas Protocol

2.1. Greenhouse gas emissions are categorised into three groups or 'scopes' by the most widely-used international accounting tool, the Greenhouse Gas (GHG) Protocol. As illustrated in Figure 1 and Table 1 below, Scope 1 covers direct emissions sources (e.g. gas boilers and fuel used in company vehicles), Scope 2 and 3 emissions cover indirect emissions.

Figure 1: Sources of corporate carbon emissions



2.2. A value chain carbon footprint measures both direct and indirect greenhouse gas emissions of an organisation. Emissions are categorised across an organisation's value chain, including upstream and downstream activities. These include emissions from both suppliers and consumers (**Error! Reference source not found.**). Shropshire Council's corporate climate footprint is illustrated in Figure 2 and Figure 3 below:

Figure 2: Shropshire Council Carbon Footprint 2019-20 (tonnes CO2e) by scope

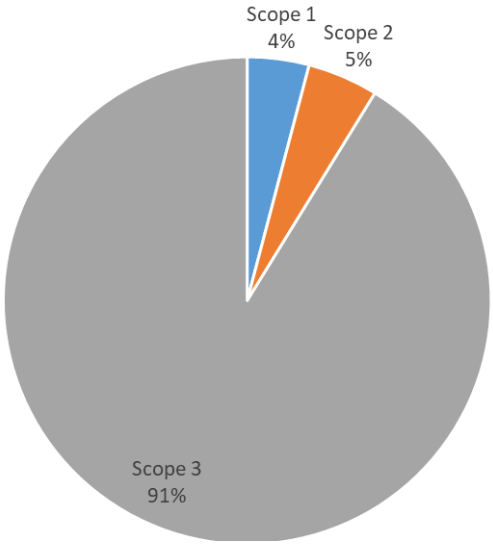


Figure 3: Scope 1 & 2 emissions 2019-20 (tonnes CO2e)

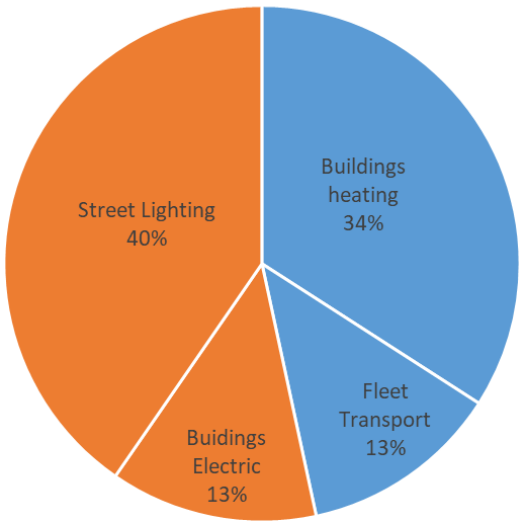
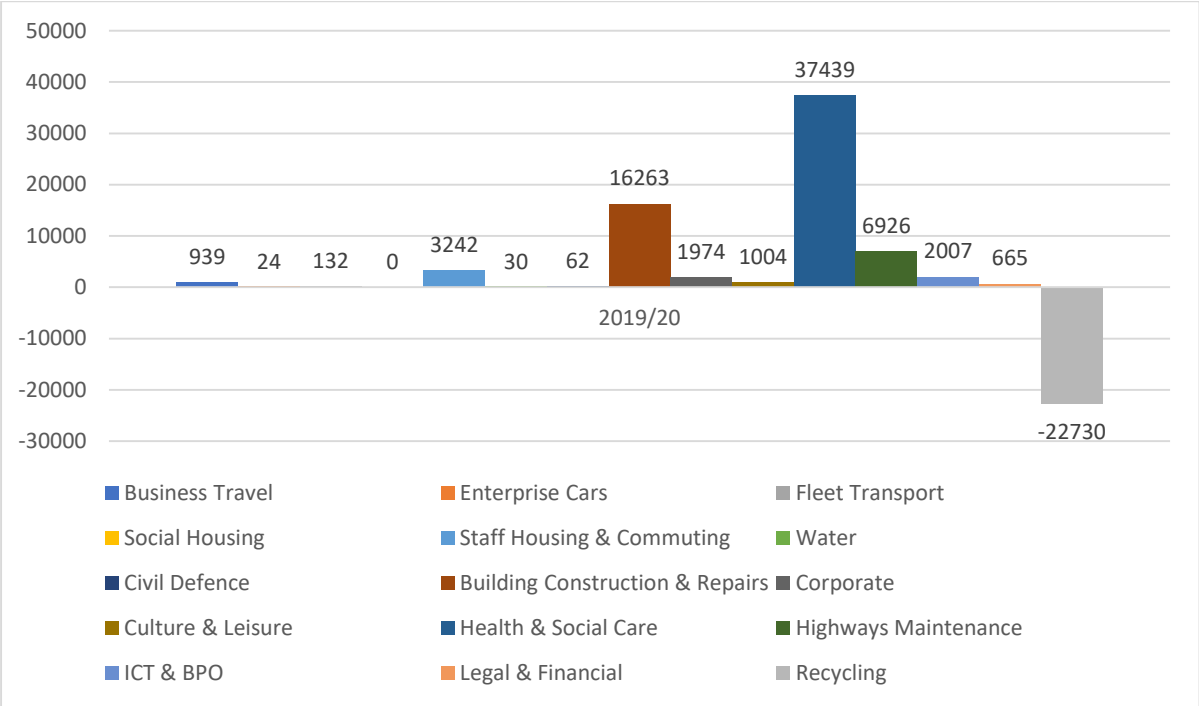


Figure 4. Shropshire Council Scope 3 (indirect) emissions for 2019 to 2020 (tCO2e)



2.3 The best available data suggests that Shropshire Council's carbon footprint (Scope 1 & 2) has fallen from around 12,000 tonnes CO2e in 2017 to around 5,000 tonnes CO2e in 2019. The Council's indirect emissions (Scope 3) are assessed as being around 50,000 tonnes CO2e in 2019 (see Figs. 2-4 above and Table 1 below). Whilst the Council's footprint represents only around 1% of Shropshire's total carbon footprint, work is ongoing to refine performance data and establish an accurate picture to support annual monitoring. The data above show that the majority of the Council's carbon emissions are generated from indirect activity, such as services which are commissioned from commercial providers, the repair and maintenance of its buildings and from staff housing and commuting.

Table 1: Sources of carbon: Shropshire Council (tonnes CO2e)

Scope	Category	Organisational Scope	2019/20
1	Buildings heating	Corporate Landlord services: • Community centres. • Libraries. • Service Area Buildings. • Staff Offices	1,688
1	Fleet Transport	• Internal combustion engine (ICE) vehicles. • Grey fleet (vans, goods) • Passenger Transport	621

Scope	Category	Organisational Scope	2019/20
2	Buildings Electric	• Emissions from National Grid purchased electricity for council buildings.	644
2	Street Lighting	• Emissions from National Grid purchased electricity for council buildings.	1,999
3	Business Travel	• Bus, train, plane etc. • Business meetings. • Leased vehicles.	939
3	Enterprise Car Club	• Business travel	24
3	Fleet Transport	• Vehicles used as part of contracted services	132
3	Social Housing*		0
3	Staff Housing & Commuting	• Home working & commuting	3,242
3	Water		30
3	Civil Defence	• Procured service*	62
3	Building Construction & Repairs	• Procured service*	16,263
3	Corporate	• Procured service*	1,974
3	Culture & Leisure	• Procured service*	1,004
3	Health & Social Care	• Procured service*	37439
3	Highways Maintenance	• Procured service*	6,926
3	ICT & BPO	• Procured service*	2007
3	Legal & Financial	• Procured service*	665
3	Misc	• Procured service*	481
Gross			**76,139**
CR	Municipal Recycling	Procured service^	-22,730
CR	Land management	Carbon capture and storage^	-2,000
TOTAL	**Corporate Carbon FP**		**51,409**

** Calculated from annual spending using a standard DEFRA co-efficient*
^CR (carbon credits) recognises that some services consume more carbon than they generate

Exclusions

2.3 The following datasets have been excluded:

1. Third party buildings: (Leisure services, school academy trusts and PFI buildings) – data availability;
2. Commercial waste generated by Shropshire Council – data availability;
3. Staff Pensions – this is the legal responsibility of the Shropshire County Pension Scheme;
4. Social housing - data from third party operators is required.

Carbon Credits

2.4 Some of the Council's commissioned services and land management activities consume more carbon than they generate (see Table 1 above). In particular, the waste management contract operated by Veolia generates a

net carbon saving of around 23,000 tonnes mainly because of the high levels of recycling in the county. The Council's current carbon footprint is also offset to some extent through carbon capture and storage on land holdings such as countryside sites, which in total currently capture and store around 2,000 tonnes CO2e per year.

Transport Fleet Clarification (Scope 1)

2.5 Greenhouse gases (GHG's) are a direct consequence of ICE (internal combustion engines), a mobile source of direct emissions. As such, the Transport Fleet is a key contributor to Scope 1. As well as being a greenhouse gas, such emissions also have an adverse effect on local air quality, which affects health and wellbeing. In addition, because of road transport bias; the cost of climate change impacts should be considered in NHS costs, road maintenance due to extreme weather events, flooding, drainage and erosion costs.

Building Utilities Clarification (Scope 1 & 2)

2.6 Scope 1 includes static sources (direct emissions) as still found in some buildings (oil and gas heating). Scope 2 includes grid-sourced electricity. The level of both scope 1 and 2 emissions will be heavily influenced by the building efficiency.

Procurement Clarification (Scope 3)

2.7 Scope 3 is third party and supply chain emissions and basically everything else unaccounted for in Scope 1 and 2. This includes goods and services procured upstream and downstream to the organisation. Although this cannot currently be measured from specific performance data, DEFRA coefficients may be used to evaluate the carbon factor by service type based on the monetary value of the annual contract for downstream expenditure. This will be refined in future years as local data becomes more available.

Business Travel (Scope 3)

2.8 Staff commuting and business travel: Staff are encouraged to work from home, carry out meetings by teleconference or if meetings are necessary, to use public transport or efficient vehicles. However, public transport and air miles have not been included.

Contracted Work (Scope 3)

2.9 Decision making in design to ensure minimum embodied carbon. Procurement of contractors will have a significant impact on the Councils net GHG (CO_2e) footprint as well as associated cost for procuring services. Scope 3 emissions also include third-party contractors, supply chains, (embodied carbon in materials and equipment). Services should refer to procurement guidance when tendering goods and services. For example, the encouragement to procure efficient vehicles to reduce emissions:

- Specify efficient vehicle in terms of emissions and running costs for all services.
- Procuring local contractors (short distance to reduce scope 3 emissions).

Financial Investments (Scope 3)

2.10 Staff pensions and corporate investments depending on their sector. Services or investments monetarily connected to Shropshire Council even if legally detached. Staff pensions are directly linked to the council by virtue of its employees.

Staff Housing and Social Housing (Scope 3)

2.11 Includes staff home energy use – which is likely to become especially important from 2020 due to increased working from home directive during the Covid 19 Pandemic.

Resource Management (Scope 3)

2.12 Includes:

- Waste and Recycling Services: e.g. Contaminated and confidential waste,
- Office equipment purchase (repurposing to reduce disposal costs).
- Other utilities commodities including water.

Any other Outsourced Services (Scope 3)

2.13 This includes residential properties (staff and social housing), together with social care, leisure service operators and any other public sector services and outsourced management such as PFI buildings. Trend data for Shropshire Council's carbon performance has been affected by significant changes to the Council's assets over time. For example, what was termed Council Housing became a connected but independently managed housing operation; several public owned properties were sold and many schools have changed to become separately managed by Academy Trusts. These changes mean that Council housing and Academy schools are not shown counted within the Council's corporate carbon footprint.

3. Climate Emergency Strategy

Key Objective:

Reduce Shropshire Council's greenhouse gas (GHG) emissions to net carbon zero by 2030 (GHG Scope 1,2 & 3)

3.1. We recognise the impacts that an unstable climate is already having on our services and our duty to reduce our carbon footprint both locally and globally. Targets on emissions are not straightforward because the causes of emissions are not straightforward and there isn't yet a full understanding of the impacts that such targets would have on the economy and the health and wellbeing of our population. However, there is an urgent need to achieve significant emission reductions and the transition to a low carbon economy will also generate many economic, health & wellbeing, and environmental

benefits. Taking early action on what we can directly control is likely to prove a more effective approach than expending significant effort in planning and target setting.

3.2. Our current emissions reduction trajectory, for direct emissions (scope 1 & 2), demonstrates that net zero GHG emissions by 2030 is theoretically possible for both direct and indirect emissions. In these circumstances, Shropshire Council, has adopted the objective of achieving net zero for direct and indirect GHG emissions by 2030. This is not a legally binding target and may be subject to change based on future evidence, but it is a challenging goal commensurate with our recognition of a climate emergency. The achievement of this goal will require extensive support in both financial and policy terms if it is to be delivered in practice.

Focus for Action

3.3. Shropshire Council will focus its efforts on:

1. Embedding Climate Change in Council governance;
2. Greenhouse Gas (GHG) emission reductions;
3. GHG sequestration;
4. Improving resilience and adaptation to the effects of extreme weather.

Key Principles:

3.4 Shropshire Council will adopt the following principles:

Prioritise Actions:

a. We need to stop adding to the problem whilst recognising that work on sequestration and adaptation is also critical.

b. It is already too late to 'fix' the climate crisis just by reducing emissions, so we will need to adapt by putting in place physical and operational adaptation measures to mitigate risks to our assets and services from extreme climate events.

c. 81% of Shropshire Council's direct (scope 1 & 2) GHG emissions in 2017 were generated from energy use in its buildings and a further 13% was generated by street lighting, so these will be priorities for early intervention.

Support Clean and Inclusive Growth

a. Our local economy needs to grow while our emissions shrink. The transition to a green economy can provide significant growth opportunities for businesses as well as providing a cleaner and more inclusive future;

b. We want the Shropshire economy to shift to one which is zero carbon and abides by circular economy principles, whilst enabling our communities to build and enjoy their prosperity. The choices we make now will determine whether we can deliver on our obligations, and the extent to which we can do so in a way which is also socially progressive;

c. We will support skills and training which allow our communities and businesses to benefit from Shropshire's transition to a low carbon economy.

Invest in Climate Action

a. Significant investment will be required if Shropshire Council is to achieve its goal of becoming net carbon zero by 2030. A range of potential actions and a pipeline of specific projects which target the most effective areas for investment and intervention are set out in the Action Plan which accompanies this Strategy. The capital investment required to make the transition to net-zero carbon performance is also likely to generate revenue savings from greater efficiency.

b. Once sufficient information has been assembled, the business case for individual investment projects will demonstrate their financial viability and feasibility in both the short and long terms. Shropshire Council has already invested in a range of low carbon technologies that have provided a return on investment.

c. Shropshire Council is under severe financial pressure and the Climate Action Plan will therefore prioritise interventions which generate a positive and direct return on investment. Within these investments we will try to prioritise investments that benefit those members of public of greatest need first, for example energy efficiency measures for residents on low incomes and the most vulnerable.

d. Some Climate Action investments may not generate returns that are easily quantifiable in financial terms and others are just very complicated to calculate. Some returns may be beneficial for carbon reduction but may have negative impacts in other areas, for example planting trees on habitats with high wildlife value. Measures which generate co-benefits (e.g. cost saving and improved environmental and social performance) are particularly attractive. Given the rapid pace of change, some measures will yield benefits that are not currently calculable at this time.

Work with others

a. We are on a shared journey and will need to work with others. This will allow us to learn from them and make use of external resources to help us to achieve net carbon zero and manage the effects of extreme climate events.

b. We will help establish and support a Climate Action Partnership of stakeholders and the wider community. The Council will work with the Partnership to provide advice, support and encouragement to our communities, businesses and charitable organisations to help them to mitigate their emissions and adapt to the inevitable impacts of the climate crisis.

c. The climate crisis is of particular significance for young people who will inherit the consequences of our actions. We will therefore work with schools across the county to ensure that the Climate Emergency is integrated as an issue across the curriculum and provide opportunities for schools and young people to contribute directly to the development and implementation of our Climate Emergency Strategy.

d. Throughout the development and implementation of our Climate Emergency Strategy and Action Plan we will be as open as possible in engaging the wider community and provide opportunities for them to contribute.

Influence the behaviour of others

a. In addition to direct control of our own GHG emissions, we have significant influence over emissions indirectly resulting from our policies, and through our regulatory functions.

b. Shropshire Council also has significant influence through its purchasing power. We will put in place measures to assess the carbon footprint of our procurement choices.

c. We will lead by example and seek to positively influence the purchasing power or funding allocations of others like the Marches LEP and its members to favour low carbon initiatives and products.

Assemble and publish evidence

a. Better local evidence is needed to identify the most effective targets for intervention and investment. We have significant gaps in knowledge and this includes the impacts of choosing one net zero carbon deadline over any other. Shropshire's Climate Emergency Strategy and Action Plan will highlight evidence gaps and prioritise areas of research required. It will also spell out the monitoring requirements that need to be established to fully measure our progress towards zero carbon.

4 Corporate Carbon Management Strategy

Power Down:

Theme	2030 Objective	Planned Measures
Buildings Energy	Reduce 2019 annual emissions by 50% to 2,360 tonnes CO2e	• Rationalise the number of buildings to only those essential for the sustainable delivery of Council Services (Corporate Asset Management Strategy); • Reduce energy demand from our buildings through a comprehensive programme of fabric and technology upgrades; • Enhance performance monitoring and control systems, together with staff and user training; • Meet the residual energy demand from renewable energy and carbon neutral sources; • Construct new buildings to Passivhaus standard, wherever possible.
Transport and Travel Energy	Reduce 2019 annual emissions by 70% to 1,939 tonnes CO2e	• Reduce the need for staff travel through improved access to local office facilities and greater home working and normalising the use of IT and

Theme	2030 Objective	Planned Measures
		communications technology wherever possible; • Encourage the use of active modes and public transport for shorter journeys; • Progressively replace Council Fleet vehicles with those powered by Ultra-Low emission fuels such as electricity and hydrogen; • Update procurement policies and work with the suppliers of goods and services to reduce indirect (Scope 3) carbon emissions.
Power Down: Commissioned Services	Reduce 2019 annual emissions by 65% to 27,686 tonnes CO2e	• Update procurement policies to highlight the importance of carbon performance as a consideration in procurement; • Work with the suppliers of goods and services to measure and reduce indirect (Scope 3) carbon emissions;
Resource consumption and waste	Reduce annual carbon emissions from water consumption and waste generation by 70% to 9 tonnes CO2e by 2030	• Reduce water consumption through a comprehensive retrofit programme of Council buildings; • Introduce performance monitoring and control systems, together with staff and user training; • Actively promote the procurement of recycled materials and the re-use and recycling of waste materials.

Power Up:

Theme	2030 Objective	Planned Measures
Renewable Energy Generation	Shropshire Council to become energy self-sufficient by 2030 for buildings and travel: 60 mW*	• Review Council land and building assets for renewable energy generation potential; • New-build and retrofitted buildings to maximise energy self-sufficiency; • Where energy cannot be used to power Shropshire Council services direct, work with other public sector organisations and local businesses to explore how renewable energy generation from Council land and buildings could help to meet their energy needs and generate carbon credits.

* *Estimated power production requirement; assumes 25% efficiency gain and that all buildings are converted from fossil fuel heating and all travel by electric vehicles;*

Carbon Capture & Storage:

Theme	2030 Objective	Planned Measures
Carbon capture and storage:	Capture and store carbon to achieve net self-sufficiency by 2030: 4,509 tonnes CO2e	• Review Council owned land for opportunities to increase existing capture and storage of carbon through e.g. tree planting, wetland creation and management; • Work with farmers, landowners and land managers to develop initiatives to capture and store any residual corporate carbon footprint.

- *Strategy relates to Shropshire Council corporate carbon emissions only;*
- *Based on best available data for 2019 performance;*
- *Based on current technologies;*
- *Separate Climate resilience and adaptation strategy will be required.*

5 Carbon Budget

5.1 Shropshire Council has agreed the principle of preparing an annual Carbon Impact Budget which will identify the greenhouse gas impacts of Council services and major projects. The Council will develop and refine arrangements to report on annual performance trends in parallel with the Council's financial budget. The starting point for this budget is our current corporate footprint. Indicative annual targets for each service area are set out in Table 2 below.

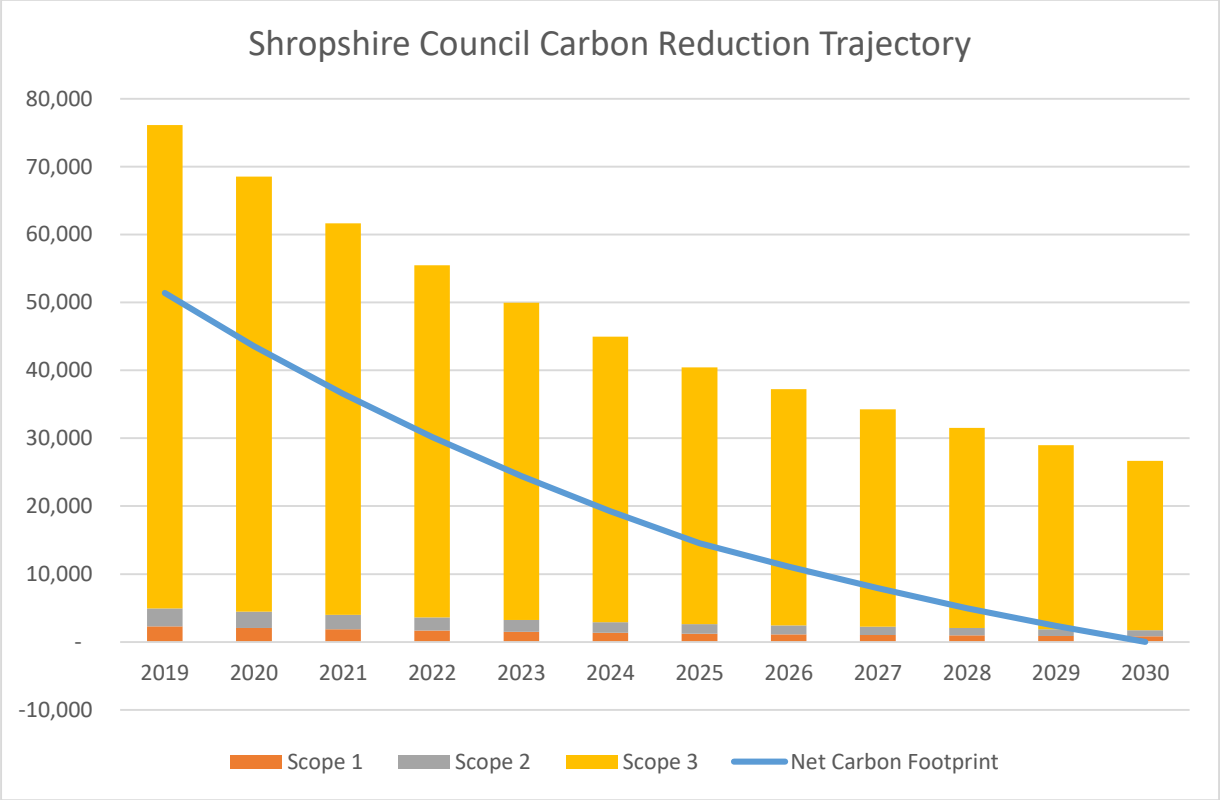
Table 2: Indicative Annual Carbon Budget 2020 – 2030 (tonnes CO2e)

Service Areas	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Adult Services	18,720	16,848	15,163	13,647	12,282	11,054	9,948	9,153	8,420	7,747	7,127	6,557
Childrens Services	18,720	16,848	15,163	13,647	12,282	11,054	9,948	9,153	8,420	7,747	7,127	6,557
Place and Enterprise	33,484	30,136	27,122	24,410	21,969	19,772	17,795	16,371	15,062	13,857	12,748	11,728
Public Health	1,621	1,459	1,313	1,182	1,063	957	861	792	729	671	617	568
Resources & Support	3,595	3,235	2,912	2,620	2,358	2,123	1,910	1,757	1,617	1,488	1,369	1,259
TOTAL	**76,139**	**68,525**	**61,673**	**55,505**	**49,955**	**44,959**	**40,463**	**37,226**	**34,248**	**31,508**	**28,988**	**26,669**
Carbon Credits	-2,000	-2,200	-2,400	-2,600	-2,800	-3,000	-3,200	-3,400	-3,600	-3,800	-3,900	-3,939
Recycling	-22,730	-22,730	-22,730	-22,730	-22,730	-22,730	-22,730	-22,730	-22,730	-22,730	-22,730	-22,730
Net Carbon Footprint	**51,409**	**43,595**	**36,543**	**30,175**	**24,425**	**19,229**	**14,533**	**11,096**	**7,918**	**4,978**	**2,358**	**0**

6 Carbon Reduction Trajectory

6.1 The carbon budget set out in Table 2 above recognises that early action is desirable and that emissions reductions will become more difficult over time. Reaching our objective of net-zero will require a modest increase in existing levels of carbon capture and storage. The trajectory to net-zero is illustrated in Figure 3 below:

Figure 3: Shropshire Council Carbon Reduction Trajectory 2019-2030



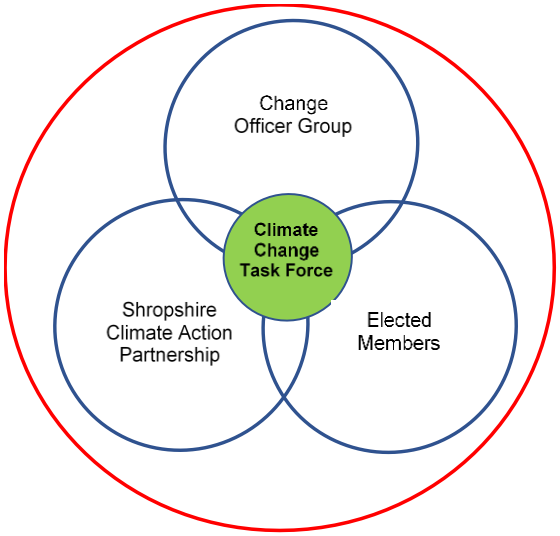
7. Implementation, Monitoring and Review

7.1 Recent guidance to Local Authorities by ARUP[1] on tackling 'climate emergency' commitments has helped to inform our corporate approach. A summary diagram of the nine suggested process stages is presented below:

[1] ARUP (2019). You've declared a Climate Emergency... what next? Guidance for local authorities. https://www.local.gov.uk/sites/default/files/documents/ARUP-Climate-Emergency-What-Next.pdf

7.2 While the above diagram is sequential, Shropshire Council will continue to work on several aspects in parallel while using the structure to keep on track and ensure specific stages are not neglected. The ARUP document suggests a similar approach: “Don’t stop acting just because you’re planning”. Shropshire Council has already made progress in most of the areas listed in the above diagram;

Figure 4 – Climate Change Working Structure



7.3 Responsibility for actions to address carbon performance and climate change is shared across all services and levels of management. The proposed working structure for climate change activity at Shropshire Council is illustrated in Figure 4 above.

7.4 Information about climate change, carbon performance and management technologies are changing all the time and the corporate Climate Strategy and Action Plan documents need to be agile enough to respond to these changes and their relationship to the county-wide strategy and action plan being prepared by SCAP (see Paras 9.1-9.3 below). They will therefore be treated as ‘live’ documents with carbon performance against the strategy budget and trajectory reported to Council at least annually. Updated information and performance monitoring are likely to prompt regular updates to the current corporate strategy.

7.5 In recognition of the urgent need to take action, no formal consultation process is proposed, but comments and suggestions for amendment on the corporate strategy and action plan are welcome and will be considered as part of the annual monitoring and review process described above. The latest ‘live’ version of the Strategy and Action Plan will be made available for public comment on the Council’s climate change web pages here:

8 Action Plan

8.1 The corporate Climate Strategy is accompanied by a separate Action Plan and Project Pipeline which have been prepared from actions drawn from multiple sources including internal discussions with officers from across Council services and the community workshop event which was held in February 2020. The full list of actions has been edited to include only those

that Shropshire Council can implement itself. It also focusses on those actions that are likely to reduce the Council's own emissions – including indirect (Scope 3) emissions. The Climate Officers Group, supplemented by occasional extra meetings with heads of service, will review this list of actions every few months and report on progress.

8.2 The Action Plan and Project Pipeline is structured into potential actions which:

a. reduce demand for energy and resources ('Power Down');
b. increase the generation of renewable energy ('Power Up');
c. help store carbon in vegetation and soils ('Sequestration');
d. increase understanding of the issues and the solutions ('Comms').

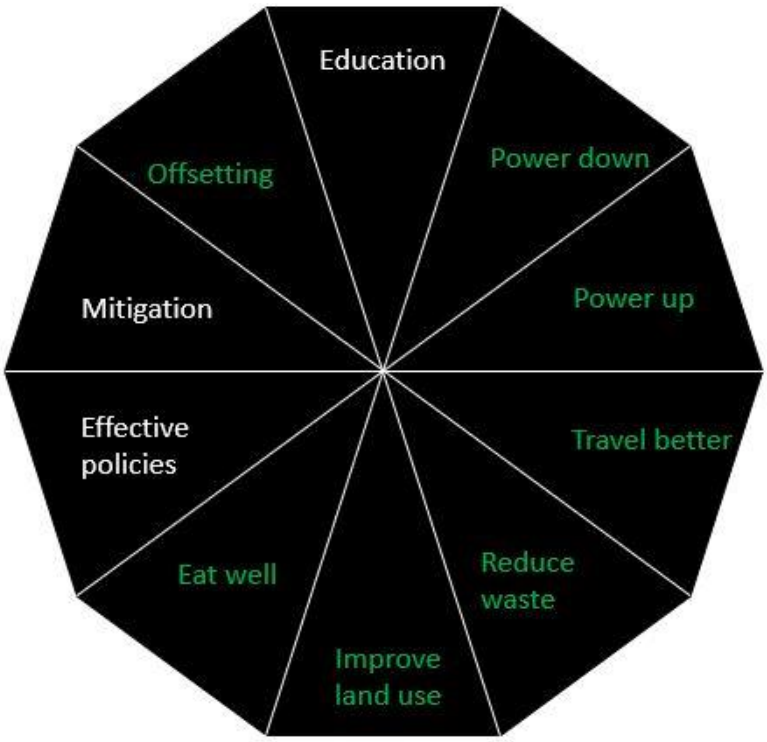
The document comprises two tables:

i. a Project Pipeline which identifies a range of active projects;

ii. an Action Plan which identifies range of potential actions which are classified (colour coded) into those which:

   a. are currently planned ('Now');
   b. are to be explored shortly ('Soon');
   c. are to be explored in future ('Later').

8.3 Actions that help reduce the emissions of Shropshire businesses or residents will form part of the strategy and action plan being prepared by the Shropshire Climate Action Partnership (see Para 9.2 below). Actions that help capture and store (sequester) carbon are included. However, the Action Plan is work in progress and will be updated regularly and progress reported annually.



8.4 In developing the list of actions, reference has been made to the 10 'dynamics' shown above and detailed on the Zero Carbon Dynamics web

site[2]. A qualitative assessment can be made of all items listed while the tangible dynamics (shown in **green**) can be measured in terms of emissions and used to build a zero carbon 'balance sheet'. Future work on our list of actions will further integrate these headings with our own carbon 'balance sheet'.

9 Shropshire Climate Action Partnership

9.1 The world-renowned Tyndall Centre for Climate Change in Manchester has recently a maximum cumulative carbon dioxide emissions budget of 17.2 million tonnes (MtCO2) for Shropshire for the period of 2020 to 2100. The latest carbon footprint calculations show that at 2017 CO2 emission levels, the county would use this entire budget by 2023.

9.2 In addition to efforts to tackle its own carbon emissions, and as a key community leader, Shropshire Council is one of the key founders and supporters of the community-led 'Shropshire Climate Action Partnership' (SCAP) which has set the objective of achieving net-zero carbon performance across Shropshire by 2030 and an initial target of preparing a county-wide Climate Strategy and Action Plan by the end of 2020. Further information is available here: https://zerocarbonshropshire.org/ The Partnership is being supported by volunteers drawn from a wide range of business sectors and communities across Shropshire and has established a number of Technical Working Groups to develop a vision and actions for topic areas including:

i. Land and biodiversity
ii. Energy
iii. Buildings
iv. Transport
v. Consumption and resources
vi. Carbon tracking and reporting

9.3 Through its regulatory role and procurement decisions, Shropshire Council is in a position to make a strong positive contribution to help the wider Shropshire community make a positive transition to a low carbon future. For example, the draft Local Plan includes policies which help to reinforce the need for energy efficiency and carbon reduction measures within the current limits which are defined by government policy which lies outside the Council's control.

[2] Zero Carbon Dynamics web site: https://www.zerocarbondynamics.com/dynamics.html