



Committee and Date

Item

Public



Corporate Carbon Performance Monitoring Report 2022

Responsible Officer:	Mark Barrow		
email:	mark.barrow@shropshire.gov.uk	Tel:	01743 258919
Cabinet Member (Portfolio Holder):	Ian Nellins		

1. Synopsis

The Council's Climate Strategy and Action Plan committed to annual reporting. This report details the Council's carbon emissions for financial year 2021/22, describes performance against its net-zero objective and sets out recommendations to be implemented.

2. Executive Summary

- 2.1. The Shropshire Plan 2022-2025 set out delivering the council's Corporate Climate Change Strategy and Action Plan as a strategic objective, through promoting the means to tackle climate change and reduce our carbon footprint, including the adoption of low-carbon energy for our assets and for communities.
- 2.2. Shropshire Council declared a climate emergency in May 2019 and in December 2020 adopted a Climate Strategy and Action Plan, which establishes the objective of achieving net-zero carbon performance for Shropshire Council by 2030 and aims for an annual carbon reduction of 10% per year. The Climate Change Task Force was established to lead the Council's response to the climate emergency in November 2019, the task force is made up of Shropshire Council officers. A Climate Change and Carbon Reduction Advisory Board was established in September 2022 to act

as a ‘critical friend’ and to assist the implementation and review of the Council’s Climate Strategy.

- 2.3. Climate action and carbon reduction are integral to all aspects of the Shropshire Plan. For example, in the context of the ‘Healthy People’ priority, extreme weather associated with the climate crisis will adversely affect vulnerable residents and service users disproportionately. This is likely to drive significant future growth in the demand for social care services as well as generating significant impacts on the physical and mental health and wellbeing of staff. Taking active steps through the implementation of a corporate Climate Strategy and Action Plan and supporting wider community efforts will allow the Council to make a demonstrable contribution to reducing the carbon footprint of the wider county, as well as ‘leading by example’ by reducing its own carbon footprint. To ensure that the risk which extreme weather associated with climate change presents to Council services is better recognised and to ensure that our assets and services are resilient in the face of the challenges of more extreme climate events, it is recommended that a Climate Adaptation Strategy is prepared during 2023.
- 2.4. During 2021-22, the efforts of the Task Force have been directed towards continuing to embed climate change as a key consideration in the Council’s corporate governance systems and to widen ownership of the issue through accredited carbon literacy training. A range of projects and initiatives continue to be developed and implemented to help the Council improve its own performance and to help foster similar action across the wider economy and communities in Shropshire (see Section 8 below), although most will take more time to yield carbon savings.
- 2.5. Accurate data and monitoring and reporting systems for carbon performance are still being developed, and all the data collected to date has been distorted by the significant impact of the Covid pandemic on service delivery. Unfortunately, pre-pandemic carbon performance data is not available to act as a benchmark for our latest corporate performance. The best available data suggests that:
- i. Shropshire Council’s direct carbon emissions (Scopes 1 & 2) fell significantly during Financial Year (FY) 2021, due primarily to the adoption of a 100% renewable power supply through West Mercia Energy and the effect of the pandemic on service delivery. However, in FY 2022, there has been a significant increase (+28%) from FY 2021 in Shropshire Council’s direct carbon emissions (Scopes 1 & 2) from 1,900 tonnes to around 2,400 tonnes, this is primarily due to an increase in activities due to Covid restrictions lifting and returning to business as usual. Direct emissions were around 5% higher in FY2022 than the base year (FY2020).
 - ii. In FY 2022, the Council’s indirect emissions (Scope 3) have decreased slightly to 31,390 tonnes CO₂e (see table below). Indirect emissions were around 3.5% higher in FY2022 than the base year (FY2020). However, there remains uncertainty around the exact quantity of the Council’s indirect emissions, as they are complex and difficult to accurately quantify. As such, we have commissioned a detailed modelling to provide a more accurate assessment of these emissions.
 - iii. Overall, gross carbon emissions have decreased by around 1% from 34,000 tonnes to around 33,800 tonnes.

- iv. The past three years of our carbon monitoring have been influenced significantly by the Covid pandemic, and in the absence of pre-pandemic data against which to benchmark, it is difficult to identify meaningful trends at this time.
 - v. High levels of municipal waste recycling and the management of Council-owned land generate carbon savings have helped to offset our gross carbon emissions. However, this activity has reduced by approximately 1,000 tonnes from around minus 37,000 tonnes CO₂e in 2019 to around minus 36,000 tonnes CO₂e in 2020.
 - vi. Net carbon emissions have therefore increased compared to FY 2021 from a net-negative performance of minus 4,296 tonnes back to a net-negative performance of approximately minus 330 tonnes CO₂e.
- 2.6. The data above shows that there has been an increase in direct emissions and a decrease in indirect emissions. Overall, there has been a 1% decrease in gross emissions against a target of a 10% reduction each year. Whilst this is disappointing, it reflects the impact of increased spending on commissioned services across several service areas where carbon emissions are still being estimated using spend, rather than actual measurement.
- 2.7. The Council's indirect emissions (Scope 3) account for around 93% of the Council's corporate carbon footprint, it is therefore important to explore how the Council's procurement policies can be updated to help accurately quantify and help suppliers to reduce indirect carbon emissions.
- 2.8. Widening the understanding and ownership of the need for urgent climate action and carbon reduction across Shropshire Council service areas is required to reduce council carbon emissions. Existing staff members in key service areas could be designated and trained as climate change champions to represent their service area.
- 2.9. It is important to note that both carbon performance monitoring and carbon reduction projects are still in their infancy and the accuracy of monitoring and the effectiveness of mitigation actions are expected to improve significantly as momentum builds behind the climate action agenda. A number of current projects and initiatives which will help to reduce corporate carbon emissions are still being developed and have yet to deliver planned savings.
- 2.10. The Council's corporate footprint represents only around 1% of Shropshire's total carbon footprint, but the Council is able to influence as much as 33% of emissions through its regulatory and support functions. The Council is already supporting a wide range of projects and initiatives designed to support local businesses and communities to reduce their carbon emissions.
- 2.11. The effectiveness of the projects and initiatives being developed by the Climate Task Force are limited by its capacity. To make faster progress towards our objective of net-zero corporate carbon performance by 2030, it is essential that greater understanding and ownership of the challenge of the Climate Crisis is achieved throughout the organisation and its suppliers.

3. Recommendations

- 3.1. That Cabinet approves the draft Corporate Carbon Performance Monitoring report 2021-22 (Appendix 1) for publication;

- 3.2. That Cabinet supports:
- i. Efforts to widen understanding and ownership of the need for urgent climate action and carbon reduction through training and the identification of a staff 'climate change' champion in each service.
 - ii. An Officer report being prepared to explore how the Council's procurement policies can be updated to help accurately quantify and help suppliers to reduce indirect carbon emissions, which now account for around 93% of the Council's corporate carbon footprint.
 - iii. Work to prepare a corporate 'Climate Change Adaptation' strategy during 2023 to identify key climate risks, their potential impact on the delivery of council services, staff and service users and to set out actions and measures to moderate these risks.

Report

4. Risk Assessment and Opportunities Appraisal

- 4.1. The climate crisis is a serious threat to the lives of millions of people both globally nationally and locally. The mitigation of greenhouse gas emissions and adaptation measures to build resilience is now urgent and essential to prevent the worst outcomes. Even if we are successful in mitigating the worst effects, we will continue to experience more pronounced and frequent episodes of extreme weather effects. The much greater frequency of extreme weather events will significantly increase insurance risks and threaten the health, wellbeing and future resilience of our communities.
- 4.2. The climate crisis is therefore already recognised as a significant strategic risk to Shropshire and the delivery of Council and public services. This risk is most likely to manifest itself in terms of financial impacts (e.g. operating costs, impacts on the Shropshire economy) and impacts on the health and wellbeing of staff and residents as service users.
- 4.3. Climate action and carbon reduction are integral to all aspects of the Shropshire Plan:
- i. **Healthy People** – Extreme weather associated with the climate crisis will adversely affect vulnerable residents and service users disproportionately. This is likely to drive significant future growth in the demand for social care services as well as generating significant impacts on the physical and mental health and wellbeing of staff.
 - ii. **Healthy Economy** – The recent energy crisis illustrates potential impacts on the Shropshire economy from the climate crisis. However, there are also significant opportunities for growth and skilled employment in new technologies, renewable energy and the rural economy.
 - iii. **Healthy Environment** – The climate crisis has very serious implications for biodiversity and food production. However, as a large rural area, Shropshire is also in an excellent position to take positive action to help mitigate these effects.

- iv. **Healthy Organisation** – Extreme weather associated with the climate crisis may significantly disrupt the delivery of Council services through damage to physical infrastructure such as roads and power infrastructure, and through impacts on staff health and wellbeing. Demand for services and service delivery costs such as highway maintenance are likely to increase significantly.
- 4.4. Taking active steps through the implementation of a corporate Climate Strategy and Action Plan and supporting wider community efforts will allow the Council to make a demonstrable contribution to reducing the carbon footprint of the wider county, as well as ‘leading by example’ by reducing its own carbon footprint. 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.
- 4.5. An Equality and Social Inclusion Impact Assessment (ESIIA) has previously been carried out which indicated that the corporate Climate Strategy and Action Plan are likely to have a positive effect on all groups in society. The climate emergency will have significant impacts on the whole of Shropshire and all its diverse communities, from those living or working in our rural areas to those living or working in our market towns, as well as those that travel into our county and across our porous borders.
- 4.6. Individual Council services identified as being responsible for appreciable carbon emissions will each need to identify a climate change champion as recommended in 3.2(i) above, to engage with their staff and service users to explore the need for, and implications of, service changes which may result from the adoption of carbon reduction measures. The Council will need to adopt an agile approach keep abreast of national good practice in order to maximise opportunities for equality and social inclusion within the overall policy context of addressing the climate emergency.

5. Financial Implications

- 5.1. Climate change represents a significant financial risk to the Council, as described in 4.3(iv) above. Action to update procurement policies to help accurately quantify and reduce indirect carbon emissions in recommendation 3.2(ii) above are likely to fall within the changes already planned to address social value. However, in the longer term this may increase supplier costs as they implement measures to decarbonise their goods and services. However adapting service delivery to address the impacts of extreme weather events will help reduce far more significant future financial risks.
- 5.2. An annual revenue budget of £0.5m has been established to provide for staff resources in the Climate Change team and to support bids for Government grant funding and work to develop and implement the wide range of projects associated with the key themes of the Council’s adopted Climate Strategy as illustrated in Table 3 below. This budget will also cover the costs of commissioning the preparation of a Climate Adaptation Strategy as recommended in 3.2(iii). To date, the Climate Change Task Force has worked with colleagues across the Council to secure capital grants totalling over £3.8m and revenue funding of over £0.5m to support decarbonisation projects.

5.3. Early action to reduce Shropshire Council’s carbon footprint and adapt service delivery to address the impacts of extreme weather events will help reduce future financial risk. Improving Shropshire Council’s carbon performance and resilience may require significant capital investment in energy efficiency measures, low carbon technologies and renewable energy generation. Access to the Council’s Capital Programme will be pursued where projects will be appraised on an individual basis following the process detailed in the Capital Strategy. Some projects delivered in partnership with others may lead to commercial income being generated.

6. Climate Change Appraisal

- 6.1. *Energy and fuel consumption:* A range of projects and initiatives are being developed which will contribute positively to the reduction of carbon emissions in future years by facilitating improved energy efficiency and carbon performance across Council Services;
- 6.2. *Renewable energy generation:* A number of projects in the Climate Action Plan are being developed to drive the delivery of additional generation of renewable energy from a range of technologies on Council land and buildings;
- 6.3. *Carbon offsetting or mitigation:* The management of Council land and our commissioned waste management service make a key positive contribution to our carbon performance, but it is crucial that we do not rely on these and instead focus first on reducing emissions wherever possible. A range of additional projects and initiatives are being developed to drive the capture and storage of carbon and to mitigate the effects of climate change on biodiversity;
- 6.4. *Climate Change adaptation:* It is recommended that a Climate Adaptation Strategy is prepared during 2023 to ensure that the risk which extreme weather associated with climate change presents to Council services is better recognised and to ensure that our assets and services are resilient in the face of the challenges of more extreme weather events.

7. Background

Shropshire Council’s Current Carbon Footprint

7.1. The gross emissions for Shropshire Council’s operations are 33,814 tCO₂e, a 1% reduction compared to our previous years reporting. However, our direct carbon emissions have increased compared to the previous financial year, this is due to an increase in activity following the Covid pandemic. Our indirect carbon emissions have decreased compared to the previous financial year. Outsourced and additional Scope 3 emissions continue to make up the majority of our current carbon footprint and are outlined in additional detail below.

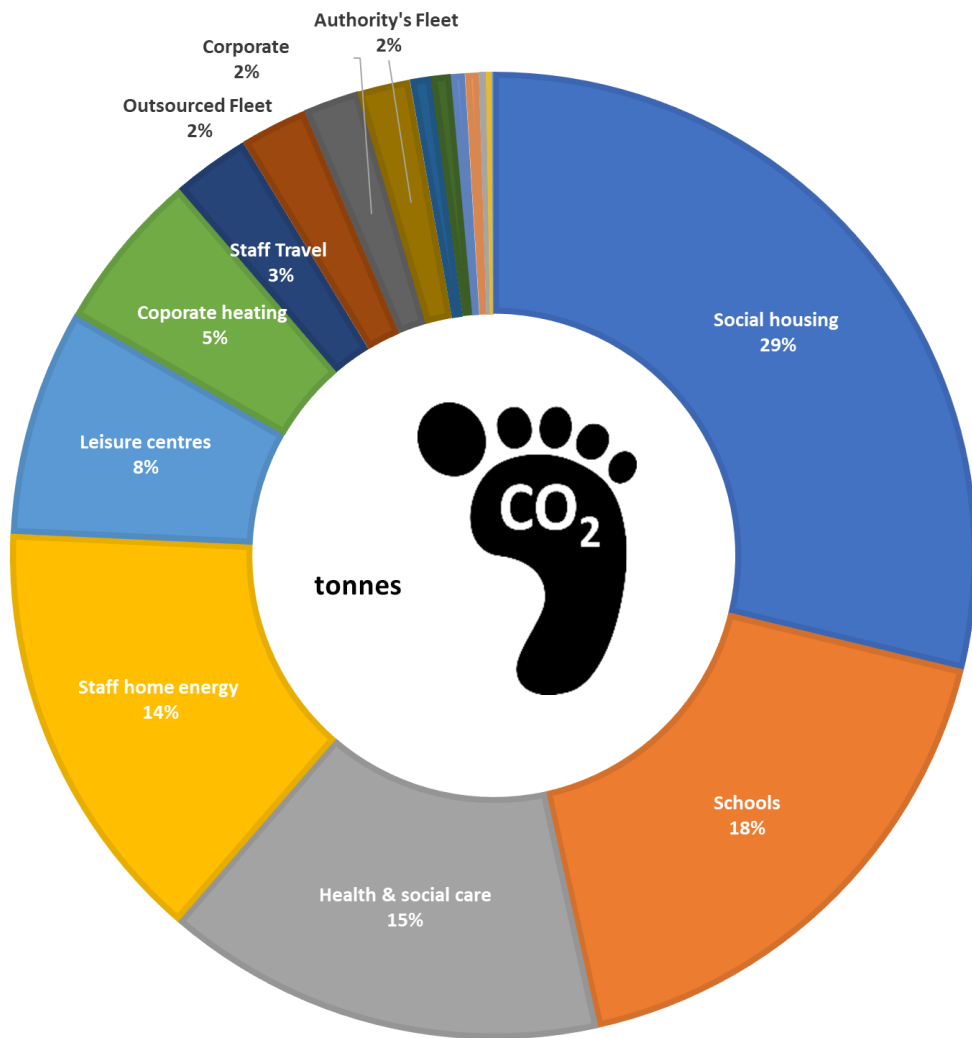
Table 1: Shropshire Council Carbon Emission 2021-22

Scope	Emissions Type	Emissions (tCO ₂ e)	Percentage of gross
Scope 1	Corporate heating	1,832	5%
	Transport fleet	592	2%

Scope	Emissions Type	Emissions (tCO2e)	Percentage of gross
Scope 2	Electricity	0	0%
Scope 3	Social housing	9,737*	29%
	Health & social care	5,005	15%
	Schools	6,075	18%
	Staff home energy	4,867	14%
	Maintenance fleet	766	2%
	Leisure centres	2,563	8%
	Staff travel	879	3%
	Corporate	634	2%
	Transmission losses	241	1%
	PFI	155	0%
	Legal & financial	225	1%
	ICT & BPO	81	0%
	Pending categorisation	66	0%
	Culture & arts	152	0%
	Water	15	0%
Civil Defence	4	0%	
Gross emissions		36,169	100%

**We have used data for FY20/21 in the absence of data for FY21/22*

Figure 1: Corporate Carbon Emissions (Scopes 1, 2 & 3)- Annual Change in performance 2020-21 to 2021-22



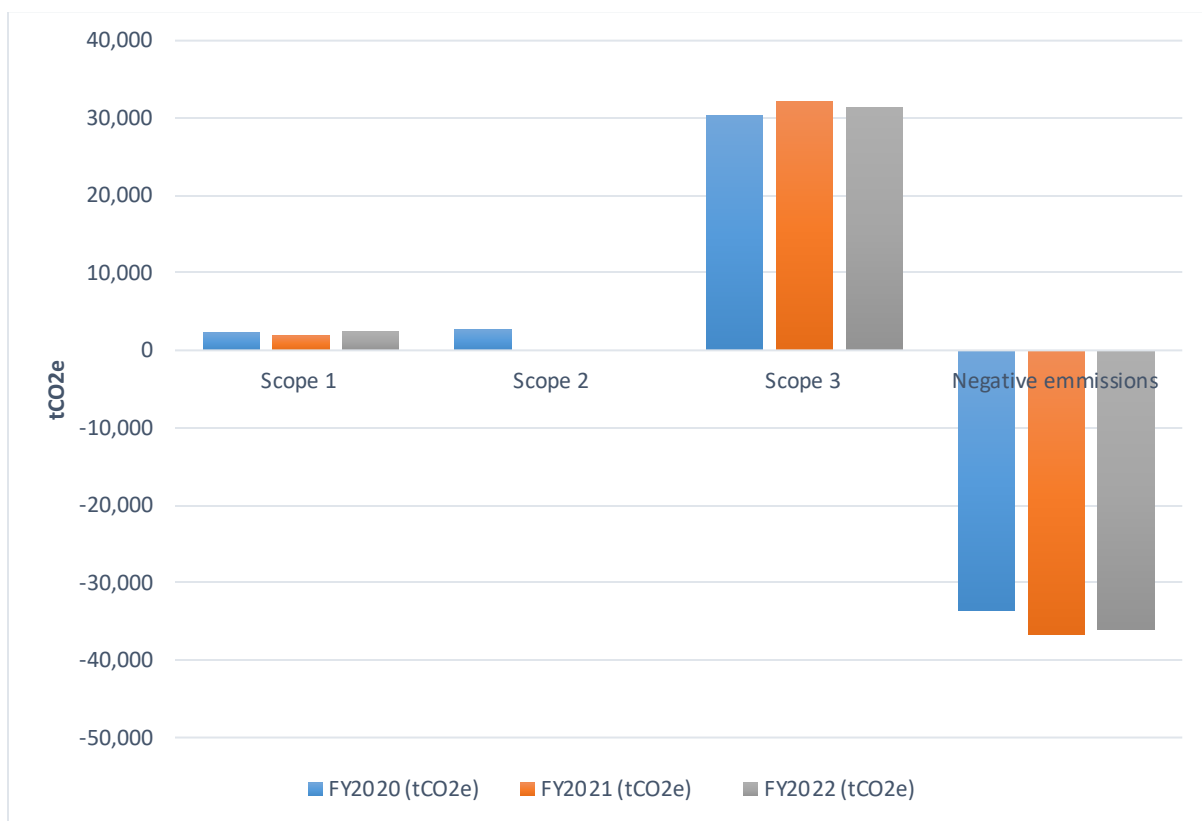
7.2 Table 2 displays the change in CO2 emissions from financial year 2021 to financial year 2022:

Table 2: Change from Financial year 2021 to 2022

Scope	FY2021 (tCO2e)	FY2022 (tCO2e)	Difference (up or down)	% change
Scope 1	1,894	2,424	+530	+28%
Scope 2	0	0	-	-
Scope 3	32,204	31,390	-814	-3%
Gross	34,098	33,814	-284	-1%

Scope	FY2021 (tCO2e)	FY2022 (tCO2e)	Difference (up or down)	% change
Negative emissions	-36,729	-36,109	620	+2%

Figure 2: Change in Shropshire Council Carbon Footprint 2020-21 to 2021-22



- 7.2. Scope 1 emissions have increased in FY2022 by 0.5 ktCO₂e due to an increase in corporate heating and transport fleet emissions. This is most likely due to a return to business as usual following the Covid pandemic.
- 7.3. Scope 2 emissions reduced to zero in FY 2021 due to the adoption of a zero-carbon electricity tariff and we have made efficiency savings on several buildings as part of our ongoing Carbon Reduction Programme for buildings.
- 7.4. There has been a 3% decrease in outsourced scope 3 emissions in FY2022. However, an improved reporting method is expected to improve the accuracy of the carbon reporting for commissioned services and will provide a more consistent framework to help service areas to improve their performance in future. The Climate Team is working closely with procurement and ICT to develop and implement improved reporting.
- 7.5. Carbon offsetting and capture activities have decreased by 2%, partly due to lower levels of domestic waste recycling under the contract operated by Veolia and the capture and storage of carbon on Council owned and managed land.




Commissioned Services

- 7.6. The pandemic has continued to have an impact on the delivery of council services, including outsourced services last year. Overall, schools maintained by the council had the highest emissions with 6.1 ktCO₂e, then leisure centres account for 2.6 ktCO₂e. The carbon emissions of several of Shropshire Council’s commissioned service areas are currently based on the overall

spending on each of the services, the majority of which has seen an increase in spending and subsequently reported carbon emissions in FY21/22.

8. Climate Action Plan: Themes and Example Projects

8.1. Shropshire Council's adopted Climate Change Strategy and Action Plan has three key themes, sub-divided into sub-themes:

	<p>1. Power Down (Carbon Footprint Reduction)</p> <ul style="list-style-type: none"> i. Low Carbon Transport ii. Buildings - Energy Efficiency improvements iii. Corporate governance iv. Supporting the transition to a low carbon economy
	<p>2. Power Up (Renewable Energy Generation and Storage)</p> <ul style="list-style-type: none"> i. Renewable Power ii. Low Carbon Heat
	<p>3. Biodiversity, Carbon Capture and Storage</p> <ul style="list-style-type: none"> i. Tree Planting ii. Land Management iii. Carbon Removal Technologies

8.2. A wide range of actions, projects and initiatives have been completed, are currently in progress or are planned for future years and these are summarised in Appendix 1. Some of these projects and initiatives are designed to improve Shropshire Council's corporate carbon performance, whilst others are designed to help Shropshire businesses and communities make the transition to a low carbon approach. Table 3 below provides some examples for each sub-theme:

Table 3: Example Carbon & Climate Projects (see Appendix 1 for full list)

Example Projects	Budget	Carbon Saving	Corporate /County-wide focus	Latest position
Power Down: Low Carbon Transport:				
EV Charging infrastructure	£2m	TBC	County-wide	<ul style="list-style-type: none"> • Current installation of 50 chargers and another 270 chargers planned during 2023 • EV Charging Infrastructure Strategy commissioned to support further installations
Power Down: Buildings - Energy Efficiency improvements				
Retrofit of SC building assets	£1m	108t CO2e/yr	Corporate	<ul style="list-style-type: none"> • Energy efficient lighting and heating and renewable energy improvements to 5 buildings • Work to prepare to identify and prioritise further improvements to around 90 Shropshire Council buildings
Power Down: Corporate governance				

Staff and member Carbon Literacy training	TBC	n/a	Corporate	<ul style="list-style-type: none"> Carbon Literacy Trust accredited training for Cabinet and Executive Directors completed. Continued roll out to other key staff during 2023
Power Down: Supporting the transition to a low carbon economy				
Business carbon advice service	£11k	TBC	County-wide	<ul style="list-style-type: none"> Grant support to Shropshire Climate Action to fund a free service to help Shropshire businesses to improve their Carbon Footprint
Power Up: Renewable Power				
Maesbury Road Solar Farm	£2.1m	TBC	Corporate	<ul style="list-style-type: none"> SC is developing a 2MW solar farm on a former landfill site to supply power direct power direct to local businesses
Power Up: Low Carbon Heat				
North Shrewsbury Heat network	£75k	TBC	Both	<ul style="list-style-type: none"> Government funding for a detailed feasibility study into piping waste heat from the Battlefield ERF to heat businesses or public buildings.
Biodiversity, Carbon Capture and storage: Tree Planting				
Community Tree Scheme	£32k	TBC	County-wide	<ul style="list-style-type: none"> Since 2010 around 96,000 individual trees have been planted and 70,000 trees for hedges have been planted.
Biodiversity, Carbon Capture and storage: Land Management				
Biochar Demonstrator Project	TBC	TBC	Both	<ul style="list-style-type: none"> Development of a pyrolysis plant to process wood from Council owned land to create biochar and energy

Key: ■ Completed; ■ In Progress; ■ Planned

9. Conclusions

- 9.1. The data presented in this report shows that there have been increases in both direct and indirect emissions. Overall, there has been a 1% decrease in gross emissions against a target of a 10% reduction each year. Whilst this is disappointing, it reflects the impact of increased spending on commissioned services across several service areas where carbon emissions are still being estimated using spend, rather than actual measurement. It is worth noting that Shropshire Council is currently one of only a few Councils to report the full extent of its carbon emissions, including indirect emissions. A number of projects and initiatives which will help to reduce corporate carbon emissions are still being developed and have yet to deliver planned savings.
- 9.2. This year's carbon reporting indicates that carbon savings generated from recycling and land management activities continue to mean that the Council's footprint is technically net-zero.

9.3. The Council’s corporate footprint represents only around 1% of Shropshire’s total carbon footprint, but the Council is able to influence as much as 33% of emissions through its regulatory and support functions. The Council is already supporting a wide range of projects and initiatives designed to support local businesses and communities to reduce their carbon emissions.

List of Background Papers (This MUST be completed for all reports, but does not include items containing exempt or confidential information)

Council 17th December 2020: Draft Climate Strategy and Action Plan:
<http://shropshire.gov.uk/committee-services/ieListDocuments.aspx?CId=125&MId=4137&Ver=4>

Cabinet Member (Portfolio Holder)

Ian Nellins, Portfolio Holder for Climate Change, Natural Assets & the Green Economy

Local Member

All

Appendices

Appendix 1: Climate Strategy 2022 Progress Report