

Council
14 October 2021

Report of the Director of Regulatory Services

Climate Change update and delivery plan

PURPOSE OF THE REPORT

To update Members on the actions taken following the approval of the Climate Change Strategy and Action Plan in October 2020 and to seek approval for a programme of works and delivery plan to progress towards the Council's target to achieve net zero carbon emissions by 2030.

RECOMMENDATIONS

1. That the updated 'Terms of Reference' for the Climate Change Working Group in paragraph 1.6 below be approved
2. That the emissions report for 2020-21 in Appendix 1 be approved
3. That the proposal to make an application to a future round of the Public Sector Decarbonisation Scheme to fund the energy efficiency and heat decarbonisation works to the Town Hall, Agricultural Business Centre and Northwood depot be approved
4. That a revenue budget of up to £30,000 to fund the engagement of a partner to carry out, as a first step, a detailed feasibility study into the technical and financial viability of ground mounted solar photovoltaic arrays on Council land be approved
5. That the recommendation to dispose of and not replace the civic car be approved
6. That the proposed approach to reporting and reducing scope 3 emissions be approved
7. That the trial of a 'climate change impact assessment tool' to be applied to all reports from November 2021 and reviewed in April 2022 be approved
8. That the proposed delivery plan in Appendix 4, specifically the activities in relation to supporting area wide emissions reductions be approved
9. That the revenue budget required to fund these projects, estimated at £11,700 for 2021/22, be approved,
10. That Council recognises and develops its role to support the residents and businesses of the Dales in reducing their carbon footprints.
11. That Council determines whether it wishes to support the Local Energy Bill and if so delegates authority to sign the relevant petition to the Director of Regulatory Services.

WARDS AFFECTED

All wards

STRATEGIC LINK

The Corporate Plan 2020-24 identified climate change as a key strategic priority under the theme 'Place - keeping the Derbyshire Dales clean green & safe'. The recommendations in this report support the specific aim to 'Achieve net zero carbon emissions from District Council operations by 2030' and 'Work with partners across the county and region to deliver this new goal through all relevant strategies'

1 BACKGROUND

1.1 In May 2019 the Council declared a Climate Emergency and pledged to make the authority carbon neutral by 2030. In October 2020 the Council unanimously approved a Climate Change Strategy and Action Plan which set out a potential pathway to achieving net zero in terms of direct emissions. The pathway to net zero, identified in the Strategy, is listed as:

- Energy efficiency improvements to existing facilities;
- Installation of biomass heating at Matlock Town Hall;
- Electrification of heating at 3 key facilities;
- Installation of roof mounted solar PV at 2 key facilities;
- Development of 2MW ground mounted solar PV;
- Electrification of the Council's vehicle fleet.

1.2 The plan outlined in broad terms the level of investment - around £2.7 million - that would be required to meet net zero and the period over which that investment would need to be made. Council noted the need to obtain funding to undertake the programme of works required and agreed to the recruitment of a Climate Change Officer on a 5-year fixed term contract

1.3 The report included a baseline measurement of Council scope 1, 2 and some scope 3 emissions for 2019-20 of 806.6t CO₂e. It was agreed that the Council's emissions be measured and reported on an ongoing annual basis.

1.4 In November 2020 the early requirements of the programme of works required to achieve net zero by 2030 were approved and built into the Capital Programme. As the capital programme considered at that time only ran until 2023/24, it did not include the significant investment required to develop the ground mounted solar arrays, which were initially scheduled for the year 2024/25.

1.5 In April 2021 a Climate Change Project Officer was appointed and the Climate Change Working Group has met twice with the newly appointed officer and the Director of Regulatory Services (June and August 2021) to provide support in assessing and delivering the recommendations of the Council's Climate Change Strategy and Action Plan

1.6 New terms of reference for the Climate Change Working Group, which clarify the future role of the Group, have been discussed. The current terms of reference read as follows: 'To make recommendations to Council addressing the issue of climate change, with the aim of addressing the climate change actions set out in the Corporate Plan 2020-24.' It is proposed that these are amended to read:

'To make recommendations to Council addressing the issue of climate change, with the aim of:

- *Addressing the climate change actions set out in the Corporate Plan 2020-24;*
- *Delivering the recommendations of the Council's Climate Change Strategy and Action Plan;*
- *Developing the Council's community actions in relation to climate change issues;*
- *Developing the Council's internal policies in relation to climate change and sustainability.'*

1.7 These terms of reference are considered to reflect the necessary focus on the Council's own operations and its community development role. If approved they should be formally entered into the Council's Constitution.

2 REPORT

2.1 Council 2020-21 scope 1, 2 and some scope 3 emissions were reported in June 2021 as shown in appendix 1. Measured emissions had fallen to 585.5t CO₂e because:

- Gas – overall usage in buildings decreased by 22%. Bakewell Pavilion was not heated in 2020/21
- Electricity – overall usage in buildings decreased by 16.5%. Bakewell Pavilion was not used in 2020/21. Several public toilets have been transferred out of Council ownership
- There has been further decarbonisation of the national grid - the CO₂e factor decreased by 9% (in comparison to 2020) due to a decrease in coal use in electricity generation and an increase in renewable generation
- Fleet vehicles – fuel usage fell by 37% due to reduced operational requirements during the pandemic
- Staff business travel (grey fleet) – fuel use decreased by 58% due to the pandemic
- More accurate data has been collected with fewer assumptions made

Energy efficiency improvements, decarbonisation of heating and roof mounted solar PV

2.2 The approved Climate Change Strategy and Action Plan identified that 'a detailed survey of DDDC's estate...should form part of any work on implementation of the strategy that follows'. These detailed surveys have now taken place for the main Council estate – the Town Hall (17.7% of total emissions), the ABC (13%) and the depot. Full reports are being prepared but the works identified in the surveys have been used to develop an application to Phase 3 of the Public Sector Decarbonisation Scheme (PSDS) which opened for applications on the 6th of October.

2.3 The purpose of this phase of the PSDS is to provide grant funding for decarbonisation projects in public buildings where the fossil fuel heating systems are at the end of their working lives and there is imminent need for replacement. The applicant is expected to contribute 'like for like' costs for the projects i.e. the cost of a new gas boiler or boilers. It is worth noting that no funding is as yet guaranteed (subject to the upcoming spending review); applicants will be informed that they have been successful from November onwards. The works must complete by 31st March 2023.

2.4 Officers have prepared and submitted an application to phase 3 of the PSDS. The application includes works which meet the specific scheme criteria in terms of boilers being at the end of their useful life and the cost to save a tonne of direct carbon over the lifetime of the project – known as the Carbon Cost Threshold.

2.5 The works included in the application for grant funding are:

Town Hall

- Boiler room insulation
- Lighting upgrade

- Window replacement in part of the building
- Replacement of some gas fired heating with two air source heat pumps

In respect of the Town Hall specifically the works included in this application represent the first stage of a wider programme to be set out in a longer term heat decarbonisation plan

ABC and Northwood Depot

- Replacement of existing gas fired heating with electric heating
- Solar PV panels

The total cost of the works is £906,550 of which it is proposed that the Council contributes £130,000 (the 'like for like' replacement cost of the gas heating systems at the three sites).

- 2.6 The predicted carbon emissions reduction upon completion of the three projects is 149.78t CO_{2e} annually. The project will result in a reduction in costs for the purchasing of gas, but increases in costs for electricity, as the new systems will be reliant on electricity for heating at the three sites.
- 2.7 In the 2021/22 capital programme there is £65,000 allocated for energy efficiency measures, £150,000 for decarbonisation of heat at the town hall, £55,000 for decarbonisation of heat at the ABC and depot and a further £467,000 for installation of roof solar PV installation.
- 2.8 The consultant has also assessed the eligibility of Wirksworth Leisure Centre, Bakewell Leisure Centre and the Arc in Matlock for the phase 3 of the PSDS. All are ineligible due either to the age of the heating system and/or the Carbon Cost Threshold criteria.

Development of 2MW ground mounted solar PV

- 2.9 The approved Climate Change Strategy and Action Plan estimated that electricity equivalent to the Council's annual requirement, plus the surplus required to offset residual emissions, could be self-generated with an investment of £1.6m in ground-mounted arrays. Five possible sites were identified and high-level estimates of capacity for generation of energy with costs and emissions savings were given 'subject to confirmation via a full feasibility study'.
- 2.10 Given the complex nature and high financial and reputational risk of a potential solar PV programme, it is critical that the Council engages the support of an expert partner at an early stage. This partner would, as a first step, carry out a review of all land assets for suitability for solar PV and battery storage, specifically: potential for planning consent, local grid capacity, ease of grid connection and indicative financial modelling. The cost of this feasibility study is estimated to be up to £30,000. Following this work a full report will be brought back to Council for approval of subsequent stages of work, to include mechanisms for financing and community engagement.
- 2.11 Officers have also had initial discussions with a Community Benefit Society in the Hope Valley who have interest in developing community energy projects in their local area. The Edge View, Stoney Middleton site (land behind Meadow Close off the A623) has been identified as one of three potential sites for a community energy ground solar PV project. The society are in the process of applying for funding from the Rural

Community Energy Fund to explore whether it would be feasible for them to build and own the installation on this site, with the possibility of the Council guaranteeing to purchase the electricity at an agreed price over a set period. Following feasibility and assuming suitability of the site, the Council would then need to make a decision about whether they wish to progress the project further.

- 2.12 The shift to locally generated sources of renewable energy through community energy schemes has the potential to provide huge benefits for people and the climate, ensuring a just transition to a low carbon future whilst protecting our landscapes and rural heritage.

Electrification of the Council's vehicle fleet

- 2.13 The approved Climate Change Strategy and Action Plan identified transport diesel from the Council fleet as the 'largest single emissions source, accounting for over a third of emissions' and recommended electrification up to HGV size. Since the plan was approved, the Council has purchased two plug in hybrid vehicles which are being used by pest control operatives. Emissions in 2020-21 fell by 37% in compared to 2019-20 but will be expected to rise again in 2021-22 as operations return to normal following the pandemic.
- 2.14 The current fleet programme is largely managed on a five-year renewal schedule. The commercial low emission vehicle market is evolving to meet the Government commitment made in November 2020 'that all new petrol and diesel cars and vans will be phased out by 2030'. The subsequent Government 'Transitioning to zero emission cars and vans: 2035 delivery plan' suggests that 'electric motoring will also become cheaper than petrol or diesel equivalents, with price parity expected in the mid-2020s but acknowledges that 'the van market is not as advanced as the car market'. It is therefore important that the Council times the transition to EVs carefully, with due consideration of the financial, operational as well as emissions implications.
- 2.15 From an operational point of view, it is also important that the fleet review ties in with the general Clean and Green service review, in order that any efficiencies identified in one can be taken account of in the other. As both of these pieces of work progress it will become possible to give more accurate estimates in terms of timings and costs.
- 2.16 In order to plan for the transition to low emission vehicles a fleet review in progress, with the support of Nottingham City Council – this is a free service offered as a package of regionally funded support. The fleet review will provide recommendations on the suitability of specific electric vehicles (EVs) for Council needs, the upfront and ongoing maintenance and running costs of EVs and critically a description of the charge point infrastructure required to support the transition. At the moment there is no money allocated in the capital programme for the installation of EV charging infrastructure.
- 2.17 Following completion of the review, a costed programme of transition vehicle by vehicle will come back to Council to include the installation of the required EV charging infrastructure.
- 2.18 In the immediate term and prior to the results of the fleet review an opportunity presents to consider the future of the civic car. This vehicle is due for renewal (as part of the ongoing 5 year schedule) in 2021-22. The vehicle is used primarily by the Civic Chairman to travel to civic functions as a representative of the Council. The vehicle is

a diesel with theoretical emissions of 149g CO₂/km. The vehicle has had low usage, even before the impacts of the pandemic, with an average annual mileage of 370 pre-pandemic, accounting for direct (scope 1) emissions of 0.17tCO_{2e} a year (during the pandemic the vehicle was used more to enable social distancing within the Clean and Green Team). Emissions reductions hierarchies suggest that the first stage in any project should be to 'reduce energy use'. Disposal of the vehicle without replacement would reduce these ongoing direct emissions plus negate the inherent 'carbon footprint' associated with the production of a new vehicle – the carbon footprint of making a car is immensely complex, with often global supply chains. Every stage of the process requires energy. A ballpark estimate suggests that producing a medium-sized new car costing £24,000 may generate more than 17t of CO_{2e} – almost as much as three years' worth of gas and electricity in the typical UK home.

2.19 The Civic Chairman would still need to travel to events, but the disposal of the vehicle could present an opportunity for consideration of other methods of travel to showcase the commitment of the Council to emissions reductions. If the use of a private car was necessary, where this was the only practical solution, then these emissions would be captured as indirect (scope 3 – grey fleet).

Scope 3 emissions

2.20 Scope 3 emissions are all other indirect emissions other than electricity. For the Council this means emissions that are a consequence of the Council's operations that occur at sources the Council does not own or control and that are not classed as Scope 2 emissions.

2.21 In 2019-20 and 2021-22 the Council reported some scope 3 emissions, specifically -

- electricity transmission and distribution (grid losses)
- well-to tank (upstream emissions) for electricity and all fuels
- grey fleet

2.22 Scope 3 emissions reporting is relatively new, and methodologies are still emerging to allow for measurement in many areas. Scope 3 emissions are difficult to account for, because the required data often lies with other organisations or individuals. As a result, there is a higher degree of estimation emissions reporting.

2.23 The approved Climate Change Strategy and Action Plan report acknowledged the omission of scope 3 emissions data associated with outsourced activities, including leisure centres and waste collection and recommended that the Council 'calculates and tracks emissions from outsourced activities in future'

2.24 As such emissions data has been sought from Freedom Leisure, who took over operational control of the centres in Ashbourne, Bakewell, Matlock and Wirksworth in 2018 (Appendix 2). The Council continues to work with Freedom Leisure to explore opportunities for future emissions reductions, including possible future applications to the PSDS.

2.25 A successful collaborative bid between the Council and Freedom Leisure has provided £734K of funding which is currently being used to install air source heat pumps, solar PV panels and a building energy management system at Ashbourne Leisure Centre. These works are predicted to deliver an annual CO_{2e} saving of 123.4 t CO_{2e} - around 56% of the current site emissions. The works are due to complete in February 2022.

- 2.26 No emissions data is currently available from Serco, who manage the Councils waste collection service. This subject has now been included in the regular contract conversations with Serco and they have committed to providing the necessary information.
- 2.27 High level screening of other key emissions categories to identify scope 3 emissions hotspots for future mitigation or reduction has been carried out. This approach identifies all possible sources of emissions and then undertakes a prioritisation activity to focus in on those emission sources where meaningful data can be reported, and where there is opportunity to manage and reduce emissions.
- 2.28 This approach is supported in the 'Greenhouse Gas Protocol Technical Guidance for calculating scope 3 emissions' which suggests (for statutory reporting) that companies 'identify which scope 3 activities are expected to have the most significant GHG emissions, offer the most significant GHG reduction opportunities and are most relevant to the company's business goals'
- 2.29 The Council's approach to measuring and reducing scope 3 emissions will therefore be:
- Work with partners to report and reduce emissions from Council leisure centres
 - Work with partners to report and reduce emissions from waste collection (generated through internal operations and through the outsourced waste contract)
 - Improve reporting on emissions from staff travel to include travelling to/from work and introduce a staff travel plan to reduce emissions
 - Focus on working with suppliers to improve the environmental impact, carbon emissions and sustainability of our procurement
 - Review the events strategy for events on Council owned land ensuring the Council is challenging event holders to reduce their climate and environmental impact
- 2.30 Appendix 4 contains further details.

Climate change impact assessment (CCIA)

- 2.31 As well as projects that tackle existing emissions it is equally as important that climate change impacts of new projects and activities are considered. In order to do this it is proposed that officers undertake a climate change impact assessment when developing or changing a policy or proposing a project or function to Council.
- 2.32 A CCIA is similar to a risk assessment, or an equalities impact assessment. It is a structured report showing:
- What impacts Council activities have on the climate and what we are doing to reduce these impacts
 - What impacts a changing climate may have on our services and functions and what actions we will take to become more resilient and less vulnerable

2.33 It works by using a excel-based decision support tool, completed by officers, which generates a climate impact score and a red amber green (RAG) rated graphic representation which can be attached to reports providing a quick visual summary (as shown in figure below in figure one). This tool has been developed by Chesterfield Borough Council and is being trialed by several other authorities.

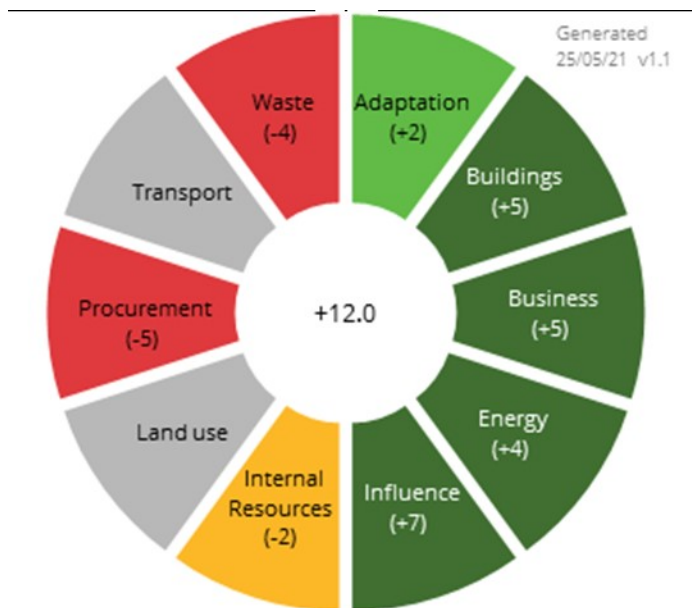


Figure 1 – example of the output from a CCIA

2.34 On a report the RAG graphic would be accompanied by a paragraph explaining the key costs and benefits associated with the project or activity in terms of the climate. It should acknowledge whether project or activity has a high social or economic value which could be perceived to outweigh the climate impacts. It should also include recommendations for what improvements could be made including an estimation of costs associated with mitigating any impacts.

2.35 The tool does not attempt to quantify the climate impact of the project or activity but instead provides a consistent method of assessment which should not prove too onerous for officers to complete and should be clear and transparent for Members and the public reading the reports.

2.36 Training on how to apply the tool will be provided for officers and ongoing support provided by the climate change officer through the trial period.

Area emissions and the community

2.37 The approved 'Climate Change Strategy and Action Plan suggested that 'as important as the Council's own net zero drive is – both as a GHG reduction effort in itself, and as an exemplar and statement of intent – the Council also needs to consider how it can help address its own indirect emissions, plus the broader emissions in its geographical area'

2.38 To stay within the targets set out in the Paris Climate Change Agreement, the whole of the Derbyshire Dales has a carbon emissions budget of 3.6 million tonnes for the

period of 2020 to 2100. At 2017 emission levels, Derbyshire Dales would use this entire budget within 7 years from 2020. This budget comes from a report by the University of Manchester and the Tyndall Centre. The UK budget to meet the Paris Agreement has been split between regions to arrive at the figure.

2.39 The SCATTER tool identifies the Derbyshire Dales' carbon footprint using a location based approach. Total reported emissions (including optional scope 3) in 2018 (latest available data) were **907,765t CO2e**. These can be broken down as follows:

Summary Greenhouse Gas emissions (tonnes CO2e)		Scope 1	Scope 2	Scope 3	
Sector	Sub-sector	Total tCO2e	Total tCO2e	Total tCO2e	Total tCO2e
		DIRECT	INDIRECT	OTHER	TOTAL
Stationary energy	Residential buildings	93,289.66	39,527.12	21,398.12	154,214.90
	Commercial buildings & facilities	17,788.76	30,611.69	7,494.26	55,894.72
	Institutional buildings & facilities	14,049.90	6,646.61	3,022.67	23,719.19
	Industrial buildings & facilities	90,074.66	37,366.89	24,594.90	152,036.46
	Agriculture	23,561.17	4.36	5,556.56	29,122.10
	Fugitive emissions	10,171.47	-	NE	10,171.47
Transportation	On-road	201,625.49	IE	IE	201,625.49
	Rail	1,316.26	IE	298.86	1,615.12
	Waterborne navigation	NO	IE	IE	-
	Aviation	NO	IE	37,073.64	37,073.64
	Off-road	2,016.25	IE	NE	2,016.25
Waste	Solid waste disposal	22,959.53	-	IE	22,959.53
	Biological treatment	NO	-	IE	-
	Incineration and open burning	NO	-	IE	-
	Wastewater treatment and discharge	4,236.96	-	NO	4,236.96
IPPU	Industrial process	32,115.11	-	NE	32,115.11
	Industrial product use	0.00	-	NE	0.00
AFOLU	Livestock	217,622.92	-	NE	217,622.92
	Land use	- 36,670.20	-	NE	- 36,670.20
	Other AFOLU	NE	-	NE	-
Generation of grid-supplied energy	Electricity-only generation	NO	-	NO	-
	CHP generation	NO	-	NO	-
	Heat/cold generation	NO	-	NO	-
	Local renewable generation	11.35	NO	NO	11.35

Notation keys: NO: Not Occurring, IE: Integrated Elsewhere, NE: Not Estimated, C: Confidential

Colour keys: Green: Required, Blue: Optional, Grey: Not Applicable

2.40 This data provides the Council with a direction for action and influence around key themes so that efforts can be focused where emissions reductions are likely to have the most impact. Specific actions are detailed in the delivery plan.

Climate change and environment delivery plan

2.41 The plan in Appendix 3 takes the recommendations approved as part of the Climate Change Strategy and Action Plan and sets out in detail the delivery of those actions being undertaken to meet the Councils 2019 pledge to 'Make Derbyshire Dales District Council carbon neutral by 2030'. It also provides a transparent, comprehensive overview of all of the Councils planned actions in terms of supporting area wide emissions reductions.

2.42 The plan also includes actions being undertaken in respect of improving natural capital, acknowledging that climate change is a significant cause of biodiversity loss and increased biodiversity can in turn support efforts to reduce the effects of climate

change. Conserved or restored habitats can remove CO2 from the atmosphere as well as reducing the disastrous impacts of climate change such as flooding and storm surges.

- 2.43 The delivery plan is intended to be an evolving document, to be regularly updated as projects progress, timings become clearer and costs are established. The plan will form the basis of ongoing updates to Council.

The Local Energy Bill

- 2.44 The District Council has been asked to lend its support to a campaign that is being led by a not for profit organisation called 'Power for the People' to introduce a Local Energy Bill. If made law, this Bill would empower community energy groups to start up and sell their clean electricity to local people. It is intended that revenue generated through these operations would be kept local and would mean more investment in local services, greater energy security, more local skilled jobs and a boost for clean energy generation across the UK. More detail on the Bill is available in a special briefing for councillors at <https://powerforpeople.org.uk/local-electricity-bill-briefing-for-councillors>
- 2.45 The Bill has cross party support at Westminster and the support of many other councils at all levels. If the District Council also wishes to support the Bill that support would take the form of signing a petition and committing to requesting that our local MP backed the Bill.

3 RISK ASSESSMENT

3.1 Legal

The Council's powers to deal with climate change are contained in the general well-being powers contained in the Local Government Act 2000. Where there is not a statutory requirement to undertake climate change work on a Local Government level however it assists in meeting the governmental target covered by the Climate Change Act 2018 to be carbon neutral by 2050. The legal risk is therefore low.

3.2 Financial

The estimated cost of the feasibility study for the ground mounted solar PV arrays is £30,000.

The estimated cost of funding activities in relation to supporting area wide emissions reductions is £11,700.

As these are one-off revenue costs, the use of the General Reserve as a source of financing is consistent with the criteria set out in the Council's Medium Term Financial Strategy. The general reserve currently has a balance of £963,412.

The disposal of the civic car would result in a relatively small receipt, which would be credited to the revenue account. Given the current low use of the vehicle, revenue savings would not be significant.

The overall financial risk is assessed as medium.

4 OTHER CONSIDERATIONS

- 4.1 In preparing this report, the relevance of the following factors has also been considered: prevention of crime and disorder, equalities, environmental, climate change, health, human rights, personnel and property.

5 CONTACT INFORMATION

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6 BACKGROUND PAPERS

- 6.1 Climate Change Strategy and Action Plan – 16/9/20

7 ATTACHMENTS

Appendix 1 – 2020-21 Emissions report
Appendix 2 – Leisure centre emissions report 2020-21
Appendix 3 – Climate change and environment delivery plan