



Report to:	Climate and Environment Advisory Committee 06 June 2023
Lead Cabinet Member:	Cllr Brian Milnes
Lead Officer:	Bode Esan

Zero Carbon and Doubling Nature Action Plan Annual Review 2022-23

Executive Summary

1. The Zero Carbon and Doubling Nature Action Plan 2020-25 (ZCDNAP) sets out actions in support of achieving Net Zero and Doubling Nature in South Cambridgeshire by 2050. This report provides an overview of progress with a detailed update and proposed revisions and new actions provided at Appendix 1.
2. The report provides the latest government data on CO₂ emissions from South Cambridgeshire. Data on key indicators for nature is not currently available at local authority level.
3. Action in the ZCDNAP is largely on track, as can be seen in the table below:

	Objective	Number of actions including completed actions	Red stalled	Amber delayed	Green On track	Completed
1	Reduce consumption of resources and waste	4	-	-	1	3
2	Decarbonise planning and land use	2	-	-	2	-
3	Decarbonise transport	19	-	2	12	5
4	Decarbonise housing and other buildings	14	-	3	6	5
5	Decarbonise business and industry	6	-	1	4	1
6	Decarbonise food systems and agriculture	2	-	-	2	-
7	Deliver training, education, communications and advocacy	7	-	-	5	2
8	Respond to the ecological emergency	12	-	-	10	2
	TOTAL	66	-	7	40	19

4. The Council has a target to reduce greenhouse gases on its estate and operations by 45% by 2025-26 and 75% by 2030-31 on a 2018-19 baseline. The Council's Greenhouse Gas accounts for 2022-23 are included at Appendix 2 and show a reduction of 25% on the 2018-19 baseline (net emissions) in 2022-23. Plans are underway to switch a proportion of the refuse vehicle fleet from diesel to hydrogenated vegetable oil (HVO). Being plant-based, HVO is almost zero carbon for the purposes of standard greenhouse gas emissions reporting. Assuming a decision to use HVO in place of diesel in sufficient volume, this will allow the Council's greenhouse gas emissions reduction targets to be met.
5. Key corporate decarbonisation project highlights and details of Zero Carbon Communities grant funded community projects are provided at Appendices 3 and 4 respectively.
6. The ZCDNAP is a live document reviewed annually as opportunities for action emerge. Proposed revisions to actions and new actions are included after each section.

Recommendations

7. The committee are recommended to:
 - Note progress on the ZCDNAP 2020-25
 - Support proposed revisions to actions and new actions

Reasons for Recommendations

8. The progress update has been brought to CEAC to allow the committee to fulfil its role advising Cabinet on policies, actions and resources required to deliver on the Council's climate change and environmental ambitions and providing updates on progress towards achieving agreed targets and outcomes.

Details

Background

9. Following adoption of Zero Carbon and Doubling Nature strategies in May 2020 and February 2021 respectively, a combined cross-Council action plan to deliver both strategies was received and noted by CEAC in July 2021; an end of year update for this plan was provided in June 2022. This plan was reviewed, and a revised and restructured plan presented to CEAC in December 2022. This report presents the end of year update for this plan.

Council estate and operations

10. Council emissions account for only >0.2% of district emissions. Although relatively small they provide an important opportunity to lead by example.
11. In its Zero Carbon Strategy, adopted in 2020, the Council committed to targets to reduce carbon emissions from its estate and operations (not including Council housing) by 45% by 2025 and 75% by 2030 on a 2018-19 baseline. For the purposes of reporting against our reduction targets, we take this to mean net greenhouse gas emissions, that is
 - direct emissions, (Scope 1; for the Council this is from gas boilers and vehicle fuel)
 - indirect emissions from grid electricity used on the Council's estate and operations, using a market-based conversion factor (Scope 2; using a market-based conversion factor allows us to where the Council purchases grid electricity on a green tariff, this is reported as zero emissions)
 - emissions from business travel in vehicles not owned by the Council (these are classified in standard protocols as Scope 3; they are currently the only Scope 3 emissions included in the Council's accounts. From 2024-25, we intend to extend Scope 3 reporting to include major service contracts).

12. With the exception of the market-based conversion factor for grid electricity, greenhouse gas emissions are calculated using conversion factors supplied and updated annually by the government into units of kilogrammes of carbon dioxide equivalence (kg CO₂e). This provides an indication of global warming potential over 100 years.
13. The Council's reduction targets are absolute; assuming 1.5% annual population growth between 2020 and 2030 (Cambridgeshire Insight projection for Cambridgeshire and Peterborough), per capita reduction targets, given current and projected population growth in the district, are respectively, 49% and 87%.
14. The Council's gross greenhouse gas emissions for 2022-23 totalled 1575 t CO₂e. The gross figure includes location-based grid electricity emissions, that is emissions reported as if electricity were purchased on a standard tariff. The full statement of the 2022-23 SCDC annual GHG emissions accounts is provided at Appendix 2.
15. Figure 1 below shows how greenhouse gas emissions from the various sources which make up the Council's gross greenhouse gas emissions have changed in the period 2018-19 to 2022-23.

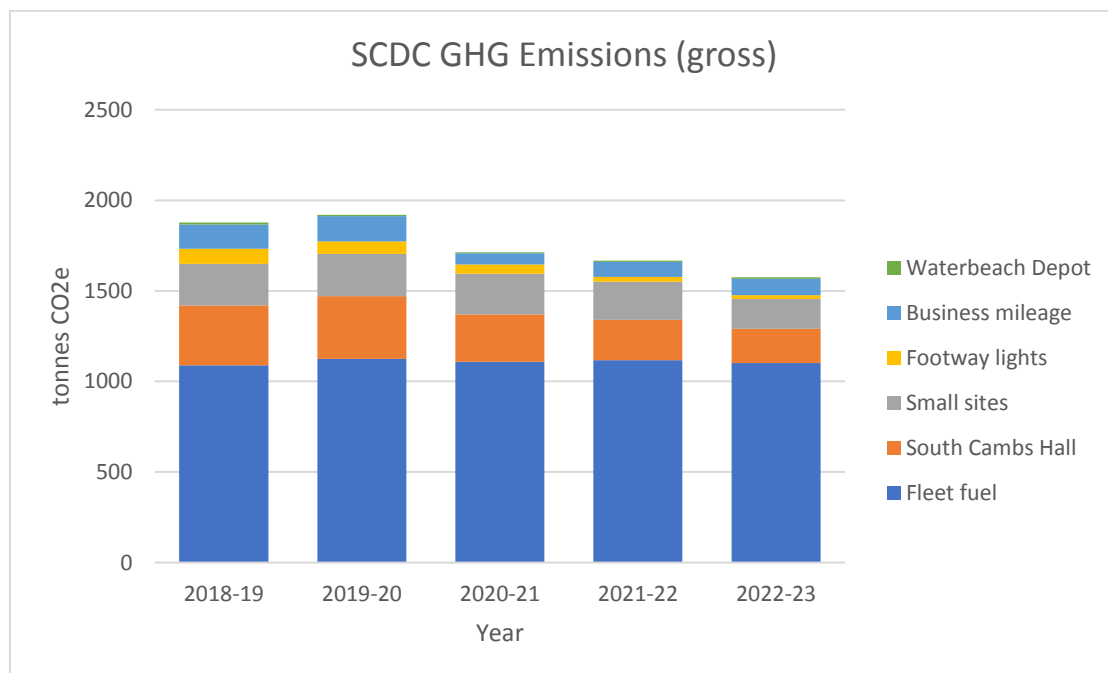


Figure 1

16. These sources are listed below with the proportion of total greenhouse gas emissions in 2022-23 provided in brackets.

- fleet vehicles - mainly bin lorries (70%)
- South Cambs Hall (12%)
- Small sites - the Council is responsible for power and heating on 85 'small sites', all of which fall under the Housing Revenue Account. These are mainly communal areas on housing estates including stairwells and sheltered housing scheme communal rooms; (10%)
- business mileage (6%)
- streetlights - the Council owns a small proportion of streetlights in the District; most are owned by the county council (1%)
- Waterbeach depot (1%)

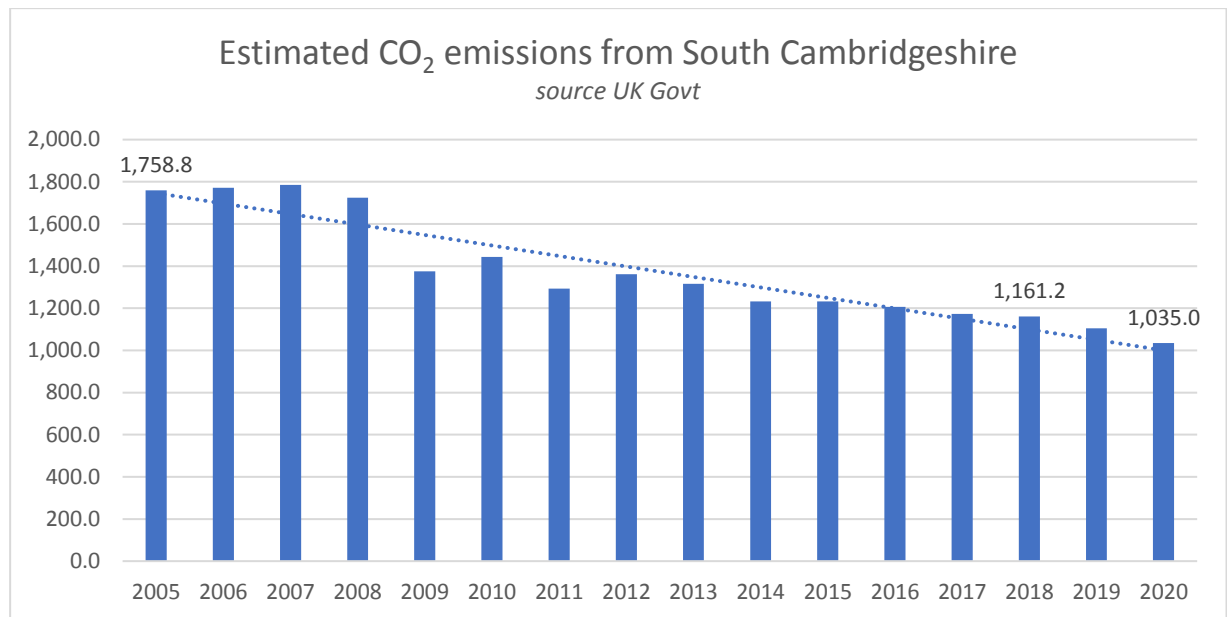
17. Total greenhouse gas emissions (gross) fell by 16% from 1878 tCO₂e in 2018-19 to 1575tCO₂e in 2022-23. Part of this was due to a fall in carbon intensity of grid electricity which reduced by 45% over the period 2017 – 2022. Other significant factors include switching of Council-owned streetlights to LEDs and installation of energy saving improvements especially heating controls in communal rooms.

South Cambridgeshire District Greenhouse Gas Emissions

18. The government started publishing data at local authority level on all greenhouse gas emissions in 2020. Prior to that and since 2005 it published estimated emissions of carbon dioxide, which makes up around 80% of UK emissions and almost all emissions from the use of fossil fuel. The data is broken down according to sector and published at the end of June in the following year, with the most recent data from 2020.

19. Chart 3 shows how total CO₂ emissions from South Cambridgeshire have changed in the period 2005 to 2020. The proportion of total CO₂ emissions in 2020 is shown in brackets below.

- Transport (45%)
- Industry, Commercial, Public Sector and Agriculture (26%)
- Domestic (22%)
- Land Use/Land Use Change (7%)
- Waste Management (>1%)



20. Total CO₂ in 2020 from South Cambridgeshire was 1,035,000 t. This was a reduction of 41% on 2005 and 6% in relation to the previous year, 2019. Much of this reduction has been due to reductions in the carbon intensity of the electricity grid.

The Council's ZCDNAP

21. The ZCDNAP sections correspond loosely with the sectors used in the government's CO₂ emissions reporting. Taking the ZCDNAP sections in turn,

Section 1: Reduce consumption of resources and waste

22. This section of the ZCDNAP comprises four actions. Three of these involved changes within the Council, that is, reviewing and improving recycling facilities, eliminating the use of single-use plastic and moving to paper-free Council and committee meetings, all of which are now completed.

23. The fourth action was to develop and implement a strategy to reduce consumption of resources and waste in the district. This is a major ongoing workstream, reported to CEAC at the 6 December 2022 meeting. Revised wording is proposed to bring this action into alignment with the corresponding action in the Corporate Business Plan.

Section 2: Decarbonise planning and land use

24. The Council is committed to supporting Net Zero through the development of planning policy. Since planning is not just concerned with buildings themselves but place making it has the potential to be a powerful tool in the response to the climate emergency.

25. The two actions in this section are to progress planning policies related to Net Zero and wider climate change policies as part of the North East Cambridge Area Action Plan and Greater Cambridge Local Plan.
26. The First Proposals for the Greater Cambridge Local Plan were informed by an extensive Net Zero study. The first proposals include that development is almost entirely located in areas which minimise travel needs. Seven policies are proposed specifically to address climate change, covering Net Zero new buildings, water efficiency in new buildings, design for a changing climate including mitigation for flooding, renewable energy projects and infrastructure and supporting land-based carbon sequestration. Following consultation on the First Proposals, officers are further developing the policies ahead of consultation on the draft Greater Cambridge Local Plan in autumn 2023.
27. The North East Cambridge draft Area Action Plan includes a Net Zero carbon buildings policy as well as wider policies related to the role of new development in responding to the climate emergency. The Area Action Plan has been prepared on the basis that the Cambridge Wastewater Treatment Plant, currently located in the Northeast Cambridge area, will be relocated off-site. The Area Action Plan process is now paused awaiting a decision on the separate Development Consent Order process for the relocation of this plant. Public consultation on the proposals is expected to take place in 2024.

Section 3: Decarbonise transport

28. Due to the impact of Covid on travel, 2020 (the most recent year for which estimated data is available) cannot be viewed as typical. Transport CO₂ emissions from South Cambridgeshire were down 9% on the previous year at 480 kt CO₂. This represented 45% of total CO₂ emissions from South Cambridgeshire for 2020. Government data for 2020 includes a breakdown as follows:
- A roads 288 (60%)
 - Motorways 90 (19%)
 - Minor roads 91 (19%)
 - Diesel railways and 'other' 11 (2%)
29. The percentage of total Transport CO₂ emissions is shown in brackets. In 2020 A roads accounted for a slightly higher proportion, and motorways and minor roads slightly a slightly lower proportion than in 2019.
30. Nationally emissions from surface transport have been broadly flat falling just 1% between 2009 and 2019. They need to fall by 90% by 2050 to meet the economy-wide Net Zero target. The government's Decarbonisation Plan was published by the Department for Transport in July 2021. On top of the commitment to ban the sale of new petrol and diesel cars by 2030, the plan includes measures to ban the sale of new large diesel trucks by 2040 with smaller diesel trucks banned from 2035.

31. Statutory responsibility for transport planning in the whole of Cambridgeshire lies with Cambridgeshire County Council but there are several areas where the District Council can take action to support the reduction of emissions from transport. The ZCDNAP includes seven sub-sections under Transport covering the Council's fleet, business mileage, EV charging, working with partners on sustainable transport and travel strategy, taxi licensing, community sustainable travel initiatives and planning policy.
32. The Cambridgeshire and Peterborough Combined Authority (CPCA) Climate Action Plan reports that four strategies are being progressed that will look to reduce travel and provide the infrastructure required to enable low carbon transport. These are due to be approved by Summer 2023 and are the Local Transport Connectivity Plan, EV Charging Infrastructure Strategy, Alternative Fuel Strategy and Bus Service Improvement Plan. Additional projects also progressing are: a Mayoral precept to support the bus network; the Zebra project to replace 10% of buses with electric buses; and ongoing consultation by Greater Cambridge Partnership on a Sustainable Travel Zone in Cambridge.

Section 4: Decarbonise housing and other buildings

33. Domestic emissions accounted for 22% of CO₂ emissions from South Cambridgeshire in 2020, of which 25% from electricity, 52% from gas and 23% from other, that is heating oil, solid fuel etc. According to the government's advisors, the Climate Change Committee, the UK's legally binding climate change targets will not be met without near complete elimination of greenhouse gas emissions from buildings.
34. The ZCDNAP groups actions to reduce carbon emissions from all types of buildings together in three sections – Council buildings, Helping house-holders decarbonise their homes by improving home energy efficiency and moving to low carbon heating, and Design and construction. Action to upgrade Council owned streetlights is included with action on Council buildings.

Council housing

35. There are around 60,000 dwellings in South Cambridgeshire with 5,295 of these in the Council's ownership and management including 1090 sheltered homes. There are a further 475 leasehold properties to which management services are provided. Added together these make up around 10% of total homes within the district and mean that the Council is by far the largest provider of rented accommodation, with Registered Providers contributing a further 5%. The Council's rented stock is predominantly between 40 and 100 years old with only 3% having been built since 2002.
36. The approach to decarbonising the Council's housing is set out in the Housing Revenue Account Asset Management Strategy 2021-26, approved February 2022. It sets out 9 priorities, of which Priority C is to have a long term strategy and programme in place to improve the thermal efficiency of homes and reduce their carbon emissions with the aim of being carbon neutral by 2050.

37. The Council commissioned a study in 2019 by an external consultant on how best to meet this aim, which recommended a three stage project whilst ensuring that overall costs to tenants are kept to a minimum:

- Stage 1 – reduce energy demand in dwellings by improving the level of insulation, including external walls and ground floors
- Stage 2 – install alternative heating systems
- Stage 3 – eliminate residual carbon through installation of solar panels or offsetting. If the grid has been decarbonised in line with government plans then this stage will not be necessary.

38. Following a successful bid to the government's Social Housing Decarbonisation Fund (SHDF) for £1.7 M, a project is being mobilised to deliver over 600 efficiency measures to bring 300 properties up to EPC level C over the next two years. A limited number of solar panel installations are included in the mix, brought forwards from the original plan and included where they will most help with cost-of-living challenges. The SHDF funding does not cover all properties. Assessments of the work needed to bring all remaining properties up to at least EPC level C will be made following the results of the Stock Condition Survey in early 2024.

39. Earlier in the year, taking advantage of government funding from the Green Homes Grant Local Authority Delivery scheme, LAD1b, solar PV was installed to 15 Council properties.

40. Two further actions concern Housing Revenue Account properties. Work will start in the coming months to install solar PV to Elm Court sheltered housing scheme in Over and remote heating controls have been fitted to all communal rooms on sheltered housing schemes. Assessments to determine potential carbon reduction measures from all communal rooms on sheltered housing schemes are being carried out.

Streetlighting

41. Work to install LED fittings in all Council owned streetlights has now been completed.

Private housing

42. Around 85% of domestic properties in South Cambs are privately owned. There are various obstacles to householders improving energy efficiency/decarbonising their homes including cost and inconvenience of arranging work, and lack of skilled and trusted perceived lack of skilled and trusted tradespeople. The Council is working to overcome these through partnership initiatives from the Cambridgeshire Energy Retrofit Partnership, (CERP).

43. Solar Together Cambridgeshire, a group buying scheme for solar panels and batteries, was set up by CERP in 2020. The scheme is run by iChoosr,

specialists in setting up group buying schemes. Householders are invited to register their interest in the scheme by a deadline after which iChoosr run a reverse auction to select one or more installer companies to deliver the work. A targeted mailshot is sent to households most likely to be interested. The scheme has run twice with 416 installations completed in South Cambridgeshire in the first round. At 4th May 389 installations had been completed in South Cambridgeshire in the second round with approximately 230 still to complete.

44. CERP has also bid successfully for government funding for home energy improvements for low income households. The first of these schemes, the Green Homes Grant Local Authority Delivery 1b scheme, completed in June 2022, delivering work to a total of 152 homes across Cambridgeshire including 15 in South Cambs (solar panels to Council owned properties).
45. The second scheme, Sustainable Warmth, is in the final stages of delivery. Sustainable Warmth comprised the Home Upgrade Grant (HUG1) funding for off gas properties and Green Homes Grant Local Authority Delivery (LAD3) funding for on gas properties. Final figures are not yet available. It is likely that work will have been completed on around 150 properties in Cambridgeshire including 28 in South Cambridgeshire.
46. Both schemes have under delivered due to lack of installer capacity, (which has affected delivery of government schemes across the country). To address this issue, CERP has procured a framework of five installer companies to operate under the local authority branding Action on Energy Cambridgeshire.
47. The framework will deliver a third government funded scheme, HUG2. As with HUG1, this provides funding for work to poor performing homes occupied by low income households in off-gas areas. It will be delivered by installer companies on the Action on Energy framework over the next two years.
48. The Action on Energy framework is also intended to provide a trusted route for self-funding customers. Householders can contact any of the five companies signed up to the framework with confidence that they have been through the Councils' procurement process. As and when new schemes such as the Great British Insulation scheme come on line, householders will be able to access funding and get work delivered using the framework companies. Details are on the [Action on Energy Cambridgeshire](#) website.

Section 5: Decarbonise business and industry

49. Business, industry, the public sector and agriculture accounted for 26% of CO₂ emissions from South Cambridgeshire in 2020. The Council's approach has been to signpost businesses to various sources of information on all aspects of sustainability, with further information and networking opportunities provided through a series of Green Business webinars.

50. Funding allocations from the government's UK Shared Prosperity Fund and complementary Rural England Prosperity Fund, launched last year, provide further opportunities for supporting businesses to decarbonise and improve other aspects of environmental sustainability. Plans are being finalised for a £170,000 Green Business Grant scheme, which aims to provide grants of up to £5,000 to around 50 businesses over two years. Larger grants for green measures will be available through other schemes currently in development.

Section 6: Decarbonise food systems and agriculture

51. The Council's current and planned action in this area was outlined in a report to CEAC's 4 April meeting. This set out various ways the Council currently encourages sustainable food initiatives covering support for allotments and community food growing initiatives through planning policy and grants; supporting a local food economy with help for community markets; influencing food behaviour, as with the Love Food Hate Waste campaigns and through Zero Carbon Communities grant funded projects promoting climate-friendly diets.
52. A key next step is to explore local appetite for a cross-sector food partnership to lead and co-ordinate action to strengthen the local food economy in South Cambridgeshire.

Section 7: Deliver training, education, communications, and advocacy and engage communities

53. Actions in this section are around increasing the capacity for action through training, education, communications, advocacy and engagement, both internally at the Council and in the local and wider community.
54. An important development during 2022-23 was the Council's Carbon Literacy training course for staff. This is an in depth seven hour course taking place over two sessions and accredited by the Carbon Literacy Trust. Two cohorts of staff have taken the course with further courses planned on a quarterly basis.
55. The established Zero Carbon Communities grant scheme provided grants for 13 projects in 2022, made up of five focussed on community engagement including a second round of the successful Net Zero Now programme to train and recruit climate leaders and two sustainable food projects and eight focussed on carbon reduction including solar panels and insulation projects to village halls. A summary of progress on the Zero Carbon Communities grant scheme is included at Appendix 4.

Section 8: Respond to the ecological emergency

56. The Council uses a wide range of levers to increase and/or enhance land managed for nature in South Cambridgeshire. A report detailing these was provided to CEAC in April.

Proposed new or revised actions

57. The action plan at Appendix 1 proposes five new or revised actions to capture work not previously included in the action plan or streamline reporting with the Corporate Business Plan. These are:

- Revise action 1.1 to identify and implement strategies for overall waste/materials reduction, decreased residual waste and increased recycling.
- Add action - working through Cambridgeshire Energy Retrofit Partnership, deliver government funded HUG2 scheme by Q4 2024-25
- Replace actions 5.2, 5.3 and 5.5 with 5.2 Provide advice and resources to help businesses understand what they can do to become greener and 5.3 Identify funding opportunities to help businesses meet economic challenges specifically to help businesses to be greener.
- Subsume Action 7.2 (Support staff to understand and engage with the climate emergency) under 7.3 (Deliver Carbon Literacy Training to staff and Members)
- Add action to award grants of up to £15,000 to at least nine community projects to reduce carbon and engage communities on climate change through the Zero Carbon Communities grant scheme Add action to promote gardening for nature to our residents to increase awareness and better enable residents to preserve and enhance nature within their own spheres.

58. An additional section to capture the Council's work on adaptation and resilience to climate change will be added following the report to CEAC on climate risks and adaptation, scheduled for the 12 October meeting.

59. Next year's review of the ZCDNAP will be provided a little later in the year to allow inclusion of the most recent local authority greenhouse gas emissions data. (Annual data is published 18 months in arrears in late June).

Implications

60. In the writing of this report, taking into account financial, legal, staffing, risk, equality and diversity, climate change, and any other key issues, the following implications have been considered: -

Financial

61. Financial resources for the actions in the Zero Carbon and Doubling Nature Action Plan have been assigned through the Council's usual budgetary processes.

Staffing

62. Staffing for the actions in the Zero Carbon and Doubling Nature Action Plan have been assigned through the Council's usual processes.

Climate Change

63. The action plan sets out the actions the Council is taking to mitigate climate change.

Consultation responses

64. The action plan has been the subject of internal consultation.

Alignment with Council Priority Areas

Being green to our core

65. The action plan sets out the actions the Council is taking to mitigate climate change and double nature.

Background Papers

Doubling Nature in South Cambridgeshire Progress Update to CEAC, 4 April 2023

<http://moderngov/documents/s130881/Doubling%20Nature%20CEAC%20Report%20March%202023%20V.2-bm-approved.pdf>

Sustainable Food: supporting initiatives in South Cambridgeshire report to CEAC, 4 April 2023

http://moderngov/documents/s130882/230404%20CEAC%20Sustainable%20Food%20Report%20BM_BE%20signed.pdf

Zero Carbon and Doubling Nature Action Plan Progress Update, 6 December 2022

<http://moderngov/documents/s129558/221206%20ZCDNAP%20update%20to%20CEACv2.pdf>

Zero Carbon Strategy report to Full Council, 21 May 2020

<https://scamb.moderngov.co.uk/documents/s116330/200521%20Zero%20Carbon%20Strategy%20Report%20to%20Council%20FINAL.pdf>

Doubling Nature Strategy report to Cabinet, 03 February 2021

<https://scamb.moderngov.co.uk/documents/s120629/210203%20Cabinet%20Doubling%20Nature%20Strategy.pdf>

Appendices

1. Zero Carbon and Doubling Nature Action Plan Progress Update
2. SCDC Greenhouse gas emissions accounts 2022-23
3. Key corporate decarbonisation projects
4. Zero Carbon Communities grant scheme report

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