

Divisions Affected - ALL

PLACE OVERVIEW AND SCRUTINY COMMITTEE (2 FEBRUARY 2022)

CLIMATE CHANGE AND CARBON REDUCTION

Report by Bill Cotton, Corporate Director for Environment and Place

RECOMMENDATION

1. The Place Overview and Scrutiny Committee is recommended:
 - a. To note Oxfordshire County Council's climate change and carbon reduction strategies, key targets, performance and areas for development.
 - b. To note the Greenhouse Gas Emissions Report for 2020/21 (Appendix 1).

Introduction

2. The Place Overview and Scrutiny Committee requested a report on Oxfordshire County Council's climate change and carbon reduction strategies (including transport, energy, waste, council buildings and infrastructure, scope 1, 2 and 3 emissions), key targets, performance and areas for development.
3. The Committee requested also:
 - a. A summary of how the council is aiming to deliver its number 1 priority – put action to address climate action at the heart of our work
 - b. Key developments for 2022/23.
 - c. A summary of the main legislative background for the council's strategies and the statutory duties of the council and its partners
 - d. An update on the council's greenhouse gas emissions in 2020/21 and progress towards the target of net zero by 2030
 - e. An update on how the council is working towards the recommendations of the 'Pathways to Zero Carbon Oxfordshire' report

Report Details

How the council is putting climate action at the heart of our work

4. In response to the climate emergency, Oxfordshire County Council has committed to:
 - a. transform our organisation to be carbon neutral by 2030
 - b. work within our wider sphere of influence to enable a net-zero Oxfordshire by 2050 and reduce emissions by 50% by 2030 (from a 2008 baseline).
5. A Climate Action Framework has been developed to guide the mobilisation of a cross-organisational Climate Action Programme covering three areas:
 - a. **Becoming climate active council:** aligning key corporate strategies and policies with climate action commitments, integrating climate considerations into business planning and decision making, equipping staff and leadership to take action.
 - b. **Operating at net-zero carbon by 2030:** developing action plans to reduce energy usage and carbon emissions across estate, fleet, highway assets, and staff mileage; mobilising adequate resourcing to deliver such plans; supporting schools to deliver against their climate targets; working with suppliers to minimise the carbon emissions impact of our purchasing.
 - c. **Enabling a zero-carbon future for Oxfordshire:** leveraging the council's influence, strategic policy roles and partnerships to accelerate the transition to zero-carbon across transport and connectivity, smart local energy systems, energy efficient homes, natural carbon management, and waste reduction.
6. In 2021/22 the Climate Action Programme's annual delivery plan contained 20 workstreams. The delivery plan does not include the full breadth of activity on climate action across the council but captures workstreams identified as important for mobilising our climate action work or for delivery in this year. The programme is reported to CEDR and Cabinet six monthly and is included in the monthly performance reporting.
7. In response to the Fair Deal Alliance's prioritisation of climate action, some Programme workstreams were accelerated and new workstreams added. For example:
 - a. A new Climate Impact Assessment tool has been developed to reflect the new administration's priorities around nature, biodiversity, adaptation, resilience, circular economy, green jobs and innovation, health and wellbeing, equality, and participation. Climate Impact Assessments are required to accompany reports to the Senior Leadership Team (CEDR) and

Cabinet proposing a new policy, procedure, service change, project or programme.

- b. 'Carbon Literacy' training is now being offered to staff, leadership and councillors.
- c. The streetlight LED conversion programme was reshaped to bring forward an additional 25% carbon savings this year.
- d. Area-based transport action plans are being developed with climate action at their heart.
- e. Introduction of a 20mph limit which will support a shift to active travel.

Key developments for 2022/23

- 8. Next year, work will continue to deliver the strategies, plans, tools and projects that will drive the council's response to the climate and ecological emergencies, within its estate and operations and across the county.

Carbon Management Plan 2022-2025

- 9. A carbon management plan for the council's own estate net-zero target is currently in development. This plan covers council buildings, fleet, highway assets (e.g., streetlighting and traffic signals) and staff business travel. It will identify an interim target for 2024/25 on route to 2030 and a project pipeline.
- 10. Given the uncertainty around corporate assets due to changes in work practices (e.g., adoption of an agile work policy) and implementation of an integrated fleet management system, the plan will evolve over the next 12-18 months, with the initial version being presented to Cabinet in May.

PAZCO delivery plan

- 11. One of the key pieces of work to be developed next year will be the countywide delivery plan for Oxfordshire's transition to zero carbon, based on the Pathways to Zero Carbon Oxfordshire report, through the Environment Advisory Group of the Future Oxfordshire Partnership.
- 12. Working with districts and other key stakeholders, a transition routemap, an action plan, milestones and interim emissions targets will be developed.

Key strategies under development

- 13. In 2022/23, the following key strategies will be under development:
 - a. Local Transport and Connectivity Plan – following the consultation, the Plan Part 1 will be finalised; development of Part 2 will include area and corridor strategies, bus strategy, rail strategy, an updated digital connectivity strategy.

- b. Adaptation – an updated evidence base will be developed to inform Oxfordshire’s adaptation and resiliency strategy.
- c. Nature recovery – it’s is expected that OCC will be the lead authority to oversee the development and adoption of local nature recovery strategy, under the new Environment Act.
- d. OP2050 – OCC has a supporting role in the development of the spatial planning strategy for the county, which will be out for consultation during the next year.
- e. Oxfordshire Infrastructure Strategy (OxIS) stage 2 – building on the OxIS Stage 1 report and the Oxon Plan Reg 18 consultation in 2021, it is planned that OxIS Stage 2 will review strategic infrastructure needs and requirements to 2050 to align with and support the new Oxon Plan.

Climate Action Programme 22/23 annual delivery plan

- 14. The programme’s annual delivery plan is being reviewed for 22/23 and will be submitted to Cabinet in May. It will include key elements of the council’s carbon management plan, as well as key strategies and projects being delivered across the programme’s priority areas – mitigation, adaptation and resilience, nature and biodiversity, community engagement and organizational transformation.
- 15. Within the council’s own organizational transformation, one of the key projects for 2022/23 will be the development of a framework for assessment and management of carbon emissions in capital projects, to inform decision making.

Investment bids

- 16. In 2022/23 we will also be seeking additional funding to accelerate electric vehicle charging roll out, domestic retrofit, supply chain emissions reduction, expansion of community capacity on climate, and advice provision to householders and other county organisations.

Legislative background and statutory roles

- 17. The council’s climate action strategies and targets are informed by the Climate Change Act and the Environment Act, as well as sectorial policy such as the government’s 10 Point Plan, Energy White Paper and Net Zero Strategy. Please see this resource for [UK laws, policies and targets](#) that inform our work.
- 18. Given OCC’s statutory roles as strategic planning authority for transport and waste, these are key areas of opportunity to drive climate action (see below).

19. We also work closely with OxLEP on clean growth and skills, and with the districts, which have a statutory role on planning, for example supporting the development of the Oxfordshire Plan 2050.

Progress on reducing the council’s own greenhouse gas emissions

Greenhouse gas reporting

20. The council reports annually on its emissions in accordance with guidance published by the Department of Business, Energy and Industrial Strategy (BEIS). The council reports on emissions from its:

- corporate estate and activities (excluding contractors)
- maintained schools
- contractors - highway maintenance fleet fuel and outsourced data centre electricity consumption. (These have historically been included in our carbon footprint.)

Carbon Neutrality (Net Zero) 2030 target

21. The council reports also on progress towards its ‘carbon neutrality by 2030’ target. The scope of this target includes emissions from corporate estate and activities (excluding contractor and school emissions). **Figure 1** below shows the boundary of our Carbon Neutrality 2030 target.

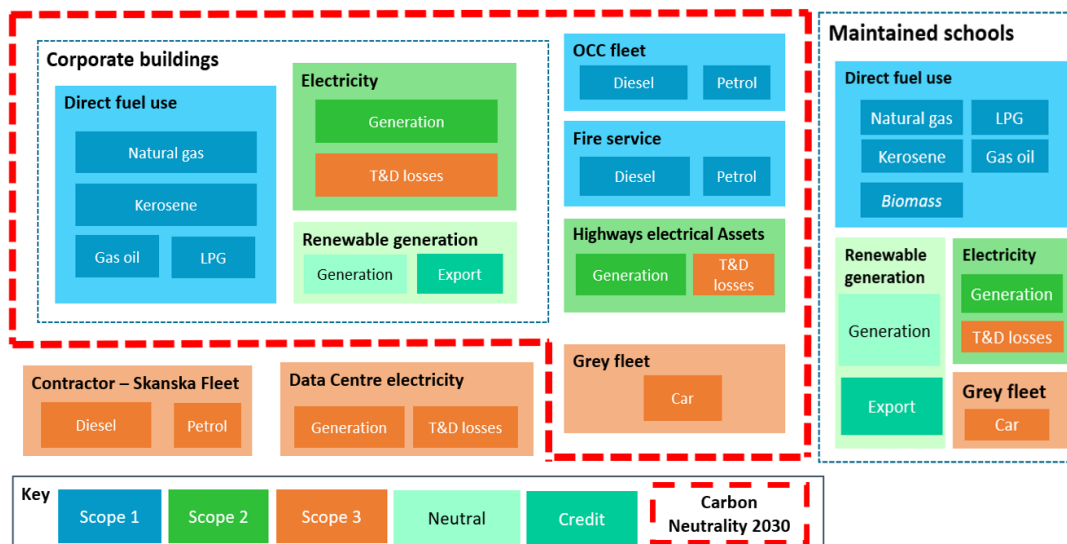


Figure 1 – Scope of Greenhouse Gas Report highlighting the emissions included in OCC’s carbon neutrality target (red line)

Approach to scope 3 emissions

22. Scope 3 emissions are emissions not directly controlled by OCC, e.g., from purchased goods and services, outsourced activities and staff travel. Due to data

accessibility, we currently report on scope 3 emissions from staff business mileage, electricity transmission and distribution losses, highway maintenance fleet fuel and outsourced data centre electricity only.

23. Reducing emissions across our supply chains is one of the key priorities identified in the Climate Action Framework. This objective has been progressed through:

- a. The new social value policy for procurement, which will be presented to Cabinet in February, places a priority on social value delivered by suppliers in the form of carbon emission reductions as well as other environmental aspects
- b. Some pilot work with suppliers to calculate and reduce supply chain emissions, e.g., within the highways contract extension and the Kennington bridge replacement project.

24. The Fair Deal Alliance want a greater ambition to reducing the council's Scope 3 emissions. A detailed understanding of the council's supply chain emissions and supplier engagement are key to implementing an effective reduction strategy. Therefore, OCC are now commissioning a piece of work with the following outputs:

- a. Produce a scope 3 GHG emissions footprint of the Council operations, according to internationally recognised standards
- b. Undertake supplier engagement to understand existing supplier carbon commitments
- c. Undertake analysis of information and data gathered and provide recommendations on next steps in developing a supply chain emissions strategy.

Performance update: 2020/21 greenhouse gas report

25. The Council's Greenhouse Gas report for 2020/2021 is included at Appendix 1. Headline figures for 2020/2021 are set out below:

- a. Reported carbon emissions dropped 12% to 16,865 t CO₂e, which represents a 75.2% decline since the baseline year of 2010-2011.
- b. Emissions within the scope of our carbon neutrality target footprint decreased 17% to 10,774 tCO₂e, a 59% decline since 2010-2011.
- c. Electricity grid decarbonisation (more renewables becoming part of the overall national electricity mix) accounts for close to a third of the corporate emissions reduction this year. The remaining reduction was driven by streetlight LED conversion and changes in working patterns due to COVID, particularly a reduction in staff business travel (which fell by 68%).

- d. Electricity usage in corporate buildings dropped by around 16%. Gas usage did not change owing in part to the need for additional air handling in our buildings to circulate fresh air.
- e. Although we are purchasing REGO-backed energy we have chosen not to count this as a carbon reduction as we are committed to reduce our reliance on grid electricity. We follow an energy hierarchy approach to energy reduction as set out in our Climate Action Framework.

26. Figure 2 below shows the evolution of emissions included in the carbon neutrality target since the baseline year 2010/11. The increases in 2012 to 2014 were due to services being brought in-house and changes in monitoring.

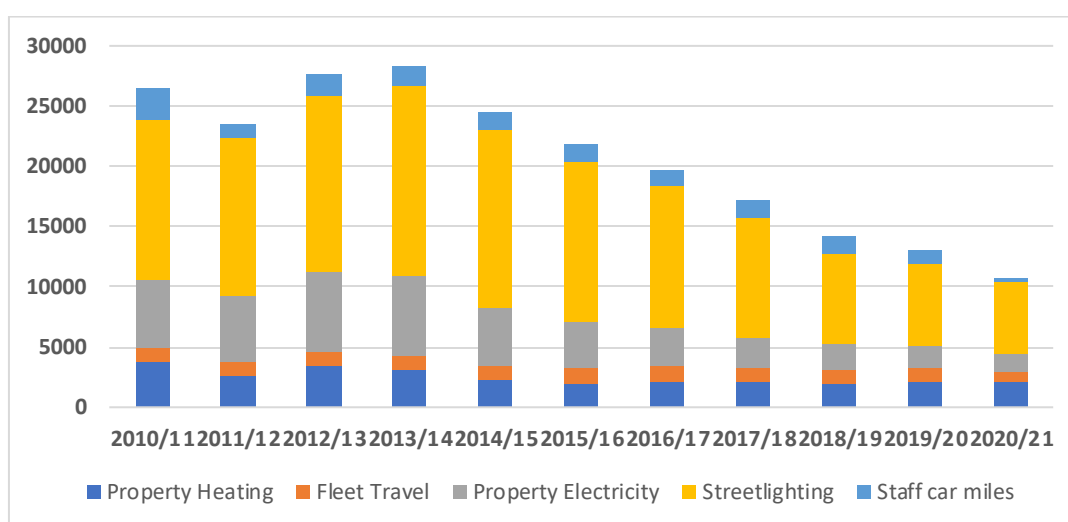


Figure 2 - OCC's carbon neutrality target emissions since 2010-2011

Update on work towards PaZCO recommendations

- 27. Pathways to a zero carbon Oxfordshire (PaZCO) (June 2021) was commissioned in partnership by OCC, OxLEP, district and city councils, and produced by the Environmental Change Institute (ECI). It meets a commitment in our Climate Action Framework to create an evidence base for decarbonisation in Oxfordshire.
- 28. The PaZCO report identifies what needs to be done to reach net zero but does not identify an action plan or shorter-term milestones to demonstrate being on track to meet the 2030 and 2050 targets.
- 29. OCC is working with the Future Oxfordshire Partnership's Environmental Advisory Group to develop a cross-Oxfordshire detailed transition routemap and delivery plan. Other partners that will be instrumental in the implementation of PaZCO's recommendations include the districts and city, Oxfordshire Climate Action Groups (CAG), OxLEP, and Oxfordshire Greentech network.

30. An internal review of OCC's readiness to implement PaZCO's recommendations highlighted that, while the county's key planning strategies (LTCP, OP2050, OxIS) are aligned with PaZCO's evidence and outcomes, there were gaps around (or need to scale up) adaptation, community engagement, and zero-carbon infrastructure – particularly electric vehicle charging, domestic retrofit, and landscape-scale nature recovery schemes. Such gaps are being addressed through additional resourcing to develop the required strategies and projects, a cross-county comms strategy, and the upcoming routemap development.

OCC's key climate strategies and initiatives

Transport

31. OCC's role as strategic planning authority for transport is one of our main levers to reduce emissions across the county by encouraging a shift to zero-carbon modes of transport and connectivity.
32. The **Local Transport and Connectivity Plan (LTCP)**, currently under consultation, outlines a vision for a zero-carbon transport system that enables all parts of the county to thrive. Our transport system will enable the county to be one of the world's leading innovation economies, whilst supporting clean growth, tackling inequalities and protecting our natural and historic environment. It will also be better for health, wellbeing, social inclusivity and education.
33. LTCP sets out to achieve this by reducing the need to travel and discouraging unnecessary individual private vehicle use through making walking, cycling, public and share transport the natural first choice. The plan is supported by the Active Travel Strategy and Bus Service Improvement Plan.
34. Oxfordshire County Council and Oxford City Council are introducing a **Zero Emission Zone (ZEZ)** in Oxford to improve air quality, cut carbon emissions, and move towards zero emission travel in the city. The ZEZ is an area where zero emission vehicles (such as fully electric motorcycles, cars and vans) can be used without incurring a ZEZ charge but where other motor vehicles may be charged. All petrol and diesel vehicles, including hybrids, will incur a daily ZEZ charge if they are driven in the ZEZ between 7am and 7pm unless they have a 100% discount or exemption.
35. The Oxford ZEZ is being introduced in two phases. The first phase is a small pilot area that will become operational in February 2022 in Oxford City Centre. This will allow the councils to test how the scheme will work before expanding the ZEZ to a wider area in the second phase.
36. Income from the ZEZ scheme will be used to pay for its development and operation as well as to fund schemes that support the transport objectives of two councils.
37. Registrations opened in December 2021 for eligible vehicle users to apply for a discount or exemption from ZEZ charges. The charging order, which gives legal

effect to the scheme, will be published in December 2021. Technical assessments and procurement of additional technical services to inform the consultation and detailed design of the wider ZEZ are underway.

38. OCC is also innovating to support transport decarbonisation. The **Oxfordshire Electric Vehicle Infrastructure Strategy**, a strategy developed jointly the Districts and City, sets out our ambitions and targets to support the above national growth of electric vehicles within the County. The strategy is being delivered through innovative projects such as Park and Charge (provision of overnight charging for electric vehicles in council car parks for residents with no off-road parking) and OxGUL-e (piloting an innovative method of on-street charging using gullies, particularly in rural locations).
39. The Government's **Zero Emission Buses Regional Areas Scheme (ZEBRA)** is intended to enable deployment of zero emission buses and relevant accompanying infrastructure to a number of areas across the country. Oxford's ZEBRA bid area includes three Air Quality Management Areas, where nitrogen dioxide levels exceed national limit values. A successful Oxford bid would lead to approximately 160 zero emission buses operating within the Oxford SmartZone area and would lead to approximately 70% of daily bus mileage within that area being operated with zero emission buses. The resulting dramatic reduction in bus emissions would contribute significantly to better air quality and better environments for all users as well as reducing transport's contribution to climate change.
40. The council is also exploring the role of hydrogen in transport innovation. Oxfordshire Living Lab have been commissioned to bring together a group of stakeholders to help build a **hydrogen innovation cluster** and explore potential projects and funding streams to develop this energy vector.

Energy

41. Our Climate Action Programme sets out how we will make best use of our local partnerships and strategic influence to enable a net zero carbon Oxfordshire by 2050. An essential building block will be delivery of the **Oxfordshire Energy Strategy**¹. Owned by the Oxfordshire Local Enterprise Partnership signed by all Oxfordshire local authorities, the strategy sets three objectives:
 - a. to secure a smart, clean, modern energy infrastructure
 - b. to reduce countywide carbon emissions by 50% by 2030 (from a 2008 baseline) as a step on the road to net zero
 - c. to enhance energy networking and partnership working.
42. **Project LEO (Local Energy Oxfordshire)**, one of the signature projects in both the Energy Strategy Delivery Plan and OCC's Climate Action programme, is

¹ [Oxfordshire Energy Strategy | OxLEP \(oxfordshireleplep.com\)](https://oxfordshireleplep.com)

spearheading the energy system transformation in one of the most ambitious, wide-ranging, innovative, and holistic smart grid trials in the UK. One of just four national demonstrator projects funded under the government's *Prospering from the Energy Revolution* programme², Project LEO is delivered by a consortium of nine organisations led by Scottish and Southern Electricity Networks (SSEN) and including Oxfordshire County Council and Oxford City Council, both universities, the Low Carbon Hub, and a number of commercial partners.

43. LEO is running trials in Oxfordshire to build a broad range of reliable evidence of the technological, market and social conditions needed for a greener, more flexible, and fair electricity system. The use of flexibility services (making temporary changes in the way electricity is used, generated, or stored) will help reduce electricity demand at times of peak power flow and maximise use of renewable power. Active participation by local residents and businesses in a well-established local energy market is a central requirement in the Pathway to Zero Carbon Oxfordshire's 'Oxfordshire leading the way' scenario.
44. As well taking part in the LEO flexibility trials, OCC (in collaboration with Oxford Brookes University) is leading the development of a new spatial energy mapping and planning tool to support strategic place-based planning for the transition to a local net zero carbon energy system.
45. In the first phase of the project, the **LEO Integrated Land Use Map** has drawn together over forty layers of data (held by the County Council or publicly available) to give an accessible overview of land use and energy assets in Oxfordshire. New data commissioned for the project identifies the potential for additional renewable generation whilst further datasets help identify opportunities for targeted energy efficiency programmes, for example in areas where the electricity network is already working close to capacity. A story map published in July 2021 (Mapping Oxfordshire's Energy Transition) uses some of the data gathered so far to illustrate the Pathways to Zero Carbon Oxfordshire report, focusing on how - and where - energy is used and generated across Oxfordshire, and how this will need to change over time³.
46. In the coming year, we will add features and functionality to the LEO map to create an **integrated energy mapping tool**. The mapping tool will be made available to Oxfordshire local authorities, Oxfordshire Local Enterprise Partnership and other key stakeholders delivering the Oxfordshire Energy Strategy, providing the spatial evidence to support development of local area energy plans and the transition to net zero carbon. A new collaboration with the Energy Systems Catapult will ensure that the mapping tool reaches a local authority audience well beyond Oxfordshire to support the national transition to net zero.

² Oxfordshire boasts two of the four projects – Energy Superhub Oxford (ESO) is funded through the same programme. The City Council is also a partner in ESO.

³ [Mapping Oxfordshire's Energy Transition \(arcgis.com\)](https://www.arcgis.com/story/mapping/oxfordshire-energy-transition)

47. Project LEO has featured prominently both in the run up to and at COP26, showcasing in events in Oxford (the Net Zero bus event in September 2021 and SSE's Road to Renewables event in October 2021) and launching the University of Oxford's new research programme, the International Community of Local Smart Grids in the UK Pavilion in Glasgow.

Schools

48. In 2019/ 20 maintained schools contributed 5,260 tCO₂e, representing 27.4 per cent of OCCs total reported emissions. The combined annual gas and electricity spending of the 137 OCC Maintained schools is around £2million, representing the 2nd highest cost for many schools after staffing costs. Energy bills are also expected to rise in future months and years, further increasing the importance that schools are able to improve their energy efficiency and reduce energy usage to shield themselves from increases in costs.

49. OCC are currently tendering for an external consultant to deliver a climate support programme for schools. A principle focus of the proposed schools support will be to reduce the carbon emissions of these schools by reducing energy usage.

50. Through the climate support for schools, OCC will be able to provide support to schools at scale, including through utilising online platforms for network events, training and information webinars which are a low-cost approach to delivering training, networking and advise at scale. The support will also include more focussed support such as energy surveys and energy use analysis, as well as supporting schools to develop action plans.

51. The deadline for tender submissions for the commission is the 7th of January. We aim for the contract to start by March.

Waste

52. Reducing the carbon impact of household waste and recycling means embedding the circular economy principals that resources have to be kept in use for longer, and items need to be easily repaired or recycled at the end of their use. The waste management industry has been focussed on reducing the carbon impact of activities for longer than most other industries.

53. Oxfordshire is one of the best performing areas in the country for reuse, recycling and composting of household waste with performance last year at 59%. This performance combined with the use of Ardley Energy Recovery Facility for non-recyclable waste has seen the amount of household waste landfilled drop to less than 5% from 85% in 2000, reducing the amount of methane produced from disposal of this waste stream. This performance has been achieved through a long history of strong partnership working between all Oxfordshire councils and the agreement and implementation of the **Oxfordshire Joint Municipal Waste**

Management Strategy which contains still further targets and aspirations to improve. Additionally, the service manages several closed landfill sites where landfill gas is captured and flared off and the Household Waste Recycling Centres.

54. The partnership also delivers communication campaigns and projects with residents to encourage behaviour change and reduce the amount of waste produced and increase reuse, recycling and composting. This includes funding the Community Action Groups which are a network of 100 community action groups working across Oxfordshire on issues including waste, transport, food, energy and biodiversity and developing a Waste Prevention Plan which is in progress.

55. Our Joint Municipal Waste Management Strategy targets are:

- a. Keep household waste growth to zero person per year
- b. Recycle 65% of household waste by 2025, and 70% by 2030
- c. Send less than 3% of household waste to landfill.

Financial Implications

56. There are no financial implications with noting the above report.

57. The proposed revenue budget that will be considered by Council also includes additional funding to support climate change initiatives from 2022/23.

58. Funding for future programme developments will need to be considered through the Budget & Business Planning process from 2023/24 onwards

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Legal Implications

59. The report raises no legal implications.

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Staff Implications

60. Staff involvement in current programme delivery is funded by agreed resource allocation and grant funding. Staff requirements of future programme developments will be put forward through the service and resource planning process.

Equality & Inclusion Implications

61. When developing and implementing its climate change and carbon reduction strategies and projects, the council must take an inclusive approach, ensuring the costs and benefits of the transition to a low-carbon economy are fairly shared.
62. While acting on climate change will bring benefits to all, it is most likely to have additional positive impacts on several of the protected and disadvantaged groups considered within the Council's equality framework

Sustainability Implications

63. The strategies and initiatives described in this report are at the core of the council's response to the climate emergency. A number of the projects have a direct impact on our corporate emissions, for example through the installation of heat pumps in our buildings or the roll out of LED street-lighting, while others are more countywide in impact, for example our efforts to increase climate resilience and emissions reduction through our strategies, policies and plans.

Bill Cotton, Corporate Director for Environment and Place

Annex: Annex 1 - Greenhouse gas report 2020/21

Background papers: Nil

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