



ADUR DISTRICT COUNCIL

Adur Joint Strategic Sub-Committee
10 November 2022

Key Decision [~~Yes~~/No]

Ward(s) Affected: All
Cabinet Portfolio: Environment & Leisure

Carbon Emissions for 2021/22

Report by the Director for Digital, Sustainability & Resources

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Executive Summary

1. Purpose

- 1.1. On 9 July 2019 Joint Strategic Committee (JSC) declared 'Climate Emergency'. As part of the declaration, Members committed to *work towards becoming carbon neutral by 2030*.
- 1.2. This report presents the third annual update on progress towards this target.
- 1.3. Since the previous report, the council has continued to improve the accuracy of its monitoring (particularly of gas consumption) and the easing of Covid-19 restrictions also saw office use increase as more staff returned to offices.
- 1.4. As a result, reported emissions for 21-22 increased by 2% when compared to the previous year.
- 1.5. An update on current carbon reduction projects is presented at Section 4.

- 1.6. A trajectory of future carbon emissions to 2030 is presented in Section 8. This uses indicative pipeline projects to map a potential route to meeting the 2030 target, subject to viable business cases being developed.

2. Recommendations

- 2.1. That the Committee notes:
- the councils' current carbon emissions and carbon reduction work programme
 - the trajectory of future emissions reductions which aims to ensure the councils meet their carbon neutral 2030 target
 - That further funding bids may be made, in consultation with the relevant executive member, and that if required further reports will brief members on the outcome of the bidding process
- 2.2. That the Committee approves:
- The publication of the carbon emissions report on the council website and the submission of these figures to external bodies where required by membership (e.g. UK100)

3. Context

- 3.1. Adur & Worthing Councils declared a climate change emergency on 9 July 2019, simultaneously setting a target to be carbon neutral by 2030.
- 3.2. The councils' adopted: Adur & Worthing Councils' Carbon Neutral Plan: Working towards the 2030 target on 3 December 2019 and a Carbon Reduction Team was appointed in September 2020 to facilitate work to achieve the target and attract funding to contribute to the councils decarbonisation.
- 3.3. Tackling Climate Change is also a key strand of the new Corporate Strategy.
- 3.4. The councils have committed to report on their emissions annually as part of their signatory to the UK100 Cities Pledge. This report sets out the emissions for the year 2021/22 for the councils.

- 3.5. The 2030 carbon neutral target required the councils to deliver approximately 10% reductions in emissions annually through the decade. Some years may see lesser and some greater emissions reductions, depending on interventions delivered, climatic conditions and other unforeseen events.
- 3.6. Following the installation of more accurate metering equipment at Worthing Town Hall in 2020/21, full Automated Meter Reading (AMR) has now been installed across all gas meters. This means the council is no longer billed based on estimated billing and has allowed us to increase the accuracy of emissions reporting. More information is presented at 3.2.1
- 3.7. Additionally, the councils are now able to monitor additional emissions arising from other sources (see Section 2). It is hoped that this ability will expand in the coming years
- 3.8. A model of the future trajectory the councils intend to take in order to meet their 2030 carbon neutral target has also been developed, as outlined in Section 8.

4. Background and Scope

- 4.1. The councils report their emissions according to the following Scopes, as defined in the BEIS Emissions Reduction Pledge 2020 guidance,

Category	Description	Data analysed
Scope 1	Direct emissions from sources owned or controlled by the reporting organisation.	Metered gas data in properties owned and operated by, and where the councils pay for gas. Diesel and petrol consumption for council-owned vehicle fleet and mileage figures for pool cars
Scope 2	Indirect emissions from the generation of energy purchased by the reporting organisation.	Metered electricity data in properties owned and operated by, and where the councils pay for, electricity
Scope 3	Indirect emissions that result from other activities that occur in the value chain of the reporting organisation,	Scope 3 emissions are those from indirect council operations, for example leisure or cultural sites not operated by the council, or from activities not directly controlled by

	either upstream or downstream.	the councils, such as water consumption. Scope 3 emissions do not currently form part of the Emissions Reduction Pledge.
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Table 1: Emission scopes

4.2. This report contains information on carbon emissions associated with water consumption. Whilst these emissions fall outside of the current carbon neutral commitment, they have been highlighted in this report for additional visibility.

4.3. As noted at JSC in October 2021, the councils' 2020/21 emissions were 2,875 tonnes of CO2 equivalent (tonnes CO2e), broken down as follows:

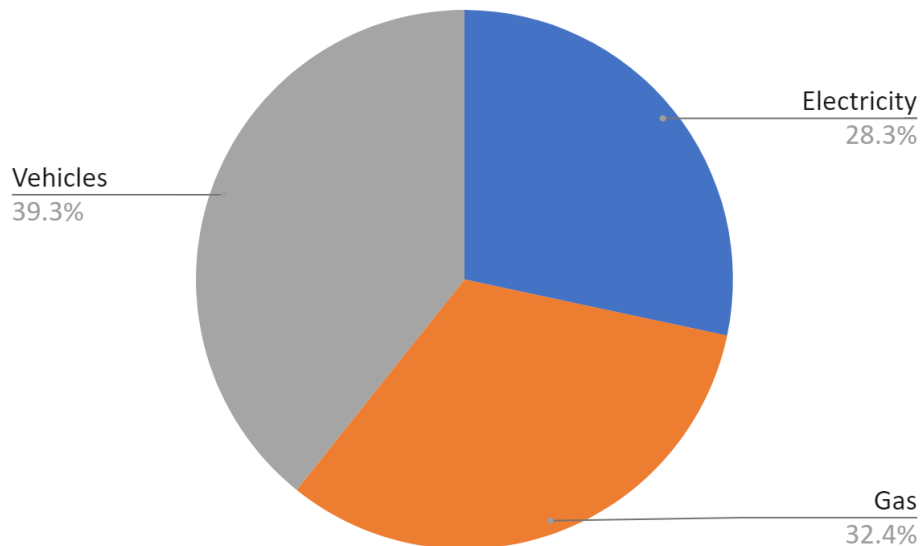


Chart 1: 2020/21 Emissions

5. 2021/22 Emissions

5.1. Given the shared nature of Adur & Worthing Councils offices, staff and operations, emissions are presented jointly for both councils. Where it is possible, emissions are presented separately.

Building Emissions

5.2. Analysis of the councils emissions associated with gas and electricity use in corporate buildings revealed that reported emissions increased by 4.57%, broken down as follows:

Emissions (tonnesCO2e)			
	2020/21	2021/22	% change
Electricity	498	537	+7.95%
Gas	765	784	+2.37%
Total	1264	1322	+4.57%
<i>Water</i>	10	8	-14.26%

Table 2: 2021/22 Building emissions to nearest tonne

5.3. Adur Homes figures have been calculated separately:

Emissions (tonnesCO2e)			
	2020/21	2021/22	% change
Electricity	78	71	-9.29%
Gas	311	378	+21.5%
Total	390	450	+15.3%

Table : 2021/22 Adur Homes Building emissions to nearest tonne

5.4. It should be noted that:

- 5.4.1. Following the installation of AMR technology across the councils' remaining gas meters, the reported emissions of two Sheltered Housing sites (Marsh House and Manor Court) have increased significantly from the 2020/21 totals. Without these, gas emissions from Adur Homes would've reduced overall.
- 5.4.2. Corporate gas emissions have increased slightly due to increased consumption when compared to under-occupied office accommodation the previous year.
- 5.4.3. Electricity emissions have rebounded since the start of the pandemic, with both the Town Hall and the return of the temporary ice rink at Steyne Gardens contributing to the increase seen in 21/22. Overall, electricity emissions remain lower compared to the pre-pandemic peak.
- 5.4.4. Since 2019, the council has procured 100% renewable electricity for all council buildings and sites through its corporate energy contract. This is an important signal to the market that the council wishes to utilise only renewable energy supplies, however according to the BEIS emissions reporting methodology, electricity generated by third-parties cannot be

counted towards the councils' emissions reduction unless very specific criteria are met.

- 5.4.5. Water emissions have been reported for the first time. Whilst current guidance recommends excluding these from our scope 1 and 2 target, they are reported here in order to increase the transparency of the councils' total footprint.

Vehicle Emissions

- 5.4.6. Based on the amount of fuel consumed by the councils' fleet and the number of miles driven by pool cars, emissions from vehicles reduced by 4.95%:

	Emissions (tonnesCO2e)		% change
	2020/21	2021/22	
Fleet	1152	1090	-5.35%
Pool Cars	0.5	5	+908.8%
Transport	1152	1095	-4.95%

Table 3: 2020/21 Vehicle Emissions

- 5.4.7. Fleet emissions are based on the amount of fuel received by the depot, rather than actual consumption totals. This amount reduced proportionally, in line with the carbon emissions reduction.
- 5.4.8. Pool car use has increased significantly as a result of staff returning to offices and undertaking additional site visits but still represents a negligible amount of emissions from vehicles.
- 5.4.9. It is hoped that future reports will also account for 'grey fleet' mileage - that is, business mileage completed by staff-owned cars. As with water consumption, these emissions are excluded from typical 'scope 1 and 2' calculations but are hoped to be quantified for a fuller picture.

Total Emissions

- 5.4.10. The councils' corporate emissions for 2021/22 are 2,417 tonnes, broken down as follows:

Corporate Emissions 2021/22

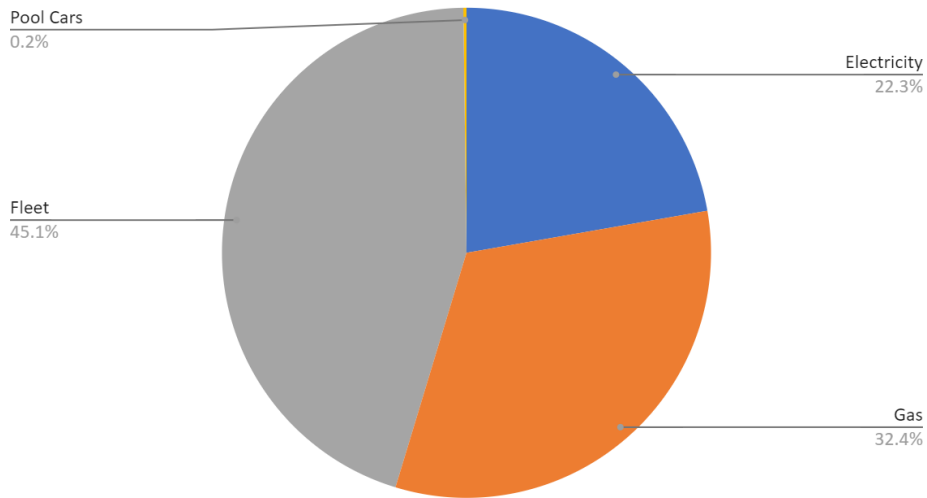


Chart 2: Corporate 2021/22 Emissions

5.4.11. Adur Homes emissions for 2021/22 are 450 tonnes, broken down as follows:

Adur Homes Emissions 2021/22

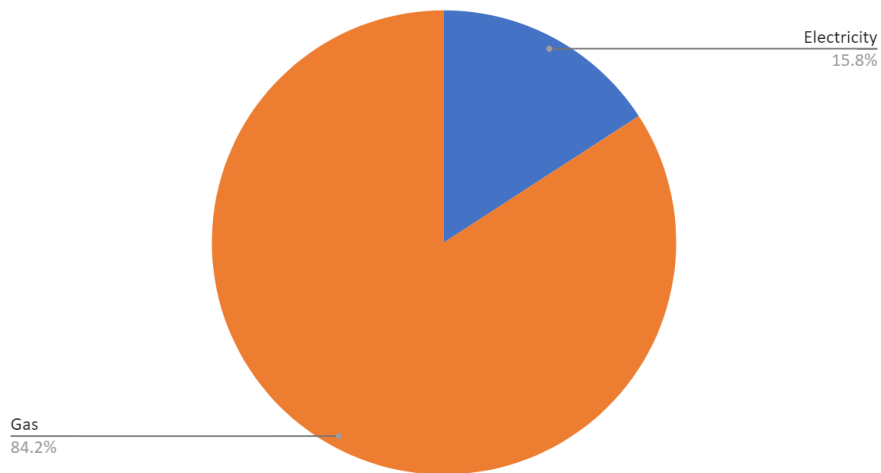


Chart 3: Adur Homes 2021/22 Emissions

5.4.12. Cumulatively, this means the Councils emissions for 2021/22 are **2,867 tonnes**.

6. Project Progress Pipeline

6.1. The councils continue to progress on the delivery of the 2019 Carbon Reduction Plan.

6.2. Projects completed this year include:

- Installation of multiple ground source heat pumps at two Sheltered Housing sites
- Installation of air source heat pumps and efficiency works at the Shoreham Centre
- Installation of 6 solar PV arrays on council-owned buildings which have already generated over 100,000kWh of renewable electricity
- Installation of multiple energy efficiency measures on Civic Quarter Buildings

6.3. Whilst some of the above projects completed before March 2022, the majority of the emissions reductions reported will be seen in 22/23.

6.4. It is estimated that the above projects will save in excess of 200 tonnes of carbon annually.

6.5. The councils continue to seek external funding support for decarbonisation work where appropriate. To date this has totalled in excess of £7m from the Department for Business, Energy and Industrial Strategy (BEIS) through the Heat Network Delivery Unit/Heat Network Investment Project (HNDU/HNIP), the Public Sector Decarbonisation Scheme (PSDS) and Low Carbon Skills Fund (LCSF). A summary of this funding is presented at Appendix 1.

6.6. Additional LCSF funding was secured in August 2022 to produce additional heat decarbonisation plans for the following buildings:

Adur (total £55,000)	
Southwick Community Centre	Lancing Manor Leisure Centre
Southwick Leisure Centre	Wadurs
Sompting Community Centre/Parish Council	
Summer Close Communal Room	Kingsfield Close Communal Room
St Nicolas Court Communal Room	
Worthing (total £85,000)	
East Worthing Community Centre	Heene Community Centre
Durrington Community Centre	Field Place

Worthing Leisure Centre	Connaught Theatre*
Pavilion Theatre*	Worthing Museum*

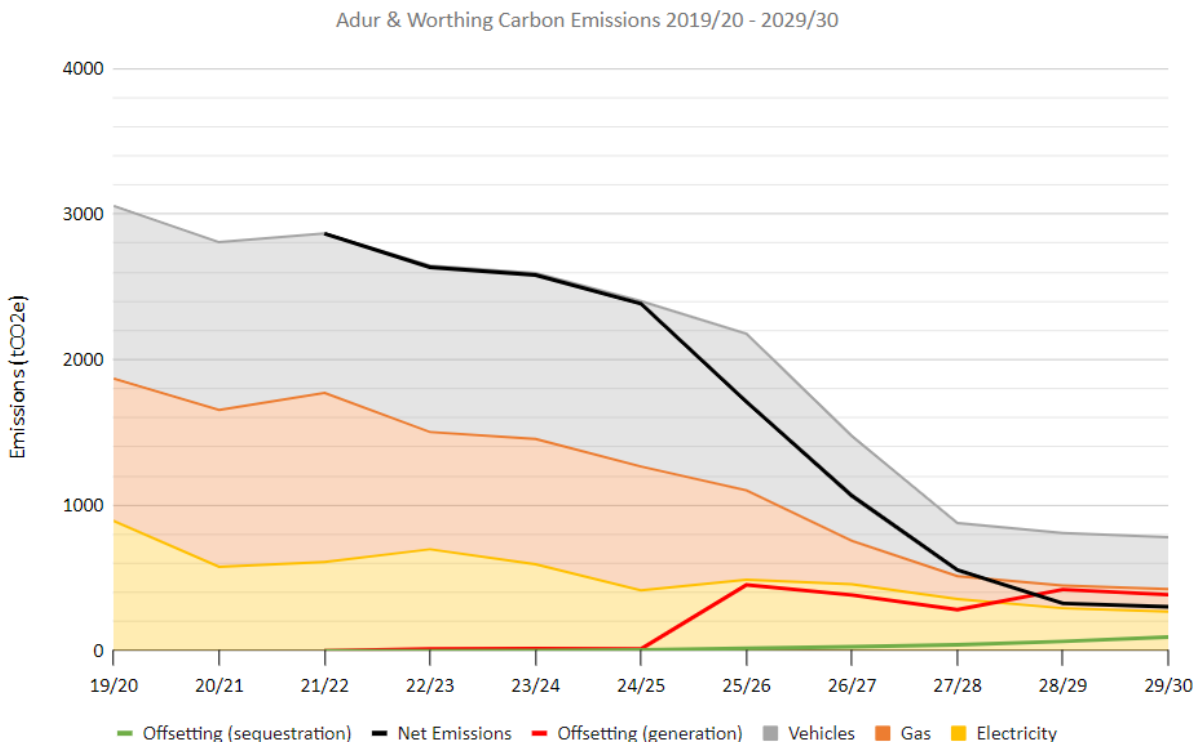
**funding secured to undertake detailed Mechanical, Electrical & Plumbing surveys to determine adaptations required to adequately heat the building with lower temperature heating systems*

- 6.7. Surveys will be produced this autumn and will be used to inform future capital bids to secure funding (internal and external) to decarbonise these buildings. Once complete, these surveys will mean that the councils have feasibility studies complete to decarbonise over 80% of the gas boilers currently operated by the councils.
- 6.8. A Public Sector Decarbonisation Scheme (PSDS) bid focusing on Worthing Civic Quarter buildings was submitted on 12 October totalling £2.99m. The outcome of this bid will not be known until mid-winter and the funding is very competitive, however if successful it will contribute significant funding to the decarbonisation of buildings throughout the Civic Quarter and is expected to lower the councils' carbon footprint by 300 tonnes per annum.
- 6.9. An additional PSDS bid to replace the end-of-life heating system at East Worthing Community Centre with a low carbon alternative was also submitted, totalling £57k and estimated to save 8 tonnes of carbon annually.
- 6.10. A further report will be brought to JSS-C Worthing seeking budgetary approval if either bid is successful.
- 6.11. Aside from the PSDS, LCSF and HNIP funded projects, additional work is ongoing on the following:
- Offsetting via renewable energy generation feasibility work
 - Scoping for additional rooftop solar PV installations on corporate and commercial buildings
 - The replacement of 5 fleet vans with fully electric models by 2024 and the development of a wider fleet strategy.

7. Forecasting

- 7.1. In order to become carbon neutral by 2030, the councils need to achieve approximately 10% reductions annually from 2019/20 to 2029/30. continue to progress the 'next steps' proposed in the 2019 Carbon Reduction Plan.

- 7.2. These carbon savings will accrue from:
- Projects to reduce the amount of gas, electricity or vehicle fuel consumed in order to meet service needs
 - UK-wide reductions in emissions associated with gas, electricity or vehicle fuel (for example, increased renewable electricity supplying the national grid)
 - Offsetting of any residual emissions
- 7.3. Offsetting requires actions the councils take to be additional (i.e. not 'business-as-usual') and would typically involve either:
- the generation of renewable electricity to meet or exceed the councils' demand
 - sequestering carbon, for example through tree planting
- 7.4. The councils are exploring options for both of the above alongside other projects.
- 7.5. Based on many of the pipeline projects identified in Section 4, plus consultation with officers from across the council, a future emissions profile has been plotted, accounting for each of the three methods of carbon reductions listed at 5.2 (Chart 3).



- 7.6. The solid black line represents the councils' residual emissions from its ongoing operations, less its additional (offsetting) actions. In other words, this is the net emissions line that the councils are committed to being net zero (or better) by 2030. As the chart shows, additional projects are presently required to be identified and delivered by 2030 to achieve net zero.
- 7.7. The chart makes assumptions about large projects in particular, for example:
- Connections to the Worthing Heat Network begin to be made in 25/26
 - The refuse collection fleet begins to be replaced with low carbon alternatives at the end of their operational life in 25/26
 - Investment in generation assets (e.g. a solar farm) occurs in 25/26
- 7.8. Each of the large interventions necessary to ensure this trajectory is followed is subject to resource restraints, development of an appropriate business case and funding proposal being approved by the relevant committee. The chart should therefore be read as 'a possible', rather than 'a definitive', however it gives a clear indication of the councils' potential trajectory.
- 7.9. It should be noted that the sequestration portion of the graph remains relatively small to 2030. This is because mature trees absorb more carbon than new plantations. Sequestration will play an increasingly important part in ensuring the council continues to be carbon neutral beyond 2030 as the impact of using renewable electricity generation (the red generation line in Chart 3) to offset emissions is reduced due to the continued decline in electricity emissions across the UK.

8. Engagement and Communication

- 8.1. The following internal groups and teams have had input into work that has been used to generate these figures:
- Carbon Reduction Delivery Group;
 - Technical Services & Facilities;
 - Building Services;
 - Environmental Services;
 - Housing;
 - Waste, Recycling & Cleansing;
 - Major Projects;
 - Finance;

- Procurement;
- Legal;
- Democratic Services;
- Planning;
- Bereavement Services.

8.2 The following external groups have been consulted as part of various carbon reduction projects:

- BEIS (Heat Network Delivery Unit, and Heat Networks Investment Programme)
- Salix (Low Carbon Skills Fund and Public Sector Decarbonisation Scheme)
- West Sussex County Council
- Ministry of Justice (Worthing Law Courts)
- Worthing Theatres and Museums
- South Downs Leisure
- Sussex Police
- Goring Cricket Club
- Age UK
- Community Centre Trusts

8.3 Consultation has also been undertaken with the following external groups relating to carbon emissions reporting:

- TEAM (energy management software supplier)
- BEIS (emissions reporting)
- UK100

9. Financial Implications

9.1. The Council has committed a range of projects to support decarbonisation within the Capital and Revenue budgets to meet the 2030 target.

9.2. Where possible, the Council will bid for external funding to support the delivery of the decarbonisation ambitions of the Council given the associated costs.

10. Legal Implications

10.1. The Climate Change Act 2008 as amended by the (2050 Target Amendment) Order 2019 is the basis of the UK's approach to tackling and responding to climate change. The Act requires emissions of

carbon dioxide and other greenhouse gases to be reduced from 80% to 100% by 2050 and the Council is committed to working towards this goal.

- 10.2. Section 1 of the Localism Act 2011 empowers the Council to do anything an individual can do apart from that which is specifically prohibited by pre-existing legislation.
- 10.3. Section 1 of the Local Government (Contracts) Act 1997 provides that every statutory provision conferring or imposing a function on a Local Authority confers the powers on the Local Authority to enter into a contract with another person for the provision or making available of assets or services, or both (whether or not together with goods) for the purposes of, or in connection with, the discharge of the function by the Local Authority.
- 10.4. In procuring for works goods or services to comply with its climate change proposals the Council must have regard to The Public Contract Regulations 2015 and / or The Public Concession Contract Regulations 2016 and take detailed legal advice as appropriate for each project.
- 10.5. When entering any arrangement with a provider the Council is to ensure that it does not infringe the rules relating to subsidies detailed in the Trade and Co-operation Agreement 2020 which are set out in Article 3 of the Agreement.
- 10.6. The Council is to remain fully compliant with any relevant grant funding terms and conditions and where there is an on-grant to an appointed provider, the Council is to ensure that there are appropriate indemnities in place in favour of the Council for any potential breaches of the funding terms, by that provider.

Background Papers

- [Carbon Neutral 2030: Working towards the councils' carbon neutral target: progress update](#) (JSC 7/10/22)
- Adur & Worthing Councils [Carbon Neutral Plan](#)
- Adur & Worthing Councils [SustainableAW](#)
- [UK100](#)
- [Public Sector Decarbonisation Scheme](#)

- [Low Carbon Skills Fund](#)
- [Climate Change Act 2008 \(2050 Target Amendment\) Order 2019](#)

Sustainability & Risk Assessment

1. Economic

Transition to a low carbon economy is vital to provide future energy systems resilience, and to address and reduce potential impacts of climate change. Improved energy efficiency across the councils' assets reduce ongoing revenue requirements for energy purchasing.

2. Social

2.1 Social Value

By securing affordable, low carbon energy into the future, the councils protect budgets from future energy price rises, drawing less budget into council operational costs away from services delivery that benefit local communities.

2.2 Equality Issues

The impacts of climate change are predicted to impact on all communities, but the greatest impact is predicted to impact the most vulnerable communities. It is imperative that all is done to mitigate climate change.

2.3 Community Safety Issues (Section 17)

No impacts identified

2.4 Human Rights Issues

The impacts of climate change are predicted to impact on all communities, but the greatest impact is predicted to impact the most vulnerable communities. It is imperative that all is done to mitigate climate change.

3. Environmental

The key driver for ongoing carbon reduction is to mitigate the predicted catastrophic impacts of climate change on the environment, economy and communities.

4. Governance

The reporting and management of carbon reduction emissions show leadership in response to our declaration of a climate emergency. This aligns with national legislation (the Climate Change Act 2008); national and regional policy, and the councils' own policy.