Greenhouse Gas Emissions Report – April 2021 to March 2022

Contents

Introduction 2
Methodology 2
Organisational boundary and scopes 3
Scope change 3
Data gaps and reliability 4
Results 4
Leisure Centres 6
Owned and leased estate 7
Other Emissions 8
The transition to carbon neutrality 9
Carbon reduction projects 10
Public Sector Decarbonisation Scheme project 10
Kingfisher and Mid Suffolk leisure centre solar car port project 11
Kingfisher leisure centre water filtration system 11
Decarbonising the grid 12
Carbon offsetting and green tariffs 12
References 13

Glossary

Air-Source Heat Pump	ASHP
Carbon Dioxide Equivalent	CO_2e
Greenhouse Gas	GHG
Hydrotreated Vegetable Oil	HVO
Kilowatt Hour	kWh
Kilowatt Peak	kWp
Megawatt Hour	MWh
Renewable Energy Guarantees of Origin	REGO
Solar Photovoltaic	Solar PV

Introduction

This report provides a comprehensive carbon footprint for Babergh and Mid Suffolk District Councils' operations in 2021/22. It provides detail on the trajectory of Greenhouse Gas (GHG) emissions since the establishment of a baseline in 2018/19 and provides supporting information for policy making and action planning to enable the Councils to respond to the declaration of a Climate Emergency and the commitment to become carbon neutral by 2030.

This report uses as its baseline the 'Greenhouse Gas Emissions Report – 2018/19 Financial Year' as this was the first comprehensive GHG report the Councils prepared. The report measures progress in terms of carbon emissions against the baseline and provides a trajectory which will need to be met to achieve the Councils' carbon neutral ambition.

Methodology

The methodology in this report is in accordance with the following guidance:

- HM Government, Environmental Reporting Guidelines: Including streamlined energy and carbon reporting guidance, March 2019 (Updated Introduction and Chapters 1 and 2).
- WRI / WBSCD - The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition), March 2004.
- WRI / WBSCD - The Greenhouse Gas Protocol: Scope 2 Guidance, An amendment to the GHG Protocol Corporate Standard, 2015.
- UK Government Conversion Factors for Company Reporting (2022) - DBEIS / DEFRA

Each activity that the Councils operate has been assessed for its direct and indirect energy use. The electricity and gas use of buildings, direct fuel use in Council-owned vehicles and mileage in private vehicles whilst undertaking Council operations have been assessed. Standard conversion factors have been used to assess the carbon footprint of each activity and building. The conversion factors are published by DEFRA on an annual basis and reflect the carbon intensity of a range of carbon sources.

The report is based on emissions of the 'basket of six' GHGs as defined by the Kyoto Protocol and include: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), F-gases (hydrofluorocarbons and perfluorocarbons) and sulphur hexafluoride (SF_6). All values are given as CO_2 equivalent (CO_2e), which is a measure of the range of GHG as measured against the warming potential of CO_2. This is standard practice and better reflects the climate impact of the Councils' emissions.

The electricity supplies for the four leisure centres were moved to an EDF Renewable Energy Guarantees of Origin (REGO) backed electricity supply in March 2021, however it is still contentious whether this consumption is allowed to be reported as zero carbon under the 'market based' approach. The 'grid average' emissions factor, which is applied to all electricity the Councils use, incorporates emissions derived from low carbon energy generation across the UK, therefore by reporting REGO-backed electricity, potentially from the same renewable sources, may lead to double counting. This is currently under review by the UK Government and therefore for the purposes of this report, a record of the REGO-backed CO_2e emissions will be included in the footprint under the title 'green tariffs', however this total will not be deducted from the overall footprint.

This report uses a location-based methodology to calculate the CO_2e emissions from electricity usage. The location-based method reflects the average emissions intensity of the national grid.

Organisational boundary and scopes

The GHG Protocol advises that in setting organisational boundaries, an organisation should select an approach for consolidating GHG emissions and then consistently apply the selected approach to define those business activities and operations that constitute the organisation for the purpose of accounting and reporting GHG emissions. A 'control approach' has been used to evaluate the Councils' GHG emissions i.e., all GHG emissions from operations over which the Councils have control. GHG emissions from operations in which the Councils have an interest but have no control have not been included. Control can be defined in either financial or operational terms.

The organisational boundary has been taken to be those emissions from the Councils' headquarters, touchdown points, leisure centres, streetlighting operated by the Councils, vehicles owned by the Councils, third parties delivering Council services, and internal Council policies that result in emissions of GHG.

An example of what has not been included in the organisational boundary would be emissions related to the disposal, treatment or sorting of waste from the point of transfer from the refuse collection vehicles to the waste handler. Furthermore, the personal commuting miles of staff to Endeavour House or other offices have been excluded as these are not within the organisational boundary. However, the emissions associated with mileage incurred by councillors attending Endeavour House on Council business, which can be claimed as expenses under standard HMRC rules, do fall with within the organisational boundary and are therefore included in the report.

To help delineate direct and indirect emission sources, improve transparency, and provide utility for different types of organisations, three "scopes" (Scope 1, Scope 2, and Scope 3) are defined by the GHG Protocol for accounting and reporting purposes (see Table 1.0).

Scope	
1	These are emissions from fuels that the Councils directly consume e.g., gas, diesel, and petrol in the direct delivery of Council business by Council employees.
2	These are indirect emissions such as electricity use in Council premises.
3	These are emissions derived from third party contractors supplying services on behalf of the Councils.

Table 1.0 – Definitions of scopes included within the organisational boundary

There is some discretion within the Protocol on what to include in each scope, for example where information is not recorded, where third party data is unavailable, or where the accuracy of data cannot be relied upon. The following have not been included for such reasons:

- The impact of the Councils' supply chains. Only those services that are delivered directly by the Councils or through third party suppliers on the Councils' behalf have been assessed.
- Contracts where the impact would be regarded as minimal e.g., the collection of a small number of abandoned vehicles by third party service providers.
- GHG emissions associated with the air conditioning within Endeavour House.
- Embedded carbon resulting from water use.
- Since the pandemic, the practice of homeworking has increased significantly, and the Council will look at evaluating the associated emissions in the next GHG report.

Scope change

In March 2021, the responsibility for payment of electricity and gas invoices was transferred from the two leisure centre contractors (Everyone Active and Abbeycroft Leisure) to the Councils. As

the Councils are now directly responsible for paying the energy invoices for most of the sites the emissions from delivered electricity have been transferred from scope 3 to scope 2 and the emissions derived from gas consumption have been moved from scope 3 to scope 1 except for emissions derived from gas consumption between September 2021 and March 2022 at Kingfisher and Hadleigh leisure centres where the payment of invoices was transferred back to Abbeycroft Leisure and these emissions will be part of scope 3.

In April 2021, the grounds maintenance contract with ID Verde was brought back in house and emissions associated with grounds maintenance have been moved from scope 3 to scope 1. It should be noted the changes in scope will not affect the overall carbon emissions figures.

Data gaps and reliability

Scope 3 emissions from the supply chain have not been included in this report, however the Councils are looking into developing a standard reporting mechanism for all the Councils' suppliers/contractors to provide a more comprehensive report in the future. This is a prominent issue as the CO2e emissions that the Councils may have influence over are likely to be significantly higher than emissions limited to the scopes of this report.

Data has been verified as far as possible, but the reliability is nevertheless dependent on the data collection practices of third-party providers. It would therefore seem reasonable to assume an error margin of +/- 5% on all values within this report.

Results

To help provide context and scale when reading the results, it may be useful to understand that an average resident of our district is responsible for the emission of 0.024 tCO_2e per annum.

The total emissions attributable to the Councils' operations were 4,754.9 tCO_2e for the 2021/22 financial year.

The breakdown of emissions by scope are shown in Chart 2.0. Scope 1 emissions, arising from the use of gas in owned and leased buildings and the four leisure centres, heating oil in sheltered housing schemes and fuel used in Council-owned vehicles, accounted for 46.6% of overall emissions. Scope 2 emissions accounted for 17.3% of overall emissions and were largely derived from electricity use in the Councils' estate and the four leisure centres. 36.0% of emissions were derived from contracted services – the Serco waste contract and the emissions from the gas consumption at Hadleigh and Kingfisher leisure centres and are therefore Scope 3.

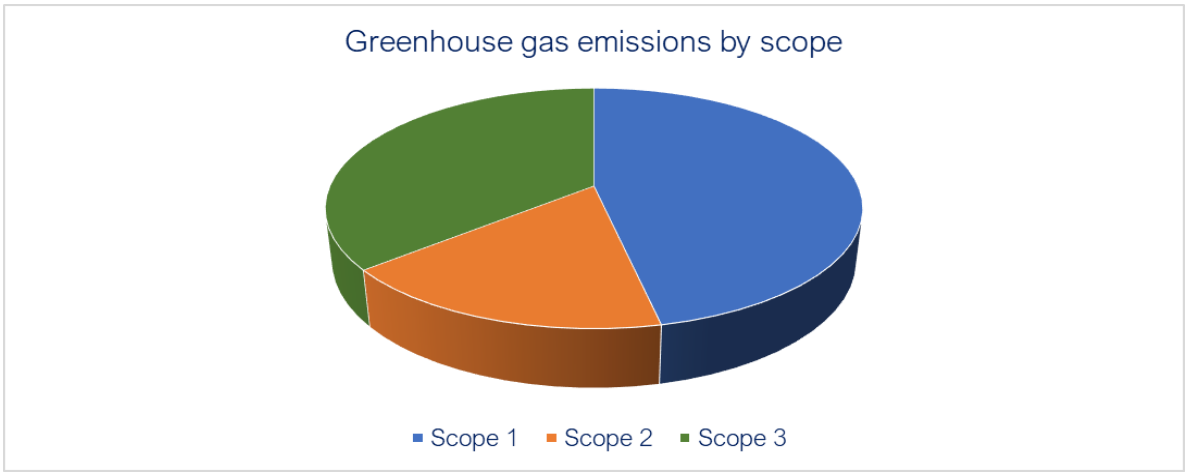

Chart 2.0 –Babergh and Mid Suffolk Council GHG emissions by scope

Table 2.0 provides a summary of the Councils GHG emissions by scope and includes the provision for reporting on carbon offsets and dual reporting on green (low carbon) tariffs.

Reporting period 2021/22	Units	Consumption	Greenhouse Gas Emissions (tonnes CO_2e)
Scope 1			
Oil boilers[1]	Litres	85,926	23.0
Premises gas	kWh	4,792,321	969.3
Leisure centre gas	kWh	2,980,000	602.8
Petrol[2]	Litres	481	1.0
Diesel[2]	Litres	118,052	302.0
Diesel - Grounds	Litres	124,000	317.2
GasOil	Litres	11,780	3.0
Scope 2			
Premises electricity	kWh	1,988,157	384.5
Street/highways lighting	kWh	183,296	35.4
Leisure centre electricity	kWh	2,083,220	402.9
Scope 3			
Staff and member business travel	Miles	397,978	109.3
3rd Party contracted diesel	Litres	318,805	815.5
3rd Party contracted HVO	Litres	317,694	11.3
T and D premises electricity[3]	kWh	4,071,377	72.0
T and D Street/highways lighting electricity	kWh	183,296	3.2
Leisure centre gas[4]	kWh	2,937,626	594.2
Endeavour House - gas	kWh	221,742	44.9
Endeavour House - electricity	kWh	300,655	63.5
Total Gross Emissions			4754.9
Carbon offsets[5]		0	0.0
Green tariffs[6]	kWh	2,083,220	439.7
Total Net Emissions			
Intensity measurements[7]			
Tonnes of CO2e per resident	Resident	195000	0.024

Table 2.0 – Summary of Babergh and Mid Suffolk Council GHG emissions

Data explanations (footnote references):

1. Oil and Gas: Not weather corrected compared to 2018/19 baseline year.
2. Business travel: Staff and members' car and motorcycle journeys including staff owned and car club vehicles. Train and bus travel not included.
3. Transmission & Distribution of electricity: the carbon footprint of electricity consumption is split between Scope 2 and Scope 3, with the proportion of energy losses that occur in delivering the electricity from power plant to the organisations that purchase it being reported as Scope 3 rather than Scope 2.
4. Scope 3 emissions for gas consumed at Hadleigh and Kingfisher leisure centres between September 2021 and March 2022.
5. Carbon offsets: We have reported on the contribution of on-site renewable energy generation that we consider as carbon offsets through our export of renewable energy to the national grid.
6. Green tariff: This includes carbon emissions which can be reported on as the Councils hold the generation certificates.
7. Intensity measurement: We are required to define a result using an 'intensity measurement', which is a ratio of GHG impact per unit of activity or other business metric. We have selected CO_2e emissions per resident. No national database exists to compare our

Councils intensity measurement figure with other Councils in the country. Those that do exist, e.g. https://lginform.local.gov.uk/reports/lgastandard?mod-area=E92000001&mod-group=AllLaInCountry_England&mod-metric=53&mod-period=3&mod-type=namedComparisonGroup provide a CO_2 emissions per capita total that takes into account sectors such as industry, commerce and land use and therefore may not provide a fair and true comparison with the figure calculated and defined in this methodology.

Chart 2.1 provides a breakdown of CO_2e emissions by sector. Emissions from the leisure centres are still the greatest source, with emissions derived from the owned and leased estate now making up the second largest sector, with 75% amount of these emissions coming from sheltered housing.

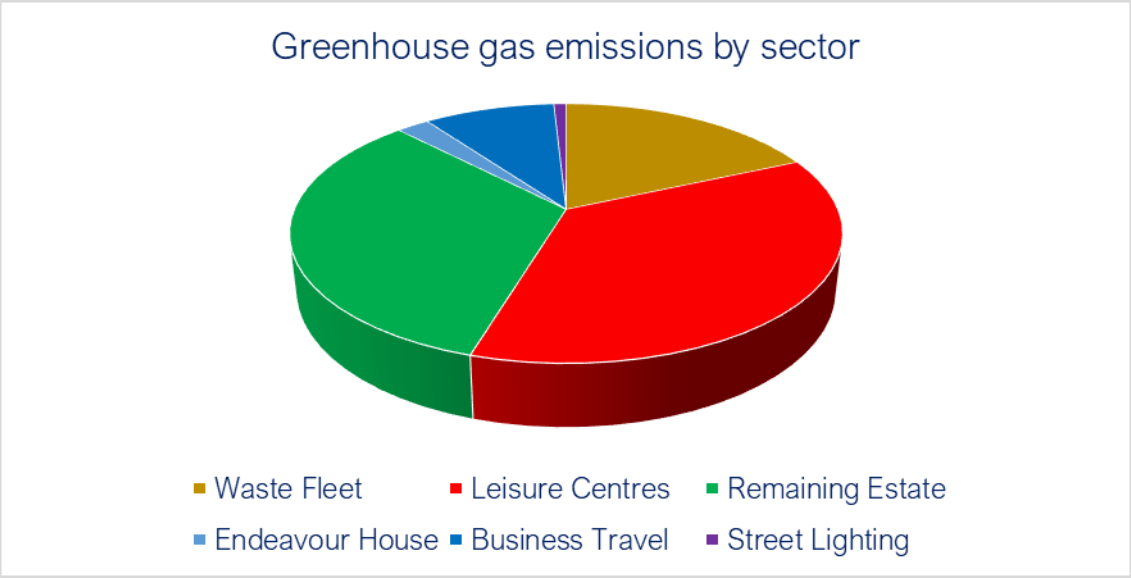

Chart 2.1 –Babergh and Mid Suffolk Councils GHG emissions by sector

Leisure Centres

The largest source of emissions came from the four Council-owned leisure centres, which are run by Abbeycroft Leisure and Everyone Active. Collectively these contributed 1,636.7 tCO_2e to the Councils' carbon footprint, or 34.4% of the total carbon emissions from Council activities, as shown in table 2.1.

Site	Operator	Gas GHG emissions tCO2e	Electricity GHG emissions tCO2e	Total tCO2e
Kingfisher Leisure Centre	Abbeycroft Leisure	600.2	103.7	703.9
Hadleigh Leisure Centre	Abbeycroft Leisure	208.9	75.6	284.5
Mid Suffolk Leisure Centre	Everyone Active	387.9	130.0	517.9
Stradbroke Leisure Centre	Everyone Active	0	130.4	130.4
Total		**1,197.3**	**439.7**	**1,637**

Table 2.1 – Summary of Babergh and Mid Suffolk Council Leisure Centre Emissions

Electricity and gas use in the Councils' leisure centres accounted for 439.7 tCO_2e and 1,197.0 tCO_2e, respectively. There is no gas grid supply for Stradbroke Leisure Centre and so the facility relies on the electricity supply. Electricity consumption in this building was higher than would be expected as all water heating is undertaken using electric immersion heaters.

Chart 2.2 provides a summary of the CO_2e emissions from the four leisure centres over the past four years. The effects of the pandemic on electricity and gas consumption are clear to see however while electricity consumption has only seen a marginal increase since the end of pandemic restrictions the emissions from using natural gas have almost returned to pre-pandemic levels.

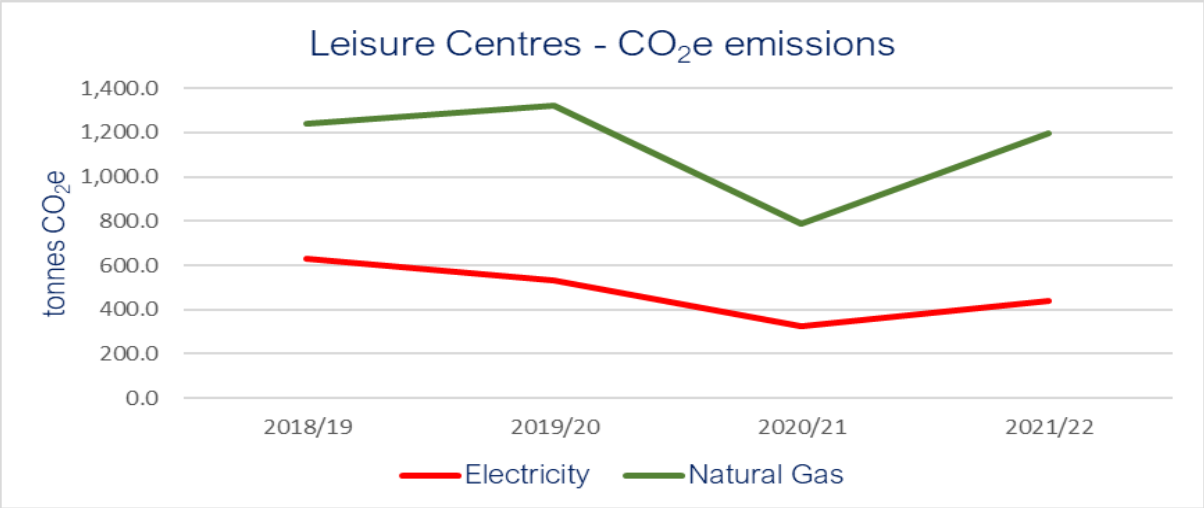

Chart 2.2 – CO_2e emissions from the four leisure centres

Owned and leased estate

The second largest source of emissions of 1,487.6 tCO_2e can be attributed to the council's built estate, which includes depots, touchdown points and sheltered housing. Sheltered housing contributes to 70.9% of these emissions.

Chart 2.3 provides a summary of the CO_2e emissions from the built estate over the past four years.

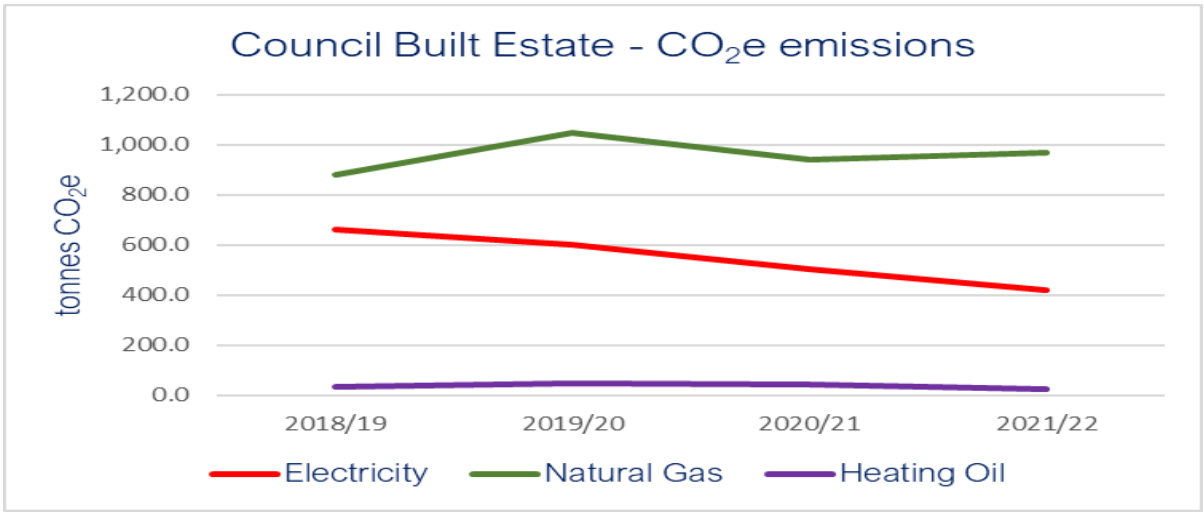

Chart 2.3 – CO_2e emissions from the built estate

Waste and Refuse Collection

The third largest source of emissions within the Council portfolio was the waste refuse collection service at 826.8 tCO_2e per annum, accounting for 17.4% of the total emissions. This was significantly lower than the previous year' total of 1,464.6 tCO_2e due to a change in the primary

fuel source. From August 2021 the waste fleet started to use Hydrotreated Vegetable Oil (HVO), which has a far lower emissions factor than standard diesel. The emissions factor associated with HVO may not fully reflect the true CO_2e emissions as the transport of the HVO is not included in the calculation. Therefore, the use of HVO as a fuel source is seen as a temporary measure to reduce emissions and a longer-term, low-carbon, solution is being sought.

Chart 2.4 provides a summary of the CO_2e emissions derived from waste services over the past four years. The impact of moving to HVO can be clearly seen in the decrease in emissions over the past year.

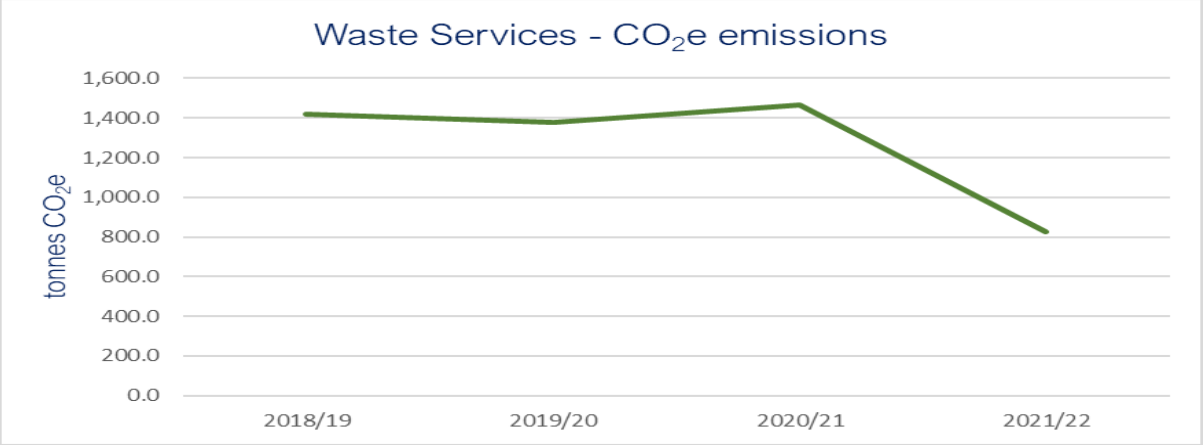

Chart 2.4 – CO_2e emissions from waste services

Other Emissions

The Council offices at Endeavour House accounted for 103.0 tCO_2e which equates to 2.2% of the Councils' total carbon emissions (this is based on the Councils' floorspace occupancy as a proportion of the whole building).

The office at Endeavour House currently has a Display Energy Certificate rating of E, which is below the standard expected of a building of its size, age, and nature of occupation. As tenants, the Councils have no control over the heating, air conditioning and lighting of the space within the building beyond the decision to base the Councils within the building. As such, these emissions are reportable but outside of the Councils' direct control.

Council staff claimed travelling expenses for 376,214 miles in the 2020/21 financial year using private vehicles for undertaking council business. This accounted for 103.3 tCO_2e. Staff mileage has increased by 30% since last year due to the lifting of restrictions associated with the Covid pandemic.

Councillors claimed travelling expenses for 21,162 miles in the 2020/21 financial year using private vehicles undertaking council business, which accounted for 5.8 tCO_2e of GHG emissions. Councillor mileage has seen a nineteen-fold increase since the previous year due to the lifting of pandemic restrictions.

Pool car use by Council staff and councillors during 2020/21 totalled 336 miles, which resulted in 0.1 tCO_2e. Pool vehicles, whilst currently underused, have a marginally lower carbon footprint per mile than the private "grey" fleet owing to the size of vehicle, the provision of electric vehicles and plug-in hybrid electric vehicles. The shift in the pool car fleet towards electric is likely to track ahead of the general fleet and as such the gap between the grey fleet and the pool cars is likely to grow – for example, an electric vehicle has a 68% lower carbon footprint than the grey fleet.

Pool cars are currently only accessible to those not in receipt of Essential Car User Allowance. Encouraging a shift to the use of pool cars should be considered with the acknowledgement that the use of private vehicles whilst undertaking tasks on behalf of the Councils is only a minor part of its carbon footprint. A shift to pool car use may also increase carbon emissions overall if staff must drive from the districts to Endeavour House to collect and return a pool vehicle.

Investment in a publicly accessible electric vehicle charging infrastructure is currently contributing to the Councils' carbon emissions either through direct electricity procurement or from host suppliers (e.g., Kingfisher Leisure Centre). The carbon emissions from the electric vehicle charging infrastructure are minimal, however it is expected to rise as the adoption of electric vehicles increases. The Councils are preparing a bid for partial grant funding of £400,000 from the Office of Zero Emission Vehicles to increase the provision of electric vehicle charging points at Council car parks.

Babergh and Mid Suffolk District Councils actively procure energy for the leisure centres and have entered REGO-backed electricity contracts with EDF for the four leisure centres. These contracts will also be available to the Councils for all Council-owned property from April 2022. The Councils are also exploring their options with regards to procuring 'green tariffs' for the gas supplies.

Any further upgrade plans will be required to fully address and minimise energy use if the Councils are to achieve their ambitions of being carbon neutral by 2030. The current buildings, either in use or under construction, have a lifespan beyond 2030 and so will require significant investment in either upgrades and/or replacement plant, or offsetting elsewhere within the Council estate to account for these emissions.

The transition to carbon neutrality

Chart 3.1 depicts the trajectory from a 2018/19 baseline of 5,804.1 tCO_2e to a carbon neutral target in 2030 and compares actual emissions against the trajectory. In 2019/20 carbon emissions rose to 5,820 tCO2e before falling to 4,821.9 tCO_2e in 2020/21. The year 2021/22 saw a marginal decrease on the previous year to 4,754.9 tCO_2e however this must be seen against the backdrop of the lifting of pandemic restrictions and the re-opening of the leisure centres and it is very encouraging the CO_2e emission levels have not returned to pre-pandemic levels.

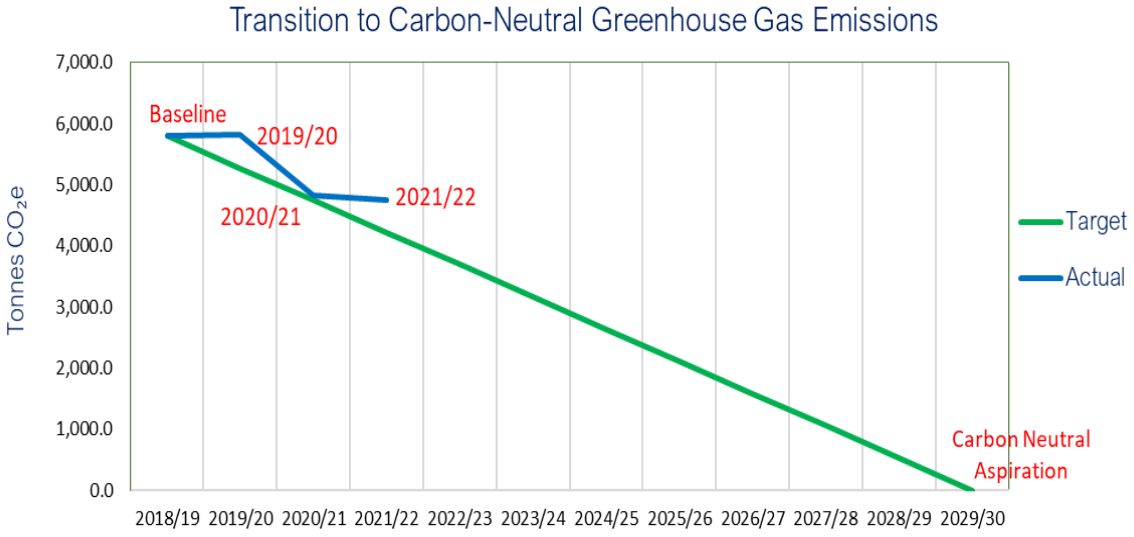

Chart 3.1 – Transition to carbon neutral GHG emissions

It will now prove to be very challenging to maintain this level of reduction as the economy begins to recover and activities return to pre-pandemic levels. Meeting the carbon neutral target by 2030 will rely on the successful implementation of the Councils' 'Carbon Reduction Management Plan', which will require a significant level of funding.

Forecasting decarbonisation

It is not possible to determine a highly accurate picture of the level of funding required and these determinations will need to make on a project-by-project basis however it is possible to give a general idea by using various tools.

The Public Sector Decarbonisation Scheme (PSDS) sets a funding cap limit of £500/tCO_2e over the lifetime (15 years) of the project to determine if projects are worthwhile. The recent project the Councils delivered using the PSDS grant delivered lifetime savings of £330/tCO_2e. As the carbon neutral target is static and not cumulative it is necessary to measure overall capital investment against the annual CO_2e saved. The PSDS grant was £1.4 Million and will deliver annual savings of circa 280 tCO_2e. Table 3.0 provides a summary of forecast level of investment needed and using the following assumptions:

- Prices are at 2021 levels.
- As the PSDS evaluation tool is designed for evaluating projects to retrofit buildings therefore only emissions from buildings are included in the forecast.
- It is assumed that carbon saved will only come from decarbonising the heating of the leisure centres and the built estate. Solar PV has now been fitted to most roof spaces in the leisure centres and systems to decarbonise heating such as air-source heat pumps will see an uplift in electricity consumption so reducing CO_2e from delivered electricity has been excluded.
- Endeavour house has been excluded as the Councils has no control over the building's development strategy.
- It is assumed that it will be feasible to decarbonise the heating of all buildings.

	tCO_2	Assumed lifetime cost - £/tCO_2e	Assumed cost capital cost- £/tCO_2e	Forecast capital cost @ £2021
Leisure centre gas (2021/22)	1,197.0	333	4995	£5,978,806
Built estate gas and oil (2021/22)	992.3	333	4995	£4,956,752
Total	2,189.3	333	4995	**£10,935,558**

Table 3.0 – Forecast capital costs for decarbonising the built estate

Table 3.0 identifies that to decarbonise heating in the built estate will require a capital investment of circa £11 Million and will reduce the Councils' overall emissions by a further 45%.

Carbon reduction projects

Over the past year the Councils have carried out several projects aimed at reducing CO2e emissions.

Public Sector Decarbonisation Scheme project

In February 2021 the Councils were awarded a £1.39 million grant from Phase 1 of the Public Sector Decarbonisation Scheme which provided £1 billion in grants as part of the Government's 'Plan for Jobs 2020' commitment to support the UK's economic recovery from Covid-19,

supporting the low carbon and energy efficiency sector. The grant was used to install solar PV on the four leisure centres and Wenham depot as well as install low carbon heating, using an air-source heat pump, in the Mid Suffolk Leisure Centre.

Table 3.1 (overleaf) provides a summary of the electricity generation at the four leisure centres.

Solar Generation - Leisure Centres

	Consumption (kWh)	Import (kWh)	Self-Consumption (kWh)	System Production (kWh)	Emission savings (tCO_2e)
Hadleigh	226,916	188,155	38,761	40,161	8.5
Kingfisher LC	462,772	128,449	334,358	338,662	71.5
Stowmarket LC	183,753	153,904	29,849	31,554	6.7
Stradbroke LC	340,530	328,402	12,129	12,159	2.6
Total	1,213,972	798,910	415,097	422,536	89.2

Table 3.1 – Overview of roof-mounted solar generation at the leisure centres

The projects have all been successfully completed and are now helping towards the Councils' aim of becoming carbon neutral. Between August 2021 and the end of March 2022 the solar PV arrays have generated a total of 422,536 kWh, saving 89.2 tonnes CO_2e.

The air-source heat pump (ASHP) did not come online until March 2022 and therefore emission reductions associated with the ASHP are not included in this report.

Kingfisher and Mid Suffolk leisure centre solar car port project

A £1.23 Million project to install 110 solar car ports at Kingfisher and Mid Suffolk leisure centres has almost been completed. Table 3.2 provides a summary of the project and shows that the solar car ports are forecast to save 53.4 tCO_2e per annum.

Solar Generation - Car ports

	Kingfisher LC	Mid Suffolk LC
System capacity (kWp)	103.3 kWp	194.9 kWp
Grand funding	£400,000	£400,000
Capital cost	£109,292	£324,370
Total installed cost	£509,292	£724,370
Number of bays	40	70
CO_2e emissions saved	27.3 tCO_2e	53.4 tCO_2e

Table 3.2 – Overview of solar car port project for Kingfisher and Mid Suffolk leisure centres

Kingfisher leisure centre water filtration system

Babergh District Council has invested £25,000 in a prototype water filtration system at Kingfisher leisure centre. The system replaces a typical sand filtration system and uses the process of electrocoagulation to remove impurities form the pool. Under the old system the treated water would be sent to sewer and the pool would be backfilled with mains water, which would have to be heated to pool temperature (28˚C). The new system maintains water quality and allows for treated water to be returned directly to the pool at 28˚C, thus saving water and the energy needed to heat the mains water. The system was commissioned in September 2022

and an evaluation of the systems' performance will be carried out once the system has been running for six months.

Decarbonising the grid

The Councils have made a significant investment, installing approximately 5 MWp of solar photovoltaic panels on around 2,000 Council-owned properties. Under the Government's standard reporting guidelines, the emissions saved are not reportable as an offset against wider Council emissions because they are claimed by the electricity companies as part of the purchase transaction. However, the investment does help to decarbonise grid electricity by replacing grid electricity with local, renewable power.

Table 3.3 provides a summary of the electricity generated by the Councils' solar PV systems over the past four years and shows the carbon emissions that have been saved during this period. Since 2018/19 the Councils have saved 4,215.6 tCO_2e, an average of 1,053.9 tCO_2e per year.

Solar PV Energy Generation - Social Housing

Year	Authority	Units	Generation	Conversion Factor	tCO_2e
2018/19	DC	kWh	2,404,821	0.2773	666.9
2018/19	MSDC	kWh	2,091,746	0.2773	580.0
2019/20	BDC	kWh	2,331,689	0.25319	590.4
2019/20	MSDC	kWh	2,009,840	0.25319	508.9
2020/21	BDC	kWh	2,242,679	0.23112	518.3
2020/21	MSDC	kWh	1,893,176	0.23112	437.6
2021/22	BDC	kWh	2,410,964	0.21107	508.9
2021/22	MSDC	kWh	1,917,544	0.21107	404.7
			Cumulative total		4215.6

Table 3.3 – Summary of electricity generation and carbon emissions reductions from installed Solar PV

Carbon offsetting and green tariffs

The Councils moved the electricity contract for the four leisure centres to a REGO-backed contract in April 2021 and although under the current reporting guidelines the Councils cannot deduct the CO_2e emissions saved from their annual emissions it has helped to further decarbonise the grid by ensuring the purchase of power generation, which saves 439.7 tCO_2e.

References

HM Government (2019): Environmental Reporting Guidelines: Including streamlined energy and carbon reporting guidance, HM Government. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/850130/Env-reporting-guidance_inc_SECR_31March.pdf

World Resources Institute and World Business Council for Sustainable Development (2004) The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition), World Resource Institute, Washington, USA Available at: https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf

World Resources Institute and World Business Council for Sustainable Development (2013) Required Greenhouse Gases in Inventories, Accounting and Reporting Standard Amendment, World Resource Institute, Washington, USA Available at: https://ghgprotocol.org/sites/default/files/standards_supporting/Required%20gases%20and%20GWP%20values_0.pdf

DBEIS and DEFRA (2022) UK Government Conversion Factors for Company Reporting (2022) Department for Business, Energy and Industrial Strategy, Available at: https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2022