Havant
BOROUGH COUNCIL

Greenhouse Gas Emissions Report

Contents

1. INTRODUCTION

1.1 The Council has made a commitment to addressing climate change and is working with its workforce, residents, businesses and stakeholders to make local life environmentally sustainable by reducing the amount of Greenhouse Gas Emissions (GHG) that are produced.

1.2 Havant Borough Council (HBC) understands the importance of protecting the natural environment and acknowledge the need to adapt to the inevitable changes that are coming to ensure the Borough remains a beautiful, sustainable and environmentally friendly place to live. It also acknowledges the need to reduce and remove the amount of greenhouse gas emissions that are produced in order to limit and reduce the length and severity of the impacts that Havant Borough will face.

1.3 In order to meet that commitment, the Council has adopted a Climate Change Strategy and Action Plan - the Borough's second strategy in this area. This five year plan is designed to support and guide the Council and Borough on its journey to net zero. Within it are specific actions HBC need to implement over the next five years in order to ensure that the Council can achieve it's net zero targets.

1.4 Through the Climate Change Strategy and Action Plan, Havant Borough Council has set a target to reduce the amount of Greenhouse Gas emissions (GHG) produced by the authority by 68% by 2030. This target reflects the carbon budgets set by Government and is considered to be a necessary interim target to support the Council's operations transitioning to zero carbon by 2035 and Borough wide by 2045.

1.5 The Council's Climate Change Strategy and Action Plan recognises that in order to achieve these ambitious targets it must first understand its baseline of emissions, what types of emissions are produced and whether these fall within Scope 1, 2 or 3 of emissions as defined by the World Resource Institute. Once determined this will allow the authority, through regular monitoring and reporting, the opportunity to report and track emissions being produced and identify the areas which need significant review to be reduced and/or removed.

1.6 This report shows the carbon emissions produced by the authority across the following years:

2021/22 2022/23 2023/24

1.7 These years have been chosen because this is where the Council has data to support tracking and baselining emissions. It is intended that as the amount of data increases this report will be expanded to accommodate the latest current figures.

1.8 Having a report of this nature allows the Council to identify where progress is being made in carbon emissions reduction and where further work is required to reduce or remove these emissions further. It will also allow the Council to identify where these sit, in Scope 1, 2 or 3 and in what area these reductions need to take place.

2. EMISSIONS INCLUDED: SCOPES

2.1 The measurement of Greenhouse Gas Emissions (GHG) is taken from the World Resources Institute Greenhouse Gas Protocol. From this we are able to understand how best to approach a reduction to greenhouse gas emissions and what areas the Council has the greatest impact on. These are defined as Scope 1, Scope 2 and Scope 3 - see table 1 below.

Table 1:

Shows the definitions of the scopes from the World Resource Institute (GHG)

Scope 1 **Direct emissions**	**Scope 2** **Indirect emissions**	**Scope 3** **All sources not within the scope 1 and 2 boundaries**
Sources owned or controlled by the Council i.e. burning oil or gas for heating and fuel consumption for business travel or distribution.	Outsourced/contract manufacturing, products and services offered by the Council.	Scope 3 encompasses emissions that are not produced by the organisation itself and are not the result of activities from assets owned or controlled by them, but by those that it's indirectly responsible for up and down its value chain.
Examples include gas heating and fuel used by fleet vehicles.	Examples include electricity used at the plaza and at leisure centres.	Examples include locations such as the leisure centres, community centres and any other leased properties.

2.2 Havant Borough Council (HBC) needs to address all three scopes in order to reduce and remove the current amount of GHG that are produced. Although it is acknowledged that the Council has more control and influence over both Scope 1 and Scope 2 emissions, Scope 3 also needs to be addressed to ensure targets are met. Some of the Council's largest outsourced contracts sit and are represented within Scope 3.

2.3 This report therefore shall present and show the data the Council has for all three scopes where possible.

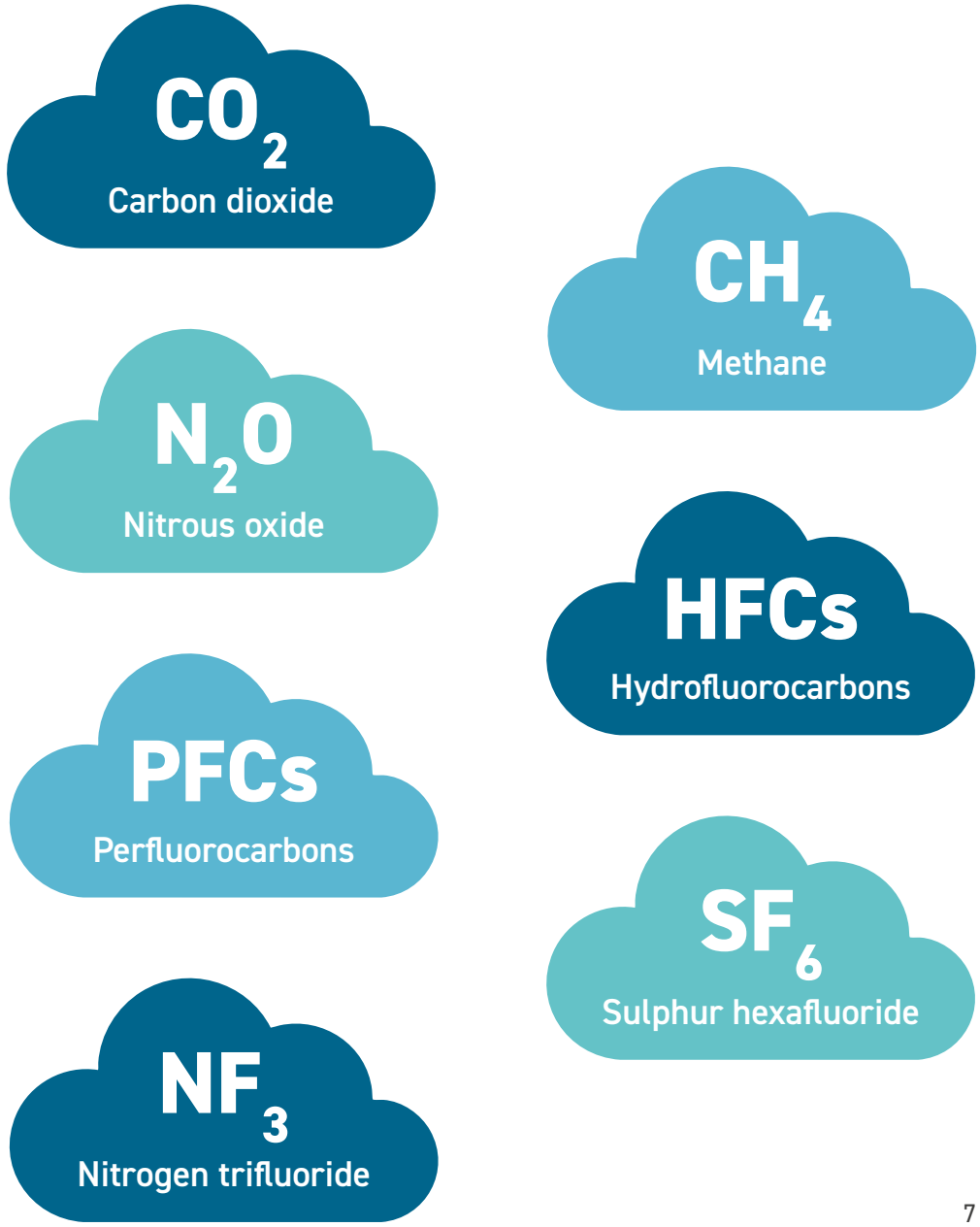
2.4 In order to complete this and collect the data required the Council has begun to reach out to its tenanted community buildings, sports clubs and other assets asking for energy data including water usage to be submitted. As this data begins to be collected on a more regular basis it is hoped that the data contained within these figures will grow and become consistent. All responses received have been included within the emissions data within Scope 3.

3. METHODOLOGY

3.1 In order to ensure that HBC are reporting in the most accurate and consistent way the Council has used an available carbon tool from The Local Government Association (LGA)[1]. The LGA, though Local Partnerships (LP) has produced this tool specifically to support local authorities in tracking the amount of carbon emissions that have been produced. It has been recommended that the authority uses this tool to ensure consistency across local authorities and reporting frameworks.

3.2 The tool is comprehensive and detailed covering all aspects of data that should be included within Scopes 1, 2 and 3 of the Greenhouse Gas Protocol (GHGP) and has been reviewed by the CPD (formally the Carbon Disclosure Project). Therefore this is the method of carbon capture that has been used within the report.

3.3 Tools like the one from the LGA use conversion factors of GHGs produced by the Department for Energy Security and Net Zero (DESNZ). GHGs are determined by the multiplying of consumption data from within HBC by using these conversion factors set by DESNZ. Emissions are reported as CO_2e. The GHG Protocol methodology accounts and reports on the seven greenhouse gases covered by the Kyoto Protocol:

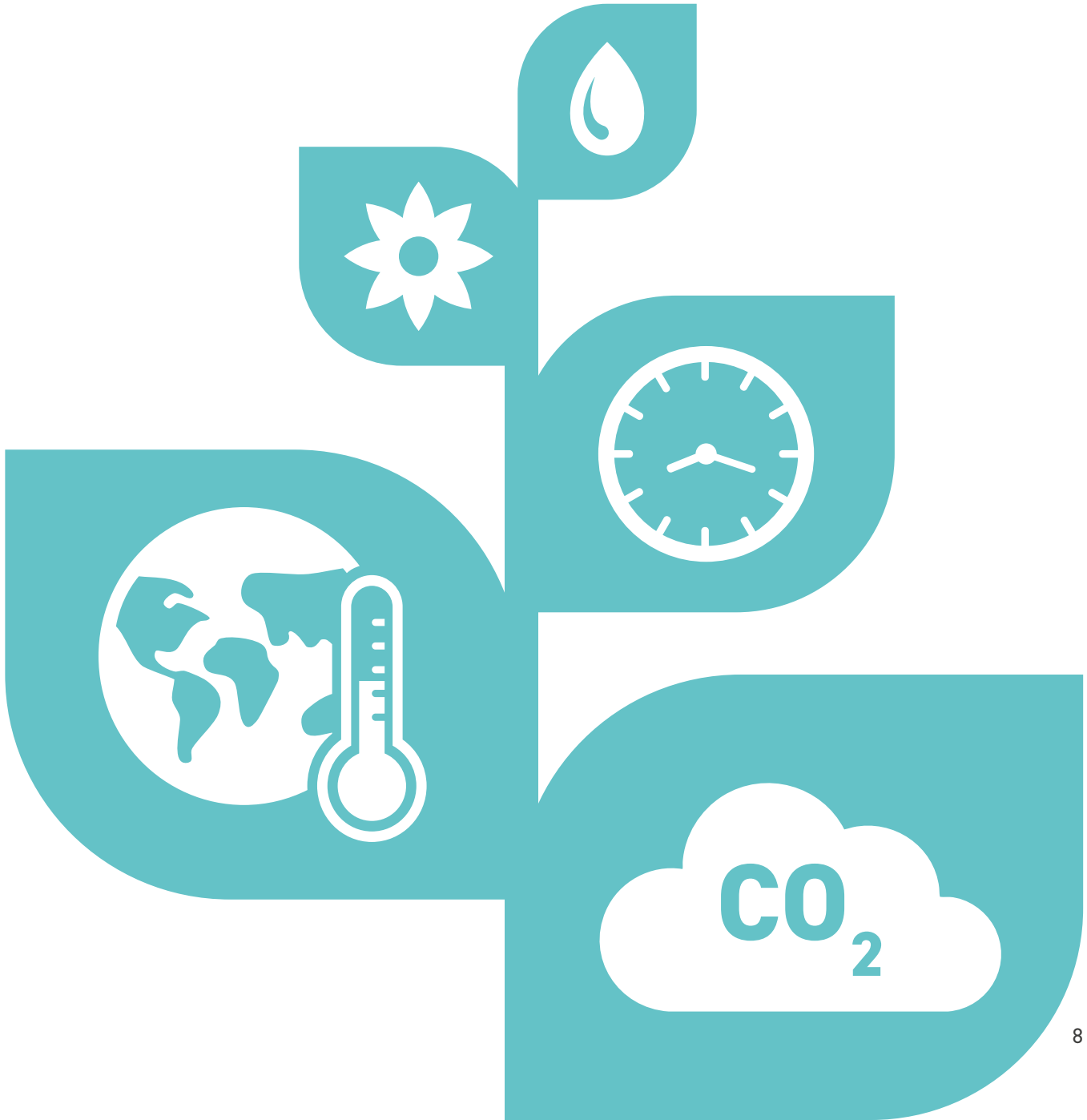


1 Greenhouse Gas Accounting Tool - Local Partnerships

3.4 DESNZ guidance states that where reporting is aligned to the financial year, the conversion figures applying for the majority of the financial year should be used. The conversion figures specify the "carbon intensity" of each activity that generates emissions, allowing the amount of "CO_2 equivalent" emissions to be determined. CO_2 equivalent emissions specify the amount of CO_2 that would have the same climate impact over 100 years.

3.5 The methodology used through this tool from the LGA therefore follows best practice guidance from DESNZ and is summarised as follows:

- Collection of usage data for all relevant energy use.
- Conversion from usage to greenhouse gas emissions using "carbon intensity" conversion factors provided by DESNZ.



4. CALCULATIONS OF EMISSIONS TOTALS

4.1 Emissions data has been obtained by multiplying the Council's activity data with the conversion factors developed by the UK Department for Environment, Food and Rural Affairs (DEFRA) and DESNZ and using the carbon accounting tool developed through the Local Partnerships.

4.2 Carbon emissions are shown in tCO_2e (tonnes of carbon dioxide equivalent) as this is a measure of how much a gas contributes to global warming, relative to carbon dioxide. The carbon dioxide equivalent of a gas is calculated by multiplying its mass (in tonnes) by the gas' global warming potential (GWP) over 100 years.

4.3 The useful output of this method is that data can be inputted through different consumption units with all the relevant and required conversion factors aligned against each choice providing an accurate, consistent and uniform approach with calculating and converting emissions data.

4.4 Once the conversion factors have been used to generate a consistent measure of emissions from all activities, these emissions can simply be summed to generate the Council's gross emissions total.

4.5 DESNZ guidance allows a net total to be reported in addition to the gross total. The net total is calculated by subtracting from the gross total emissions from elsewhere that the Council's activities have prevented or offset.

4.6 Consideration needs to be given to Solar PV and renewable energies already installed. For example, the solar photovoltaic (PV) installations on the Councils leisure centre in Waterlooville will have energy which is being sold back to the grid and therefore emissions will be transferred and highlighted through this channel. However, since the solar panels have been relatively recently installed it is unlikely that the changes here will be able to be reported on at the time this report is produced.

5. RESULTS: TOTAL EMISSIONS

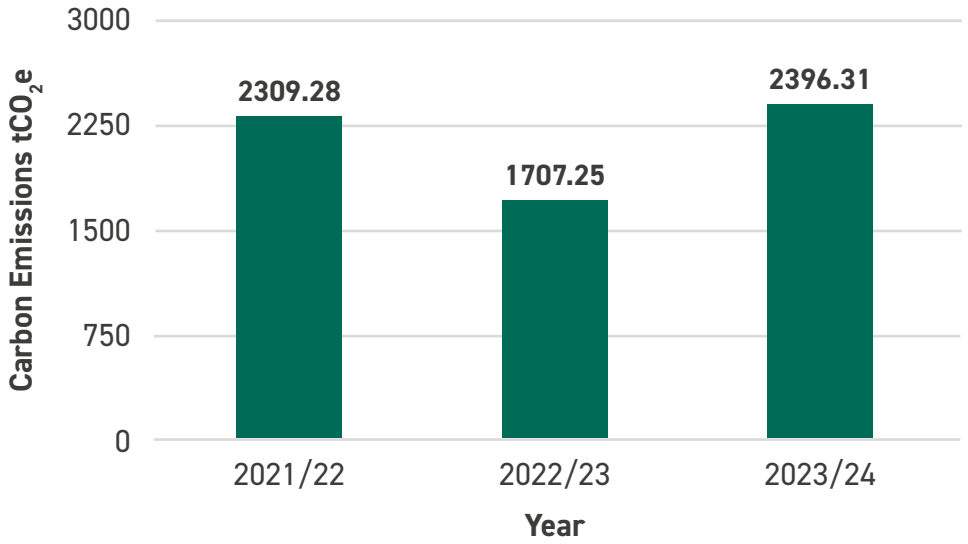
Table 2:

Showing emissions results and differential changes across years

Year	Emissions (tCO_2e)	% Difference
2021/22	2309.28	
2022/23	1707.25	-26.08%
2023/24	2396.31	+40.37%

Graph 1:

Showing the carbon emissions generated at Havant Borough Council

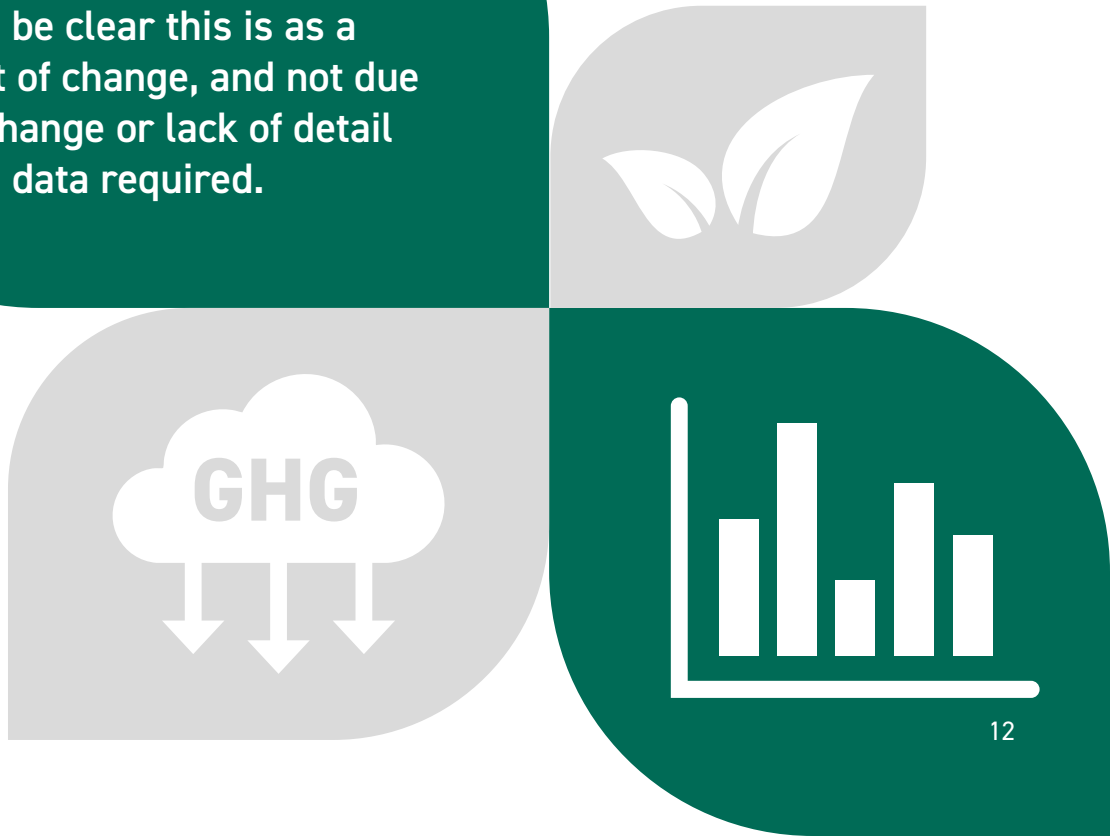


5.1 The results shown in the table and bar chart on the previous page highlight the starting point for council GHG emissions being 2309.28 tCO_2e in 2021/22. The next year showed a decrease of emissions by 26.08% and were reported to be 1707.25 tCO_2e in 2022/23. Emissions then increased by 40.37% in 2023/34 to total 2396.31 tCO_2e, the Councils highest emission rate to date.

5.2 It is not a surprise to see year 2023/34 as producing the highest production of GHG emissions. The Council is reaching out to expand and capture a greater amount of data then it has before and as this occurs an increase in emissions is likely to be seen. It was only last year that the Council reached out to collect energy use data from its leased buildings, started tracking its fleets fuel use and including other areas of data. As this wasn't captured in the previous years, this would explain why 2023/24 has the highest emissions rate so far.

5.3 The Council aims to gather as much information as it can to accurately report on its emissions and therefore it would be expected that the emissions generated at the authority will continue to grow before it will start to come down.

When emissions do start to reduce based on the changes being made at the authority it will be clear this is as a result of change, and not due to a change or lack of detail in the data required.



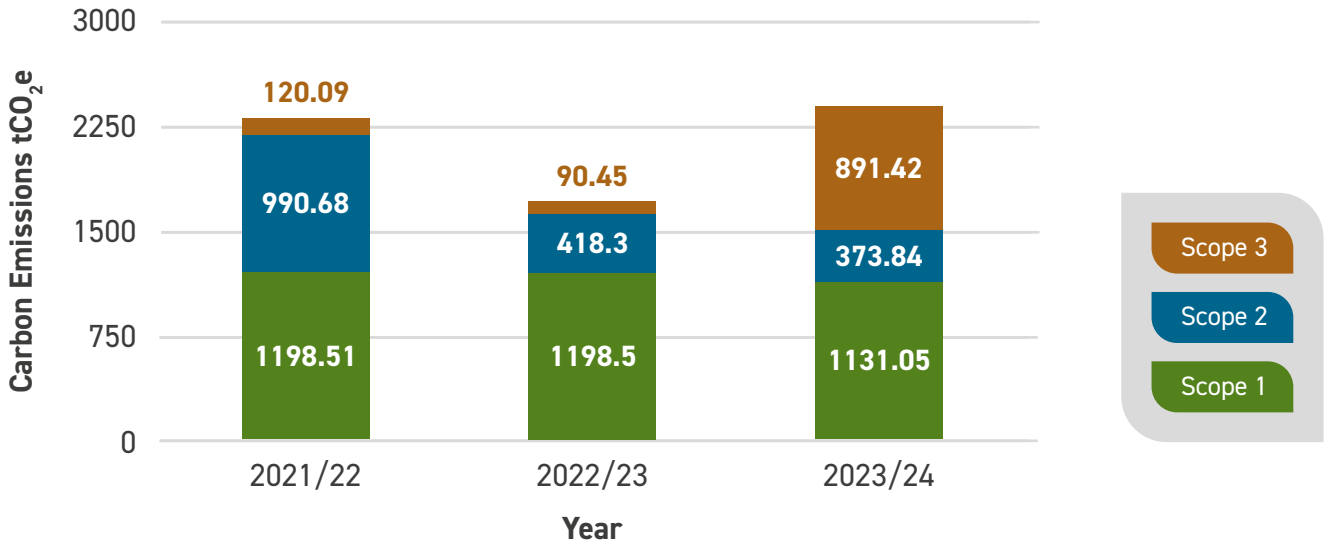
6. RESULTS: TOTAL EMISSIONS BROKEN DOWN BY SCOPE

6.1 An effective way to look at the results in greater detail is to present them broken down across Scope 1, Scope 2 and Scope 3 as per table 1 at the beginning of the document. The benefits of doing this is that the authority can easily identify whether emissions are greatest in the areas the Council has direct control over, indirect control over or through outsourced contacts and procurement.

6.2 In order to be able to show the data above, the emissions generated have been converted from percentages of a total into a numerical value.

Graph 2:

Shows the carbon emissions generated broken down into Scope 1, 2 & 3



6.3 Scope 1 is the Council's emissions it has direct control of.

It is not surprising that in all 3 years this scope represents the highest total of emissions because the Council has access to all of its data readily. Using the Local Government Association Tool, Scope 1 includes:

- Heating
- Fugitive Emissions
- Authority's Fleet
- Authority's Fuel Use

6.4 Appendices 1–3 show and outline the data recorded for each of the uses but the heating of the main plaza building is the leading cause for this higher figure and will remain as such until the Council moves away from its reliance on fossil fuels.

6.5 Although there is not a significant drop in emissions associated with gas usage at the plaza there has been a drop in emissions of 68.55 tCO_2e between 2021/22 and 2023/24. It is likely that this drop in emissions used reflects the behaviour change of the authority and the drop made to heating temperatures over the winter months.

6.6 The vehicle fleet reported on within the report covers only the Mayor's car, the Council's pool car and courier van. Although there has been a modest increase of 383 litres difference across 2022/23 and 2023/24 this has created an addition of 0.92 tCO_2e over the year.

6.7 Scope 2 represents electricity usage across council assets.

It has seen a significant decrease in the amount of electricity used at HBC between 2021/22 and 2023/24 creating a saving in emissions equivalent to 615.59 tCO_2e. As the Council steps away from its reliance on fossil fuels and starts to begin the introduction of renewable energies this should continue to drop further.

6.8 Scope 3 can include:

- Staff commuting
- Staff working from home
- Water
- Waste
- Staff business travel
- T&D losses
- Material use
- Outsourcing

6.9 Although Scope 3 can include the above, HBC is only able to record limited energy provided from Norse. Therefore Scope 3 is the area HBC needs to capture more regularly and widely to increase the picture we present as an authority on our emissions.

6.10 Norse South East provides Environmental Services for the authority and is a significant outsourced contracted service. Across 2023/24 emissions have increased significantly within Scope 3 as Norse started to contribute energy usage to the Council's carbon baseline and therefore from here the Council will be able to identify whether changes are being made to increase or decrease the amount of emissions associated with the company and contract.

6.11 The Council owns a number of assets and holds ownership of these sites but the control of the day to day is managed by the owner of that site through an individual lease agreement with the authority. The Council reached out to these sites to establish the energy usage last year and many responded with this data. These emissions will be considered under Scope 3 and will be included within a future report of emissions for 2024/25 once further emissions data has been gathered. This will no doubt continue to increase in future emissions in control of the authority which will feed into the baseline and is a result of the timing of gathering this information. However, with working with these sites and supporting their decarbonisation plans, emissions over time should reduce.

7. CHANGES TO EMISSIONS OVER TIME

7.1 Reporting on greenhouse gas emissions produced by the Council is now a priority at the authority and the intention is that annual reporting will be conducted to monitor the authority's progress. Additional measures have also now been put in place around what and how the authority can capture these emissions so changes are expected to be seen in the coming years.

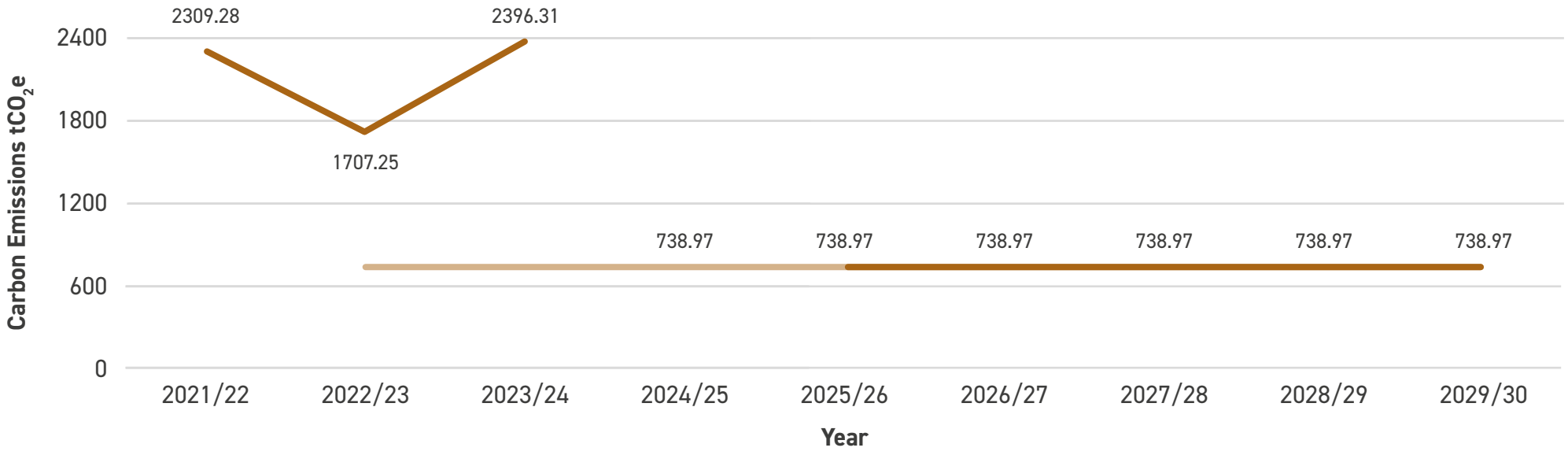
8. PATHWAY TO ACHIEVE NET ZERO TARGET

8.1 Havant Borough Council are able to produce emissions data for years from 2021/22 and therefore this is considered to be the starting baseline for emissions in its journey to net zero. It is acknowledged that additional information needs to be gathered to continue to present the most accurate picture for future emissions calculations but this is a natural consideration of local authorities on a net zero journey and will be noted in any future reports.

8.2 Taking data from 2021/22 allows the authority to produce a trajectory of necessary emissions savings required in order to achieve its 68% target for emissions reductions by 2030 and this can be seen in graph 3 below.

Graph 3:

Showing the trajectory of emissions



8.3 Target emissions for each year can be calculated by assuming that emissions must decrease by a fixed percentage each year from this baseline, until the 2029/30 financial year. An acceptable level of residual emissions in 2030 must also be assumed, and 25 tCO_2e has been chosen. This is based on 100 tCO_2e being considered as a level of emissions that could be realistically offset (equivalent to approximately 5000 mature trees that would not otherwise have been present), and an estimated 25% of emissions being accounted for by the Scope 1 and Scope 2 emissions reported here. To reach 25 tCO_2e in the 2029/30 financial year, Scope 1 and Scope 2 location based emissions need to reduce by an average of 12% each year from 2021/22.

8.4 Graph 3 outlines that between 2021/22 the required reduction, in order for HBC to be on track to reduce emissions by 68% was hit and on track. However, the years between 2022/23 and 2023/24 have seen a significant increase in emissions, due to the latest reporting and additional data included within this.

8.5 With 2023/24 not hitting the target it means that all future subsequent years have a larger % reduction to achieve in order to hit the 68% reduction target by 2030.

8.6 What has to be acknowledged is the additional data that was collected and presented in 2023/34 and therefore the trajectory is not proportionally represented. However, with any increase, that target gets harder to achieve and HBC should be aiming for significant reductions per year.

8.7 It could be included, for future reports a more basic fundamental level of emissions consistent across the years of data gathered, in order to present a fairer representation on whether the 68% reduction is on track. However, it would have to be acknowledged that this approach would include a minimal amount of data.

9. CONCLUSION

9.1 Havant Borough Council is pleased to be taking a forward thinking approach to calculating and establishing its carbon baseline for the authority and wider Borough.

9.2 Throughout the creation of the Council's new Climate Change Strategy and Action Plan, education and knowledge has been outlined as one of the key objectives to achieve in order to support authorities on their net zero journey. This report represents a key piece of information to ensure that emissions can be recorded and tracked across the years to help the authority realise where and how the changes required can be achieved.

9.3 The report outlines the areas where the authority needs to focus on which will form the next version of the Climate Change Strategy and the direction for emissions reductions. The Council will be aiming to update this report on an annual basis to inform and demonstrate the progress the Council is making in this field.

APPENDIX 1. SUMMARY OF EMISSIONS FOR 2021–22

Scope	Emissions Type	Emissions (tCO2e)	Percentage of Total Emissions
Scope 1	Heating	1,198.77	51.9%
	Fugitive Emissions	0.00	0.0%
	Authority's Fleet	0.00	0.0%
	Authority's Fuel Use	0.00	0.0%
Scope 2	Electricity	991.22	42.9%
Scope 3	Staff Business Travel	0.00	0.0%
	Staff Commuting	0.00	0.0%
	Working From Home	0.00	0.0%
	T&D Losses	87.72	3.8%
	Water	0.28	0.0%
	Material Use	0.00	0.0%
	Waste Generated From Own Operations	0.00	0.0%
	Outsourced Scope 3 (TOTAL)	31.29	1.4%
Total Emissions		**2,309.28**	**100%**

APPENDIX 2. SUMMARY OF EMISSIONS FOR 2022–23

Scope	Emissions Type	Emissions (tCO2e)	Percentage of Total Emissions
Scope 1	Heating	1,199.23	70.2%
	Fugitive Emissions	0.00	0.0%
	Authority's Fleet	0.00	0.0%
	Authority's Fuel Use	2.21	0.1%
Scope 2	Electricity	417.81	24.5%
Scope 3	Staff Business Travel	0.00	0.0%
	Staff Commuting	0.00	0.0%
	Working From Home	0.00	0.0%
	T&D Losses	38.22	2.2%
	Water	0.40	0.0%
	Material Use	0.00	0.0%
	Waste Generated From Own Operations	0.00	0.0%
	Outsourced Scope 3 (TOTAL)	49.38	2.9%
Total Emissions		**1,707.25**	**100%**

APPENDIX 3. SUMMARY OF EMISSIONS FOR 2023–24

Scope	Emissions Type	Emissions (tCO2e)	Percentage of Total Emissions
Scope 1	Heating	1,130.22	47.2%
	Fugitive Emissions	0.00	0.0%
	Authority's Fleet	0.00	0.0%
	Authority's Fuel Use	3.13	0.1%
Scope 2	Electricity	375.53	15.7%
Scope 3	Staff Business Travel	0.00	0.0%
	Staff Commuting	0.00	0.0%
	Working From Home	0.00	0.0%
	T&D Losses	32.49	1.4%
	Water	0.50	0.0%
	Material Use	0.00	0.0%
	Waste Generated From Own Operations	0.00	0.0%
	Outsourced Scope 3 (TOTAL)	854.43	35.7%
Total Emissions		**2,396.31**	**100%**

APPENDIX 4. GLOSSARY

Term	Definition
Adaptation	Responding to the impacts caused by climate change.
Mitigation	Removing or reducing GHG emissions.
AP	Action Plan
Greenhouse Gas Emissions	Emissions that are put into the atmosphere from burning fossil fuels.
Climate Resilience	The capacity to cope, respond and recover from potential hazardous events or disturbances.
GI	Green Infrastructure
HBC	Havant Borough Council
HCC	Hampshire County Council
Net Zero	The balance between the amount of greenhouse gases produced and the amount removed from the atmosphere.
PCC	Portsmouth City Council
LAD	Local Authority Delivery
LA	Local Authority
LGA	Local Government Association
LP	Local Partnership
LPA	Local Planning Authority
LTP	Local Transport Plan
Sustainable	Meeting the needs of those without compromising the future.
T&D	Transmission and Distribution

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