CARBON MANAGEMENT ACTION PLAN – PROGRESS REPORT

Peterborough City Council

(Council-CMAP-2021)

PETERBOROUGH CITY COUNCIL

Contents

Executive Summary

In March 2020 we adopted a new Council Carbon Management Action Plan (Council-CMAP) setting out how we intend to cut our organisational carbon emissions. This report details the progress made both in terms of reducing our emissions and actions taken to develop projects designed to reduce emissions.

It should be noted that 2020 has proven to be a challenging year due to the impacts of the Covid-19 pandemic. Whilst the pandemic has led to some direct benefits including a direct reduction in overall emissions from some sources, it has also led to challenges in terms of reduced officer capacity to deliver projects.

Clear and meaningful progress has been made across a number of the 'top 20 commitments for 2020' with highlights including a switch to a 100% renewable electricity contract across the Council's estate, an increase to the planned level of dimming across the Council's street lighting assets and implementation of a Carbon Impact Assessment process across the Council's operations. Of the many actions in the main part of this document, the following forms a summary of the top 21 commitments we aim to achieve over the next 12 months.

21 Commitments for 2021

Over the next 12 months, the Council will play its part to help mitigate and adapt to climate change with the following actions:

1. Develop and trial a proposal for **minimum street lighting levels** across the city to maximise carbon savings, balancing environmental, social and economic factors.
2. Roll out **'Carbon Literacy' training during 2021**, initially focusing on Members of the Climate Change Cross Party Working Group, Change Champions and lead officers from each department across the Council.
3. Seek to secure funding from future rounds of the **Public Sector Decarbonisation scheme** (or an alternative source) to improve the efficiency of the Council's estate.
4. Develop a process for **collecting additional emissions data** from the Council's farm estate and seek funding to undertake research to identify potential opportunities to **reduce carbon emissions from peat soils**.
5. Develop a process for **collecting additional emissions data** from 3rd party organisations including Medesham Homes and Opportunity Peterborough.
6. Develop a process for **collecting additional emissions data** from purchased materials and work with the Council's procurement team to identify mechanisms to improve the sustainability of the council's procurement process.
7. When normal Mayoral duties resume, a **new lease** for the Mayoral car will be considered which will include options for an **electric or hybrid vehicle.**
8. To ascertain and review options to enable the Council to consider switching to a **low carbon gas tariff.**
9. Begin to implement recommendations from the **fleet review** undertaken by **Aragon** which will see the introduction of new electric vehicles.
10. Develop detailed **carbon assessments** for two major highway projects and use the information to influence the **final design**.
11. **Engage with national government** on the resources and legislation necessary to empower local government to deliver our climate ambitions.
12. Develop a Business Case to establish the viability of switching the local **Skanska fleet** to an alternative **sustainable fuel.**
13. Investigate the opportunities to reduce emissions from the **Regional Swimming Pool**, currently the Council's single highest carbon emitting site.
14. Continue to **rationalise office floorspace** thereby reducing energy demands, for example, excess floorspace at the Town Hall will be leased.

15. Initiate a process to identify **adaptation** opportunities across the Council's operations and potential interventions.
16. Roll out further guidance and training for staff in relation to the recently introduced '**Carbon Impact Assessment**' procedure – a new assessment which requires all Council decisions to be assessed for the carbon implications of the decision being made.
17. Actively **participate in a citywide Climate Change Partnership forum**, and the annual Climate Change Action day.
18. Further develop the cross-party **Climate Change Member Working Group**, so that each political party of the Council can both champion carbon savings, scrutinise decision making and steer further carbon savings initiatives and ideas.
19. Work with **other local authorities** to ensure **best practice** is shared and opportunities to **collaborate** are identified and developed.
20. Hold the second annual **Climate Action Day**, known as **March Forth** to engage businesses and residents across the city. This day will be a celebration of the work to date, as well an opportunity to share ideas on how to **tackle climate change** and take a **pledge to adopt climate friendly behaviours** for the day.
21. Conduct a **staff travel survey** once Covid-19 restrictions are lifted to understand the change in travel behaviour. Opportunities to support home working where feasible will be explored.

1 Introduction

Peterborough has the potential to be a truly sustainable city. A city which has a thriving local economy, strong communities and a sustainable way of life. A city where our residents are healthy, happy and prosperous.

To achieve this we will need to do things differently. If everyone on Earth lived as the average Peterborian, British or European citizen does, we would need nearly three planets' worth of resources to sustain us[1]. This means, on average, each of us is using too much of the world's resources to produce the food we eat, treat the waste we produce, generate the energy we use, consume the goods and services we take for granted, and the travel around the area and beyond.

Peterborough City Council has committed to take action to reverse the trend of increasing consumption of natural resources, and instead put Peterborough on the road to becoming a truly sustainable city. It remains clear that there is an unprecedented urgency to address climate change. The climate science is unequivocal. There is recognition that the impacts of climate breakdown are already causing serious damage around the world. The Intergovernmental Panel on Climate Change (IPCC) Special Report on Global Warming of 1.5°C, describes the enormous harm that a 2°C average rise in global temperatures is likely to cause compared with a 1.5°C rise (IPCC, 2018). And we can see the local evidence of rising temperatures ourselves. In July 2019, Cambridgeshire was the hottest place in the UK reaching an all-time high temperature of 38.1°C[2]. The latest UK climate projections (UKCP18) suggest that the UK climate will continue to warm over the rest of this century, and on average, will result in hotter and drier summers, warmer and wetter winters with more extreme weather events expected, though individual years may not conform to this pattern (Environment Agency, 2018).

In response Peterborough City Council declared a 'climate emergency' on 24th July 2019 (**Peterborough City Council, 2019a**). In doing so the Council joined a global movement which worldwide has seen, to date, 1,863 jurisdictions in 33 countries declare a climate emergency, and within this 400 local authorities in the UK[3].

In making this declaration the Council committed to a wide range of comprehensive actions, including, in summary:

- Make the Council's activities and the city's net-zero carbon by 2030 with a baseline, action plan and budget by 31st March 2020.
- Ensure political and chief officer leadership to embed this priority into work, ensuring all decisions are in line with net-zero carbon by 2030.
- Set up a Climate Change Partnership group proactively involving young people and convene a citizen's assembly.
- Review 2020/21 budget proposals and ascertain environmental impact.
- Use planning powers to deliver net carbon new developments and communities and increase tree planting.
- Achieve 100% clean energy across the Council's full range of functions by 2030 and explore renewable generation and storage.
- Replace all Council vehicles with electric or hybrids including the mayor's car, provide electric vehicle infrastructure and encourage alternatives to private car use across the city.
- Increase the efficiency of buildings, in particular to address fuel poverty.
- Coordinate events to raise awareness and share best practice and keep everyone updated.

[1] WWF states that if everybody in the world lived as the average EU resident, we would have exhausted nature's budget for 2019 by 10 May 2019, and would need 2.8 planets to sustain us. (WWF, 2019)

[2] "The UK has seen its hottest July day ever as the temperature reached 38.1C in Cambridge. The new record outstripped the previous high for the month of 36.7C, set at Heathrow in July 2015." (New Scientist, 2019)

[3] Figures correct as of December 2019 (The Climate Emergency Declarations and Mobilisation, 2019)

- Call on the UK Government to provide the powers, resources and help with funding to make this possible and ask local MPs to do likewise.

Many of the above actions are directly or indirectly related to reducing our carbon emissions, with the headline being to hit the net zero target by 2030 for the Council's activities.

This document:

- Sets out what our current carbon emissions are so we know what progress we have made and can continue to set meaningful targets and milestones.
- Details the progress made on projects we have undertaken to date and sets out projects we intend to deliver (or continue to deliver) to reduce our emissions.
- Puts forward potential future projects and ideas requiring further investigation.
- Discusses funding options.
- Discusses how this process will be managed.

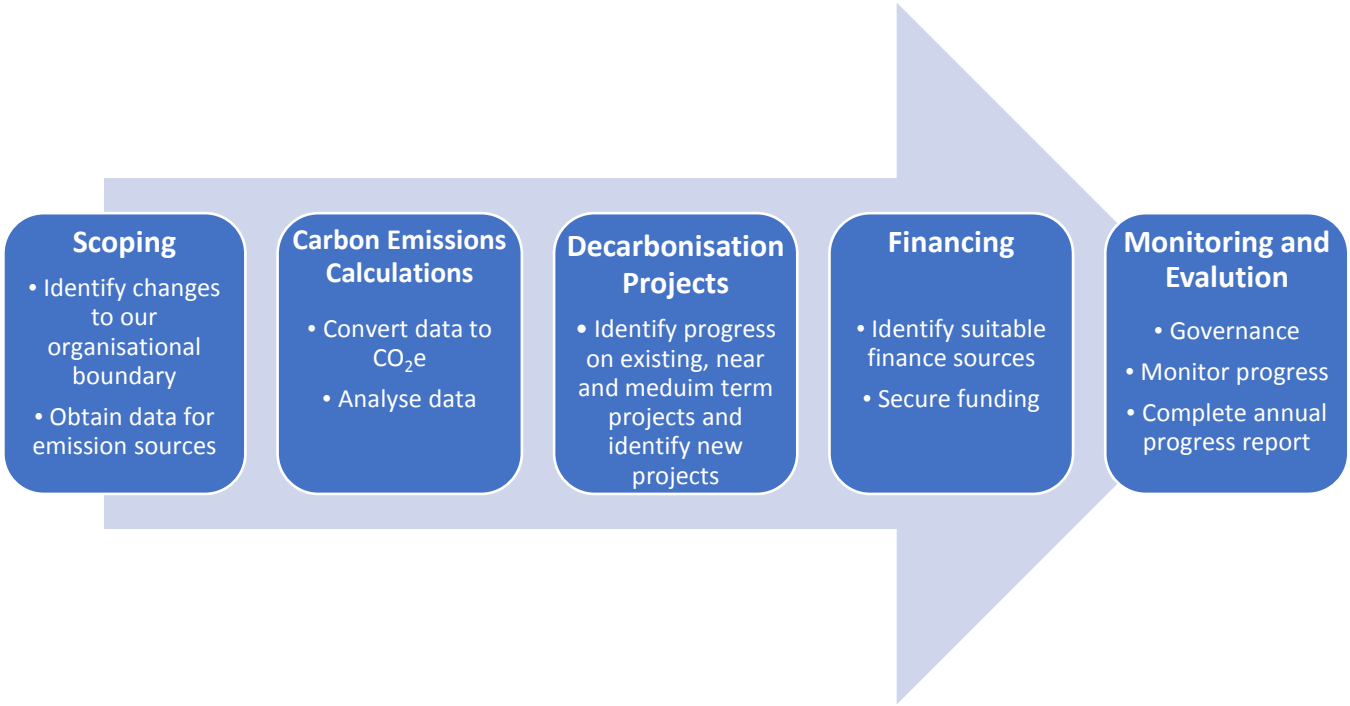

Figure 1: Carbon Management Process

2 Our Carbon Footprint

In order to decide what should be done to reduce our emissions, we need to properly understand what our current activities are emitting. This is sometimes known as working out our 'carbon footprint' which is a measure of the greenhouse gases (GHGs)[4] emitted into the atmosphere from sources in a specified area or organisation. It usually includes all relevant greenhouse gases, the most common of which is carbon dioxide (CO_2). Emissions of other GHGs such as methane (CH_4) or nitrous oxide (N_2O), are measured in 'carbon dioxide equivalent' (CO_2e)[5].

Nationwide, emissions of CO_2 make up 81% of GHG emissions, with the remainder from methane (11%), nitrous oxide (4%) and fluorinated gases (3%), when weighted by Global Warming Potential (GWP)[6]. The biggest source of greenhouse gas emissions in the UK is transport, closely followed by stationary energy (emissions arising from buildings).

This Action Plan examines the carbon footprint of Peterborough City Council as an organisation. The carbon footprint of the geographical area of Peterborough as a whole is examined thoroughly in a separate draft Citywide Carbon Management Action Plan.

The methodology for the calculation of the Council's carbon footprint can be found in appendix B.

2.1 Carbon Footprint Results 2019-20

The carbon footprint of Peterborough City Council (as an organisation) comprises emissions that occur as a result of the Council's own operations.

We have calculated the carbon footprint of the Council's own operations in line with the UK Government's Environmental Reporting Guidelines for Voluntary Greenhouse Gas Reporting[7].

Scope 1 (direct) and scope 2 (purchased electricity) emissions amounted to 5,758 tonnes CO_2e. Scope 1 and 2 includes emissions from gas and oil for heating our buildings, electricity for our buildings and street lighting etc. and emissions from fleet vehicles. Scope 1 and 2 are generally considered to be areas that are within an organisation's control and therefore the organisation can reduce the resultant emissions. Scope 3 emissions amounted to 3,855 tonnes CO_2e. Scope 3 are considered to be indirect emissions that an organisation cannot directly control and therefore the ability to reduce emissions to net-zero is more difficult.

[4] The main GHGs are: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF_6) and Nitrogen Trifluoride (NF3). The Kyoto Protocol – the international agreement addressing climate change - covers these seven main GHGs. The last four are fluorinated gases ("F-gases") which are a range of man-made compounds (including HFCs, PFCs, SF6 and NF3) used in a variety of industries including refrigeration, air-conditioning and the manufacture of cosmetics, pharmaceuticals, electronics and aluminium. F-gases are extremely potent greenhouse gases with some having GWPs of several thousand or more (BEIS, 2020a). The greenhouse gases covered by the Kyoto Protocol account for over 99% of global greenhouse gas emissions.

[5] By using CO_2e as a measuring tool means that the different global warming potential (GWP) of different gases are taken into account. Quantities of GHGs are multiplied by their GWP to give results in units of carbon dioxide equivalent (CO_2e)

[6] Global warming potential. A factor describing the radiative force impact (degree of harm to the atmosphere) of one unit of a given GHG relative to one unit of CO_2.

[7] These reporting guidelines are based on internationally-recognised standards from the World Resources Institute and World Business Council for Sustainable Development: the GHG Protocol Corporate Accounting and Reporting Standard, and the GHG Protocol Scope 3 standard. (BEIS, 2020a)

2.1.1 Results summary

Emissions have been calculated using data for the financial year 1 April 2019 to 31 March 2020. The resultant emissions for 2019-20 total 9,613 tonnes of CO_2e. The baseline was originally calculated for the financial year 1 April 2018 to 31 March 2019 and the most recent emission calculations are shown below to allow comparison.

This is summarised as follows:

Total Gross Emissions	Baseline Emissions 2018-19	Current Emissions 2019-20
for Scope 1 (direct - largely gas and council owned transport)	2,721	2,255
for Scope 2 (indirect - largely electricity)	4,924	3,503
for Scope 3 (other indirect)	3,962	3,855
Total	**11,607**	**9,613**

Table 1: Summary GHG emissions (CO_2e, tonnes)

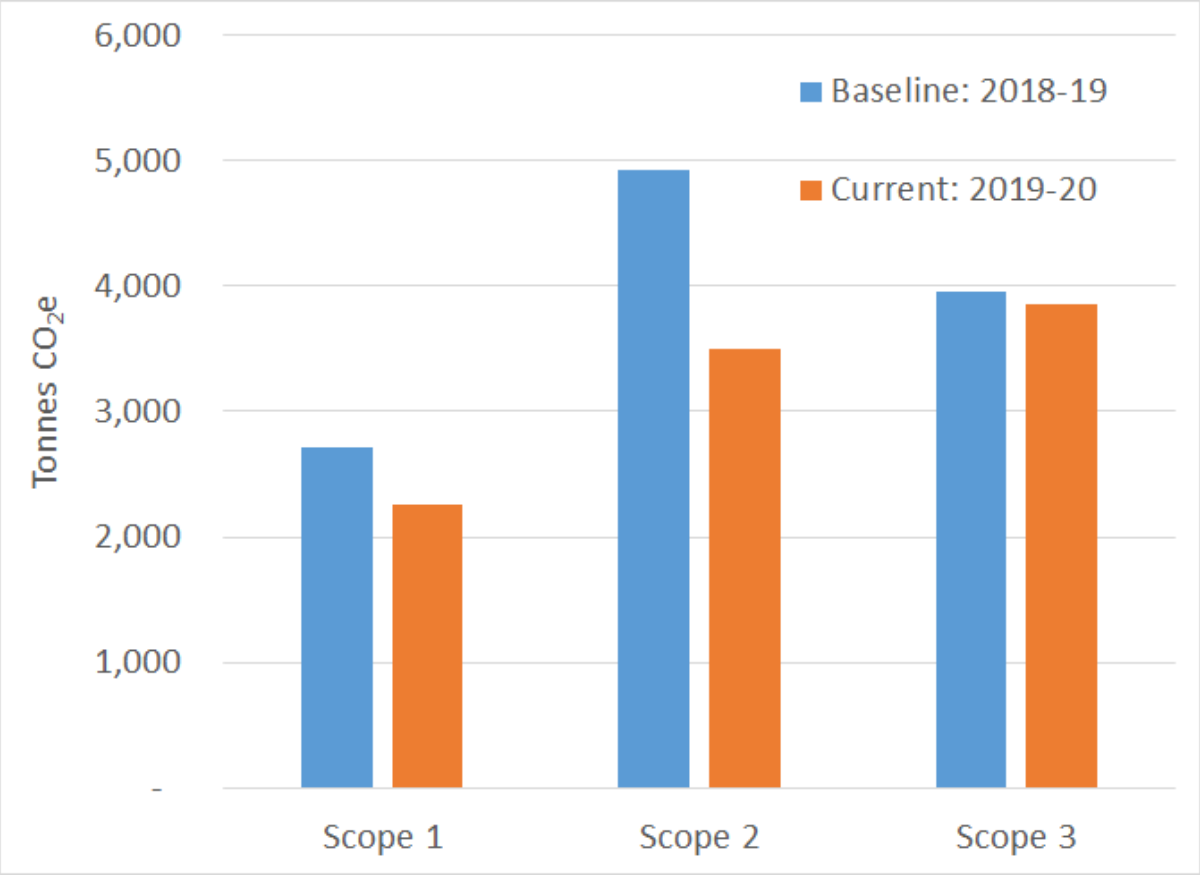

Figure 2: Greenhouse gas (GHG) emissions by scope, 2019-20

There has been a clear reduction in overall emissions from the baseline year. This has been in part due to decarbonisation of the national electricity grid, as the energy mix provided by the grid comes from a greater

proportion of sustainable sources (wind, solar etc.). As a result carbon emissions associated with electricity generation reduced by almost 10% compared to the previous year (BEIS, 2020c).

2.1.2 Results by Business Area

Buildings and utilities account for 6,904 tonnes CO_2e, which is 72% of all current known emissions. The largest source of gross emissions within buildings and utilities is electricity usage, accounting for 1,167 tonnes CO_2e plus another 99 tonnes for transmission and distribution losses (scope 3).

GHG Emissions (tonnes CO_2e)	Scope 1	Scope 2	Scope 3			Total
			General	T & D[8]	WTT[9]	
Buildings & utilities	**2,242**	**3,503**	**69**	**300**	**791**	**6,904**
Cultural services	1,488	666	-	57	287	2,498
Electricity for Street Lighting	-	1,569	-	133	222	1,925
Electricity for Council Buildings	-	1,167		99	163	1,428
Gas for Council Buildings	725	-	-	-	91	816
Industrial	29	100	-	8	18	155
Skanska services	-	-	54	2	9	65
Aragon services	-	-	15	1	2	17
Transport	**13**	**-**	**2,247**	**-**	**440**	**2,701**
Cultural services	9	-	13	-	5	27
Staff Business Travel	-	-	425	-	3	428
Council Owned Transport	4	-	-	-	1	5
Skanska services	-	-	189	-	47	245
Aragon services	-	-	1,612	-	383	1,995
Waste	**-**	**-**	**9**	**-**	**-**	**9**
Council Building Waste Disposal	-	-	9	-	-	9
Total	**2,255**	**3,503**	**2,324**	**300**	**1,231**	**9,613**

Table 2: Breakdown of emissions, 2019-20

Analysis of this data allows us to identify service areas which are emitting high levels of greenhouse gases and to prioritise those service areas for decarbonisation projects. The largest single contributing service area is cultural services which emitted approximately 2,525 tonnes of CO_2e, closely followed by street lighting at 1,925 tonnes of CO_2e. The largest single contributing building is the Regional Pool which emitted approximately 681 tonnes of CO_2e, closely followed by Sand Martin House at 443 tonnes of CO_2e.

[8] Transmission & Distribution (T&D) emissions relate to emissions associated with grid losses (the energy loss that occurs in getting the electricity from the power plant to the organisations that purchase it)

[9] Well To Tank (WTT) emissions relate to emissions caused by the extraction, refinement and transportation of primary fuels

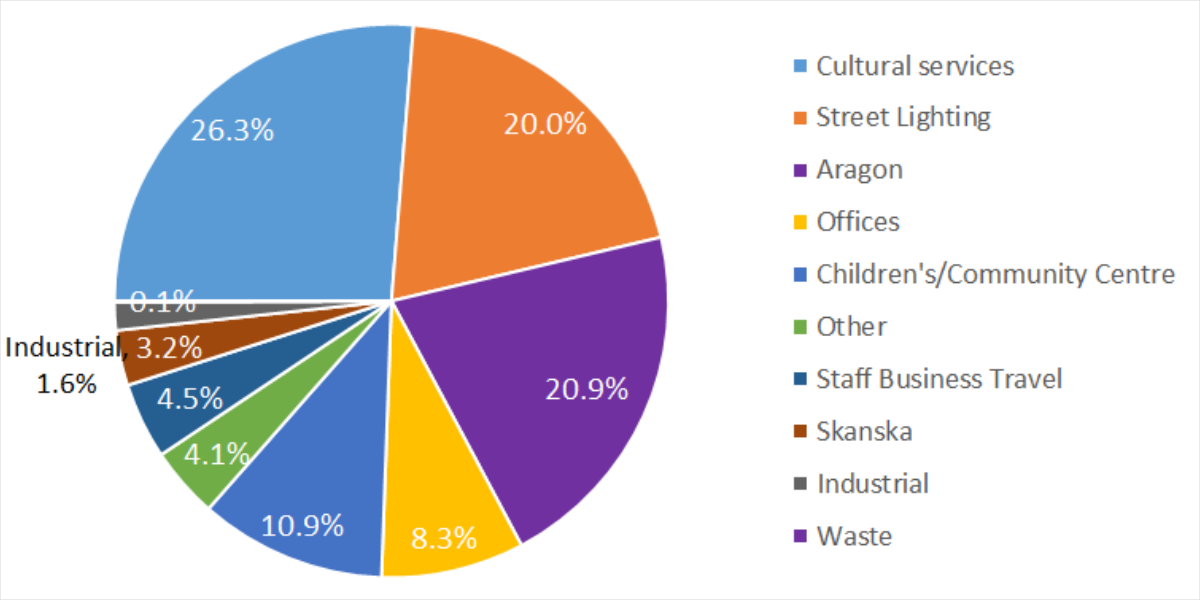

Figure 3: Greenhouse gas (GHG) emissions by business area, 2019-20

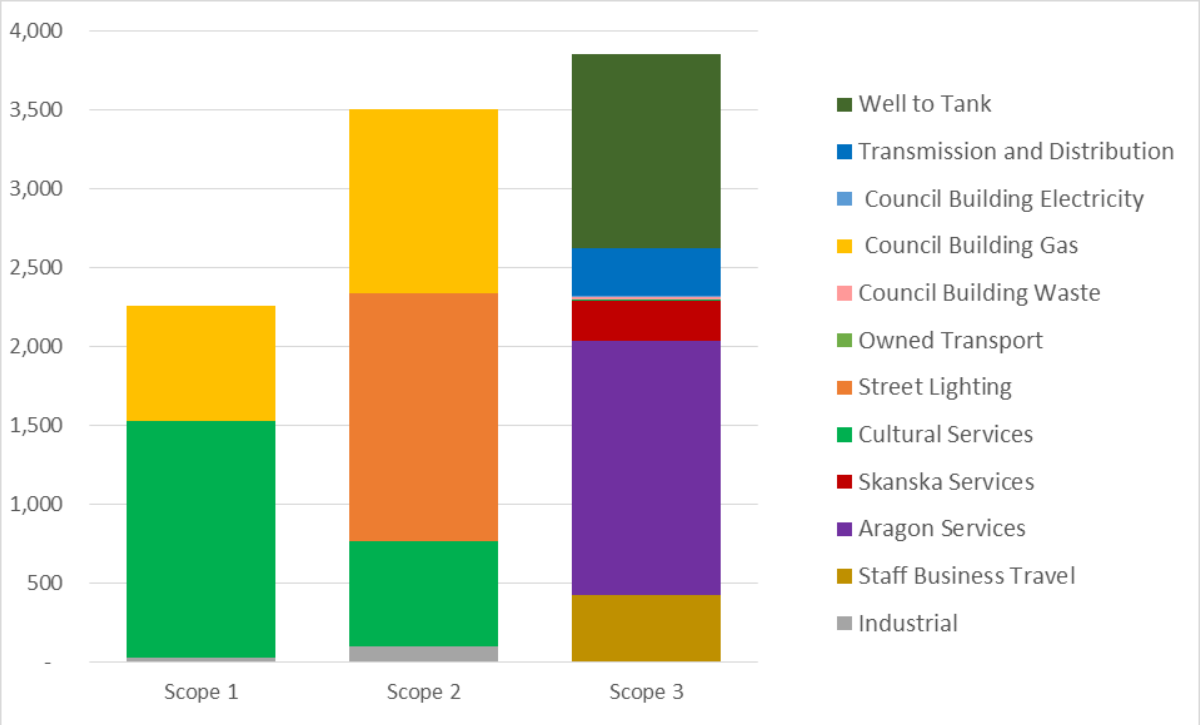

Figure 4: Breakdown of emissions by scope and type, tonnes of CO_2e

2.1.3 Intensity Ratios

Local government responsibilities are often flexible with activities differing over time. As these changing activities will affect the amount of carbon emitted, it is sometimes advantageous to express emissions as intensity ratios. Intensity ratios express the GHG impact per unit of economic value or per member of staff. The Council employed 954 FTE in 2019-20 which equates to an intensity measure of 6.04 tCO_2e/FTE (full time equivalent) (scope 1 and 2

only). The Council turned over £505,766,000 in 2019-20, which equates to an intensity measure of 19.18 tCO_2e/£1m.

	2018-19	**2019-20**
Intensity ratio: staff	8.01 tCO_2e/FTE	6.04 tCO_2e/FTE
Intensity ratio: turnover	19.18 tCO_2e/£1m	19.01 tCO_2e/£1m

It should be noted that the Council delivers some of its services via 3rd party arrangements and the FTE for these services is not included e.g. Aragon. The Council is also delivering a number of services via partnership arrangements with Cambridgeshire County Council; this is reflected in the overall FTE count.

3 Decarbonisation Projects

The commitment to achieve net-zero carbon emissions across both the city of Peterborough and the Council's operations is a crucial yet momentous task. There is an indefinite list of changes required, many of which are only realistically feasible on a regional or national scale; however there are some practical actions that can be taken at a local level. The following section of this report provides a breakdown of projects that the Council will seek to take forward. In order to make decisions on what projects to take forward, the Council will assess projects based on the following criteria:

- Cost of the action proposed in relation to the CO_2e saved (i.e. CO_2e saving per £ spent)
- Ease of implementation (i.e. the actions that will make savings sooner)
- Public demonstration (the Council has an important role in demonstrating how projects which tackle climate change can be completed to other organisations and businesses)

3.1 Peterborough City Council's Projects

The Council has completed several projects in recent years that will have reduced carbon emissions. This is good news and demonstrates the long term commitment this Council has to minimise its impact on the environment. However, being a leading Council over the years actually makes the task to reduce of emissions further and quickly harder with many of the 'easy' wins having already been taken.

3.1.1 Committed Projects - update

The Council has already committed to undertaking a number of projects that aim to directly reduce carbon emissions. An update detailing the progress made on these projects is set out below:

Project	Business Area	Project Details	Update
Street Light Dimming	Street Lighting	Following the LED street lighting upgrade programme the Council is now able to dim street lights. As part of phase one of the 2020/21 budget setting process a trial was proposed to dim lights in residential areas by 20 per cent between 9.30pm and 5am and on traffic routes by 20 per cent between 9pm and midnight, and by 40 per cent between midnight and 5am. In order to calculate the reduction in carbon emissions arising, officers have undertaken an assessment to quantify the change in energy demand and have converted this to CO_2e which results in an estimated reduction of 183.7 tCO_2e, which accounts for more than a 1.5% reduction of the total baseline 18/19 carbon footprint.	The proposal detailed here commenced in April 2020. However this was surpassed in response to the Covid-19 emergency which resulted in street lighting levels across the city being reduced by 40% during the hours of darkness. The CO_2 and financial saving was initially estimated over a period during the summer months but due to the ongoing impact of the pandemic the actual savings will significantly outweigh those predicted. The data for this will be captured when emissions for the 2020/21 year are published in the next iteration of this plan. Proposals to establish minimum lighting levels are currently being developed which it is hoped will allow some of these benefits to be sustained.

Staff engagement	Office and Transport	The Council has an active network of 60 Change Champions representing all of the Council's various service areas. These individuals are responsible for raising awareness of key initiatives and embedding change across the organisation. A key focus for the Champions moving forward will be to develop and deliver a programme of behavioural change activities to result in actions that will directly reduce carbon emissions across the Council's estate. This programme of work commenced in December 2019 and a small budget has been allocated from the current Climate Change revenue budget to support this work. It is very difficult to quantify the emissions reduction that will occur as a result of this work and therefore no data has been included here. However the Carbon Trust estimate that savings of between 5 and 10% are achievable from successful awareness and behavioural change initiatives across an organisation.	Progress in this area has been significantly affected by the Covid-19 pandemic with officers, understandably, focussed on communicating other key messages. However, the Council has invested in 'Carbon Literacy' training for a member of the Climate change Team. This is a 'train the trainer' style course which will allow a programme of training to be rolled out across the Council during 2021. This will initially focus on Members of the Climate Change Cross Party Working Group, Change Champions and colleagues from departments across the Council i.e. finance, HR etc.
Engagement with Councillors	All	Cross Party Climate Change Working Group – at a meeting of Cabinet on the 18th of November a decision was made to establish a Cross Party Climate Change Working Group. The aim of this group is to aid a greater understanding of the key issues which the Council must consider, and the reasonable options that exist to address those issues, in respect of the climate emergency declaration. It is very difficult to quantify the emissions reduction that will occur as a result of this work and therefore no data has been included here.	The Group continues to meet, virtually throughout the Covid-19 pandemic, on a monthly basis. The Group have played a crucial role in the development of the Draft Citywide-CMAP and have held two in depth workshops to support the development of this plan.

3.1.2 Near Term Projects - update

The Council also considered a number of projects that were anticipated to reduce carbon emissions. An update detailing the progress made on these projects is set out below:

Project	Business Area	Project Details	Update
Opportunity assessments on Council owned buildings	Offices	The Council has commissioned the NPS Group (who deliver the Council's Property Management Services) to undertake energy opportunity assessments for a number of its highest energy consuming sites including Sand Martin House, the Regional Pool and Clare Lodge. The aim of these assessments is to identify ways in which emissions can be directly reduced through a range of measures including, for example, heating optimisation and renewable energy generation. At this stage we have not received completed assessments back from NPS so full details of the potential savings cannot be included here.	Energy Opportunity Assessments were completed for a number of Council sites and measures identified that could be taken to reduce emissions. Shortly after these assessments were completed the Government announced a 'Public Sector Decarbonisation Fund' and officers committed resources to secure funding. The Council has successfully received project development funding and is therefore in the process of developing detailed proposals.
Land Management	Estate	The Council manages a rural estate of approximately 3,000 acres, much of which is understood to be comprised of rich peat-based soils. It is estimated that 60-80% of wasted peatland in the UK is located within the Cambridgeshire/Peterborough area (i.e. in simple terms, as peat is intensively farmed, it dries, degenerates, shrinks and ultimately emits large volumes of CO_2e). There is significant potential not only to understand the emissions arising from the Council's farm estate activities but to seek opportunities to reduce emissions both through revised land management practices and the development of energy projects to bring forward local decarbonised heat and power. In time, it is possible for peatland areas to not only reduce their emissions but become 'carbon sinks', pulling CO_2 out of the atmosphere.	Unfortunately officers have been unable to identify and secure suitable sources of funding to prioritise this work. This will therefore remain a live project moving forward. Officers have however commenced work with one of the Council's tenant farmers who has adopted a number of exemplar farming practices and work will continue to calculate the Carbon Footprint of this farm.

		Subject to securing sufficient funding the Council intends to undertake research to identify the potential opportunities. Until this research is undertaken there is no data available to indicate the potential savings.	
Mayor's Car	Transport	As part of the Climate Emergency Declaration a commitment was made to consider options for changing the Mayor's car to an electric or hybrid. The current lease agreement expires in January 2021 and therefore alternative options will be considered prior to that date.	Due to the ongoing Covid-19 pandemic a decision has been taken to allow the current lease to expire. At a point in time when normal Mayoral duties resume a new lease will be considered which will include options for an electric or hybrid vehicle.
Renewable energy tariff	Offices and Street Lighting	As part of the Climate Emergency Declaration a commitment was made to achieve 100% clean energy across the Council's full range of functions by 2030. The Council is currently in the process of procuring a new energy tariff and as part of this process will undertake a cost comparison exercise to ascertain the feasibility of achieving this timescale. The carbon savings that would be achieved as a result of this will not be known until a suitable energy provider is identified.	The Council switched to a renewable energy tariff for electricity from 1st October 2020. Work is underway to identify options for gas.
Aragon fleet review	Transport	Aragon are in the process of undertaking a fleet review with the aim of moving the entire fleet to alternative fuels. An opportunity assessment is underway to ascertain the feasibility of this which suggests it is unlikely that it will be feasible to convert all vehicles at this stage. Currently we have not completed the assessment so full details of the potential savings and associated costs cannot be included here.	Aragon Direct Services are in the process of procuring a new fleet to replace their aging equipment. In order to undertake this exercise independent advice and review was provided by the Energy Saving Trust (EST) utilising funding from the Department for Transport (DfT). A comprehensive assessment of various options has been looked at, and at this stage, to meet the needs of the service and reduce carbon Aragon propose a mixture of some electric vehicles, hybrid (diesel and electric) and diesel options alongside a commitment for a carbon neutral fleet by 2030.
Identify embodied carbon	Embodied Carbon	Skanska have developed a tool which allows the embodied carbon contained within their materials and processes to be quantified. The aim of this is to enable officers to plan, design and undertake schemes with more	In 2020 Skanska carried out a carbon assessment for the A605 Alwalton scheme; the data is currently being processed and therefore we cannot draw any conclusions at this stage. In 2021, Skanska aims to produce carbon

		knowledge about the environmental impact of the projects they deliver and it is hoped that more sustainable products with lower levels of embodied carbon can be selected. At this stage no schemes have progressed completely through the process and therefore full details of the potential savings cannot be included here.	assessments for two major highway projects which will be used to influence the final design.
Lease of Town Hall after refurb	Offices	During summer 2018 a significant proportion of Council Officers relocated to a new office at Sand Martin House. Subsequently, a refurbishment programme is taking place at the Town Hall in order to allow areas in both the north and south of the building to be leased out to a 3rd party. The tenants will be directly responsible for their energy consumption and therefore the emissions will no longer be within the Council's scope.	This is in progress with refurbishments currently taking place in the Town Hall (north) ahead of lease in April 2021. Other opportunities are being explored for other sites in parallel but Covid-19 has affected interest. Energy usage is likely to have significantly declined during the pandemic and opportunities to identify ways to retain some of these benefits are being explored.
Tree Planting	Estate	The Council is already committed, within its Trees and Woodland Strategy, to: ensure that where a Council owned street tree is removed, it will be replaced on a one for one basis, using established nursery grown standard trees; and to achieve an overall 10% increase in canopy cover within the Council's direct control within the next 10 years the equivalent of a further 49.5 ha of additional canopy cover or 4126 trees. As part of the Climate Emergency Declaration a commitment was made to increase tree planting and therefore the Council is committed to working with Peterborough Environment City Trust to determine whether a local carbon off-setting programme can be put in place, to fully take account of the carbon savings from tree planting and dramatically increasing the volume of trees that can be planted.	The Trees and Woodland Strategy sets a target for tree planting on Council owned and maintained land over the next 9 years. Options for altering this target are discussed in a separate paper to be discussed at Council.

3.1.3 Medium Term Projects - update

The Council also committed to identifying further projects that would require more research in order to ascertain individual feasibility and contribution to the overall target. An update detailing the progress made on these projects is set out below:

Project	Business Area	Project Details	Update
Renewable energy opportunities	All	Whilst the Council has already installed solar PV across 30 sites generating approximately 1,240,379 kWh in 2019-20 it acknowledges that in order to achieve the target of net-zero carbon emissions it will be necessary to generate more energy from renewable sources. As such the Council is committed to working with its partners to identify and develop further suitable opportunities. Initially this will include a project supported by BEIS to build upon feasibility work undertaken last year, to develop the design of a low carbon, local heat network.	The PIRI project supported by BEIS, Innovate UK and private investment will create a smart, responsive, low-carbon, energy infrastructure design that can support the city's future growth by developing a design for a replicable integrated smart city energy system comprising a heat network, Smart Embedded Electricity Network, EV charging network and overarching control scheme (Energy as a Service platform) to create a step change in the transition to zero carbon. PIRI is a 2 year "Detailed Design" Programme, the output of which will be a robust and investible business case following HMT principles and standards. The Consortia led by the Council includes SSE, Cranfield University, Sweco, Element Energy and SGS. To date the project has focussed on community engagement and data collection – specifically with regard to the development of a low carbon heat network for Peterborough, including key Council operational sites. This has enabled us to model potential network options. This will recommend two potential options that can be analysed in greater detail in the next stage, with full investigation of strategic, legal, financial, commercial and management cases resulting in a preferred scheme option by the end of 2021.
Skanska bio fuels trial	Transport	Skanska, our highway maintenance partner, is currently undertaking a trial in another part of the country to ascertain the viability of utilising an alternative lower carbon fuel for their vehicle fleets. Estimations suggest that based on average data over a 12	Skanska have completed the trial they were undertaking and have concluded that this offers a realistic and practical intervention across their operational fleet in Peterborough.

		month period if this trial was extended to Peterborough savings in the region of 150 tCO_2e could be realised. However there are currently practical and financial restrictions which prevent this being rolled out in Peterborough and therefore work is required to ascertain whether or not these can be overcome.	Work is now underway to develop a business case and seek corporate support to implement this project locally.
Skanska 'zero carbon compound'	Plant equipment	Skanska has committed to trial a new 'zero carbon compound'. This is a small temporary building from which staff operate from when constructing major highways projects. It involves the use of renewable energy infrastructure to power the facility and charge associated electrical equipment. Work is currently underway to identify a suitable scheme to undertake this trial in Peterborough.	In Winter 2020 Skanska commenced a trial of an Ecosmart ZERO unit. The aim of the trial was to reduce carbon, to assess the unit's usability (compared to standard units) and to understand whether there is a reduction in operational costs. Initially the review of the compound was positive, particularly around usability. However, within the first week, the battery ran flat and the welfare unit was unusable and whilst this was fixed it went on to fail again. Due to these issues a decision was made to off-hire the unit and return the original welfare unit. The trial was unable to assess whether there were any carbon or fuel cost reductions but alternative compounds are now being explored.

3.1.4 New/continued projects

The Council is committed to developing some of the projects detailed above further and identifying additional projects that require more research in order to ascertain individual feasibility and contribution to the overall target. At this stage it is not possible to calculate the initial cost of these projects or the timescale within which they will be completed. At this stage this includes the following:

Project	Business Area	New/Continued	Project Details
Street Light Dimming	Street Lighting	Continued	Proposals to establish minimum lighting levels are currently being developed which it is hoped will allow some of these benefits to continue.
Behaviour Change	Office and Transport	Continued	Roll out 'Carbon Literacy' training during 2021, initially focussing on Members of the Climate Change Cross Party Working Group, Change Champions and a lead officer from each department across the Council i.e. finance, HR etc.
Opportunity assessments	Offices	Continued	Seek to secure funding from future rounds of the Public Sector Decarbonisation scheme (or an alternative source) to improve efficiency of the Council's estate.

Land Management	Estate	Continued	Seek funding to undertake research to identify potential opportunities to reduce carbon emissions from peat soils across the Council's farm estate.
Mayor's Car	Transport	Continued	At a point in time when normal Mayoral duties resume a new lease will be considered which will include options for an electric or hybrid vehicle.
Renewable energy tariff	Offices and Street Lighting	Continued	To ascertain and review options to switch to a 100% renewable gas tariff.
Aragon fleet review	Transport	Continued	Secure corporate funding to implement recommendations from the fleet review undertaken by Aragon which will see the introduction of new electric vehicles and a zero-emission fleet by 2030.
Identify embodied carbon	Embodied Carbon	Continued	Review the results from the assessment undertaken for the A605 Alwalton and undertake two further assessments on major schemes projects which will be used to influence the final design.
Renewable energy opportunities	All	Continued	The PIRI project will recommend two potential options that will be analysed in greater detail, with full investigation of strategic, legal, financial, commercial and management cases resulting in a preferred scheme option by the end of 2021. This will include details of emission reductions that could be achieved from key Council sites.
Skanska biofuels trial	Transport	Continued	Develop Business case and seek corporate support for investment.
Swimming pool facility	Cultural Services	New	Investigate opportunities to reduce emissions from the Regional Swimming Pool, currently the Council's single highest carbon emitting site.
Procurement	All	New	Work with the Council's procurement team to further develop minimum standards to drive forward sustainable procurement decisions.
Adapting to climate change	All	New	Initiate a process to identify adaptation opportunities across the Council's operations and potential interventions.

3.2 Projected Achievement Towards Target

The projects detailed in this chapter provide a way for the Council to progress closer towards the net-zero target. The emissions savings owing to the majority of these projects are not yet sufficiently quantified; the Council will look to calculate these and enable interim carbon targets to be set for future years.

4 Carbon Management Action Plan Financing

This CMAP details an overall model for carbon management in the City Council to carry us towards our goal of net zero emissions by 2030. All projects implemented as part of this scheme will go through the Council's approval process, meeting project management controls and receiving expenditure approval in accordance with the budget setting process. It must be noted that these corporate controls are required regardless of eventual funding streams as the Council needs to ensure Value for Money is achieved.

Some schemes identified in Chapter 3 are existing projects and as such approval and funding for the schemes has already been agreed and is, where appropriate, detailed in the city Council's Medium Term Financial Strategy (MTFS). The Council has access to several potential funding streams and the choice of most appropriate funding will depend upon achievement of Value for Money. This will be assessed following the completion of a relevant business cases for individual projects. External funding will always be considered before the use of internal Council funds; a dedicated team is available to help facilitate and maximise the funds applicable to the Council.

Some of the ways the Council may decide to fund the projects associated with the CMAP are:

- **Grants and Loans:** Some projects may be applicable for external funding. The Climate Change Act and agenda to achieve a green recovery from Covid-19 have given rise to a number of climate change/energy efficiency funds. These will be interrogated to determine if any funding streaming are suitable for projects within Peterborough.
- **Match-Funding**: Some grant awarding bodies, and other third-party funders offer part funding for projects with the stipulation that the Council funds the remaining costs.
- **Invest to Save:** The Council's capital programme contains funding for Invest to Save schemes. Projects funded via this budget will deliver savings to the Council. Business cases for future proposals are required to demonstrate how the cost of borrowing will be covered and show how the individual scheme is self-financing and so has no overall impact against the Council's long-term financial position.
- **Internal Resources:** Schemes may also be considered that require investment through the medium term financial strategy (i.e. carry an additional cost to be factored into the budget, subject to approval) where they contribute towards delivery of service improvements, or to achievement of Council priorities. This includes funding for revenue schemes or financing the borrowing for capital schemes.

5 Project management

This section details how the Council-CMAP will be governed, owned and managed. Successful implementation and delivery of the plan requires a robust, transparent governance structure which will ensure strategic ownership of the Council's carbon reduction aims. This governance process will bring together the diverse range of projects undertaken throughout the Council which contribute to the organisation's overall environmental impact.

5.1 Identifying Projects

The Council is committed to identifying opportunities to reduce carbon emissions across all areas of its operations. In order to achieve this the Council has introduced the following:

- A core team of officers, representing key service areas, have been identified. These officers will meet on a regular basis in order to discuss ongoing and forthcoming projects. This allows early conversations about opportunities to reduce carbon to take place.
- Decisions taken by the Council are now subject to a Carbon Impact Assessment (CIA). This involves lead officers undertaking a review of their project/decision and considering what impact it will have on the Council's target to achieve net-zero carbon emissions. A summary of the CIA is included in the governing report to enable the relevant decision maker to make an informed decision. This process has helped raise awareness of the challenge that climate change presents. It aims to encourage officers to consider potential impacts on carbon emissions throughout the project design and decision making process.
- The role of the Change Champions is being expanded to ensure that Climate Change is a high priority across all service areas. This gives officers throughout the organisation the authority to suggest climate friendly adaptations to projects or service delivery to help us to reach net-zero carbon

5.2 Initiating Projects

Before any project is initiated the relevant Council Officer will ensure that all of the necessary procurement and governance steps are undertaken. Consideration will also be given, on a case by case basis, to any communication activity that may be required alongside any specific monitoring requirements.

5.3 Monitoring Projects

The impact of individual projects will primarily be monitored by analysing emissions data and any other relevant data. Data will be used to ensure resources are directed to projects with the most significant impact. Where appropriate engagement activities will be undertaken to monitor projects.

5.4 Reporting Progress

Each year the Council will produce an annual report detailing the emissions arising from all emissions sources within the organisation's operational boundary. The Council will aim to publish this no later than the 31st of March each year.

6 Stakeholder Engagement

To support the Council's net-zero commitment we initially intended to engage with a number of stakeholders during 2020 to support the Council and the city to become net-zero. However, this activity has been significantly limited by the Covid-19 pandemic and therefore a number of this area of work will carry forward into 2021. Stakeholders include:

- **Cross Party Climate Change Working Group**: at a meeting of Cabinet on the 18 November 2019 a decision was made to establish a Cross Party Climate Change Working Group. The aim of this group is to aid a greater understanding of the key issues which the Council must consider, and the reasonable options that exist to address those issues, in respect of the climate emergency declaration.
- **Change Champions**: The Council has an active network of 60 Change Champions representing the Council's various service areas. These individuals are responsible for raising awareness of key initiatives and embedding change. A key focus for the Champions moving forward will be to develop and deliver a programme of behavioural change activities to result in actions that will directly reduce carbon emissions across the Council's estate. This programme of work commenced in December 2019 and a small budget has been allocated from the current Climate Change revenue budget to support this work.
- **Peterborough Climate Change Partnership (PCCP):** work will commence to launch a local climate change partnership group. This is likely to involve members of the local business community, residents, young people, Council officers and members.
- **Peterborough Youth Council:** this group of young people have agreed that they would like a significant proportion of their work to focus on addressing the climate emergency. As such the Council commits to working in partnership to deliver tangible action and the Youth MP has been given a standing invitation to attend the Cross Party Working Group.
- **Citizen Engagement**: whilst the above will enable certain members of the public to be involved in activities and offer views, the Council wants to set up a mechanism whereby wider citizen engagement can take place. The Council initially intended to undertake a citywide survey designed to gauge local opinion in order to ascertain priorities for local action. Unfortunately, this was postponed due to the Covid-19 pandemic and therefore this will be revisited to consider if such activity would be appropriate during the year ahead. The Council will continue to ensure that: its website provides up to date and accurate information about its activities alongside a carbon calculator to allow individuals to quantify the personal impact; coordinate an annual day of action on the 4th of March, known as March Forth, to encourage individuals to take meaningful action to reduce their impact and; continue to raise awareness of climate change through the local media.
- **Schools**: the Council sees schools as having a vital role to play in helping to meet our ambitious targets. Schools have a big direct carbon impact themselves, but also play a vital role in education and behavioural change. As such, during 2020 we intended to work with all local schools (including maintained and non-maintained schools) to prepare a bespoke action plan for schools (Schools-CMAP). We also intended to consider the possibility of launching a carbon saving competition to encourage schools to reduce their energy consumption. Both of these activities were significantly affected by the Covid-19 pandemic and will therefore carry forward to 2021.
- **Parish Councils**: the Council sees Parish Councils as having a vital role to play in helping to meet our ambitious targets. Parish Council generally have a relative low carbon impact themselves, but can have a vital role championing change within its local area. As such, we are working with Peakirk Parish Council to prepare a bespoke action plan (Parish-CMAP), that maximises the opportunities Parish Councils have within their statutory powers, with the intention that this will form the template for other Parish Councils to use.

- **Other Local Authorities:** We are working across borders, in particular with Cambridgeshire County Council (CCC), where sharing of resources and expertise is already taking place across a wide range of functions. CCC similarly declared a climate emergency earlier in 2019. The joint Director for Economy and Place, Steve Cox, has been given responsibility to coordinate actions to deliver both climate emergency declarations, thus ensuring a joined-up approach will take place across Cambridgeshire and Peterborough.

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Appendix A

Methodology used to calculate the Council's carbon footprint.

Defining The Scope

The starting point for carbon management is to accurately establish the emissions baseline. The scope of the baseline includes the required types and sources of emissions over a defined timescale. The baseline is a fixed point against which a reduction target can be set and future performance monitored.

Emissions-releasing activities are classified into three groups known as scopes. These, their relevant associated activities, are defined in the GHG Protocol Corporate Standard as follows:

Scope	Definition / Activity
1 (Direct)	**Emissions from sources that are owned or controlled by the organisation**
Fuels	Fuel sources combusted at a site or in an asset owned or controlled by the organisation.
Refrigerants	Refrigerants that leak from air-conditioning equipment.
Passenger vehicles	Travel in cars and on motorcycles owned or controlled by the organisation.
Delivery vehicles	Travel in vans and heavy goods vehicles that are owned or controlled by the organisation.
2 (Indirect)	**Emissions that are a consequence of the organisation's operations, but occur from sources owned or controlled by another company**
Electricity (grid)	Electricity used by an organisation at sites owned or controlled by them.
3 (Other Indirect)	**Emissions that are a consequence of the organisation's operations, which occur at sources which they do not own or control**
Business travel	Travel for business purposes in assets not owned or directly operated by the organisation.
Hotel stays	Overnight hotel stays for work purposes.
Material use	Process emissions from purchased materials.
Waste disposal	Emissions from end-of-life disposal of different materials using a variety of different disposal methods.
Water supply	Emissions from water delivered through the mains supply network.
Water treatment	Emissions from water returned to the sewage system through mains drains.
Transmission & Distribution	Emissions associated with grid losses (the energy loss that occurs in getting the electricity from the power plant to the organisations that purchase it).
Well-to-Tank (WTT)	Upstream emissions of extraction, refining and transportation of a primary fuel source prior to its point of combustion.

Table 3: GHG Emission scopes and associated emission releasing activities (BEIS, 2020a)

The Organisational Boundary

In order to produce this Carbon Management Action Plan it is essential to accurately establish the scope of the operations on which our organisation will report. This process is known defining the organisational boundary. This means establishing what activities and functions are counted (or 'in scope') for the purpose of determining the Council's overall emissions, and by default what activities and functions are not counted ('out of scope'). This stage of the process involves reviewing the Council's operations to determine activities that give rise to carbon emissions.

In cases where the organisational structure is straightforward, reporting would include the impacts from everything that is owned and operated by the organisation. However, as a unitary authority with third parties, the Council has a complex organisational structure whereby some entities are only part-owned or part operated. It is therefore not possible for the council to simply apply the financial or the operational control[10] boundaries. Instead the Council has defined its boundary in order to ensure that it captures emissions from the full scope of the services it is responsible for as outlined in figure 4 below.

Figure 5: Peterborough City Council organisational boundary (grey areas currently excluded)

[10] Operational Control Boundary. Recognised boundary setting approach as defined in the GHG Protocol reporting guidelines.

We have determined that it is appropriate to include the following sources (though as a reminder, we have purposely excluded schools):

Scope	Typical activities for a local authority organisation		Identified Council emission sources
1	**Stationary**	Production of electricity, heat or steam	• Gas used in Council Offices and sites *i.e. Town Hall, Sand Martin House, Dodson House etc.* • Gas used in buildings operated by Vivacity
	Mobile	Transportation of raw materials/ waste	• Travel in vans and heavy goods vehicles operated by the Council • Travel in vans and heavy goods vehicles operated by Vivacity
	Fugitive	Hydrofluorocarbons (HFC) emissions during use of refrigeration and air-conditioning equipment	***Excluded (see below)***
2	**Stationary**	Consumption of purchased electricity, heat or steam	• Electricity used in Council Offices *i.e. Town Hall, Sand Martin House, Dodson House etc.* • Renewable energy generated at Council sites • Electricity used in street and car park lighting which also includes road signs and illuminated bollards • Electricity used in buildings operated by Vivacity • Renewable energy generated at Vivacity sites
3	**Stationary**	Production emissions from purchased materials	***Excluded (see below)***
	Process	Process emissions from purchased materials	***Excluded (see below)***
	Mobile	Transportation of raw materials/ products/ waste, employee business travel, employee commuting	• Staff business travel and accommodation • Employee commuting **– *Excluded (see below)*** • Vivacity, Skanska and Aragon staff business travel and accommodation • Buildings and fleet used to deliver services by Skanska and Aragon

Table 4: Identified Council related emissions in relation to typical GHG emissions for service sector / office based organisations (WRI/WBCSD, 2004)

Excluded Emissions

In addition to those sources detailed above there are other areas which give rise to emissions that the Council feel should be included but for which, at this time, there remains insufficient detail to enable them to be included:

Scope 1

- **Refrigerants** – Leakage from air-conditioning and refrigeration units can release gases into the atmosphere that have a global warming potential. At present this data is not available, however going forward the Council will look to find methods to record and report this information.

Scope 3

- **Water supply and treatment** – Whilst the energy used to heat water is included, what is not included is the energy used relating to cold water. Even cold water has an emissions implication through the treatment and pumping process from source (e.g. reservoir) to tap. It was decided that the emissions contribution from water consumption remains too small to justify the extra reporting burden at this stage, especially given that there is no existing reporting structure and the relatively limited volume of water consumed by the Council.
- **Waste Disposal** – This plan deliberately excludes emissions arising from waste treatment. The Council currently collects approximately 87,500 tonnes of municipal waste from homes across the city each year and this is treated in a number of different ways dependent on the type of waste. Details on this source of emissions will be included in the Citywide Carbon Management Action Plan. The rationale for this decision is that this waste is a citywide resource, some of which currently generates enough electricity to power over 16,000 homes through the Energy Recovery Facility, and therefore this opportunity to offset emissions should be accounted for on a citywide level.
- **Employee commuting** – Whilst the emissions relating to employees travelling for the purposes of work, to and from meetings for example, is included within this report, the emissions arising from employees travelling from home to work are not included. This approach is accepted as part of the GHG guidance and these emissions will broadly be captured as part of the Citywide-CMAP.
- **Peatland** – Between 60-80% of wasted peatland in the UK is located within Cambridgeshire with estimated carbon emissions of up to 5.5 $MtCO_2e$ (5). Peatland degradation is an international challenge and Cambridgeshire is well placed to lead nationally. It can build on the work of The Wildlife Trust at Great Fen, The National Trust at Wicken Fen and collaborate with the Agri-businesses to find solutions of international interest. The Council holds a farm estate of approximately 3,000 acres, a proportion of which is comprised of peatland soils. At this stage there is no data available to include in this plan but the Council is committed to not only understand the emissions arising as a result of its agricultural land but to seek opportunities to reduce emissions both through revised land management practices and development of energy projects, to bring forward local decarbonised heat and power.
- **Passenger transport** – the Council support a number of passenger transport services including: Call Connect, Community Link, some Stagecoach services, home to school transport and transport for adult social care. The Council has not historically collected sufficient data to enable the carbon emissions arising from these services to be calculated and with these services due to be delivered directly by the Cambridgeshire and Peterborough Combined Authority going forward this data would no longer be relevant to the Council's scope.
- **3rd parties** – emissions relating to some 3rd party organisations including NPS Peterborough Limited, Medesham Homes LLP and Limited, Opportunity Peterborough (OP), the Peterborough Investment Partnership LLP (PIP), have not been included in this plan because no data is currently available.
- **Purchased materials** – By far the biggest 'exclusion' relates to the purchasing and use of goods, and the consequential 'embodied energy' of such goods. Embodied energy is a complex area, but in simple means the energy used to make and distribute goods, before such goods are actually used. The following text box gives an example to illustrate the point:

In the last version of this plan the Council set out its intention to make all of these excluded areas 'in scope' moving forward. Whilst we have achieved this for waste it has not been possible to gather all of the information necessary for the remaining areas and therefore this remains a clear focus for the year ahead.

Data Collection

The energy data used to calculate the baseline was gathered from different sources including: invoices received by the Council, annual energy statements from utility providers, property services and third party providers (i.e. Aragon and Skanska). Work continues to ensure that this data is robust and systems are in place to ensure ongoing timely and accurate collection of such data.

Energy Type	Source	Data Quality/Estimation techniques
Gas	Energy invoices and Annual Energy Statements from different suppliers. Collated data from third party providers.	Where estimations have been used records are held with source data. **Methods include:** Annualising consumption or average data calculated using bookended data.
Passenger vehicles	Staff mileage claims, fuel purchased and vehicle log books.	Annualising consumption where required
Delivery vehicles	Fuel purchased and vehicle log books	Annualising consumption where required
Electricity	Energy invoices and Annual Energy Statements from different suppliers. Collated data from third party providers.	Where estimations have been used records are held with source data. **Methods include:** Annualising consumption or average data calculated using bookended periods.
Renewable Energy	Online renewable energy portal	N/A
Business travel	Capita data records	N/A

Table 5: Source of data by energy type

Calculating emissions

To calculate what your CO_2e emissions are, it is necessary to convert the 'raw' data (such as kWh of electricity used) into CO_2e emissions. This process is relatively straight forward, using what are known as 'conversion factors'.

Conversion Factors

The carbon conversion factors used for this Action Plan are the 2018 UK Government published carbon conversion factors (BEIS, 2020b), The Council will use the most up to date conversion factors each time it updates this plan or produces an annual report.

The key conversion factors used are as follows:

Energy Type	**Conversion factor**
Fuels	
Natural Gas	0.18385 kg CO_2e / kWh (Gross CV)
Diesel (average biofuel blend)	2.59411 kg CO_2e / litre
Petrol (average biofuel blend)	2.20904 kg CO_2e / litre
Electricity	
UK electricity	0.2556 kg CO_2e / kWh (Gross CV)
Vehicles (passenger, delivery and business travel)	
Small diesel car	0.22868 kg CO_2e / mile
Medium diesel car	0.27459 kg CO_2e / mile
Large diesel car	0.33713 kg CO_2e / mile
Small petrol car	0.24736 kg CO_2e / mile
Medium petrol car	0.30945 kg CO_2e / mile
Large petrol car	0.45536 kg CO_2e / mile
Small car (unknown fuel type)	0.24072 kg CO_2e / mile
Large car (unknown fuel type)	0.36785 kg CO_2e / mile
Average car (unknown fuel type)	0.28502 kg CO_2e / mile
Water	
Water supply	0.344 kg CO_2e / cubic metres
Water treatment	0.708 kg CO_2e / cubic metres
Transmission & Distribution	
UK electricity	0.02413 kg CO_2e / kWh
Well-To-Tank	
Various	Various (dependant on fuel type)

Table 6: Key GHG conversion factors (BEIS, 2020b)

Baseline Year Recalculation Policy

There may be circumstances under which it becomes necessary to recalculate our baseline year emissions. If significant changes were to occur - either within the Council's organisation or to recognised methodologies - it could challenge the validity of existing data. To mitigate this we have developed the following baseline year recalculation policy which will ensure that any significant changes are identified, measured for a recalculation threshold and processed accordingly:

Change scenario	Baseline year recalculation?
Mergers, Acquisitions, Divestitures	
Acquisition of (or insourcing) a facility that did not exist in the baseline year.	Potentially recalculate baseline year emissions depending on likely impact to be consistent with new approach, or correct errors
Disposal of (or outsourcing) a facility to another company.	Potentially recalculate baseline year emissions depending on likely impact to be consistent with new approach, or correct errors
Transfer of ownership/ control of emissions sources. This includes changes in lease status.	No base year recalculation required
Organic Growth and Decline	
Organic growth	No base year recalculation required
Organic decline	No base year recalculation required
Changes in Quantification Methodologies / Errors	
Changes in emission factors or methodologies (e.g. change in activity data) that reflect real changes in emissions (i.e. changes in fuel type or technology)	No base year recalculation required
Changes in measurement methodologies, improvements in the accuracy of emission factors/ activity data, or discovery of previous errors/ number of cumulative errors	Potentially recalculate baseline year emissions depending on likely impact to be consistent with new approach, or correct errors

Table 7: Baseline year recalculation policy

The Council will review the scope on an annual or biennial basis to ensure that data is collected from all relevant sources.