

CORPORATE CARBON REDUCTION PLAN 2019 – 2021

December 2019



Introduction

The decision by Council on the 08 March 2019 to declare a Climate Emergency produced a number of key actions. These included a pledge to make Plymouth carbon neutral by 2030 and to produce a Climate Emergency Action Plan and a new Corporate Carbon Reduction Plan. This report sets out a draft Corporate Carbon Reduction Plan for 2019-2021.

Strategic Objectives

The Plymouth Plan

The draft Corporate Carbon Reduction Plan (2019-2021) is guided by the overarching Strategic Plan for the city and Plymouth City Council, “The Plymouth Plan” with strategic objectives including:

- Declaration of a City Climate Emergency
- To be a carbon neutral city by 2050 and halving carbon emissions by 2034
- Increasing the proportion of energy from local renewable, decentralised and low carbon sources.

Plymouth City Council – Corporate Plan

Corporate carbon reduction as a concept has been included into a number of Corporate Plans between 2011- 22 with ambitions to:

- Reduce the corporate CO₂ emissions and to “deliver the Council’s Carbon Management plan”
- A green, sustainable city that cares about the environment

Background

Corporate CO₂ emissions have been successfully monitored and performance managed for many years, mainly focussing on a small number of very specific measurable indicators. The previous Corporate Carbon Reduction Plan (2011-2016) successfully reduced corporate carbon emissions by 20% over this period. Areas of greatest achievement include significant CO₂ reductions in: Street lighting; Building heating upgrades ie Guildhall, Ballard; Introduction of Electric Vehicles; Mobile working meaning less business travel and developing Green Champions. The Council is signed up to the Carbon Disclosure Project, a global carbon monitoring programme to help organisations work together and monitor their reduction of emissions and actions on climate change. This draft Corporate Carbon Reduction Plan has also been designed to complement the developing draft Climate Emergency Action Plan.

Purpose

Plymouth City Council contributes circa 1% towards the city’s overall carbon emissions. As a leading public sector organisation, we have a track record of leading by example. We already have aspirational targets in place to reduce emissions and whilst our contributions have been reducing year on year, the pledge to make Plymouth carbon neutral by 2030 has fundamentally accelerated the need to review and where necessary develop local policies and plans to meet this challenge. This Corporate Carbon Reduction Plan sets out how we can work towards meeting that goal.

Prioritisation and timescales and link to Climate Emergency Action Plan

The proposed Corporate Carbon Reduction Plan seeks to accelerate reduction of carbon emissions produced by Plymouth City Council over the period to 2030. In line with the strategic timeline of the Climate Emergency Action Plan each of the themes are set against one of the three phases. (Emergency response phase (2019-21), Transitional phase (2021-23) or Acceleration phase (2023-30))

Boundary and scope.

The scope of this plan is to reduce the carbon emissions from the Plymouth City Council estate and its operations. The plan is focussed on areas that demonstrate significant carbon emissions and energy uses which are in the direct influence/control of Plymouth City Council. However, the plan also seeks to go beyond these 'hard' initiatives and challenges: policy; governance; behavioural processes and decisions which have carbon emission contributions to the Council's CO₂ emissions. The following themes will be addressed in the new Plan:

- A. Emissions and significant energy uses within the Plymouth City Council estate.**
- B. Engagement, behavioural change and governance arrangements in Plymouth City Council.**

Themes**A. Emissions and significant energy uses within the Plymouth City Council Estate**

- Review all Council (operational and commercial) buildings (existing and new)
- Vehicles/Fleet/Transport
- Evaluate Roads and street furniture including lighting and traffic lights.
- Staff and Councillor travel/Travel at Work (i.e. business travel/staff owned cars used to conduct council business).
- Waste minimisation (Council generated).

B. Engagement, Behavioural change and Governance in Plymouth City Council

- Governance
- Decisions
- Behaviours
- Engagement
- Finance – strategic investment policy and procurement

Carbon Neutral by 2030 – Baseline, terminology and measurement

Good practice requires the establishment of baselines from which to monitor progress, the outcome is to achieve zero carbon emissions by 2030. To help us define our baseline carbon footprint the Greenhouse Gas Protocol places an organisations emissions into 3 categories.

Scope 1 – are the Direct Emissions from the activities of an organisation or under their control. Including fuel combustion on site such as gas boilers, fleet vehicles and air-conditioning leaks.

Scope 2 – Indirect Emissions from electricity purchased and used by the organisation. Emissions are created during the production of the energy and eventually used by the organisation.

Scope 3 – All Other Indirect Emissions from activities of the organisation, occurring from sources that they do not own or control. These are usually the greatest share of the carbon footprint, covering emissions associated with business travel, procurement, waste and water.

Appendix 1 shows our current understanding of the extent of our scope 1 and 2. This work is being updated and work is in progress to understand the scale and boundaries of our scope 3 emissions.

The emphasis therefore is to determine, for each of the identified activities, their respective CO₂ outputs. Appendices 1 and 2 below sets out both the terminology, scope, measuring mechanism and baseline for each specific activity. Baselines will be developed for each theme and each individual activity within the Corporate Carbon Reduction Plan and will have their output measure and own target.

Draft Corporate Carbon Reduction Plan 2019 – 2021

Foreword

Local authorities are going into battle in the war on climate change. Figures published by the Carbon Trust show that local authorities in the UK spend around £750 million on energy and account for around 7 million tonnes of carbon dioxide emissions annually through their own activities. Plymouth City Council is no exception and the target of cutting our baseline carbon emissions by 2030 poses real challenges for every part of the Council.

Plymouth City Council has declared a climate emergency. As part of the response to this, the council has committed to ensuring that its operations are carbon neutral by 2030. This plan describes the actions we will take to achieve this goal and how we will measure our progress.

Plymouth City Council is committed to tackling climate change and ensuring environmental sustainability becomes a priority for the authority, both as a service provider and figurehead employer in this area. This Plan is the result of cross-departmental actions to identify opportunities to reduce consumption in energy, water, and fuel, minimise waste production, and to embed carbon management as a fundamental part of working life in Plymouth City Council.

The UK Committee on Climate Change recently highlighted local authorities' significant role in delivering national carbon targets. It recognises that councils' can drive and influence emissions reductions in their wider areas through the management of their estate, the services they deliver, their role as social landlords, community leaders and major employers, and through their regulatory and strategic functions.

The City Council is aware of the importance of its role and this is reflected in the Council's Strategic planning framework. We were previously working towards a target of 30 per cent reduction by 2020 compared to 2005 carbon emissions. The council has made significant progress in reducing carbon emissions over the last 9 years, by reducing energy use, improving the energy efficiency of our buildings, and reducing vehicle use. However, to achieve the 2030 target we will have to go further.

The actions set out in our plan identify the initial opportunities we have identified to reduce carbon emissions relating to the council's operations but this is only a starting point. The council will engage staff, contractors and stakeholders to expand the plan and the range of actions that help us to meet our target.

Draft Corporate Carbon Reduction Plan 2019 – 2021

Draft Corporate Carbon Reduction Plan 2019 – 2021	
<i>A. Emissions and significant energy uses within the Plymouth City Council Estate</i>	
Area of focus	Activities
Review all Council (operational and commercial) buildings (existing and new)	<p>Invest in a decarbonisation programme covering PCC estate;</p> <ul style="list-style-type: none"> • Review the councils corporate and commercial estate. • Complete a full audit of energy use within all PCC occupied buildings <ul style="list-style-type: none"> ○ Review the baseline use of energy and evaluate the carbon emissions from each building. ○ Identify the network of metering across the estate to quantify each building use. ○ Complete dynamic modelling of main PCC Buildings. ○ Incorporate zero and low carbon technologies including fabric retrofit at every appropriate council site. • Review purchasing zero or low carbon sourced energy. • Complete full audit of water use across the PCC estate. • Review the Council's procurement strategy and considering including a climate emergency statement and requirements in all suppliers. • PCC will make endeavours to develop a district heating and cooling system utilising low carbon heat pump technology.
Evaluate Vehicles/Fleet/ Transport/ Equipment	<p>Invest in a decarbonisation programme covering PCC's vehicle fleet;</p> <ul style="list-style-type: none"> • Review the total number of vehicles in the PCC fleet, including consideration of alternative fuels which would reduce carbon emissions if viable. • Review plant/tools which produces CO₂ emissions looking at potential alternative fuels or different mechanisms to undertake the purpose. • Fleet replacement of existing end of life diesel cars/small vans to electric alternatives. • Review zero emission alternatives for the HGV vehicles, which take advantage of new technologies becoming available to the general market.
Roads and street furniture including lighting and traffic lights	<ul style="list-style-type: none"> • Scope carbon and financial savings that can be achieved through improved control and management of street lighting using CMS - Energy, CO₂ emissions, Night Scout Requirements and Pre-emptive intervention (faults). • Reduction of illuminated Bollards and O/H Sign Lights following TSRG 2016 amendments- Energy, CO₂ emissions, maintenance liability, reduction of risk activity. • Roll out of LED Traffic Light Units - Energy, CO₂ emissions, maintenance visits (current stock shows 48% of Junctions and 73% of Ped Crossings have HI lamps) TCF2 bid and S106/278 projects will replace 6% of these.
Staff and Councillor travel/Travel at Work - Reducing unnecessary travel	<ul style="list-style-type: none"> • Undertake a Grey fleet review. • Reduce Car Travel by looking at car club initiatives for PCC Staff. • Support and encourage more sustainable methods of travel such as walking, cycling, bus, train and care sharing. • Identify and reduce unnecessary travel at work also including council vehicles. • Undertake an accommodation review including staff parking.
Waste minimisation which is Council generated	<ul style="list-style-type: none"> • Review and optimise the number of individual providers currently commissioned. • Examine and standardise waste capture across the estate. • Reduce overall waste. • Ensure that anything that can be reused is reused. • Put in place mechanisms to Recycle more and encourage staff to use recycling facilities.

<u>B. Engagement Behavioural change and Governance</u>	
Area of Focus	Activities
Governance	<ul style="list-style-type: none"> • Review all existing Corporate Council policies in light of the Climate Emergency. E.g. procurement, commissioning. <ul style="list-style-type: none"> ○ Identify any conflicting policies and assess implications. • Develop a structured timetable with Scrutiny Management to ensure that activities within the Corporate Carbon Reduction Plan are regularly reviewed by Performance, Finance and Customer Scrutiny Board. • Review all existing programmes in the light of the Climate Emergency. <ul style="list-style-type: none"> ○ Set carbon budgets for those departments in which it would be beneficial to use this approach to reduce emissions. • Consider embedding an environmental performance management system into the PCC structure including training ISO14001. • All City Council capital investments will be assessed for their impact on climate change, with immediate effect by incorporating carbon emissions impact assessments into the approvals process..Review 'carbon footprint implications' impact assessment questions on Main Committee and CMT Template.
Behaviours	<ul style="list-style-type: none"> • Employ a Behavioural change programme – targeted at high end energy users and leadership. • Implement The Way We Work programme with a focus on the climate change emergency on each of the following: <ul style="list-style-type: none"> ○ Working from home ○ Working practices ○ Reducing staff travel ○ Greater use online meetings ○ Travel between city buildings
Engagement	<ul style="list-style-type: none"> • Develop a PCC communications strategy on the climate change emergency. • Providing regular news items and communication on tackling climate change for staff to raise awareness. • Update the Green Champions Plan to ensure that it reflects the changes within this plan. E.G <ul style="list-style-type: none"> ○ Reduce the amount of energy we use ○ Reduce the amount of resources we use and increase waste that is recycled ○ Reduce the amount of water we use ○ Lower our carbon footprint ○ Promote green travel such as walking and cycling • Continue to work with other councils, and city wide stakeholders (PU, NHS, Marjon etc) with similar ambitions, sharing best practice and encouraging take up of the inclusive growth charter.
Finance – strategic investment policy and procurement	<ul style="list-style-type: none"> • Review Investment fund and debt policy. • Make it a standard condition that partners and suppliers in future procurement activities provide their company Carbon emissions (Over the term of the contract). • Seek to review the Construction Charter to ensure that suppliers in future procurement activities have Carbon reduction targets. • Give due consideration to Social Value outcomes for all our contracts in respect of sustainable procurement for, goods, works and services <ul style="list-style-type: none"> ○ More programmes to reduce emissions and lower carbon footprint ○ Less air pollution from direct and indirect transport

Appendices 1

Terminology

There are various statements that relate to Energy use and Carbon emissions. The following are regarded as the meaning of the following terms:

1. Carbon Neutral, (this has the same meaning as Net Zero Carbon), this is the state where used energy (that results in a discharge of carbon directly or indirectly) by a process or system, has that energy (and therefore the carbon released) offset by the production (generation) of an equivalent amount of energy by some form of renewable energy production. An example of this would be where a building uses electricity for space heating during the winter but photovoltaic cells (PV) on the roof produce an equal number of kilowatt hours of electricity as was used for heating, measured over a defined time period, usually one year.
2. Energy, this is what does the work, usually measured in kilowatt hours (kWh), (the rate of energy converting would be in kilowatts (kW)).
3. Carbon emissions. Carbon dioxide is released to the atmosphere when fossil fuel is used to do work. Examples of work are; heating a building using a gas or oil fired boiler, driving a vehicle, treating leachate, illuminating an office or boiling water in an electric kettle. In direct fired process, e.g. gas or oil fired water heater/boiler or gas cooking, carbon is released at the point of use, in the case of electrical equipment the carbon is released at the point of generation of that electricity.
4. For one kWh of energy “used” to do work the carbon emission will depend on the source, this will be different for gas, oil or grid supplied electricity. (The Department for Business, Energy and Industry Strategy recommend the following conversion rates Natural Gas – 0.20428 (kgCO₂/kWh), Oil – 0.25974 (kgCO₂/kWh), UK Grid Electricity – 0.2556 (kgCO₂/kWh), other organisations may use other conversion factors.)
5. Embodied (or embedded) Carbon, this refers to carbon dioxide emitted during the construction of a building and the construction/manufacture of building materials, and all processes of the construction of that building including transport, design and site activities etc. together with end of life emissions that would be emitted during demolition and processing of the arising of that demolition.

Appendices 2

Baseline Scope

All activities will require to set out their baselines and understand their contributions to the overall Plymouth City Council contribution.

The current known energy sources that produce emissions are listed below with their respective % of contributions. Overall it is estimated that in 2019, Carbon emissions are circa 16.5 Million kg/CO_{2e} annually. This is currently split as:

Theme	kg CO₂	Percentage
Buildings	8,698,955	52.6%
Fleet	1,859,955	11.3%
Street Lighting	5,713,000	34.6%
Business Mileage	260,000	1.6%
Other – unknown at this stage	Unknown	Unknown