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Angela Hutchings
Chief Executive

AGENDA

**Policy and Scrutiny
Committee:**

ENVIRONMENT

Date and Time:

**Wednesday, 22nd February 2023 at 7.00 pm –
rearranged from 11.1.2023**

Venue:

Council Offices, Council Chamber

Membership:

**Councillors Thomas (Chairman), Anderson, Ainsley,
Campagna, Cutler, Edwards, Egan, Mrs J. Payne, Mrs J.
Thornton and Walter**

**Cabinet Member
attending:**

**Councillor Blackwell – Leader of the Council
Councillor Savage - People & Community**

Officers attending:

**Miss Ann Horgan - Scrutiny Officer
Simon Lewellyn - Environmental Health Operational
Manager
Ben Brook – Strategy, Policy and Performance Manager**

Enquiries:

Loretta Hill – Ext. 2427

PART I

(Business to be taken in public)

- 1. Apologies**
- 2. Members' Interests**
- 3. Climate Action Plan Monitoring**

This meeting has been arranged to monitor the Council's Climate Action Plan. A report and supporting papers is attached to assist the Committee's deliberations.

At the Ordinary Council on 30th November 2022 the following question was put which the Chairman indicated would receive consideration at this meeting.

“Will the Chairman of the Environment Policy & Scrutiny Committee when reviewing the Climate Action Plan to reinforce its commitment made to tackling climate change through the continuation of work already identified through its Climate Action Plan, consider action to introduce an easy to navigate dedicated presence on its website in order that residents can quickly access details of this councils Climate Action strategies, including but not limited to:

Regularly updated versions of the Climate Action Plan,

Advice to residents and businesses on reducing their carbon footprint

Regularly updated data on the current Air, Pollution and Water Quality in the borough.

Advice to residents on waste reduction and recycling

Links to initiatives, projects and schemes available through our Partner Organisations.

Also will the committee revisit the question of whether it feels now is the time to declare a Climate Emergency linked to its CAP”

The Chairman also indicated the Committee would revisit whether recommendations are appropriate regarding the Declaration of a Climate Emergency. This had been the subject of a question from a resident to the Leader of the Council at the Council meeting.

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Policy and Scrutiny Committee - Environment

11th January 2023

Subject: Climate Change – Action Plan

1. Purpose of Report

This report aims:

- 1. To provide background information and the reasons for production of this report.**
- 2. To provide an update report to the Climate Change Action Plan, describing work that the Council are currently carry out to contribute towards the local, national, and global push towards combating the effects of climate change and to work towards carbon neutrality within our organisation.**

2. Links to Council's Priorities and Objectives

The report links directly with the Council's Environment objective.

3. Recommendations

- a) That Committee reaffirms its commitment to combat the effects of climate change and for the Council to work towards carbon neutrality within its organisational activities.
 - b) That the Climate Change Action Plan is noted
 - c) That Committee seek a further update report in 6 months' time.
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4. Background – Climate Change and Carbon Reduction

At its meeting on 22 January 2020 Cabinet considered the report on the Motion to Council on 22nd October 2019 in respect of a Borough wide tree planting campaign, which due to its potential financial implications was referred without debate to Cabinet.

The report suggested that a more strategic and coordinated approach to tackling climate change would ensure that maximum benefit is derived from the resources allocated to addressing it. It also stated that there is an opportunity for this Council to take a leadership role in this work and to assist households, businesses and agencies in Castle Point to take advantage of the opportunities associated with reducing carbon emissions.

It was resolved that Cabinet reports to Council and recommends that the Motion be referred to the Environment Policy and Scrutiny Committee to be considered as part of a task to look at what action the Council can take to tackle the growing global threat of climate change and to report back its findings and recommendations to Cabinet.

Environment Policy and Scrutiny Committee met on 25th August 2020. A report was presented to members by the Environmental Health Operational Manager. Several recommendations were made to Cabinet:

- a) For the Council to take a more corporate approach to climate change by the setting up of an officer group to act as a discussion forum, sharing of knowledge and resource, and to prepare an action plan of carbon reduction works and other initiatives, to guide the Council's activities going forward.
- b) To note that Committee considered the declaration of a 'climate and ecological emergency' within Castle Point and the creation of an associated action plan with the aim of reducing organisational carbon emissions to 'net-zero,' with a small majority agreeing that this course of action should be taken. Cabinet are invited to consider this matter further and to take a final decision on this matter.

A further report was presented to Cabinet in September 2020, which made the following recommendations:

- i) a permanent Climate Change officer group, with appropriate service representation be set up with a full terms of reference, to consider and enable carbon reduction action planning and monitoring, sharing of best practice, highlight and champion the work and progress of CPBC in this area to Councillors and other parties.
- ii) That the officer group undertakes an initial baseline assessment of the carbon emissions arising from the Councils activities (i.e. an organisational assessment) including energy use emissions from buildings, operations, and vehicles.

- iii) That the officer then compiles a fuller action plan to initially cover the Councils (internal) response to Climate Change and Carbon Reduction, within 1 year, with reference to any specific targets that have been set.

Cabinet decided to not make a 'climate emergency' declaration at this time, or to set a specific date for carbon neutrality.

5. Update report

A copy of the activities currently being undertaken by the Council regarding Climate Change and Carbon Reduction can be seen in Appendix 1. It should be noted that the action plan is a collaboration between 7 Operational Managers, each of whom are responsible for their own workstreams and actions. This work is undertaken in addition to existing responsibilities and workload.

6. Corporate Implications

a) Financial

It is assumed that any short-term workstreams would need to be met within existing resource or external grant funding. There is no dedicated officer resource for this area of work, which is likely to be problematic for the Council going forward as both local resident and government expectations are only likely to increase over time. As such, there is likely to be the need to consider appointing an officer with the time and resource with which to dedicate to this important area of work, as has been the case in many other local authorities who have considered and resourced this area of work. There may also at various stages the requirement to pay for specialist advice.

For further development of the action plan, in the medium term it needs to be recognised that implementing some of the possible measures that will be needed to achieve a net-zero carbon position, may have significant financial implication for the Council.

It is envisaged that when more ambitious projects are contemplated, the financial implications will need to be considered alongside their potential climate and ecological benefits to determine the key areas for investment. These in turn will need to be ranked against possibly competing priorities or financial constraints on the Council at the time.

b) Legal Implications

There are no legal implications with regard to the action plan. The contents of this plan do not in itself, bind the Council to any statutory duties to make its activities net-zero carbon by a set date. However, it should be noted that the UK government was the first major economy in the world to create legislation to achieve a net-zero position for all greenhouse gas emissions by 2050.

c) Human Resources

There are no specific human resource implications other than an expectation that employees would take personal responsibility for their behaviour and actions in response to any Council Direction or if other commitment were to be made by Cabinet.

d) Equality Implications

There are no specific equalities implications regarding this report.

e) Timescale for implementation and Risk Factors

The action plan is a living document and has been ongoing since being approved by Cabinet. It will continue to evolve over time as and whenever circumstances allow or action on specific areas is required.

Report Author – Simon Llewellyn
Environmental Health Operational Manager
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Action Plan Authors:

Ben Brook – Policy Manager
Ryan Lynch – Operational Services Manager
Matthew Lippett – Assets and Estates Manager
Shane Williams – Leisure General Manager
Simon Llewellyn – Environmental Health Operational Manager
Amanda Parrot – Planning Policy Manager
David Randerson – Housing Development and Finance Manager

Appendices

Appendix A – Climate Change Action Plan (Nov 2022 update)
Appendix B – Climate Change in context (further information)

Operational Managers Climate Change Group

Climate Change Action Plan v1.4

1) Combined Corporate Services – Coordinator Ben Brook

Action	Lead Officer and resources	Timescales	Performance targets / outcomes	Risks and mitigations	Progress and/or further detail - July 21	OCTOBER 2021 UPDATE	MARCH 2022 UPDATE	NOVEMBER 2022 UPDATE
Review the council's procurement policies to ensure that environmental consideration is given to any procurement undertaken by the council (as part of a wider review of procurement policies to	Claire Dowdall	Over 2021/22 and in line with any new Procurement Bill	Procurement policies up to date and include section on environmental consideration	Risk that environmental impact not included in tender exercise and subsequent scoring mitigated by support from EMT about importance of environmental considerations in procurement	Not commenced	The Council has been working with a subgroup of the Procurement Agency for Essex (PAE) who are looking at social value and environmental impact of procurement across Essex to ensure a	The new Procurement rules is unlikely to be ratified until later in 2022. Currently liaising with ECC and Braintree regarding	The corporate procurement rules will be changed when the new legislation comes in. The Essex Procurement Hub are looking at aligning Corporate Procurement rules with Castle

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ensure that social value expectation are set out in tender opportunities following Procurement Green Paper)						consistent approach. This work will inform the Council's own procurement policy updates.	Joint/Shared TOMS	Point and incorporating Social Value through Joint/Shared TOMS
NEW ACTION Investigate with other councils across Essex the options of buying electricity direct from a renewable generator through a Power Purchase Agreement	Claire Dowdall	Exploration over 2021/22 (noting that the Council's current energy contract runs until April 2022)	Cost of electricity % from renewable sources	Risk that the Council does not take advantage of alternative methods of sourcing energy resulting in higher costs and lower percentage of energy from renewable sources. Mitigated by	New action added November 2021	New action added November 2021	ECC leading on this project, CPBC have asked to be included in the report. Awaiting info from ECC.	ECC leading on this project, CPBC have asked to be included in the report. Awaiting info from ECC.

Action	Lead Officer and resources	Timescales	Performance targets / outcomes	Risks and mitigations	Progress and/or further detail - July 21	OCTOBER 2021 UPDATE	MARCH 2022 UPDATE	NOVEMBER 2022 UPDATE
				engagement in this process.				
Review the report templates to consider adding environmental impact to any reports to officers or members (e.g. Leadership Team, Cabinet, Council)	Ann Horgan	September 2021 onwards	Revised template is issued and in use.	Risk that environmental impact not completed in report templates mitigated by clear message from Cabinet and EMT about importance of environmental considerations in Council decision making	Not commenced	Environmental impact added to the Council's report template from November (will start to be used for reports from December)	Need to formally share the new template. Will put in place for the new financial year.	Will be added to templates for use from January 2023.
Exploration of project to digitise council records	Mike Greenwood	TBC – on re-commencement of ICT Strategy Group	Scoping of project and decision to proceed or not	Risk that records are not digitised consistently and reliance on paper copies remains	Not commenced	The ICT Strategy Group has now recommended following a pause during Covid-19 and	No updates	Other digitisation IT projects taking priority (e.g. Council website). Three Council service

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				mitigated by robust project planning		will be discussing this item at their November meeting.		areas already have scanning and document management systems (DMS) in place. Potential for corporate-wide system likely to be revisited in 2023/24.
Project scoping for installation of Electric Vehicle Chargers on Council-owned sites	Shane Williams and Ryan Lynch	Project scoping by end Q2 2021/22	Scoping of project and decision to proceed or not	Risk that the council does not provide EV charging points making the Borough less welcoming to visitors who drive electric cars and perception that environment not taken seriously. Mitigated by	Not commenced but electric charging points will be provided in the refurbished Labworth car park. The enabling ducting has already been laid .	Scoping of the project has commenced and will continue through November, including getting specialist advice on the range of options available.	Some engagement with suppliers. Awaiting installation to progress at Labworth Car Park as a proof-of concept	The Council has recently entered into an agreement for the installation of EV chargers at Labworth Car Park. Further installations will be explored following completion of this work.

Action	Lead Officer and resources	Timescales	Performance targets / outcomes	Risks and mitigations	Progress and/or further detail - July 21	OCTOBER 2021 UPDATE	MARCH 2022 UPDATE	NOVEMBER 2022 UPDATE
				careful project scoping to understand options, costs and benefits				

2)Housing Services – Coordinator David Randerson

Action	Lead Officer and resources	Timescales	Performance targets / outcomes	Risks and mitigations	Progress and/or further detail - Jul 21	OCTOBER 21 UPDATE	MARCH 2022 UPDATE	NOVEMBER 2022 UPDATE
Ensuring new properties in Borough take advantage of green technologies	David Randerson	2021 and ongoing	New builds incorporate green technologies, these include non-gas heating, photovoltaic tiles and electrical charging point infrastructure.	Potential cost implication that might make scheme not financially viable due to return on our investment. Clear costing analysis and a menu of possible green options to choose from to ensure viability.	Have begun discussions and planning new builds in pipeline for this year to take account of green energy.	Recent planning application to go to DC for 2 houses at 2 Cedar Road and 4 houses at 54 – 60 Linden Way includes air source heat pumps, solar panels and EV charging infrastructure.	Planning permission granted for both sites – to include air source heat pumps, solar panels and EV charging infrastructure.	Additional site of 3 Houses at Link Road also has planning permission. Anticipated commencement of all three sites 21 st November 2022 to be completed Summer 2023

New Architects (sustainability experts)	David Randerson	Ongoing with current contract expiring Dec 2022.	New builds incorporate green technologies	New architects yet to deliver a scheme. Have good track record in the sector and have obtained planning permission for first scheme.	Have begun discussions and planning new builds in pipeline for this year to take account of green energy.	See previous comments. These will be the first scheme that new architects will deliver.	Builds in pipeline for 2022/23 to take account of green energy.	New contract for Architectural services to include requirements for sustainable developments
Consideration of energy efficiency measures / in social housing / new build (Solar etc)	David Randerson (new build) Philip Sharp SEH for existing stock	Ongoing	New builds incorporate green technologies. Using energy efficient installations as part of maintenance and refurbishments in existing stock	Potential cost implications stretching limited budgets. Forward planning for capital schemes has been devised and reviewed continuously against budgets.	As per above on new builds. On existing stock, all voids have low energy light bulbs fitted before letting for example.	Have begun a process of collating and updating all EPC data, to identify all properties with ratings below C initially. Will feed into possible bid for funding from Govt Net Zero programme.	SEH appointed as new contractor for EPC works. Collating and updating all EPC data, to identify all properties with ratings below C initially.	Available Grants streams to be investigated to support sustainable installations.
Information and advice to Council Tenants (i.e. energy switching, sourcing green energy options etc)	David Randerson Liz Robinson	TBC – yet to plan timeframe for producing literature	Consideration of information to be contained in next a future tenant newsletters	Only risk that residents do not or cannot afford newer energy suppliers because of use of key meters and reluctance to change	Not commenced	Not commenced as current utility situation makes switching suppliers difficult. Will incorporate advice in next tenants' newsletter	Energy saving lightbulbs fitted in all void properties.	Current energy issues to be reviewed and appropriate steps taken to support tenants to be determined. Installation of smart meters at blocks to commence to allow for greater

								information on usage to be obtained
Procure training and develop strategy on green sustainable housing	David Randerson	TBC – yet to plan and source suitable trainers	Scoping of project and decision to proceed or not	Potential cost implications stretching limited budgets. Forward planning for capital schemes has been devised and reviewed continuously against budgets.	Not commenced	Still to be arranged.	Still to be arranged.	Looking at county/country wide solutions such as those offered by Essex County Council and the Thames Gateway partnership
Annual Boiler replacement programme	Philip Sharp SEH	Ongoing	Performance linked to Decent Homes rating, plus boilers that are beyond economical repair. Fuel efficient combi boilers are fitted wherever possible	Costs and demand exceed budget provision. Generally, use unallocated sum for budget overspends	Programmed works set against DH rating and future programmes known in advance of boilers failing DH rating.	Current years programme completed. Funding and programme being finalised for 2022/23 programme.	Programme in place for 2022/23.	Ongoing delivery of 22/23 programme, planning for 23/24 due to commence
Loft insulation programme	Philip Sharp SEH	Ongoing	Properties identified from 5-year stock condition surveys and programmed	Costs and demand exceed budget provision. Any missed held over to the next financial year	Ongoing provision based on the information held.	This is relevant to work on EPC's. New programme to go out to tender for 2022/23	Tender has been issued - 153 properties per year for three years.	Programme due to commence 23/24

			based on the level of existing insulation in loft.					
Investigation of low carbon options for future heating installations (gas free)	David Randerson	Ongoing	Architects have built into plans to deliver air heat source pumps in our new builds	Increased costs over convention gas boilers and increased cost to resident in running costs. Meets government regulations that will be coming into force. Will as part of of producing literature on green energy will assist residents in how to manage consumption and costs.	Not commenced yet	Not yet commenced until new developments are completed and available to let in 2022/23	Not yet commenced until new developments are completed and available to let in 2022/23	Construction due to commence 21 st November 2022 for completion Summer 2023

3)Corporate Assets and Estates – Coordinator Matthew Lippett

Action	Lead Officer and resources	Timescales	Performance targets / outcomes	Risks and mitigations	Progress and/or further detail - Jul 21	OCTOBER 21 UPDATE	MARCH 2022 UPDATE	NOVEMBER 22 UPDATE
Implement measures to lower energy consumption	Matthew Lippett	2022/2023 target	Reduce carbon dioxide emissions	Cost risk	To update in due course	No progress updates	No progress / updates	Within the Council Offices, the building management system has been reviewed and heating timings adjusted to reflect actual need.
Aim to buy 100% renewable energy	Matthew Lippett	2023/24 target	Increase amount of renewable energy used	Cost risk	To update in due course	No progress updates	No progress / updates	The Council purchases its energy through the crown commercial services framework. From April 2023 the council has requested to move from the standard sourced energy to Zero Carbon for Business Energy. The framework used has already procured some a proportion of the energy for next year and there is also a limited renewable

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								energy guarantee of origin. Over the next 36 months it is hoped that 100% of energy purchased for the Council would be Zero Carbon.
Investigate installation of PV / heat pump on council operated buildings	Matthew Lippett	2022	Investigate cost and performance of combined heat and power pump	Cost risk	To update in due course	No progress updates	No progress / updates	No progress / updates
Implement and encourage reduction of single use plastic within Council buildings	Matthew Lippett	2022	Reduce use of single use plastic	Cost of alternatives	To update in due course	No progress updates	No progress / updates	The Council Offices, including the leisure centres signed up to the "Refill" to offer free water refills to the public. Plastic cups have also been removed from Water stations to encourage use of reusable bottles/cups.
Rationalise the size of the Council's	Matthew Lippett	2025 (provisional)	Reduce the size of the Council's	Future Business needs risk	To update in due course	No progress updates	No progress / updates	The Old Canvey Offices will be vacated by the NHS in March 2023,

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operational estate			operational estate					providing vacant possession for the site, should the council then wish to dispose of the freehold interest. There is also the possibility of decanting the current occupiers of The Whitehouse into the Kiln Road offices in 2023/24, providing the opportunity to demolish The Whitehouse if decided by the Council.
Relocate council staff into a BREEAM rated Excellent Building	Matthew Lippett	2030 (provisional)	Relocate staff into a smaller 'Excellent' rated property	Availability, location and cost risk of occupying such a property	To update in due course	No progress updates	No progress / updates	No progress / updates
Implement a majority work from home policy	Matthew Lippett	2022	Reduce number of back-office staff regularly attending council properties	Staff well-being risk	To update in due course	No progress updates	No progress / updates	Leadership Team are developing the new hybrid / work from home policy – details to be confirmed in 2023/24 FY

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Undertake sustainability improvements to council properties	Matthew Lippett	2023/24	Review EPCs for all properties and engage with sustainability consultant to identify costs of possible improvement works	Cost Risk	To update in due course	No progress updates	No progress / updates	A PPM programme is being undertaken across 21 corporate property assets in FY 2023/24, at an estimated cost of circa £307k.

4)Regeneration – Coordinator John Royle / Amanda Parrott

Action	Lead Officer and resources	Timescales	Performance targets / outcomes	Risks and mitigations	Progress and/or further detail - Jul 21	OCTOBER 21 UPDATE	MARCH 2022 UPDATE	NOVEMBER 2022 UPDATE
Participate in strategic planning and delivery initiatives that support environmental outcomes (e.g.	Ian Butt Amanda Parrott	On-going	TBC	Lack of staff resource	The Regeneration Team are helping to progress a range of strategic initiatives that support environmental outcomes. These include the South Essex Estuary Park (via ASELA), and the feasibility of the Black Jetty Renewables project. Our role includes supporting with the	On-going. Further discussions held with ECC and Energy Hub re Black Jetty.	On-going. Further discussions held with ECC and Energy Hub re Black Jetty.	South Essex Park is a priority project for ASELA and phase one is in the advanced design stage. Phase two includes the marshes area

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SEE Park, Black Jetty, etc)					development of business cases, scoping projects and seeking appropriate funding for delivery.			<p>within the Borough.</p> <p>Discussion started with a major landowner on rewilding their estate as part of a strategic biodiversity net gain network</p> <p>The new Castle Point Plan will include tackling climate change as one of its core objectives.</p> <p>The Black Jetty remains a paused project at present.</p> <p>A vision for South Essex is to be developed. If based on a the draft strategic framework, it will</p>

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								<p>set the highest standards of sustainable development, zero carbon and off-grid energy capability.</p> <p>A new toolkit for new settlements is being developed which sets the same standards and embeds stewardship into the design stages.</p>
Advocate available local business support scheme for business carbon reduction support	Sheridan Barr Economic Development Officer post (Post pending)	Up to March 2023	TBC	Lack of staff resource	The Low Carbon Across the South East (LoCASE) programme is supported by the European Regional Development Fund to provide a free business support programme in the South East. It aims to help businesses become more competitive and profitable while protecting the environment and encouraging low carbon solutions. To do this, LoCASE	Business forum being planned for Jan 2022 which will include promotion of support schemes.	Business Forum took place on 23 rd February 2022. LoCASE promoted as part of the event. The event remains viewable online via the Council's	LoCASE offer and Business Briefing dates promoted via an email out campaign to the Regeneration database and Business Rates database.

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schemes (e.g. LoCASE)					provides grants for businesses of up to £20,000 as well as training workshops and fully funded events. Targeted business support is on offer for companies who offer “green” or low carbon goods and services.		YouTube Channel.	<p>The UKSPF investment plan (approved 5 December 2022) includes support for businesses for green technology, including a training programme for net zero assessor and retrofitting. Working with ECC on retro fitting training.</p> <p>Approval for an Economic Development Officer pending. Their remit will include working with businesses on green energy, green technology, and skills</p>

5)Planning Policy – Coordinator Amanda Parrott

Action	Lead Officer and resources	Timescales	Performance targets / outcomes	Risks and mitigations	Progress and/or further detail - Jul 21	OCTOBER 21 UPDATE	MARCH 2022 UPDATE	NOVEMBER 2022 UPDATE
Prepare a Green Infrastructure Delivery Plan, for the delivery of multifunctional improvements to open spaces and the natural environment in the Borough	Amanda Parrott / Ryan Lynch (there is an overlap) Planning Policy Team + additional support for engagement	TBC (ASAP)	<ul style="list-style-type: none"> Increased quantity of accessible natural Green Space Improved quality of open space provision Increased propensity to walk or cycle 	<p>Resources for delivery – PM to be factored into funding requirements</p> <p>Resources for ongoing management – where possible secured via S106</p> <p>Competing schemes – prioritisation of resources as they arise based on identified criteria</p>	TBC	Will progress as part of SEEPark proposals in 2022.	No progress since October 2021	To be progressed as part of work on the Castle Point Plan

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As part of the review of the Developer Contributions supplementary planning guidance establish the need to seek Green Infrastructure contributions when considering planning applications	Amanda Parrott Planning Policy Team + specialist support for viability assessment	By June 2022	Increased funding for Green Infrastructure projects secured via S106	Prioritisation of Green Infrastructure considering viability constraints – need to emphasis socio-economic benefits	TBC	Review underway with draft to be reported to Cabinet in early 2022.	Review progressing well. Report to Scrutiny and Cabinet in June 2022	Insufficient evidence to support seeking S106 for green infrastructure specifically at this time. Additional evidence collected for the Castle Point Plan will be used to rectify this.
Support Essex County Council in delivering improvements to the cycling and walking infrastructure in Castle Point.	Amanda Parrott / John Royle	Ongoing	Increased propensity to walk and cycle	Castle Point is not a priority area for this type of investment at ECC – use CIL income to stimulate ECC spending / bids for DfT funding	TBC	No progress to date.	No progress to date.	The preparation of Local Walking and Cycling Improvement Plans to be included as part of work on the Castle Point Plan.

6)Environmental Health Services – Coordinator Simon Llewellyn

Action	Lead Officer and resources	Timescales	Performance targets / outcomes	Risks and mitigations	Progress and/or further detail - Jul 21	OCTOBER 21 UPDATE	MARCH 2022 UPDATE	NOVEMBER 2022 UPDATE
Establish Carbon Baseline and produce annual calculation to enable progress (direct CO2e emissions across Scope 1-3 as defined by the LGA) to be monitored	Simon Llewellyn / Environmental Health Staff.	Annual figure to be calculated	Figure to be calculated and reported	Substantial change in LGA scope inclusions, may make year on year comparisons more difficult.	Baseline now calculated.	N/A	COVID affecting results of previous Financial Year, next update will be 22/23 financial year.	New carbon calculation (organisational emissions) to take place at end of financial year, which will be the first unaffected by COVID since baseline

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Undertake project work relating to £2.3m capital grant received under LAD1b, to insulate homes at Kings Park, Canvey Island.	Simon Llewellyn / Erika Lewis	Work to continue until project completion now end of April 2022	Improvement in energy efficiency and reduction in carbon emissions – improved, warmer homes.	Delays caused by matters outside of the control of CPBC. <ul style="list-style-type: none"> • Changes in PAS standards. • Weather conditions. • Material / staff shortages. 	Initial delays caused by a change in PAS standards. Work now underway (June 2021)	LAD1b currently at 123 completions with 50 more planned for the period to March 2022.	LAD1b currently at 155 completions, a further 20 part completed and ongoing.	LAD1b Project completed in April 22 with 184 total completions.
NEW – Undertake work relating to £2.5m capital grant won under HUG1 to insulate homes	Simon Llewellyn / Erika Lewis	April 2022 – Mar 2023	Improvement in energy efficiency and carbon emissions – improved, warmer homes.	Delays caused by matters outside of the control of CPBC. <ul style="list-style-type: none"> • Changes in PAS standards. • Weather conditions. Material / staff shortages	N/A	N/A	Pre-project work including procurement and ensuring all BEIS paperwork is completed. Initial contact being made with residents to benefit from the scheme.	HUG1 project currently well underway with 90 External Wall Insulation completions and 60 Underfloor Insulation completions so far.
Work to promote Energy Efficiency	Carla Okikiade /	Ongoing	Increased awareness amongst Private	Issues with staff resource due to	Ongoing.	Ongoing – Local Landlords Forum	A further landlords forum to be	Next landlords forum TBC.

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Standards in the Private Rented Sector with reference Private Sector Housing Service Plan	Environmental Health Staff		landlords / tenants, with enforcement where appropriate, as to the Minimum Energy Efficiency Standard (MEES)	priority from other EH duties.		to be attended November 2021.	held June 2022.	
Seek additional staff resource to allow for extra work to be undertaken regarding energy efficiency, carbon reduction and project support across the organisation and wider Borough.	Simon Llewellyn / any additional staff secured.	2022	Additional funding (i.e. grant funding) secured to allow additional work to be completed regarding energy efficiency / carbon reduction.	Funding not secured.	Not commenced	Not commenced	Not commenced	Work being considered as part of current restructuring.
Consider applications for additional capital grant	Simon Llewellyn	Ongoing	Potential for additional funding secured with which to	Lack of staff resource to apply for / operate	Not commenced	Additional grant monies sought under HUG1 and joint bids for	HUG1 scheme bid successful, work underway in partnership	LAD2 work ongoing in partnership with

Action	Lead Officer and resources	Timescales	Performance targets / outcomes	Risks and mitigations	Progress and/or further detail - Jul 21	OCTOBER 21 UPDATE	MARCH 2022 UPDATE	NOVEMBER 2022 UPDATE
funding, as and when opportunities arise, regarding energy efficiency in private sector housing, subject to resource.			fund / deliver energy efficiency works with measurable carbon reductions.	projects. Lack of funding secured.		funding under LAD2.	with Warmworks to insulate further properties under LAD2.	Warmworks. Work on a consortium bid with several other local authorities to secure HUG2 funding for the benefit of local residents.
OMT Climate Group facilitation / coordination and representation / liaison with Councillors and external parties such as joint meetings with the Castle Point Climate Change Action Group.	Simon Llewellyn	Ongoing	Work of the OMT Climate Change Group reported periodically to councillors and others. Opportunities given for input / feedback to improve the work undertaken by the Officer group, seek expertise / resource from external parties where appropriate.	Lack of time / resource to devote to this area of work.	Ongoing	Ongoing	Ongoing – Meetings of OMT Climate Group	Ongoing – OMT climate meetings continue to be held. Joint meeting with CPCAG to be revived, appropriate format considered / discussed by Policy and Scrutiny Committee.

Action	Lead Officer and resources	Timescales	Performance targets / outcomes	Risks and mitigations	Progress and/or further detail - Jul 21	OCTOBER 21 UPDATE	MARCH 2022 UPDATE	NOVEMBER 2022 UPDATE
Air quality monitoring at 30 locations around the Borough. Sites to be periodically reviewed.	Billie Day and Environmental Health Staff	Ongoing	Indication given of air quality over the area covered by the Borough.	Changing government standards. Financial pressures, affecting ability to carry out function.	Ongoing – annual report produced and available in late July (approx.) each year.	Update report now received to be published online Nov 2021.	Ongoing AQ monitoring taking place in Borough. Reports published online.	Ongoing AQ monitoring taking place in the Borough – Reports published online.
NEW ACTION Facilitate Climate group engagement with proposed Youth Climate Ambassador Scheme.	Simon Llewellyn and Ben Brook	TBC	Proposal for Youth Ambassador representative to engage with the Council via the Climate Action Group and to take forward initiatives contained in the Council's Climate Action Plan.	Castle Point Climate Action Group to engage / encourage young persons to apply to the scheme, envisaging one ambassador per 2 Council wards. Enough volunteers would need to be found.	N/A	New Action	We have not received any further communication yet regarding this scheme.	This is to be discussed via the next Environment Scrutiny Committee.

7)Leisure Services – Coordinator Shane Williams

Action	Lead Officer and resources	Timescales	Performance targets / outcomes	Risks and mitigations	Progress and/or further detail - Jul 21	OCTOBER 21 UPDATE	MARCH 2022 UPDATE	NOVEMBER 2022 UPDATE
To explore the relocation of spare LED lights following the extension of the fitness suite at Waterside Farm Leisure Centre to reduce energy consumption in other Council properties.	Shane Williams – liaison with Facilities	Over 2021/22 / 23 and in line refit / upgrades of existing properties	Ideally all lights relocated	Risk that existing lights are not suitable for other properties / existing fittings	X2 lights will be relocated in Runnymede's dosing area in July 2021 Explore use at Woodside Hall Potential for some Lights to be reused in Council cemetery	Some lights reused in Cemetery by facilities. Other lights to be relocated.	No updates / report	N/A
Undertake feasibility study to install a new heat recovery system in Runnymede's Swimming Pool	Shane Williams	2021 / 2022	Completion of feasibility study and results feed up to EMT / Cabinet	Resource / budget provision to fund feasibility study may not be available	Not commenced	No update.	No updates / report	Framework required to appoint specialist contractor to review the feasibility of installing such a new system. SW in

Action	Lead Officer and resources	Timescales	Performance targets / outcomes	Risks and mitigations	Progress and/or further detail - Jul 21	OCTOBER 21 UPDATE	MARCH 2022 UPDATE	NOVEMBER 2022 UPDATE
			If feasible Business Case will need to be completed	Study may indicate poor return of investment resulting in loss of resources				discussion with Claire Dowdall. Update 06.12.22 - Sport England Awarding £5,000 to appoint consultant to review Leisure Centre energy usage and recommendations, Review will include AHU system at Runnymede.
Paddocks Community Centre replacement - to scope out feasibility of new energy efficient solutions i.e. ground heat pumps, reuse of grey water, solar panels and so forth	Shane Williams and Trudie Bragg	TBC – in line with final design / tender of project	Scoping of solutions / decision on individual energy efficient solutions to be progressed to EMT / Cabinet for decision making	Risks that some energy efficient solutions may not return investment / may increase operational costs	Ingleton Woods commissioned to undertake detailed feasibility study, which is due to be completed by end August 2021	Feasibility report received. Project put on hold until June/July 2022 to give Sandra Durrant and associates time to decide if they are able to take on the management and operation	No updates / report	£900,000 funding agreed to refurbish existing facility. Project group to consider energy efficient upgrades such as LED lighting.

Action	Lead Officer and resources	Timescales	Performance targets / outcomes	Risks and mitigations	Progress and/or further detail - Jul 21	OCTOBER 21 UPDATE	MARCH 2022 UPDATE	NOVEMBER 2022 UPDATE
						of the existing building.		
Upgrade Building Management System at Waterside Farm Leisure Centre to provide enhanced control of AHU systems	Shane Williams	June 2021	Reduction in operational costs	None noted	Completed June 2021	Upgrade completed	N/A	N/A
To reduce Leisure Centre AHU intake and outtake following the end of COVID 19 restrictions. Systems currently running at 100% in line with COVID Secure guidance. To reduce intake and outtake to 50% (was 70% pre Covid)	Shane Williams	July 2021 or in line with restrictions ending	Reduction in operational costs in line with pre COVID expenditure	To monitor humidity levels following reduction (if levels are too high this may cause deterioration to facilities i.e. mould / rust etc...) if levels increase above recommended levels. If too high, intakes	Completed July 2021	Completed 2021, intake and outtake reduced below pre pandemic requirements to reduce operational costs	N/A	N/A

Action	Lead Officer and resources	Timescales	Performance targets / outcomes	Risks and mitigations	Progress and/or further detail - Jul 21	OCTOBER 21 UPDATE	MARCH 2022 UPDATE	NOVEMBER 2022 UPDATE
				and outtakes will be increased resulting in no saving				
Waterside Farm Leisure Centre gym extension – energy efficient air con system, led lights and new energy efficient roof insulation panels installed	Shane Williams	June 2021	Project completed		Completed June 2021	New systems installed June 2021	N/A	N/A
Review new / improved energy efficiency solutions when pre-planned improvements are undertaken at the Councils leisure / halls facilities. Including equipment	Shane Williams	On-going	TBC in line with individual replacements, projects etc.		TBC	No update.	No update / report	£900,000 funding agreed to refurbish existing Paddocks facility. Project group to consider energy efficient upgrades such as LED lighting.

Action	Lead Officer and resources	Timescales	Performance targets / outcomes	Risks and mitigations	Progress and/or further detail - Jul 21	OCTOBER 21 UPDATE	MARCH 2022 UPDATE	NOVEMBER 2022 UPDATE
upgrades, remodelling of existing areas and pre-planned replacements i.e. pool plant in future etc...								
Update 06.12.22 - Sport England Awarding £5,000 to appoint consultant to review Leisure Centre energy usage and recommendations. Review will take place at Runnymede and Waterside Leisure Centres in 2023.	Shane Williams	Report to be provided By June 2023						

8)Operational Services – Coordinator Ryan Lynch

Action	Lead Officer and resources	Timescales	Performance targets / outcomes	Risks and mitigations	Progress and/or further detail - Jul 21	OCTOBER 21 UPDATE	MARCH 2022 UPDATE	NOVEMBER 2022 UPDATE
Explore Electric vehicle options.	Ryan Lynch/Will Coakley/Dilip Gurung	On-going	Reduced emissions from council operated fleet.	Currently no infrastructure in place to support electric vehicle charging etc funding	Not commenced Next procurement of vehicles will consider electric options.	Currently looking into costs associated with replacement of the small van fleet with EV's including the charging points needed to support their use at the Farmhouse.	No Update	No update
Woodland / tree planting schemes. Support Essex County Council with	Ryan Lynch	On-going	TBC	Currently exploring funding opportunities	Sites have been highlighted with funding now being sought.	Planting of whips will commence this season. Trees coming from various sources	Around 6000 whips have been planted across the Borough (mostly Canvey)	No update

Action	Lead Officer and resources	Timescales	Performance targets / outcomes	Risks and mitigations	Progress and/or further detail - Jul 21	OCTOBER 21 UPDATE	MARCH 2022 UPDATE	NOVEMBER 2022 UPDATE
the Essex Forest Partnership to deliver planting schemes across CPBC						(woodland trust and ECC)		
<p>Review waste collection options with the aim to:</p> <p>1. Increase the amount of waste recycled or composted;</p> <p>2. Reduce amount of waste produced;</p> <p>3. Improve quality of recyclables</p>	Dilip Gurung	On-going	Increase in recycling and composting rates, best quality recycle, reduction in waste produced, reduction in use of single use plastics	Funding not currently in place, may be resistance to change particularly in respect of waste reduction policy	Consultant report has been produced which compares various waste collection options. Report to July 2021 Cabinet proposing the Environment Policy and Scrutiny Committee is tasked with considering the options and making recommendation to Cabinet on its preferred option.	<p>Environment Policy and Scrutiny Committee tasked with reviewing future collection options. First meeting held on 25 Oct 2021, second session scheduled for 6th Dec.</p> <p>Social media posts subsequently being put out reminding people</p>	Meetings are still ongoing with Scrutiny discussing the various options	<p>Waste Management Review still in consultation with higher management.</p> <p>Recycling services promoted in social media to recycle and reduce waste. Recycling week was successfully promoted</p> <p>Targeting flats to reduce contamination by sending</p>

Action	Lead Officer and resources	Timescales	Performance targets / outcomes	Risks and mitigations	Progress and/or further detail - Jul 21	OCTOBER 21 UPDATE	MARCH 2022 UPDATE	NOVEMBER 2022 UPDATE
<p>produced to ensure they can be recycled into new quality materials</p> <p>4. Reduce use of single use plastic</p> <p>5. Reduction in service costs</p>						<p>how to dispose of their waste correctly and how not to contaminate recycle.</p>		<p>communication and labelling correctly in problematic sites</p> <p>Promoted service and engaged with public in events</p> <p>Council provided plastics bin are now in circular loop. The damaged bins if brought to reception are returned to manufacturer to be recycled.</p> <p>Some services have been moved to digital space with option to order printed copies.</p> <p>Some delivery service has been permanently removed however still available to</p>

Action	Lead Officer and resources	Timescales	Performance targets / outcomes	Risks and mitigations	Progress and/or further detail - Jul 21	OCTOBER 21 UPDATE	MARCH 2022 UPDATE	NOVEMBER 2022 UPDATE
								residents who are unable to travel to pick up point of some receptacles.
Increase diversion of food waste from residual waste, and reduce amounts of food waste produced overall	Dilip Gurung	On-going	Increase food waste diversion, and decrease food waste production	Resource capacity to ensure project is completed to the highest standards	Working in partnership with ECC on pilot scheme on food waste communications.	Pilot scheme was delayed but is now taking place in Chelmsford, if it proves successful it will be rolled out Essex wide but this is unlikely to be before late 2022. In the meantime we will continue to promote/educate residents in respect of our food waste service.	No Update	<p>Promoted ECC campaign and Kitche app to reduce food waste and use our food collection service.</p> <p>CPBC will be supporting ECC food waste reduction and recycling campaign next year and contributed £1000 towards it.</p> <p>Started food collection trail at Canvey Island park homes.</p> <p>Pilot project with ECC to trail food collection at</p>

Action	Lead Officer and resources	Timescales	Performance targets / outcomes	Risks and mitigations	Progress and/or further detail - Jul 21	OCTOBER 21 UPDATE	MARCH 2022 UPDATE	NOVEMBER 2022 UPDATE
								Montgomerie Primary School. We will look to promote this service to other school if successful.
The upgrading of litter bins to Dual Recycling and General Litter Bins (DRGLB), the Recycling side to take plastic bottles and cans. The DRGLB's will be located in areas where fast food outlets are based and where the consumption of their products is likely to occur	Stuart Jarvis	35 DRGLB's are being installed in 2021 following the successful award of a grant application, 22 DRGLB's to be installed in 2022/23 dependent on growth bid.	Increased recycling, reduced littering	Installation of 22 DRGLBs in 2022/23 subject to securing funding	On track	35 DRGLBs installed to date and further 22 ordered funded from within existing budgets. Growth bid no longer required.	No update	On track to be completed by end of 2022/23 financial year

Action	Lead Officer and resources	Timescales	Performance targets / outcomes	Risks and mitigations	Progress and/or further detail - Jul 21	OCTOBER 21 UPDATE	MARCH 2022 UPDATE	NOVEMBER 2022 UPDATE
New Grounds Maintenance and Street Cleansing Contract will include carbon reduction measures as part of the evaluation process	Stuart Jarvis	2022/23	Reduced emissions from vehicles and equipment	Vehicles and equipment must be fit for purpose	On track	Contract documentation is being finalised.	No update	Contract awarded to Pinnacle FM, Pinnacle have added 8 electric powered mowers for small sites and fine turf. 13 electric powered hedge trimmers for small hedge work and 5 electric powered vans.
Green infrastructure schemes – protecting and improving natural habitats such as woodland. Tree planting sites across the Borough are being	Ryan Lynch Environmental Rangers	On-going	TBC	Funding for planting schemes being explored jointly with ECC.	Ongoing management of Thundersley Great Common SSSI. Tree Planting to commence in autumn 2021 subject to funding.	As above planting will start on delivery of whips. (it's vital its understood planting will NOT take place on the common SSSI we should be	Around 6000 whips have been planted across the Borough. We will be adding further sites to next years planting scheme and hope that this continues	We will be adding further sites to next years planting scheme and hope that this continues for several years to come.

Action	Lead Officer and resources	Timescales	Performance targets / outcomes	Risks and mitigations	Progress and/or further detail - Jul 21	OCTOBER 21 UPDATE	MARCH 2022 UPDATE	NOVEMBER 2022 UPDATE
highlighted. Work with Natural England to maintain the SSSI status of Thundersley Great Common.						removing trees from this site)	for several years to come.	



Appendix B – Climate Change in Context

1. Introduction & Context - Climate Change and Scientific Consensus and the United Nations Intergovernmental Panel on Climate Change

Introduction

There is clear evidence to show that climate change is happening. Measurements show that the average temperature at the Earth's surface has risen by about 1°C since the pre-industrial period. 17 of the 18 warmest years on record have occurred in the 21st century and each of the last 3 decades have been hotter than the previous one. This change in temperature hasn't been the same everywhere; the increase has been greater over land than over the oceans and has been particularly fast in the Arctic.

The UK is already affected by rising temperatures. The most recent decade (2008-2017) has been on average 0.8 °C warmer than the 1961-1990 average. All ten of the warmest years in the UK have occurred since 1990 with the nine warmest occurring since 2002.

Although it is clear that the climate is warming in the long-term, note that temperatures aren't expected to rise every single year. Natural fluctuations will still cause unusually cold years and seasons, but these events will become less likely.

Along with warming at the Earth's surface, many other changes in the climate are occurring:

- warming oceans
- melting polar ice and glaciers
- rising sea levels
- more extreme weather events

Causes of Climate Change

Rising levels of carbon dioxide and other greenhouse gases, such as methane, in the atmosphere create a 'greenhouse effect', trapping the Sun's energy and causing the Earth, and in particular the oceans, to warm. Heating of the ocean's accounts for over nine-tenths of the trapped energy. Scientists have known about this greenhouse effect since the 19th Century.

The higher the amounts of greenhouse gases in the atmosphere, the warmer the Earth becomes. Recent climate change is happening largely as a result of this

warming, with smaller contributions from natural influences like variations in the Sun's output.

Carbon dioxide levels have increased by about 45% since before the industrial revolution. Other greenhouse gases have increased by similarly large amounts. All the evidence shows that this increase in greenhouse gases is almost entirely due to human activity. The increase is mainly caused by:

- burning of fossil fuels for energy
- agriculture and deforestation
- the manufacture of cement, chemicals and metals

About 43% of the carbon dioxide produced goes into the atmosphere, and the rest is absorbed by plants and the oceans. Deforestation reduces the number of trees absorbing carbon dioxide and releases the carbon contained in those trees back into the atmosphere.

The effects of rising temperatures on the UK

Even if global temperature increases are limited to 2°C or less, there are projected to be impacts for the UK. Temperatures over land would be expected to increase by more than the 2°C global average. In a 2°C world in the UK there could be a 30% decrease in river flows during 'dry' periods, a 5-20% increase in river flows during 'wet' periods, and between 700 and 1,000 more heat-related deaths per year in South-East England compared to today.

In a 4°C world in the UK impacts become increasingly severe and may not be avoidable through adaptation. For example, damages caused by river, coastal and surface water flooding all increase markedly with 4°C of warming. Residual flood risks remain high under all adaptation scenarios considered, suggesting limits in the amount of risk that can be avoided through investment in flood defences and other responses. Potentially irreversible impacts to the natural environment are projected with 4°C of warming, including risks to species in protected areas and internationally important UK bird populations. Extreme weather events in the UK are also likely to increase with rising temperatures, causing:

- heavier rainfall events – with increased risk of flooding
- higher sea levels – with larger storm waves putting a strain on the UK's coastal defences. This is likely to have an impact on low lying coastal areas such as the East Coast of the UK and of Canvey Island in particular in the Castle Point Borough.
- more and longer-lasting heat waves

The effect of warming on rainfall patterns and water supplies

Changing rainfall patterns will affect water supplies. Too much rainfall in a short amount of time in some areas and not enough in other areas will contribute to both flood and drought conditions. We are already seeing increasing numbers of heavy

rainfall events, and expect this increase to continue, with greater risk of river and flash flooding.

Mountain glaciers are expected to continue melting which, along with reduced snow cover, will put stress on communities that rely on these as sources of water.

Changes in the oceans

Increasing temperatures and acidification of the oceans are threatening marine ecosystems around the world. Coral reefs will be at major risk if ocean temperatures keep increasing.

Sea levels will keep rising as the polar ice sheets and glaciers melt and the warming oceans expand. Even small increases of tens of centimetres could put thousands of lives and settlements at risk from coastal flooding during stormy weather.

Coastal cities with dense populations are particularly vulnerable, especially those that can't afford flood protection. Low lying areas of Castle Point such as Canvey Island are of particular risk.

The impact of warming on food production

Increased temperatures, changes to rainfall patterns, and an increased risk of extreme weather events will all negatively affect the production of major food crops such as wheat, rice and maize. In tropical and temperate regions, climate change without adaptation will have a negative impact on these crops for local temperature increases of 2°C or more, although some individual locations may benefit. Overall, we expect that warming will cause more negative effects than positive ones on crop production. At higher levels of warming this will cause a growing gap between food demand and supply.

Because trade networks are increasingly global, the effects of extreme weather events in one part of the world will affect food supply in another. For example, floods or droughts that damage crops in Eastern Europe or the US can directly affect the cost and availability of food in the UK.

The impact on ecosystems

Rapid, large changes in global temperatures (4°C or more above the pre-industrial temperature by the end of this century) and changes in rainfall patterns will increase the vulnerability of many species to climate change and may lead to the extinction of entire species. Even with smaller amounts of warming many species will be placed at greater risk. The animals and plants most at risk will be those that:

- have no new habitats to move to
- can't move quickly to new habitats
- are already under threat from other factors, such as overharvesting or habitat loss and degradation because of human activity

Extinctions and changes in the number of species in a population will have an enormous impact on food chains. Most ecosystems would struggle to function as they currently do under large changes in climate that happen rapidly within a century or so.

The impact on human health

Climate change is expected to make some existing health problems worse as temperatures increase. Malnutrition could become more widespread as crop yields are affected by increased drought conditions in some regions, leading to reduced food production. Warmer temperatures could increase the range over which disease-carrying insects are able to survive and thrive. Vulnerable people will be at risk of increased heat exposure and the number of deaths due to temperature extremes is expected to increase in the future, although in the long term there will likely be fewer health problems related to cold temperatures. The amount of people at significant risk from flooding is expected to increase in the future and some studies have shown that there is likely to be an increase in disease relating to worsening air pollution. The populations likely to be most affected by the health impacts of climate change are those that are already hardest hit by climate change, particularly in developing countries.

Poverty

People with low income in both developed and developing countries will be most vulnerable to the impacts of climate change. Decreasing food production, an increase in health issues associated with climate change, and more extreme weather will slow economic growth, making it increasingly difficult to reduce poverty.

The impact of extreme weather events globally

Growing populations and increasingly expensive infrastructure are making our societies more vulnerable to extreme weather events. Heat waves and droughts are expected to become more common and more intense over the coming century, and more frequent heavy rainfall events and rising sea levels will increase the risk of floods.

While not all extreme weather events can be directly linked to human influences, we are already seeing the huge impacts on society that extreme weather events can have. The World Meteorological Organization (WMO) reported that between 2001 and 2010 extreme weather events caused:

- more than 370,000 deaths worldwide (including a large increase in heatwave deaths from 6,000 to 136,000) – 20% higher than the previous decade
- an estimated £660 billion of economic damage – 54% higher than in the previous decade

Research has shown that the record global average temperature and the extreme heatwave in Asia during 2016 would not have happened without warming due to

human activity. Human-caused climate change also influenced other events in 2016, including extreme heat in the Arctic, the duration of coral bleaching in the Great Barrier Reef, the increased the risk of wildfires in the western US, extreme rainfall in China and drought conditions in South Africa that led to food shortages.

Possible abrupt changes in our climate

Most discussions of climate change look at what is most likely to happen, such as the likely temperature changes if we do, or don't, take action to reduce greenhouse gas emissions.

But scientists have identified the possibility that with sustained high temperatures major elements of the Earth's climate could be drastically altered. These 'tipping points' in our climate are less likely, but potentially much more dangerous.

While known impacts from small temperature rises could be managed (although this will become increasingly expensive as temperatures increase), passing a tipping point could cause large or abrupt changes, some of which may be effectively irreversible.

For example:

- Arctic permafrost could thaw rapidly, releasing greenhouse gases that are currently 'locked away' and causing further rapid warming
- the great sheet of ice covering Greenland, which contains enough ice to cause up to 7 metres of sea level rise, could melt almost entirely. While this would take a long time to happen, it is possible that the ice sheet would not be able to regrow after a certain amount of melting occurs.

While such events are considered unlikely, they can't be ruled out, even under relatively low temperature rises of less than 2 °C above the pre-industrial temperature. All indications are that, should we pass one of these tipping points, there would be a range of extremely severe and potentially irreversible impacts.

The UN Intergovernmental Body on Climate Change and agreement amongst experts

The Intergovernmental Body on Climate Change is an independent body composed of scientists from around the world. It has been tasked by the United Nations to assess and review the most recent scientific, technical, and socio-economic evidence related to climate change. The IPCC's Fifth Assessment science report concluded that the scientific evidence for a warming climate is indisputable and that 'human influence on the climate system is clear'.

The UK Government has always fully supported the work of the IPCC and regards its assessments as the most authoritative view on the science of climate change available.

In October 2018 the IPCC published a Special Report on Global Warming of 1.5 °C. The report showed that there is a range of pathways that could be followed to limit warming to 1.5°C above pre-industrial levels, but these all require a profound and unprecedented cross-sectoral transformation of our energy, land, urban and industrial systems globally. Under all plausible scenarios that limit warming to 1.5°C, carbon dioxide and other greenhouse gas emissions must peak imminently then decline rapidly (by about 45% from 2010 levels by 2030), with carbon dioxide emissions reaching net zero around 2050.

It is still possible to limit warming to 1.5°C; globally achieving this will require strong and rapid mitigation of greenhouse gases and the use of greenhouse gas removal (GGR) technologies, to directly remove carbon dioxide and other greenhouse gases from the atmosphere. Such methods could involve, for example, planting trees, biofuel crops coupled with capture and storage of released carbon, and machines to directly capture carbon from air. Pilot studies and further analysis are needed for these and other options, to explore if they are commercially and technically feasible on a global scale.

Tackling Climate Change

If action is taken now:

- we will avoid burdening future generations with greater impacts and costs of climate change
- economies will be able to cope better by mitigating environmental risks and improving energy efficiency
- there will be wider benefits to health, energy security and biodiversity
- We will contribute towards minimisation of potential adverse physical impacts on the Castle Point Borough, such as rising sea levels in a low-lying area.

2. Castle Point Approach

As part of our local contribution to this important area of work, a step-by-step approach has been taken, which was approved by CPBC Cabinet in September 2020:

- i) a permanent Climate Change officer group, with appropriate service representation be set up with a full terms of reference, to consider and enable carbon reduction action planning and monitoring, sharing of best practice, highlight and champion the work and progress of CPBC in this area to Councillors and other parties.
- ii) That the officer group undertakes an initial baseline assessment of the carbon emissions arising from the Councils activities (i.e. an organisational assessment) including energy use emissions from buildings, operations, and vehicles.

iii) That the officer compiles a fuller action plan to initially cover the Councils (internal) response to Climate Change and Carbon Reduction, within 1 year.

It was agreed that initial action plan incorporate and focus on the Councils own activities (for instance energy use, emissions from buildings, operations and vehicles) as this is the area which can be influenced most strongly by the relevant service areas.

In addition, consideration was also to be given to activities both under the Councils direct control and in our more general sphere of influence, such as the setting of policies, working with partners and other parties to produce a coordinated approach to carbon reduction. For instance, this may include working with partners on green infrastructure and environmental improvements and the improvement of home energy efficiency, via the promotion of government grants.

iv) At this point in time Cabinet has not deemed it desirable to declare a 'Climate Emergency' or to definitive date for overall corporate carbon neutrality. However, they did request that the group provides that the officer group provides periodic update reports to Councillors, to enable monitoring to take place at a political leadership level.

3. Action plan development

The action plan was developed via a Climate Change working group of operational managers, all of whom have a wide portfolio of operational responsibilities in addition to climate change.

The work of the core group is principally one of coordination, with the focus on reducing the carbon footprint of the Councils operations. However, the work of the group also includes consideration of initiatives within our more general sphere of influence, including setting policies and working with partners to provide a coordinated approach to carbon reduction across the Borough. to consider and enable carbon reduction action planning and monitoring, sharing of best practice, highlight and champion the work and progress of CPBC in this area to Councillors and other parties.

A monthly meeting was convened over several months where discussions were held relating to the action plan, potential carbon saving initiatives and to the more general sharing of ideas and information.

Core attendees were chosen because their roles are likely to include delivery of initiatives which are contribute towards carbon reduction. Membership is flexible to allow the right people to be brought in at the appropriate time.

Consultation with Council managers outside of the core group was also undertaken, to ensure that all areas of the council undertaking wider initiatives relating to climate change and energy conservation were included in the plan.

Plan development/progress and the work of the group, including Carbon Baseline calculations was regularly reported to the Castle Point Climate Change Forum, a group comprising of CPBC councillors (including the Cabinet Member for Environment,) Council Officers (including the Head of Environment,) and members of the Castle Point Climate Change Action Group.

4. Carbon Baseline

To allow for progress monitoring to take place, the group decided to use software developed by the Local Government Association in conjunction with Local Partnerships to enable a 'carbon baseline' to be calculated. The benefits of the 'Greenhouse Gas Reporting Tool:'

- Standardising how Local Government measure and report carbon emissions
- Knowing if our interventions have made a difference
- Enabling consistent sector wide benchmarking
- Providing a robust and reviewed tool to calculate and store baselines and the outputs

The tool calculates the council's direct CO₂e emissions (Scope 1 and 2) which are directly linked to the council's operations, plus some of the basic indirect CO₂e emissions (Scope 3). As such it will show the council the scale of the challenge of achieving net zero carbon targets. The scope sheet also enables the recording of the basis on which data has been collated the data to make consistency with future years easier.

The scope of the calculation includes emissions for which the Council is directly responsible:

- Emissions (Scope 1 and 2) from our estate and operations including gas heating, electricity fugitive emissions, electricity usage for Council owned buildings and emissions from our small fleet vehicles, such as vans of and of larger vehicles such as Refuse Collection Vehicles (RCV's).
- Emissions (Scope 3) staff business travel, water and transmission and distribution losses for electricity use.

A number of areas of indirect emissions are deemed by the calculator to be currently 'out of scope' and these have not been included Areas currently not included in the calculation, include areas where the Council does not have direct control for instance staff commuting and some contracted out services.

We have chosen the financial year April 2019-March 2020 as the baseline year for measuring future progress.

The main sources of emissions are our operational buildings (heating and electricity) which account for 70% of total emissions, and emissions from Council fleet vehicles at 23%. Transmission and distribution losses is the term used to describe the proportion of electricity purchased by the Council that is lost between the power station and the point of use and contributes 2% to the total.

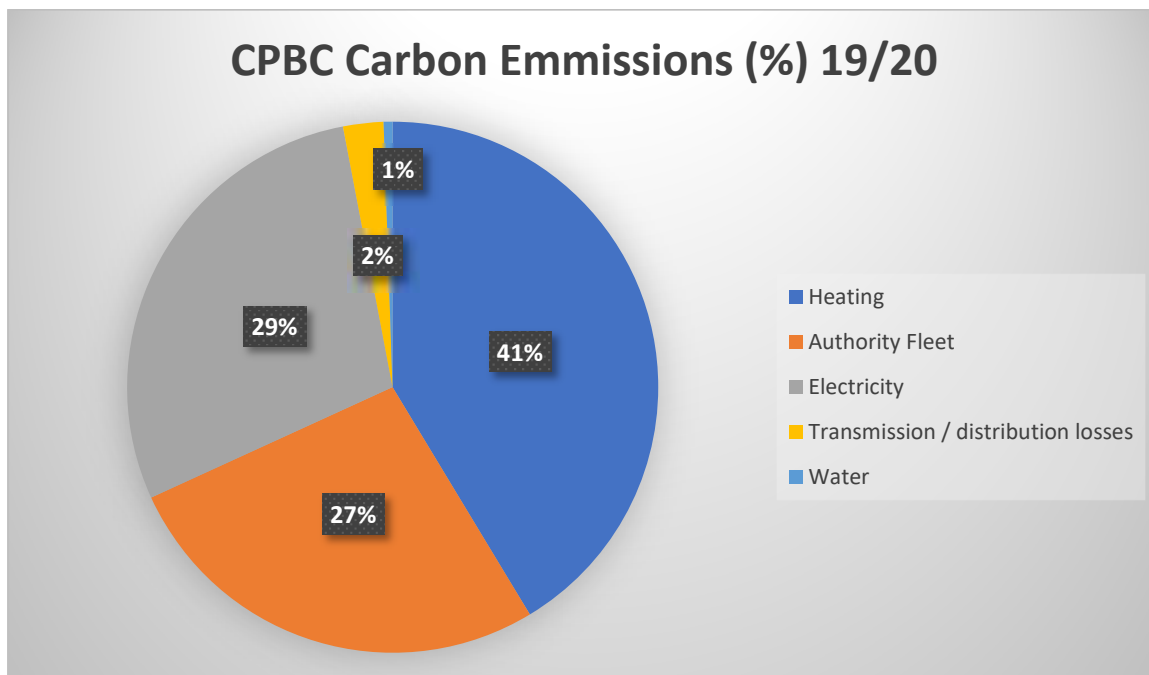
Direct Carbon Emissions are illustrated in the below charts:



CPBC Carbon Emissions (tCO₂e) 2019/20

Emissions Type	LGA Scope	Emissions (tCO ₂ e)	%
Heating	1	847.58	41
Authority fleet	1	549.77	27
Fugitive emissions	1	0	0
Electricity	2	591	29
Transmission / distribution losses	3	50.25	2
Water supply	3	11.06	<1
Staff travel*	3	N/A	N/A
TOTAL		2050.56	100

*Not currently available in an accessible format, but envisaged to be <2% of total.



Calculation based on use of 'Carbon Accounting Emissions Tool' courtesy of the Local Government Association. Scope includes direct carbon emissions within the Councils control in accordance with LGA guidance.

NOTE: Due to COVID restrictions adversely affecting data, calculations were not completed for 20/21 or 21/22. The next measurement will be taken for FY 22/23.

5. Monitoring

The work of the group has been split into 8 workstreams, each led by a coordinator. Each coordinator is responsible for development / delivery of the work within their workstream and to monitor/report progress back to the main climate change group, to allow for further reporting to managers, councillors, and other interested parties.

6. Resources

As a small local authority with limited resources, the actions that we are able to undertake must be balanced against the staff and financial resource available to the Council at any given time. There is no current dedicated resource available for this work, all staff undertaking related work also must maintain a wide variety of other important functions for the Council. Potential additional resource, in particular from government capital grants for initiatives, or any opportunity to provide dedicated staff to this area of work, will be regularly investigated.

7. Ongoing status of the action plan

The action plan can be seen as a continually evolving document. The contents of the initial plan will be subject to ongoing revision and update as new initiatives come on stream and new government and scientific advice is received.