

## **Appendix B**

### **Sustainability and Climate Change Research**

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# TRDC Climate Emergency Report

## Introduction

Tackling climate change will be a defining challenge for the next decade and beyond. It will take extensive planning and far reaching-change; but it also presents a new opportunity to create exactly the kind of future we want to see, as we transform our society to achieve the goal of net zero emissions by the middle of this century at the latest.

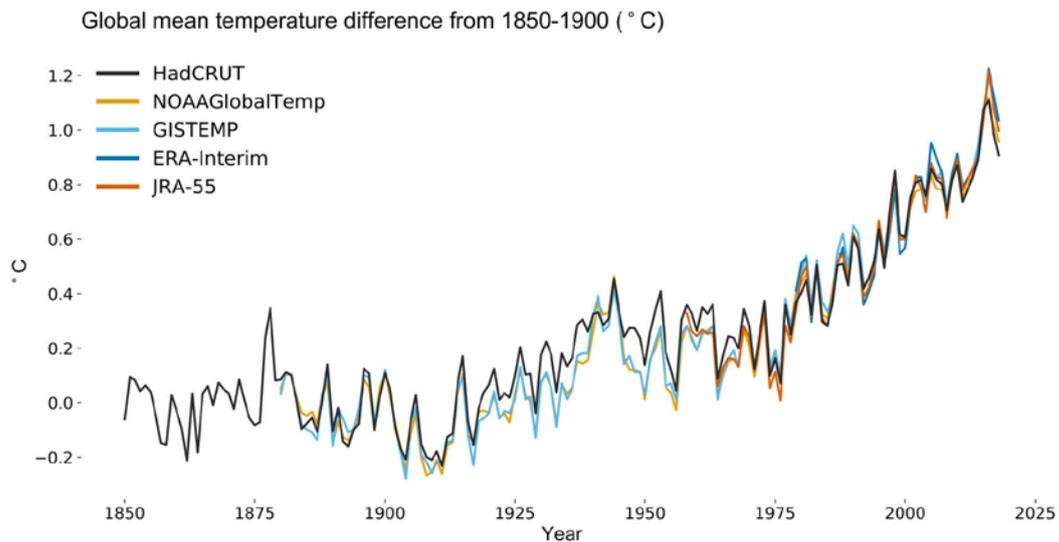
## How do we know climate change is happening?

Ref: Grantham Institute – Climate Change and the Environment

<https://www.imperial.ac.uk/grantham/publications/climate-change-faqs/>

Multiple independent data sets show that the Earth's average surface temperature has warmed by about 1.0°C since the start of the Industrial Revolution in 1850. This historic trend of global warming is a clear signal that human emissions of greenhouse gases are changing the planets. The historic trend of atmospheric warming observed for the last 150 years is remarkable and is substantially greater than can be explained by natural variation. These have risen from 280 parts per million in around 1850, to over 400 parts per million today. This is a clear indication that human emissions of greenhouse gases are responsible for the rise in global temperatures. Natural climate processes could not have caused such a rapid and continued increase in surface temperature. Measurements of the Earth's surface temperature, reveal that globally averaged temperatures have warmed by about 1.0°C since 1850.

 Met Office



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## Can Natural Factors explain the speed of Climate Change

The world's climate is affected by many different natural processes that have a variety of impacts throughout time. These often influence global surface temperatures for a short while and make some periods either warmer or colder. However, none of these natural factors can explain the long-term trend of global warming that we have observed since 1850 and are seeing today. These different natural factors play a role in cooling or heating the planet over relatively short periods of time, such as months and years. They cannot explain the warming trend of the past century.

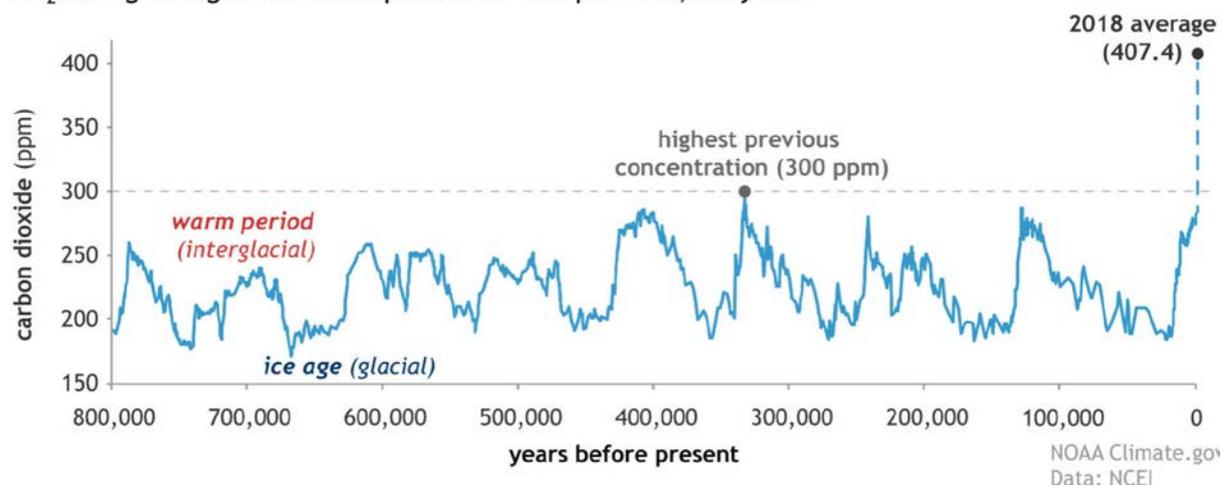
Climate sensitivity' is the way global temperatures respond to an increase in CO<sub>2</sub> in the atmosphere. Scientists currently estimate that the climate warms by about between 1.5°C and 4.5°C each time the concentration of CO<sub>2</sub> in the atmosphere doubles. Increased water vapour caused by a rise in atmosphere temperature, thin high ice clouds and the melting of the ice caps reduce the ability of the of the Earth to reflect the sun's rays and hence more sunlight is absorbed. All these natural processes amplify the human causes of global warming accelerating temperatures further.

## Is this warming just a natural cycle between Ice Ages?

The pace of today's rise of CO<sub>2</sub> levels in the atmosphere is much faster than for any glacial cycle. In the last 60 years alone, emissions from human activities using fossil fuels have caused CO<sub>2</sub> levels to increase by about 100 parts per million, taking us to 410 parts per million in total. It took 10,000 years for CO<sub>2</sub> levels to increase by 100 parts per million naturally, following the last Ice Age.

The amount of CO<sub>2</sub> in the atmosphere is also higher than at any other point in human history. The last time the world had a CO<sub>2</sub> concentration of 410 parts per million was between 5.0–3.5 million years ago, when the world was 3–4 degrees warmer than today. Greenland and West Antarctica were free of ice and sea levels were 15–20 metres higher than today.

CO<sub>2</sub> during ice ages and warm periods for the past 800,000 years



## How is this affecting us?

Many people have experienced emergencies such as fires, floods or cyclones. In these times, we move into emergency mode. In emergency mode we stop “business-as-usual” because nothing else matters as much as the crisis. We don’t rush thoughtlessly in, but focus on a plan of action, which we implement with thought, and all possible care and speed, to protect others and get to safety. Everyone chips in, with all hands on deck. Climate warming is now a planetary crisis or emergency, requiring courageous leadership and a coordinated society-wide response of a scale and speed never before seen in peacetime.

It is now too late for gradual, incremental steps to protect what we care about. The Titanic didn’t just need to slow its pace, but needed to turn at emergency speed. It’s the same for climate warming.

## The Response by Local Government

<https://www.climateemergency.uk>

### Impact

265 of the 408 (65%) District, County, Unitary & Metropolitan Councils have declared a Climate Emergency to date. A number have moved to the next stage to produce a Climate Action Plan.

Friends of the Earth worked with Ashden to produce a Climate Action Toolkit designed to help local authorities to radically cut carbon emissions. The purpose is to enable each Authority to develop their own Climate Change Action Plan. See Appendix 1.

## What is happening with our neighbours and HCC



9 of the councils in Hertfordshire, plus Hertfordshire County Council have declared a Climate emergency, with most giving a target date.

<https://www.climateemergency.uk>

<b><u>Council</u></b>	<b><u>Date climate emergency declared</u></b>	<b><u>Target date (if any)</u></b>	<b><u>Council</u></b>	<b><u>Date climate emergency declared</u></b>	<b><u>Target date (if any)</u></b>
<b>Hertsmere</b>	September 2019	2050	<b>Watford</b>	July 2019	2030
<b>Chiltern</b>	July 2019	2030	<b>Welwyn Hatfield</b>	June 2019	2030
<b>Dacorum</b>	July 2019	2030	<b>Stevenage</b>	June 2019	None
<b>East Herts</b>	N/A		<b>Three Rivers</b>	May 2019	2030
<b>North Herts</b>	May 2019	2030	<b>Herts County Council</b>	July 2019	None
<b>St Albans</b>	July 2019	2030	<b>South Bucks</b>	N/A	

Most of the councils have responded with statements about their initiatives. These include:

- Reducing carbon emissions, and becoming carbon neutral by a target year.
- Integrating climate change into planning policy with a focus on greener homes and buildings.
- Delivering against sustainable transport plans for example bike hire schemes, improving cycle ways.
- rewilding
- Improving social housing and flats to reduce energy wastage and take full advantage of government and energy provider funding to improve the energy efficiency of private homes.
- Maximising recycling
- Looking at ways the council buildings can be more efficient – e.g. solar panels, no single use plastics etc.
- Increase the number of electric charging points to encourage the greater use of electric rather than petrol cars.
- Engage with all sectors of residents, communities and businesses to publicise the climate emergency declaration and work together to reduce the possible impact.

The Hertfordshire Councils meet regularly at the Sustainability Forum to discuss and progress ideas.

### **Additional steps**

Some councils have made some extra steps which include:

- *Hertsmere* - set aside funding for the appointment of a Climate Emergency Officer for a 2 year contract, following the decision at the Executive meeting on 16th October 2019.
- *Dacorum* – Achieved the ISO 14001:2004 accreditation in October 2015. To meet the requirements of ISO 14001:2004 they have to manage their environmental compliance, legal obligations, as well as reducing electricity, gas and water usage by 10 per cent in 13 of their commercial buildings, cutting the volume of waste being sent to landfill, and increasing their recycling rate to 65 per cent
- *Chilterns*: Introduced electric pool cars to be used by council staff on external visits. Working to advise residents of grants that are available – low carbon workspace and installing EV charging points
- *St Albans* and *Letchworth* have obtained Surfers Against Sewage Accreditation for plastic.
- *East Herts*: focussed on sustainable travel to work and school.
- *Watford*: Are launching a bike share scheme in March 2020 – the scheme will comprise up to 200 pedal bikes and 100 e-bikes and 70 preferred parking locations across the borough. They are also launching an on-demand bus service in March 2020, with 7 small 15 seater accessible buses that will provide a flexible bus service that does not follow a fixed route but responds to demands from passengers and the routes they want to take. There are no bus stops – people are picked up and dropped off at ‘virtual bus stops’ at a point close to their home or destination. The scheme will operate via a free, easy to use smartphone app or telephone service e for those without a smartphone.



The Arriva Click 15 seater buses that Watford Borough Council will be launching in March 2020. Each bus will have comfortable seating, tables, free WiFi, USB

## Other Councils across the country

### Bristol

Bristol has developed a Once City Approach to the Climate Emergency with the Climate Action Plan working in conjunction with the City’s objectives for Connectivity, the Economy, Health and Wellbeing, Homes and Communities and Education.

It has created a sustainability board which includes members from partners and stakeholders across the city. They have commissioned a technical assessment to

understand how close their existing plans will take them to carbon neutrality for their own direct emissions. The second phase considers how they will close the gap to achieve carbon neutrality on direct emissions for which the target is 2020.

In order to achieve this the City will need a carbon budget so that all projects and policies are not only assessed against the financial budget but also the carbon one. In this way the Council will know the cumulative consequences.

One brave move they have taken is that all privately owned diesel vehicles will be barred from entering a clean air zone in the city centre every day between 7am and 3pm by March 2021.

### **Camden Council**

“Camden councillors of all parties pledged to go further and faster to reduce carbon emissions as they debated the climate crisis alongside school children, Extinction Rebellion, Citizens’ Assembly members and Climate Emergency Camden representatives tonight.”

Use Sustainable Choice for procurement: making informed decision based on quadruple Bottom line considerations – environmental, social, financial and cultural benefits

Sustainable events through using a sustainable events policy to provide guidelines advice and standards to consider venue selection, transport, equipment, energy supply, supplies promotion and publicity.

Encourage local primary schools to join EnviroMentors to provide sustainability workshops for schools <https://www.kabnsw.org.au/our-programs/enviromentors-program/>

The Assembly agreed 17 proposals include making all new buildings zero carbon, installing solar panels on as many homes as possible, designing a new public information campaign on the climate crisis, piloting community energy schemes and installing more ‘segregated’ cycle lanes. They are at different stages of development, but Camden Council has already translated some of these into action, including:

The first community led ‘car-free day’, held in Leighton Road in Kentish Town in September.

*“We now need to translate the proposals into community-led action and borough-wide policies to develop a new Climate Action Plan for Camden and make a radical difference.”*

### **Lancaster**

Refuse collection fleet has switched from diesel to electric saving 785t of CO<sub>2</sub>. Emissions from the fleet which had contributed to 23% of the total council’s emissions.

Plans are compiled for the Council to build a 25MW solar farm –£24.3M investment saving over 4000t of carbon. Net profit estimated at £48.5 over 25 years.

Have set up a Citizens Jury to seek recommendations from residents

Climate change manager being recruited.

Develop a virtual team of officers who are required to support the officer.

Plant 1,000,000 trees at an investment of £200,000

### **London Borough of Brent**

Employed specialist consultant to achieve net zero. Highlight was going all electric for transport and heating, insulation, high use of solar PV and zero carbon power grid. Carbon sequestration a combination of sycamore, ash and birch of up to 6 tonnes per hectare carbon absorption.

### **Stroud**

<https://www.climateemergency.uk/blog/stroud-implementation-of-climate-change-emergency-motion/>

Stroud, in December 2015 became the first Carbon Neutral local authority in Northern Europe. Their target is to become a carbon neutral district by 2030.

They have deduced there are very significant economic gains from moving to a low carbon economy. More than two thirds of the value of the District's current expenditure of over £0.16 billion a year on electricity, gas, oil, coal, petrol and diesel is exported from the county. Improving the energy performance of buildings and equipment in the county and shifting to EVs for transport could reduce the district's energy bill by £10 million (releasing the money for more locally beneficial expenditure) and create an energy productivity gain for its businesses of some 20%.

Highlights of their plan: major focus to increase the supply of renewable energy supply within district considering all technologies – wind, solar and hydro

Revising the existing Local Plan to set sufficiently high energy performance criteria in advance of the new plan which is due in 2021.

All council owned buildings, and building on their land to be built as carbon neutral.

Address carbon capture scheme through supporting central government plan through the planning process and in addition tree planting.

Allocated £200,000 with aim of raising it to £500,000 to support the scoping and delivery of the Stroud Carbon Neutral 2030 Commitment

### **Warrington**

Have developed a 3000 panel renewable energy scheme by renting the roof of a factory building. This will provide the equivalent fuel required by 200 households and an income scheme for the next 20 years.

## **Nottingham**

Work place parking levy introduced in 2012 has provided funds for sustainable transport – tram, bus and railway station improvements. Car use has fallen and increased take up of public transport.

## **Winchester**

Have issued an Action Plan with their mitigation strategy for carbon offsetting using their land and identifying partner landowners to plant trees.

## **Glasgow**

Target to go carbon neutral by 2030 was reported on BBC news 17/01/20

<https://www.bbc.co.uk/news/av/science-environment-51141619/climate-change-can-glasgow-go-carbon-neutral>

The challenge for Glasgow is that the whole city was built on heavy industry and fossil fuels. It has old poorly insulated social housing, a Victorian subway system and a cold climate meaning the heating is on a lot

Transport –introduce low emission zones, more electric vehicle charging points, make the city more accessible for cyclists and pedestrians

Heating – use River Clyde to heat homes? Wind farm being made bigger, using solar panels.

## **Hillingdon**

In recent years, the council has transformed itself, becoming greener and more efficient, while saving taxpayer's money, through a number of changes and initiatives, including:

- A 53 per cent reduction in carbon dioxide emissions over the past five years from non-domestic electricity and gas supplies
- A planned new contract from 2020 to provide electricity for council properties and schools from 100 per cent certified renewable sources
- A LED street lighting programme, replacing 23,700 sodium lights to be more energy efficient, resulting in a 74 per cent reduction in carbon emissions
- Active measures to improve local air quality and deter people from leaving their vehicle engine idling, particularly around schools
- More ways to reduce the amount of plastic waste that ends up in landfill or as litter, such as through new drinking fountains in the borough's parks
- Urban greening initiatives and the planting of new trees across the borough, including offering 5,000 free saplings for residents to grow on their premises.