Crawley Borough Council

Climate and Ecological Emergency Action Plan – September 2021

Core Principles for Action

Introduction -The Global Climate Change and Ecological Emergency

Human activity is disrupting our climate and people across the world are suffering the impacts of global heating now. We have all seen media reports this summer of the high temperatures and devastating fires in Greece, North America, Siberia and Australia, and on flooding in China, Germany and even in this country. While unprecedented droughts, fires and floods are leading to broken food supplies and migration of populations in the global south. Although these are reported less prominently they are becoming an increasingly worrying reality.

This is happening at a current 1.1 degree Celsius increase over pre-industrial temperatures. Current and planned activity so far will take the temperature to well over 3-4 degrees this century[1] and condemn most of the planet to become uninhabitable.

Following publication of the recent key 2021 IPCC[2] report on the science of climate change, the head of the UN has described the world as on 'Code Red for humanity'.

Ecological destruction is related to climate change, but in itself is likely to be just as damaging to humanity. The UK is one of the most ecologically depleted countries in the world[3] and its biodiversity is declining. As well as affecting our quality of life and health, nature supports food production, material sourcing and mitigation of extreme weather conditions. Nature also sequesters carbon in its trees and soils. These provide a store which, if destroyed, further releases carbon, adding to global heating.

We are in the decisive decade.

We are now beyond taking small measures while generally carrying on with 'business as usual'. Deep cuts in greenhouse gas emissions are needed quickly to stabilise rising temperatures alongside rethinking agriculture and land use to restore ecosystems. This will impact on all aspects of our lives.

Decisions we make now will determine whether or not we are subject to catastrophic climate and ecological impacts or can transition to a stable and sustainable world. These decisions must be taken at all levels of society, and as a local authority we have a critical lead role to play in driving down carbon emissions at the local level and encouraging others to follow suit.

[1] *United Nations Emissions Gap Report 2019*
[2] *UN Intergovernmental Panel on Climate Change is an international grouping of scientists whose final reports are required to be endorsed by governments across the world and are therefore regarded as relatively conservative*
[3] *The annual State of Nature2 report www.nbn.org.uk/stateofnature2019*

A. Purpose:

This paper outlines the core principles to underpin action on carbon reduction that will be adopted in developing the Climate Emergency Action Plan. They have been agreed by the Climate Emergency Advisory Group.

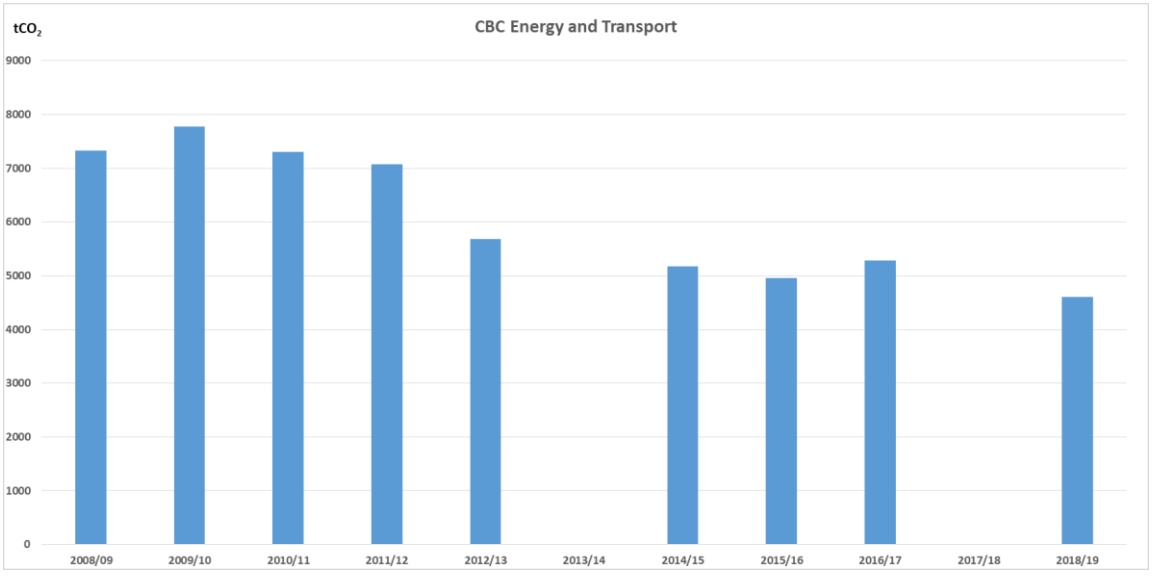
B. Our commitment:

Crawley Borough Council (CBC) declared a Climate Emergency in July 2019, and pledged to reduce carbon emissions from our workings and activities by at least 45% by 2030 and to zero before 2050.

C. Action on climate so far:

CBC has been working to reduce its carbon emissions since 2009, most recently through the Carbon and Waste Reduction Strategy 2012 – 2050.

CBC's Scope 1 (on-site direct) and Scope 2 (off-site indirect energy supply) carbon emissions from energy use in buildings and transport have been determined and reported annually since 2009 (apart from 2014 and 2018). The figure below shows the generally downward trend in emissions over the past 10 years.



These carbon reductions were achieved through, for example:

- Crawley Homes - energy efficiency *retrofit* programme (loft, cavity and solid wall insulation, and solar PV installation)
- Crawley Homes - energy efficient *new build* homes including Passiv Haus
- LED lighting upgrades in the Town Hall, Orchard Street Car Park, Community Centres, K2 and the Hawth
- Solar PV installations at K2, the Hawth and three Community Centres
- New Combined Heat and Power (CHP) at K2

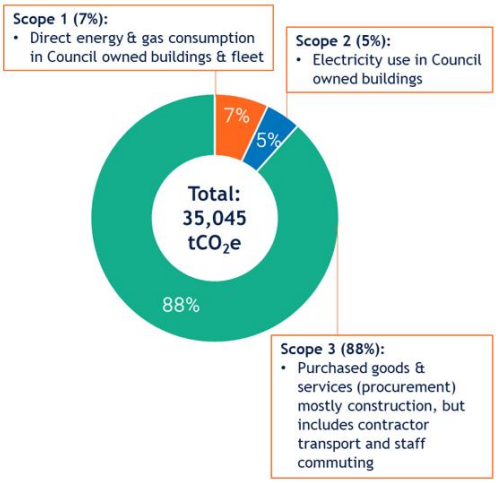
- The District Heat Network installation that will contribute 100 tCO_2 towards the borough's carbon reductions from 2022 onwards, with 30% of the reductions associated with the new Town Hall.

Additionally, behaviour change campaigns, particularly tackling transport and waste, have been run periodically, with harder-to-measure impacts.

The carbon emissions from CBC electricity use will additionally have reduced annually in line with the general decarbonisation of the electricity supply through the national grid.

D. New Baseline Audit:

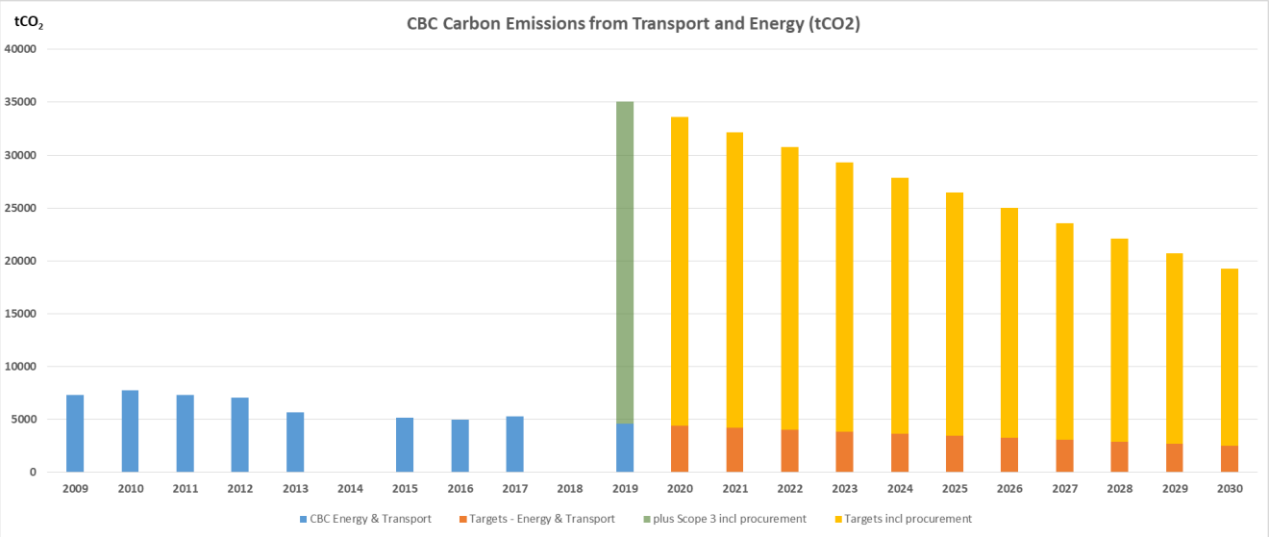
After the declaration of the Climate Emergency, a new baseline audit (Appendix A) was commissioned in early 2020. The declaration asked us to look at the Council's workings and activities, so the audit was extended to cover a wider scope than in previous years. It also included our Scope 3 (indirect, supply chain and transport) emissions to highlight CBC's wider impact through the consumption of goods and services.



In order to meet our carbon reduction targets of at least 45% reduction by 2030 (working from the new 2019 baseline), we need to reduce our emissions by

- 1434 tCO_2 total per annum
- of which 189 tCO_2 per annum is from buildings energy use and CBC business transport

This carbon reduction trajectory is illustrated in the figure below, showing the significance of Scope 3 emissions.



Crawley Borough Council commissioned consultancy Anthesis to help with the audit and produce a 'Climate Emergency Support' evidence base, which was presented to CMT. This sets out the scale of change needed to meet our own carbon reduction targets as a Council, and models possible carbon emission reduction pathways for the borough as a whole to help us plan our own Climate Emergency response.

Anthesis used the SCATTER tool[4] to test different packages of interventions. These illustrated the potential to decarbonise buildings, transport, waste and generate renewable energy across the borough and helped us develop the core principles to underpin action critical to delivering on our carbon reduction commitments.

Since the Borough's climate emergency declaration, emerging climate research means national and international reduction targets have been increased. This strengthens Crawley BC's explicit commitment to declaration targets being regarded as minima and for action to exceed these wherever possible.

[4] SCATTER - which stands for Setting City Area Targets and Trajectories for Emissions Reduction – is an interactive tool funded by BEIS that uses a wide range of national and local public data sets to help local authorities understand and report on area-wide greenhouse gas emissions.

E. Core Principles for Action:

Our carbon emissions can be grouped into six key areas for action within each of which there are a number of core principles that are critical to the successful delivery of our carbon reduction targets.

The key areas for action are:

1. Energy – demand reduction & low carbon heat and cooling
2. Renewable Energy & Storage
3. Low carbon transport – demand reduction & transition to low carbon modes
4. Waste & Water – reduction (linked to procurement), recognising the hierarchy of practice.
5. Procurement - supply chain tracing to minimise and reuse, develop 'closed loops' and sustainable sourcing for products and services
6. Green & Blue Infrastructure – natural systems for biodiversity and carbon stores.

The core principles for carbon reduction within each key area should be considered as underpinning development of the detailed actions in the Climate Emergency Action Plan, guiding the direction and timeframe for future work.

1. Energy - Demand Reduction & Low carbon heat and cooling

Core Principles:

1.1. Reduce energy demand

1.2. Transition to low carbon heat and cooling

1.3. Stop investing in technologies now that leave a carbon legacy

1.4. Promote & support innovation in delivery of low and zero carbon energy

1.1 **Reduce energy demand –** this should always *come first*, as measures that can be undertaken now, without the need for significant, unknown or unproven advances in technology. As an organization, this means we need to proactively manage our buildings to reduce energy demand through fabric improvements, including insulation, good operational practices and monitoring.

Economically, this usually makes sense, whether at an individual, organisation or borough level. Our energy demand and bills can be reduced and borough costs associated with installing new generation assets, new grid connections and grid reinforcement works can be minimised. Energy savings can also often be achieved more quickly by implementing demand side behaviour changes or 'quick win' efficiency measures.

1.2 **Transition to low carbon heat and cooling** - decarbonising heating will be one of the key challenges we have to overcome to meet our carbon targets. Conversion of the existing gas network to hydrogen, or 'green gas' is considered unlikely to occur by the 2030 timeframe, (although a wider UK Government

strategy for heat is expected this year). Reducing our gas demand and moving to low carbon heating and cooling technologies for our buildings will be key.

1.3 **Stop investing in technologies now that leave a carbon legacy** – We can only achieve the carbon reductions needed if we recognise and stop pursuing the path that has led us to the climate emergency. We also know that retrofitting to correct old systems will be far more costly in the long run than investing in low carbon technologies now. The legacy of carbon embodied in infrastructure also needs to be recognised which means that durability, selecting lower carbon materials and conserving structures will be important considerations. The sooner we adopt a low carbon culture, the greater will be the carbon savings.

1.4 **Promote & support innovation in delivery of low and zero carbon energy** – CBC should lead by example to exert wider influence to deliver carbon reductions across the borough. This means adopting low carbon systems in council operations, broadcasting these measures and supporting initiatives to enable transition for businesses and residents. Identifying new skills, training practices and product design through the planned Innovation Centre will support this and skilled jobs.

2. Renewable Energy & Storage

Core Principles:

2.1. Invest in renewables on CBC estate - support increased reliance on electricity and ambient energy for heating and transport, including thermal systems

2.2. Support renewables with battery and thermal storage

2.3. Investment in off-site renewables - consider contributing to national grid or community energy networks

2.1. **Invest in renewables on our own estate** - moving away from gas for our heating, and also a shift towards electric for our transport will mean an increase in our reliance on electricity. CBC will subscribe to a green, renewables grid tariff. However, although decarbonisation of the national electricity grid has increased rapidly in recent years, with 2019 being the first year that renewable energy sources provided more electricity to UK homes and businesses than fossil fuels, the renewable contribution varies and the electricity grid is not predicted to be 100% by 2030. Generating renewable energy on site will not only help us reach our target, but will also help us reduce our operating costs over the longer term. Thermal systems such as solar or heat pumps reduce electricity demand too.

2.2. **Support renewables with battery and thermal storage** - batteries can help us maximise the use of energy that we generate ourselves, and save money by reducing the amount of energy we have to buy from the grid. With the added option of selling excess energy back to the National Grid, combining solar panel installations with battery storage also has the potential to generate revenue. Thermal energy storage such as water tanks or building fabric mass reduces loss.

2.3. **Investment in off-site renewables** – As buildings and vehicles are switched to using electricity, it is important to make sure that that electricity comes from renewable sources. As well as investing in renewables on our own estate, CBC should consider contributing towards a greener national grid or community supply

networks by investing in off-site renewables, ideally within the local area to ensure local resilience and continuity of supply. This may be an investment opportunity.

3. Low Carbon Transport and Equipment

Core Principles:

3.1. Reduce total mileage travelled

3.2. Necessary travel/transport will be by low carbon modes, always prioritising active and shared travel

3.3. Rationalise and decarbonise tools and machinery

3.1. **Reduce total mileage travelled** – as with energy for buildings, we first need to reduce the amount of fossil fuels we use by reducing the need for travel and transportation. The aim will be to reduce the number of vehicles required – which represent significant embodied energy as well as cost.

3.2. **Necessary travel/transport will be by low carbon modes** prioritising walking, cycling, public transport and using low carbon vehicles only, where necessary. This provides a flexible transport mix that is fit for purpose and has added benefits for staff health and wellbeing and air quality. We will investigate the most appropriate technologies across our fleet. A particular challenge is specialist vehicles, like the waste fleet which contributes a significant proportion of transport emissions.

3.3. **Decarbonise tools and machinery** – in line with decarbonising vehicles, we will review options for decarbonising tools and machinery. This will involve seeking mechanical rather than power tool solutions and a review of processes using powered equipment.

4. Waste & Water

Core Principles:

4.1. Prioritise minimising resource use, reducing waste creation including reduction in water use

4.2. Apply the circular economy approach and follow the waste hierarchy of resource reduction and reuse before recycling, including use of waste water

4.1. **Prioritise minimising resource use, reducing waste creation including reduction in water use** – avoiding unnecessary products, especially disposables and packaging and consider durability, longevity and sharing economy. Ensure systems conserve water, noting that water supply and disposal demand significant energy.

4.2. **Adopt circular economy principles and follow the waste hierarchy** of resource Reduction and Reuse *before* Recycling, including use of waste water – despite some mainstream recognition of the three 'R's, the focus still tends to be on recycling and disposal. A circular economy is based on the principles of designing out waste and pollution, keeping products and materials in use, and

regenerating natural systems. We need to embed these principles into our everyday operation and decision making.

5. Procurement

Core Principles:

5.1. Minimise carbon emissions throughout the supply chain and support development of supplier and partner good practice, including financial services and investments

5.2. Ensure sustainable sourcing in the supply chain for biodiversity and ensure reliable monitoring

5.3. Avoid disposable products

5.1. **Minimise carbon emissions throughout the supply chain** – CBC can have strong influence over the carbon emissions from its own procurement spend through the guidelines and strategy for procuring goods and services. The council has an opportunity to work with existing and future suppliers to reduce their emissions to align with the council's own ambitions, and thereby supporting reductions in the council's consumption emissions. This will be most impactful in the construction sector.

5.2. **Ensure sustainable sourcing in the supply chain for biodiversity** – to minimise impacts on ecosystems and avoid scarce resources and products from extractive industries, seeking out recycled and reused products and those from reused and recycled materials. This will demand regular monitoring and guidance.

5.3. **Avoid disposable products** – in line with the principle of waste reduction and resource optimisation, the purchase and use of single use disposable items must be eliminated as far as possible.

6. Green & Blue Infrastructure

Core Principles:

6.1. Protect and enhance our natural land and water environment - maximise opportunities for biodiversity gain and carbon sequestration

6.2. Establish green/blue climate change mitigation and adaptation actions alone or alongside projects affecting the built or natural landscape

6.1. **Protect and enhance our natural land and water environment** (green and blue infrastructure) to maximise opportunities for biodiversity gain and carbon sequestration, seeking opportunities to develop local, connected wildlife habitat projects acknowledging wider social and environmental benefits. Key to success is recognition of complex needs and benefits of natural ecosystems.

6.2. **Establish green/blue climate change mitigation and adaptation actions** – for example through green space and wetland management, urban trees and other vegetation for shade, reducing urban heat island effects and flood management, SUDS across the estate and beyond.

Applying principles to develop the action plan:

Alongside these core principles are a number of overarching actions needed to develop and implement a robust Climate Emergency Action Plan and an ongoing responsibility of the council will be to hold government and other authorities to account in enabling everyone to play their part in meeting climate targets.

Overarching Enabling Actions		
Output	**Action**	**When?**
Climate Emergency Advisory Group	Identify key officers to champion the development of the action plan, programme and key projects	COMPLETED October 2020
Climate Emergency Action Plan	Apply core principles to develop, finalise & adopt plan Identify key officers from across the council to take ownership of key actions Establish mechanism for embedding carbon reduction in council-wide decision making processes (eg Climate Change Impact Assessment, assessment wheel,..)	24 Nov 2021 Cabinet Oct 2021 Through 2021/22
Climate Emergency Board	Establish board chaired by CEO to agree actions and ensure the plan's priority pathway through political processes and authority service delivery	December 2021
Monitoring Framework	Establish a means of monitoring and reporting progress in carbon reductions against the action plan. Embed in corporate decision making Update report on progress toward decarbonisation to be taken to OSC and Cabinet every six months.	December 2021
Funding Plan	Develop a viable funding route to deliver the climate emergency action plan, embedding delivery and costs within existing services, projects and budgets where possible, ensuring key services facing the most demand and which serve our residents are not adversely affected.	For 2023/24 budget and beyond to 2030
Staff Climate Literacy	Develop and implement staff engagement and training programme focussing on skills enabling staff to incorporate carbon reduction actions into their work and service delivery. Offer training to members.	Start roll-out for 2022/23 and ongoing
Communications & Influencing	Develop a Carbon Emergency communications and engagement plan to engage and influence internally with staff and members and externally with residents, businesses and other stakeholders.	November 2021

Overarching Enabling Actions		
Output	**Action**	**When?**
Climate Risk Assessment	Assess current and future risks to the organisation and across the borough from climate change	December 2021

F. Next Steps

The detailed Climate Emergency Action Plan will be developed using the outlined core principles. The Climate Emergency Advisory Group will need to draw on advice, expertise and commitment from other colleagues from across the council to develop and then implement the plan.

The practical implications for each service within the council will mean reviewing most aspects of service delivery, particularly procurement. Whilst there will be additional costs for some products, this should not be automatically assumed and minimising resource use should be recognised as a means to reducing carbon.

An evaluation tool is being developed to help guide all kinds of project development and embed carbon reduction in council-wide decision making processes. The Sustainability Team is also a key source of advice and guidance at any stage.

The Climate Emergency Action Plan is expected to be taken to Cabinet for approval on 24 November 2021.

Louise Skipton-Carter
Sustainability Manager

November 2021

Appendix 1: Carbon Audit – 2018/19

		FY1819			
Emission Source		Activity Data	Unit	tCO2e	% of total emissions
Scope 1					
Buildings & Other Assets: Council Operated	*Natural Gas*	3,030	*MWh*	557	1.59%
	Total			**557**	**1.59%**
Buildings & Other Assets: Contractor Operated (K2 & The Hawth)	*Natural Gas*	7,478	*MWh*	1,375	3.92%
	Total			**1,375**	**3.92%**
Vehicle Fleet	*HGV Rigid >3.5-7.5t*	1,000	*miles*	0.79	0.00%
	HGV Rigid >7.5-17t	9,834	*miles*	10	0.03%
	HGV Rigid >17t	99,549	*miles*	153	0.44%
	Pool Cars	5,008	*miles*	1.46	0.00%
	Fuels (Diesel)	337,148	*Litres*	337	0.96%
	Fuels (Unleaded)	13,682	*Litres*	32	0.09%
	Total			**534**	**1.52%**
Total Scope 1 Emissions				**2,466**	**7.04%**
Scope 2					
Buildings & Other Assets: Council Operated	*Purchased Electricity*	3,508	*MWh*	993	2.83%
	Total			**993**	**2.83%**
Buidlings & Other Assets: Contractor Operated (K2 & The Hawth)	*Purchased Electricity*	2,464	*MWh*	630	**1.80%**
	Total			**630**	**1.80%**
Total Scope 2 Emissions				**1,623**	**4.63%**
Scope 3					
Buildings & Other Assets: Council Operated	*Natural Gas - WTT*	3,030	*MWh*	77	0.22%
	UK Electricity - T&D	3,508	*MWh*	85	0.24%
	Water Supply	52,216	*m3*	18	0.05%
	Water Treatment	52,216	*m3*	37	0.11%
	Total			**217**	**0.62%**
Buildings & Other Assets: Contractor Operated (K2 & The Hawth)	*Natural Gas - WTT*	7,478	*MWh*	179	0.51%
	UK Electricity - T&D	2,464	*MWh*	53	0.15%
	Water Supply	49,264	*m3*	17	0.05%
	Water Treatment	49,264	*m3*	35	0.10%
	Total			**284**	**0.81%**
Contractor Vehicles	*Vans (Class II)*	52,577	*miles*	10	0.03%
	Vans (Class II)	23,199	*Litres*	62	0.18%
	Total			**73**	**0.21%**
Grey Fleet	*Average Car: Petrol*	59,867	*Miles*	27	0.08%
	Average Car: Diesel	89,801	*Miles*	17	0.05%
	Motorbikes	60	*Miles*	11	0.03%
	Total			**55**	**0.16%**
Employee Commute	*Walk / Bicycle*	980,169	*Miles*	-	0.00%
	Private On-Road Transport	3,690,966	*Miles*	1,063	3.03%
	Public On-Road Transport	357,957	*Miles*	64	0.18%
	Public Off-Road Transport	441,069	*Miles*	31	0.09%
	Total			**1,158**	**3.30%**
Procurement Spend	*Input/Output*	£64	*million GBP*	29,171	83.24%
	Total			**29,171**	**83.24%**
Total Scope 3 Emissions				**30,957**	**88.33%**
Total Emissions				**35,045**	