

2030 Carbon Neutral Programme



This Programme is Brighton & Hove City Council's response to the climate and biodiversity emergency. It sets the direction for action on climate change by the council, partners and residents across the city for the next decade, focussing on social justice and future generations alongside rapid decarbonisation. This Programme sets out clear actions and interventions required on the path to net zero emissions, starting immediately.

June 2021

Foreword

The creation of this carbon neutral programme is a monumental development, setting out the ways we will combat the climate crisis in our city.

This comes after we declared a climate and biodiversity emergency in 2018 and extensive consultation on how our city can adapt for the better, through the democratic debate at our Climate and Youth Assemblies.

Climate change is causing devastating damage across the globe, destroying habitats and driving many species to extinction.

The human population is suffering too, with more frequent extreme weather events and toxic air. We cannot sit back and let this happen.

So we're not. We are grasping the opportunity with both hands, taking ambitious action with residents and partners across the city, to reach the target of a carbon neutral city by 2030.

This journey will not be an easy one, but it is one the city needs to take to protect the environment now and for future generations.

It is clear already that many in our city are passionate about tackling climate change through the creation of innovative projects across many different fields.

We want to build on Brighton & Hove's achievements, like becoming the first city in the UK to win the Gold Sustainable Food City Award last year and set an example for the systematic change that needs to happen.

I believe that this programme of work is a very important step in this journey, and I'm excited to work with residents and organisations across the city on the projects outlined in our carbon neutral programme, for a sustainable future for Brighton & Hove.



Phélim Mac Cafferty

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Introduction

BHCC's commitment to climate action

Brighton & Hove City Council declared a Climate and Biodiversity Emergency in December 2018 alongside an ambition for the city to be carbon neutral by 2030. The council's corporate plan, "Our plan 2020 to 2023 – a fairer city, a sustainable future" sets out a series of priorities, including to take all action required to make our city carbon neutral by 2030.

A Programme produced in partnership with Brighton & Hove

Governance

In December 2019 Policy & Resources Committee approved the establishment of the cross-party 2030 Carbon Neutral Member Working Group to oversee the creation and delivery of a Carbon Neutral Programme to help the city to transition to carbon neutrality by 2030.

Fair and inclusive – participation in climate action

Brighton & Hove City Council believe that the city can only achieve its carbon neutral ambitions with all city organisations, businesses, communities, residents and visitors signed-up to our common agenda and working together to find solutions for the challenges we face. Taking a joined-up approach to delivering projects and initiatives that protect and promote our environment, facilitate behaviour change, support city resilience to the impacts of climate change, and nurture the skills and opportunities we need to help our economy grow and prosper, is central to the city's ambition. The council's response to the grave challenges of the Coronavirus pandemic highlights the need for a green recovery and demonstrates how we can work together across the city at all levels.

It is particularly important that climate action is fair and inclusive and ensures that all residents have an opportunity to participate. Climate change impacts upon different sections of society differently and the impacts of climate change could exacerbate existing inequalities within the city. The Coronavirus pandemic has highlighted inequalities, for example poor housing and overcrowded conditions making self-isolation impossible, and cold damp homes affecting people's underlying health and resilience. Factors such as age and health can affect sensitivity to climate impacts, and the availability of green space and good quality housing, can offset exposure to the impacts of climate change. Levels of inequality and income, and neighbourhood and community cohesion will affect the ability of individuals and communities to adapt.

The council is working hard to reduce its own corporate carbon emissions, but in total these contribute less than 2% of the city's emissions. The carbon neutral 2030 target is a city-wide one and as such needs participation from residents, schools, businesses and institutions across the city. The council is engaging with the city at many levels through the Climate Assembly, city-wide partnerships, behaviour change campaigns, formal consultations and support for community action.

Climate Assembly 2020

The Brighton & Hove Climate Assembly held between September and November 2020 explored how we combat climate change over the next decade. The key question was, "How can we step up actions to reduce transport-related carbon emissions in the city?"

A randomly selected, representative group of 50 residents from across the city were invited to take part. A range of selection criteria were applied: gender, age, ethnicity, long-term illness or disability, occupation, car ownership and area of the city. Invitations were sent to 10,000 local households, 700 residents applied for one of the 50 places; a very strong response compared to Citizens' Assemblies elsewhere. The Recommendations from the Climate Assembly have informed the development of BHCC's 2030 Carbon Neutral programme and are being used to help develop the fifth Local Transport Plan and the Local Cycling and Walking Infrastructure Plan. The assembly was designed and facilitated by independent [Ipsos MORI](#).

Youth assembly

The mobilisation and enthusiasm seen during the many climate youth strikes in Brighton & Hove have shown that young people are a great force in pushing for change and coming up with creative ideas to combat climate change and the loss of biodiversity.

Young people formed the UK's first youth citizen assembly to advise Brighton & Hove City Council on specific actions to take on important issues like transport. The youth climate assembly met online between September and December 2020. Twenty-four young people from schools, colleges and universities in Brighton & Hove, took part.

Climate conversations

In September 2020 the city council launched the on-line space 'Let's talk climate change': <https://climateconversationsbrighton.uk/engagementhq.com/>. This platform has links to all the Climate Assembly materials and involves the wider city in conversation, polls and submitting ideas about local action on climate change. To date, the focus has been on transport and travel, the Climate Assembly and engagement on the Downland Estate Plan. The on-line space will cover a range of other themes and initiatives such as environmental engagement and the circular economy over the coming months and seek residents' input to help the city to transition to carbon neutrality.

Formal consultations

Individual projects within the 2030 Carbon Neutral programme will undertake their own consultations and equalities impact assessments if relevant.

Working across our region

To be successful, this Programme will require participation and collaboration with many stakeholders and partnerships across the city, as well as engaging Brighton & Hove's residents. Action is required at all levels: international, national and locally.

As a leading city, Brighton & Hove City Council develops solutions and shares good practice with regional partners and other cities. For example, Brighton & Hove City Council is lead partner in The Living Coast UNESCO Biosphere, the UK's only urban biosphere reserve, contributing to innovative sustainable socio-economic development projects that also protect and conserve the natural environment. Shared learning locally, regionally, nationally and globally across the world network of biospheres is a key objective of this partnership.

Working with Greater Brighton, Coast to Capital Local Enterprise Partnership, Transport for the South East and the Greater South East Energy Hub is key to delivering programmes to decarbonise our infrastructure and economy at the rate and scale we need including where we need to secure support from Government.

We work with key partners including the local universities, electricity and gas companies, The Living Coast Biosphere, and the Sussex Local Nature Partnership to create projects that will accelerate progress on climate action and build green skills and jobs.

Measuring and reporting progress

We will report annually on the city's progress on climate action and carbon emissions, with quarterly updates on the delivery of the Programme provided to committees through the council's performance reporting framework.

A Key Performance Indicator on **Reduction in Greenhouse Gas Emissions** will be monitored annually from 2020-21 onwards, using data provided by ScatterCities. <https://scattercities.com/>

Not all the actions in this Programme will generate quantifiable carbon savings, but where data is available for the council's direct emissions it will be included. Where it's not possible to quantify carbon savings, we indicate if the impact is high, medium or low.

The council is working towards reporting progress to the Global Covenant of Mayors, through the Carbon Disclosure Project CDP-ICLEI Unified Reporting System. <https://www.cdp.net/en>

News stories on climate action are available at: <https://www.brighton-hove.gov.uk/climate-change>

Continuing development of this Programme

Action on climate change is fast-moving. Therefore this is a living Programme of high-level actions, which can be responsive to developments over its life. Likely developments include new scientific information on pathways to net zero; advances in Best Available Techniques (BAT) to give the best environmental or health outcomes; significant changes in local, national or international policy and funding on climate change and energy; and learning and best practice from other cities and partners. Responding to these challenges is complex and dependent on many factors.

The CN2030 Programme runs until 2030. Most actions in the current programme focus on the period to 2023, and there are some longer-term actions that are less detailed.

Key issues for future development are:

- Refining estimates of greenhouse gas emissions sources and sinks to help identify additional priority areas for action and track progress towards the carbon neutral target
- Further engagement with major local businesses and organisations to elevate ambition and align climate action across the city
- A carbon offsetting framework to enable more local carbon cutting projects
- Investigating alternative finance for climate action
- Developing the circular economy especially in the construction industry
- Solutions for scaling up energy efficiency retrofits for private housing
- Understanding the carbon footprint of consumables such as food and clothing.

This Programme will be reviewed in 2023 in line with the council's Corporate Plan for 2020 – 2023, which aims to deliver a fairer city with a sustainable future.

Further information and get involved

Brighton & Hove City Council's website has more information about the council's climate actions and about actions that individuals and communities can take to cut their own carbon footprint: www.brighton-hove.gov.uk/climate-change/what-you-can-do

Timeline of climate action in BHCC

1880-1947	Purchase of Downland Estate
2006	Adoption of Sustainable Community Strategy 'Creating the City of Opportunities'
2006-2007	Neighbourhood Action on Climate Change – community behaviour change project
2010	Climate Change Adaptation Scrutiny Panel
2009-2012	Climate Connections - global awareness and city behaviour change project
2011	Local Climate Impacts Profile for Brighton & Hove
2011	Brighton & Hove Climate Change Strategy – an early commitment to climate change action
2014	The Living Coast Biosphere formally designated by UNESCO
2015	Fourth Local Transport Plan includes a carbon reduction objective to reduce transport emissions
2016	City Plan adopted – includes policies on sustainability of new homes and non-residential buildings
2011-2017	BHCC adopts the One Planet Living Framework for overseeing actions to improve sustainability
Dec 2018	BHCC Members declare a climate and biodiversity emergency
Sept 2019	BHCC creates fund to encourage climate action within the council (SCRIF)
July 2020	Greater Brighton agrees Energy Plan and Water Plan
Sept-Nov 2020	BHCC hosts Climate Assembly on travel and transport
Oct 2020	Brighton & Hove Youth Climate Assembly
Oct 2020	Greater Brighton signs 10 pledges on climate action
Nov 2020	Brighton & Hove awarded Gold Food Sustainable City https://bhfood.org.uk/wp-content/uploads/2020/11/Gold-Food-Places-Bid-2020.pdf
Nov 2020	consultation starts on the Downland Estate Plan
Dec 2020	Council leader Cllr Phelim Mac Cafferty signs Glasgow Declaration https://www.glasgowdeclaration.org/
Dec 2020	BHCC Circular Economy Routemap and programme for the city receives committee approval
Jan 2021	Council agrees grants for community projects which tackle climate emergency and biodiversity
Feb 2021	Launch of Hydrogen Sussex
March 2021	Carbon Neutral 2030 Programme

Brighton & Hove’s carbon neutral target

The council has set an ambitious target for the whole city to be carbon neutral by 2030.

Brighton & Hove’s carbon emissions profile

The starting point is the city’s current emissions of greenhouse gases, which were 1,242 kilo-tonnes (KT CO₂e) in 2018 (the most recent year for which full data is available). This includes aviation and shipping. Data is provided by ScatterCities (<https://scattercities.com/>)

Total carbon emissions in the city have fallen by just over a third since 2005. The largest cut has come from electricity, as the National Grid gets more renewable electricity from wind farms and solar power.

Figure 1 - Brighton & Hove greenhouse gas emissions 2018 (kT CO₂e)

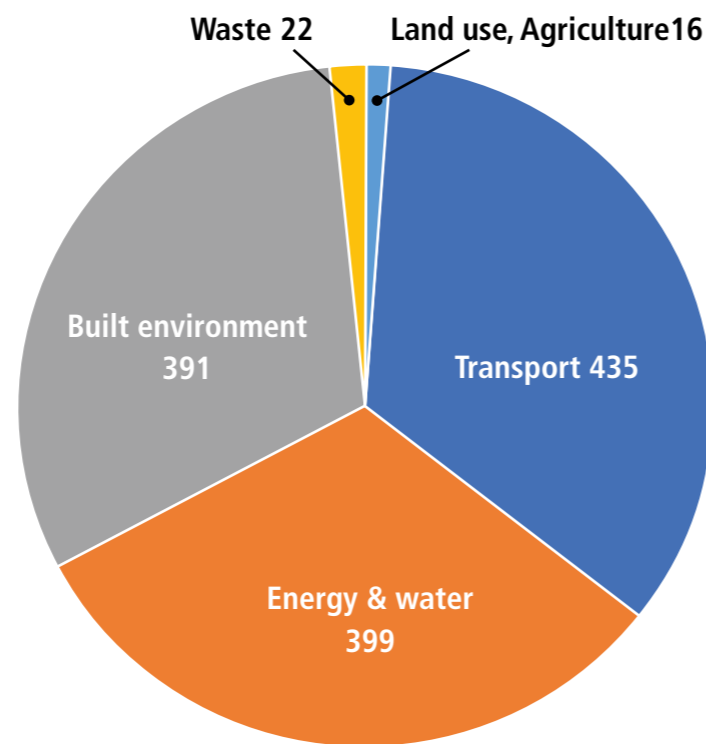
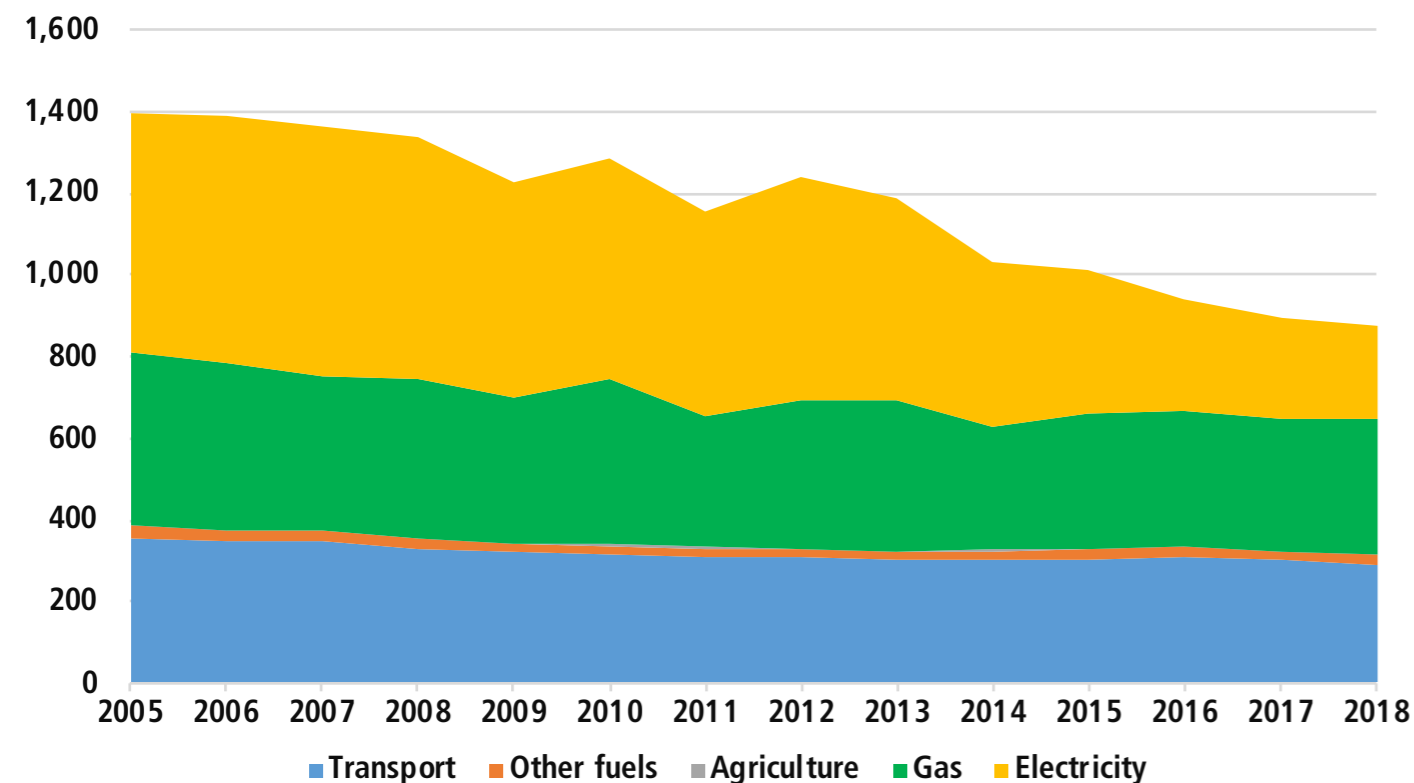


Figure 2 - Brighton & Hove carbon emissions 2005-2018 (kilo Tonnes CO₂)



Target 2030

BHCC’s carbon neutral target requires the city’s greenhouse gas emissions to fall by 12.7% annually from 2020 onwards. This is a science-based target, prepared by the Tyndall Centre for Climate Change, showing Brighton & Hove’s fair contribution to keeping climate change within limits. Carbon emissions accumulate and stay in the atmosphere for hundreds of years, so it is important to act as soon as possible.

Figure 3 shows the scale of the challenge, comparing the science-based target (blue line) with current trajectory outlined in this Programme (grey dotted line) and the ‘business as usual’ scenario (orange dotted line). This top-down analysis shows a gap between the estimated modelled BHCC pathway and the carbon neutral target – this is because modelling assumptions are based on present day evidence and actions. Work will continue towards the ambition to close that gap.

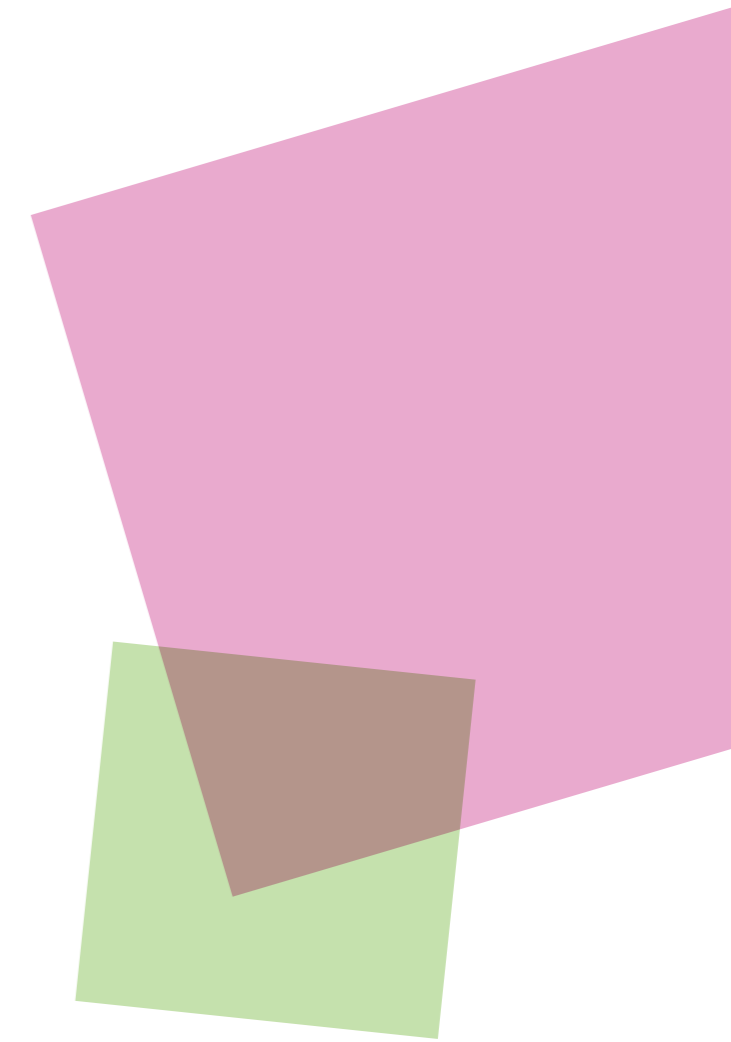


Figure 3 - B&H Greenhouse Gas reduction pathways

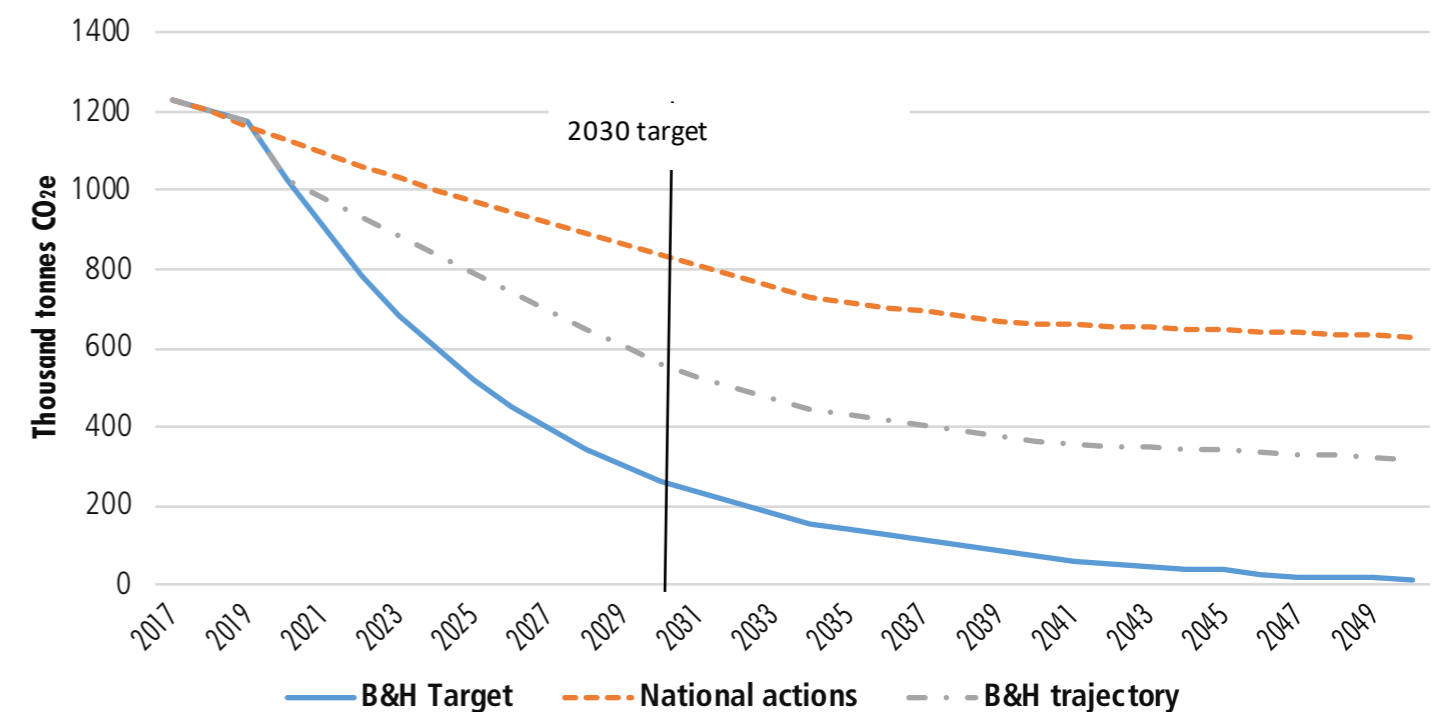
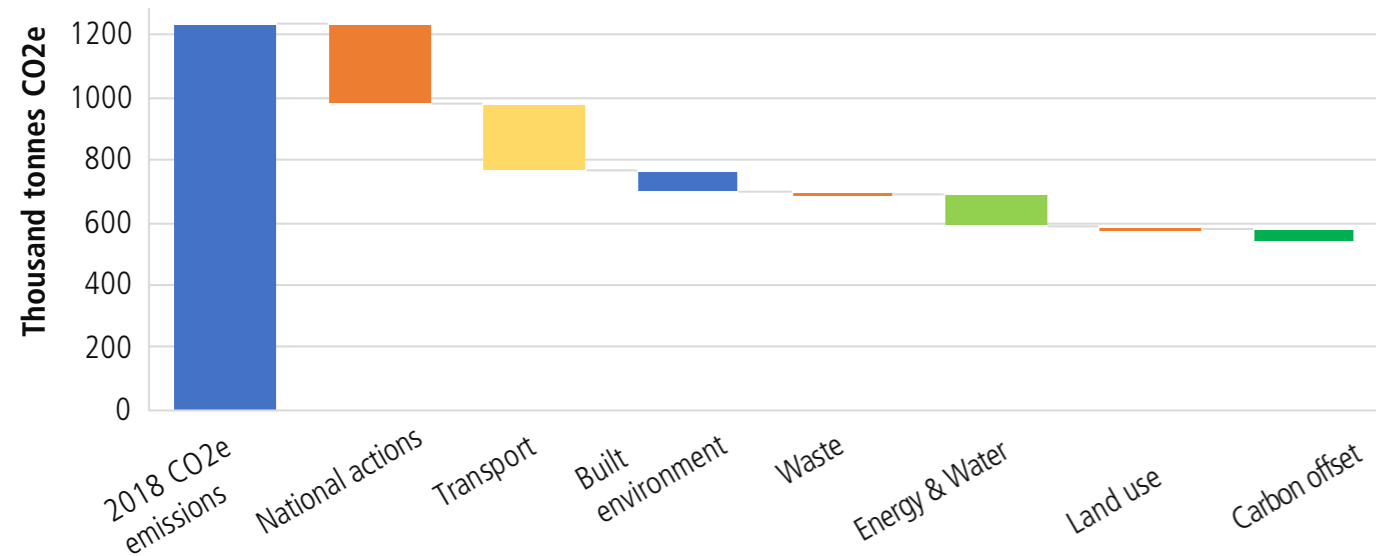


Figure 4 - Potential BHCC greenhouse gas reduction by sector by 2030



Pathway to carbon neutral

This Programme shows how a pathway to cutting carbon across Brighton & Hove could be secured, with the participation of residents, communities, businesses and organisations. Programme actions take into account the council’s spheres of influence and public expectations.

Early estimates are that the actions in the Programme could help cut nearly a third of the city’s carbon emissions by 2030. In addition, national actions (particularly decarbonisation of the electricity grid) could save another third. Figure 4 illustrates this and further work will refine these estimates.

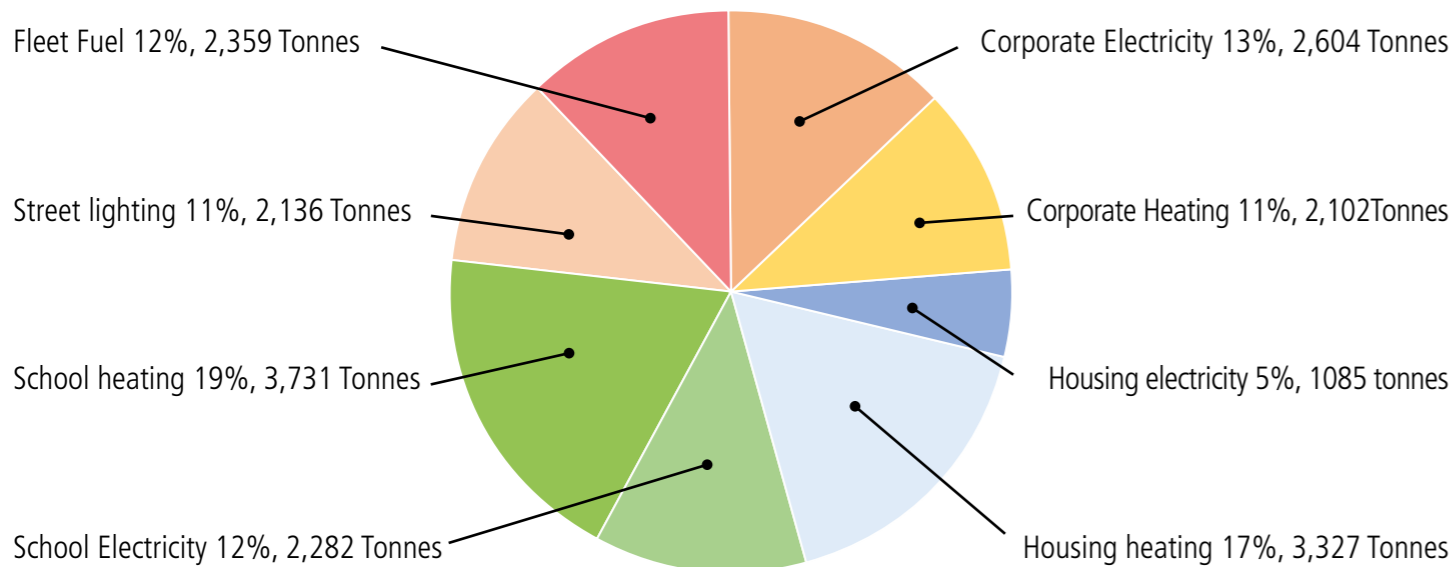
Brighton & Hove City Council’s corporate carbon footprint

The council’s greenhouse gas emissions were only a tiny fraction (1.7%) of the city’s emissions in 2018.

The Council has been working to reduce carbon emissions within its own operations and estate. The council’s GHG footprint in 2018/19 was 21,793 tonnes CO₂e, a reduction of 9.9% on the previous year.

The council’s carbon emissions have reduced by 47% over the 10 years to 2019, meeting BHCC’s existing targets. Action has included decommissioning oil boilers and installing solar panels on council buildings and modernisation of street lighting. With BHCC’s current capacity of installed Solar PV and planned investment, it is forecast that the proportion of the council’s electricity self-generated by Solar PV will increase from 1% in 2018/19 to 14% by 2023/24.

Figure 5 – Brighton & Hove City Council greenhouse gas emissions 2019-20



1

What does Carbon Neutral mean?

Carbon Neutral means that carbon emissions will be reduced as far as possible. Then any remaining carbon emissions are offset via carbon sinks or carbon reduction projects. Net Zero Carbon is another term that means the same thing.

2

BHCC’s Science-Based Target

The Tyndall Centre has calculated science-based carbon emissions targets for UK local councils, showing how each can make its fair contribution to the Paris Climate Change Agreement to stay well below 2C global warming. Brighton & Hove’s target is to emit no more than a maximum 5.9 million tonnes CO₂ between 2020 and 2100. This pathway requires an annual minimum reduction of 12.7% in CO₂ emissions, starting immediately.

3

Greenhouse gases and carbon emissions

‘Carbon emissions’ means carbon dioxide (CO₂) emitted when fossil fuels are burned in vehicles, buildings, industrial processes and so on. CO₂ is one of the Greenhouse Gases (GHGs) identified by the Kyoto Protocol, which warm the atmosphere. There are six greenhouse gases, including carbon dioxide, methane, nitrous oxide and fluorocarbons, often referred to together as ‘carbon dioxide equivalent’ (CO₂e). Nitrous oxide from diesel and petrol combustion is a potent greenhouse gas and also prejudicial to human health when inhaled. ‘Carbon emissions’ is often used as a catch-all term to include both carbon dioxide and other greenhouse gases.

This Carbon Neutral 2030 Programme target is for all greenhouse gases. Where data on greenhouse gases is not available, data on carbon dioxide is used instead.

Brighton & Hove City Council’s Carbon Neutral Programme

The Carbon Neutral Programme is a coordinated programme of projects that aims to continue and accelerate the city’s transition to carbon neutrality by 2030.

Timescale

As the bulk of action will need to take place in the short term, this Programme focuses on the period to 2023, with less detail on the remaining period to 2030. Some projects are indicated for further development over the next few years.

Project timeframes are

Short term 2021 – 2023

Medium term 2024 – 2026

Long term 2027 – 2030

The plan is structured over the following key priority areas, with several cross-cutting themes to demonstrate the broader impact of actions targeted in each theme.

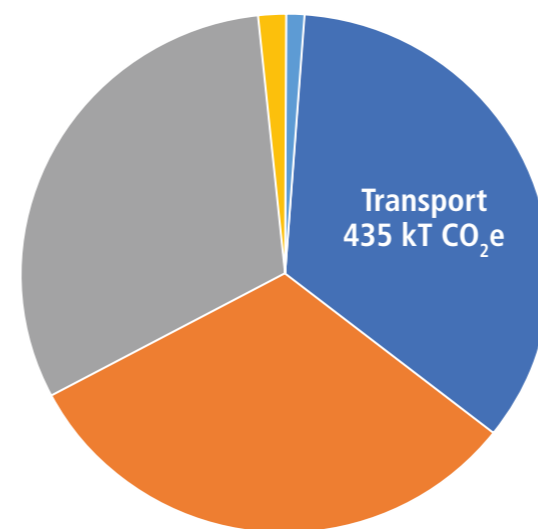
Key priority topics

- Travel and Transport
- Energy and Water
- Waste
- Built Environment
- Nature and Environment (Food, land use and agriculture)

Cross-cutting themes

- Community engagement
- Jobs, education and skills
- Circular economy
- Adaptation
- Carbon offsetting
- Procurement

Travel and Transport



Over a third of Brighton & Hove’s carbon emissions come from transport, which includes estimates for shipping and plane flights by Brighton & Hove residents. A shift to public transport and active forms of travel is needed to bring down carbon and nitrous oxide emissions, affecting everyone in the city. Switching from petrol and diesel vehicles to electric and hydrogen vehicles will save carbon emissions and improve air quality, as will a reduction in the length and number of vehicle trips.

BHCC held a climate assembly in Sept – Nov 2020, on the topic of travel and transport. The key question was, “How can we step up actions to reduce transport-related carbon emissions in the city?” The climate assembly asked for:

- Individuals to be given every opportunity to change the way they travel to reduce emissions, improve air quality and create a safer, accessible and more pleasant environment.
- Transport providers to make low emissions transport affordable and easy to use

They made 10 recommendations, which will be considered by the Council in developing its fifth Local Transport Plan and the Local Cycling and Walking Infrastructure Plan:

- 1 A car-free city centre – being taken forward as a ‘liveable city centre’
- 2 The public transport system should be affordable/accessible
- 3 Creation of healthier low traffic/pedestrianised communities
- 4 The council should actively consult and engage with the community
- 5 Introduce mobility hubs (i.e. a recognisable place which provides and connects up different types of travel – for example cycle hire, bus, rail, car club, parking and transport information)
- 6 Cyclists should be prioritised over cars through well-designed dedicated cycling networks that are safe and practical for day-to-day use as well as leisure
- 7 Introduce a Park & Ride to minimise car use in the city
- 8 Make public transport a more convenient alternative to driving a car
- 9 Messaging should focus on what people gain rather than lose and educate/expand citizens knowledge
- 10 There should be a focus on incentives rather than sanctions as interventions



Travel & Transport

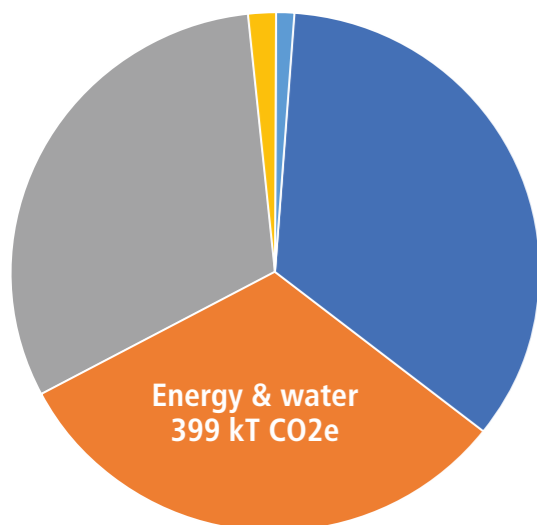
Key Actions	Deliverable	Impact on CO2 emissions	Timeframe	Key Partners
Local Transport Plan 5	Strategy setting out the priorities for transport and travel in the city to 2030, to support a more inclusive and accessible city, reduced carbon emissions, improved air quality and public health, safer streets, and a stronger more sustainable local economy. Focus on reducing the need to travel, managing demand and promoting and providing safe, inclusive, sustainable and healthy alternative travel options	High	Short, medium & long term	Transport operators, businesses, educational establishments
Create an inclusive and integrated transport system	Improve access to all parts of our city and our services for people with physical, sensory and learning disabilities Expansion of Bike Share scheme to deliver a citywide scheme with 50% electric bikes Support an Assisted Cycle Hub on Brighton seafront	Low	Ongoing	
Develop a public realm which enables active travel	Develop an active and sustainable travel network Delivery of School Streets programme to improve road safety and air quality outside schools Invest in the maintenance of the city's road and pavement network Promoting physical activity and reducing social isolation	High	Ongoing	
Increase use of public transport	Encourage mixed forms of travel with good transport interchanges and better integration of travel information and ticket purchasing Work with public transport operators to improve infrastructure - bus stops, bus shelters, Real Time Information, Station improvement Continue to support bus services, especially in outlying areas that are not commercially viable Support and encourage the use of sustainable transport in the local visitor economy through the BioCultural Heritage Tourism project, and development of The Living Coast by Bike portal	High	Ongoing	Transport operators,, The Living Coast,

Key Actions	Deliverable	Impact on CO2 emissions	Timeframe	Key Partners
Local Cycling and Walking Infrastructure Plan	Prioritised programme of improvements focusing on principal walking and cycling routes, including in town and local centres. Aim to make walking and cycling the first choice for local journeys 10-year programme of investment including delivery of secure on-street cycle storage	High	Short term	
Promote and use technology to reduce and manage travel	Work with partners to attract investment in ultrafast broadband infrastructure across the city and enable home working Smart traffic signals	Medium	Short and medium term	Technology companies
Promote and facilitate the use of zero emission and electric vehicles	Install hundreds of on street electric charging points and rapid charging hubs for taxis	High	Short and medium term	Transport operators, council contractors
Improve air quality	Improve air quality through clean buses, taxis and delivery vehicles and seek further investment in zero emission buses. Continue to implement Ultra Low Emissions Zone in city centre and consider expansion of zone Reduce carbon emissions from council-owned vehicles	Low	Ongoing	Bus, taxi and delivery companies

Related plans and policies

- Local Transport Plan
- Local Cycling and Walking Infrastructure Plan (in development)
- Brighton & Hove 2020 Annual Air Quality Status Report
- Brighton and Hove Air Quality Action Plan 2015

Energy and Water



Energy is essential for our city. It provides heat for homes, powers our transport and keeps our healthcare system running. Establishing an affordable, locally generated green energy supply will maintain our quality of life and improve energy security and resilience. Rising energy prices, energy inefficient housing and low incomes have resulted in high levels of fuel poverty. The health effects of living in a cold, poorly ventilated home are well established, ranging from cardiovascular and respiratory problems to depression.

This section tackles reducing energy consumption, providing greater access to renewable energy, and making sure existing homes are affordable and healthy to live in. This means new renewable energy generation technologies, an engaged community who want to make change, and a focus on innovative business models that can transform our local energy systems. Energy-efficient homes reduce waste energy and the demand for non-renewable energy, and may also be cheaper and healthier to live in.

The transition to Carbon Neutral by 2030 can only be delivered if we are able to secure the decarbonisation of our energy and water infrastructure at scale, therefore working at a city region and wider south east region scale will be critical to success. The council will work closely with partners of the Greater Brighton Economic Board and Greater Brighton Infrastructure Panel to deliver ambition solutions for low carbon infrastructure across the city region.

Greater Brighton Energy and Water Plans - These Plans, agreed in 2020, brought together public sector, business and academic stakeholders across the city region. They identified opportunities for energy and water infrastructure that will support objectives for decarbonisation and economic growth, in renewable energy, power, heat and transport. Learning and dissemination between local councils was key in this rapidly evolving technical, financial and regulatory environment. Recently there is an increased focus on the potential to build a hydrogen economy in the city region, particularly for heavy vehicles.

The Water Plan identified challenges in cutting consumption of clean drinking water to reduce the impacts of the predicted water shortages to the region within the next decade. Water and wastewater treatment use energy so cutting consumption will also reduce carbon emissions.



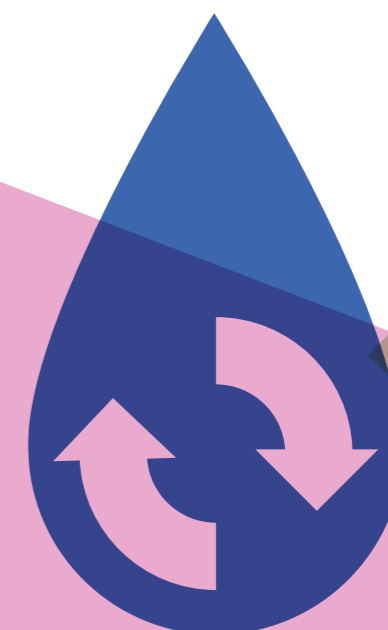
Existing homes - Energy efficiency in housing and buildings is key to reducing carbon emissions, and the council has a role to play in energy upgrades and retrofitting, through facilitating and coordination, being a trusted partner, and supporting the growth of local skills and supply chain. The council is developing an extensive plan for solar PV, replacement of heating and hot water and energy efficiency in council housing, as well as working with residents to adapt behaviour where required and ensure they get maximum benefit from the retrofit programme.

There is significantly more private housing than council housing, so this is where greater carbon savings can be made, although this is more reliant on government action and funding. The council is working with partners including Solar Together Sussex, Warmer Sussex and the Local Energy Advice Partnership to promote retrofit of private homes.

Council property - The council has been improving its own property portfolio by identifying inefficiencies in energy use and working with site managers to save energy and water and create efficiencies in gas, electricity and oil use. In the next period there is a focus on low carbon heat technology and surveys will be carried out in schools and housing centres that may be suitable, as well as the improvement of control and monitoring systems. In 2021-22 a programme to install 500 kW of Solar PV in corporate, housing and leisure sites will save 150 tonnes CO2 p.a. The council will transfer its energy supply to renewable sources as contracts become due for renewal.

Key challenges

- 38% of city's carbon emissions are from gas, 26% from electricity
- Scaling up energy efficiency retrofit of private homes (rented & owner-occupied) presents long-term, logistical and engagement issues
- Heating is difficult to decarbonise, requiring a mix of solutions, heat networks, and long-term programmes to replace gas boilers.
- Local supply chain for new energy technologies needs to be developed further
- Smart energy systems are vital but require complex multi-party integration and smart interfaces



Energy & Water

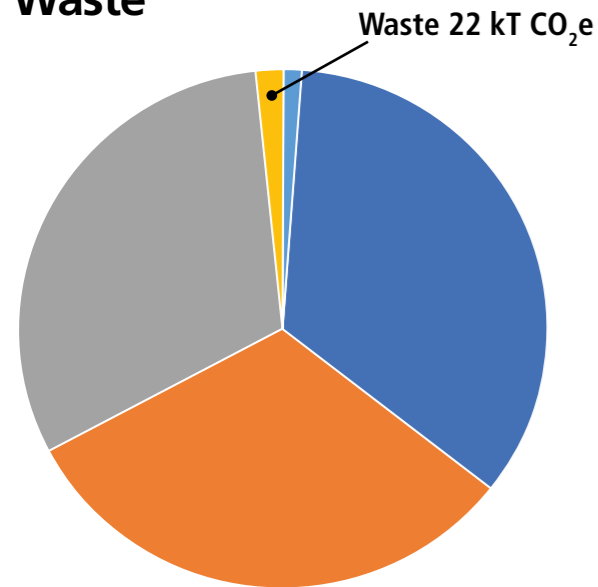
Key Actions	Deliverable	Impact on CO ₂ emissions	Timeframe	Key Partners
Reduce CO₂ emissions from council owned properties	Develop an investment plan for transitioning council buildings to carbon neutral. Building audits will quantify opportunities, identify and prioritise pipeline of self-financing energy saving projects on council assets. Energy efficiency and renewable energy projects completed with savings reinvested. Work towards fully renewable electricity supply in council property.	High	Short, medium and long term.	
	Deliver major programme of renewable energy, solar PV and energy efficiency retrofitting on council housing	1,291 tonnes p/a	Medium term	
Reduce carbon emissions from council-owned vehicles	Council fleet to become carbon neutral; reduce diesel vehicles and plant through delivery of the Fleet Strategy	High	Medium and long-term	
Street Lighting modernisation	Replace street lighting with LEDs through the continuation of the street lighting modernisation programme	2,360 tonnes in 2021	Short-term	
Improve standards in private housing	Continue to explore partnerships and lobby for investment and solutions for scaling up retrofit of private housing to improve energy efficiency	Medium	Long-term	
	Increase capacity for hazard inspection and Energy Performance Certificate non-compliance. Consider creation of a private rented sector team to enforce housing and energy efficiency standards. Support expansion of good landlord schemes	Medium	Short term	
	Address fuel poverty through programme of energy efficiency in council-owned housing	Low	Short and medium term	

Key Actions	Deliverable	Impact on CO ₂ emissions	Timeframe	Key Partners
Support a resilient, zero carbon and smart energy system through delivery of the Greater Brighton Energy Plan.	Deliver pipeline of projects. Work in partnership with Greater Brighton Economic Board and Coast to Capital Local Enterprise Partnership to secure investment in the city's infrastructure.	High	Short, medium & long-term	Greater Brighton
	Establish the Greater Brighton Hydrogen Group to support the transition to hydrogen across the city region	High	Medium and long-term	Greater Brighton
	Deliver feasibility study on hydrogen	Low	Short term	
	Develop business case and seek approvals for development of a solar farm	High	Medium	
	Promote heat networks through Planning system. Develop district heat network study at Conway Street	Medium	Short, medium & long-term	
	Explore potential for a Heat Decarbonisation plan, including options for replacement of gas boilers	Medium	Medium term	
	Continued cyclical investment and trials of renewable technologies that save carbon	Medium	Short, medium & long term	
Facilitate a resilient, integrated water environment through Greater Brighton Water Plan	Continue participation and delivery of The Aquifer Project (TAP) to protect and improve the quality of groundwater in the Brighton chalk aquifer as a sustainable resource for public water supply	low	Short and medium term	

Related plans and policies

- Greater Brighton Energy Plan
- Greater Brighton Water Plan
- BHCC Housing Committee 20 Jan 2021 report "Housing action towards Carbon Neutral 2030" with draft Housing Revenue Account Carbon Neutral Strategic Action Plan 2021-2025

Waste



Managing waste efficiently involves increasing the awareness of residents and businesses around how waste is produced and how we manage and reuse our waste. The benefits of achieving this are more than reducing landfill or plastic in the oceans. By thinking differently about how we use materials and what we throw away, we can generate benefits to the city, such as reducing the number of heavy vehicles on the roads, alleviating congestion and improving air quality, and creating partnerships between organisations to use waste material from one as resources for another.

Brighton & Hove already has one of the lowest rates of waste sent to landfill, at 2.7% in 2019-20 and falling. The city's residual waste is sent to the energy recovery facility at Newhaven and generates electricity for 25,000 homes.

Recent work in Brighton & Hove includes:

Tech Take Back: Cityclean has partnered with Tech-Takeback to create an "on demand, small electrical end of life collection service" to improve the offering to residents. Between 12 Nov 2020 and 28 Jan 2021:

- There were 591 household collections
- 6474 items were collected
- Weighing a total of 10.9 tonnes
- 616 tonnes of CO₂ emissions were saved through reuse of these items

Waste, Resources and Street Cleansing Strategy

- Developing a Strategy which will consider the achievements of the Modernisation Programme and identify how the service can continue to deliver and embed these improvements, as well as set out further opportunities for modernisation for the service over the next five years. One of the suggested ambitions is to increase levels of reduce, reuse and recycling

Recycling leaflet -

Redesigned the recycling leaflet to be sent to all households with council tax bills



Food waste collection options appraisal

- Partnered with the Waste and Resources Action Programme (WRAP) on an options appraisal for the introduction of a food waste collection service. This includes how the service can best operate in Brighton & Hove in terms of frequency of collections, vehicles, the receptacles to be used both kerbside and communal, the materials to be collected at the same time and the volume of food waste collected.

Garden Waste - introduced a third garden waste round

Current Projects in development

- 1 Communal bin system: Reviewing the existing communal bin system and identifying areas for improvement with the current distribution of bins, capacity offered for different waste streams, improvements to glass recycling (bins, contamination of, and noise), bin bays, signage, type of bins, expansion of waste streams, and application of colour coding for the different waste streams
- 2 IT systems: Modernising the service and supporting the wider programme of change through technology, including improved flow of real-time information
- 3 Managing waste responsibly: Delivering an informative and educational campaign to assist residents, visitors, businesses and crews to dispose of waste responsibly.
- 4 Wheelie bin audit and rollout: Implementing a wheelie bin recycling service to all the streets identified as suitable for this service from the city-wide wheelie bin audit.
- 5 Schools Food Waste collection

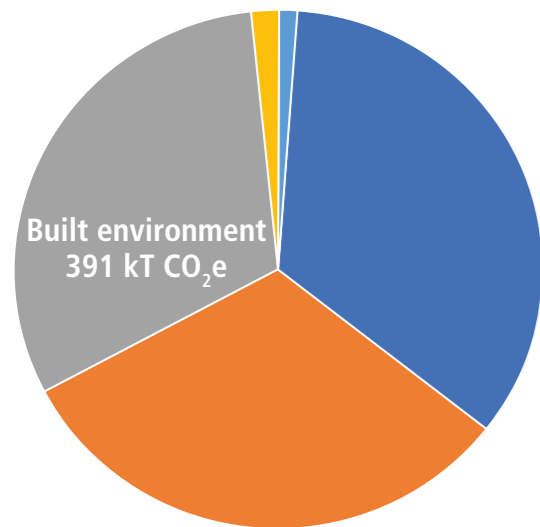
Related plans and policies

- Environmental Enforcement Framework
- Binrastructure and Litter Reduction Strategy (in development)
- Waste, Resources and Street Cleansing Strategy (in development)

Waste

Key Actions	Deliverable	Impact on CO ₂ emissions	Timeframe	Key Partners
Increase Reduce / Reuse	Take a preventative approach to avoid food being wasted, in line with principles of the food waste hierarchy	Low	Short-term	
	Community Composting,	Low	Medium term	BHFP
	Install TLC-branded drinking water fountains	Low	Short-term	The Living Coast Biosphere
	Extend Revalu electrics (Tech Take back) to recycle phones, laptops etc	Low	Short Term	TTT
	Work towards development of a Reuse Centre	Low	Medium	Planet Brighton Veolia
	Build Furniture Reuse into the Bulky Waste Collection Service	Low	medium	
	Develop and deliver accreditation scheme to encourage businesses to end the use of single use plastics	Low	Short term	SAS Traders
	Develop communications campaign to encourage reduce and reuse before recycling	Low	medium	
	Continue to minimise waste sent to landfill	Low	ongoing	Veolia
	Subject to consultation end the use of single use BBQs on the beach and in parks and open spaces	Low	Short	
Increase Recycling	Introduce additional Garden Waste Rounds to different property types	Low	Short term	Veolia
	Extend range of plastic that can be recycled. Run a feasibility study on options for food packaging - pots, tubs and trays	Low	Medium	Veolia
	Introduce Domestic Food Waste Collection	Medium	medium	Veolia
	Introduce Foil Recycling	Low	medium	Veolia
	Reduce contamination of recycling	Low	medium	
	Extend 'Ghost Gear' fishing line collection for recycling on the seafront	Low	Short term	Leave No Trace Brighton
	Roll out improved and colour coded containment for recycling	Low	Medium	
	Extend 'On the Go' recycling,	Low	Medium term	

Built Environment



Key challenges

The built environment is responsible for:

- 36% of all carbon emissions
- 40% of energy consumption
- 50% of all raw material extraction
- 1/3rd of all drinking water usage

In Brighton & Hove there is a lower level of owner occupation and more private rented housing, compared with the South East region. The housing stock is older and there are pockets of poor energy efficiency. The planning system is important for new build homes, offices, retail and industrial uses and the council has an extensive range of planning guidance on nature conservation and the urban environment. The council also uses its influence as a client, landowner and development partner in regeneration schemes and building affordable housing.

The council is leading the way and increasing its expertise through a cross-party Zero Carbon New Homes Working Group, researching and creating specifications for Zero Carbon new affordable homes, and new ways of deploying solar PV and heat pumps in council housing. This group is addressing carbon emissions through, for example, the adoption of Whole Life Carbon Assessments which measure greenhouse gases throughout the construction and operation of new homes.

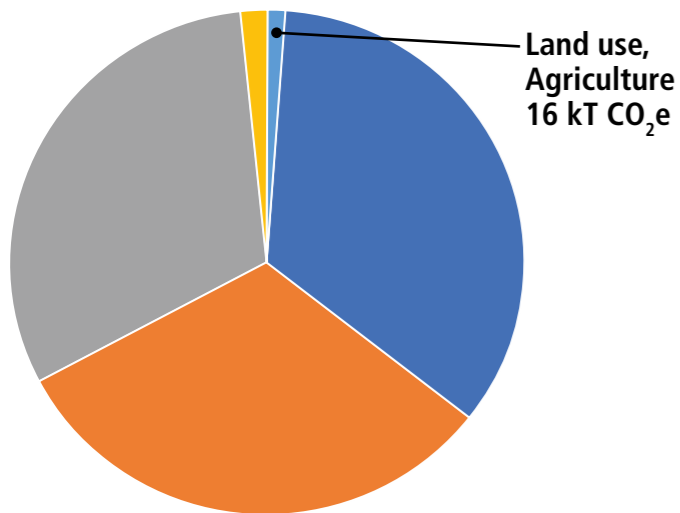
Related plans and policies

- City Plan Part One <https://www.brighton-hove.gov.uk/content/planning/planning-policy/city-plan-part-one>
- City Plan Part Two
- BHCC Housing Committee 20 Jan 2021 reports – Housing Actions towards Carbon Neutral 2030 and
- Sustainability Measures for New Homes and Housing Supply Sustainability Policy

Built Environment

Key Actions	Deliverable	Impact on CO2 emissions	Timeframe	Key Partners
Regeneration schemes to provide social and sustainability benefits	Introduce a sustainability impact checklist for new regeneration projects – private sector and public sector – through the planning system.	low	Short term	Development industry
	Embed circular economy principles into new developments, construction and deconstruction projects	medium	Short term	Development industry
Build sustainable council housing	Develop a design specification for carbon neutral homes	Low	Short-term	
	Deliver pilot Zero Carbon social housing project at Victoria Road, Portslade	Medium	Short-term	
	Develop and introduce a decent environment standard for council estates	Low	Medium-term	
	Adopt a New Build Housing Sustainability Policy for new council housing supply	Medium	Medium-term	
Secure sustainable development in the city through planning policies and City Plan.	Implement sustainability policies in City Plan Part One and supporting guidance documents (including guidance on energy efficiency and design, sustainable drainage, parking, masterplans, food growing advice, swift boxes/bee bricks, Nature Conservation,)	Medium	Short term	
	Adopt City Plan Part 2 and implement updated sustainability policies in relation to new development	Medium	Short term	
	Start review of City Plan Part 1 to update policies.	Medium	Short term	
	Promote carbon neutral development with developers, architects and agents	Medium	Medium-term	Development industry
Community Infrastructure Levy, Infrastructure Delivery Plan	Apply a Community Infrastructure Levy to new developments to secure funding to deliver the city's low carbon infrastructure priorities.	Low	Short-term	
	Update the Infrastructure Delivery Plan to reflect priorities, e.g. carbon offsetting and supporting retrofit	Low	Medium-term	
Planning Guidance	Prepare, adopt and implement planning guidance to support delivery of sustainable and biodiverse places Adopt Urban Design Framework Supplementary Planning Document (SPD) Hove Station Master Plan SPD Update Nature Conservation SPD	Medium	Short term	

Nature and environment (Food, land use, agriculture)



Nature’s contribution is critically important for our livelihoods, economy, quality of life and wellbeing. Halting and then reversing biodiversity loss and improving the resilience of our natural environment is vital. The council has declared a climate and biodiversity emergency, so we seek to identify, enhance and improve access to the most important natural habitats including chalk grassland, woodland and hedgerows.

Parks, gardens, farms and the Downland Estate surrounding Brighton & Hove offer opportunities to capture and lock up carbon in soils, grassland, trees and even the marine environment. Green spaces can be managed for biodiversity and soil health, landscape, recreation and agriculture as well as carbon sequestration. Where and how we produce food has a significant impact on carbon emissions as well public health and quality of life. With a longer dry season, valuable habitats will need to be resilient to fire. There are great hopes for locking up carbon in the natural environment, but more evidence is needed. All these elements will be increasingly important to help reach the city’s Carbon Neutral 2030 target.

Tree planting – A landscape of trees has many benefits for physical and mental health, and tree planting projects often have enthusiastic community support. However, not all tree planting results in positive carbon sequestration. Planting the wrong trees in the wrong place can actually release more carbon stored in the soil than is sequestered by the trees as they grow. It can also destroy existing habitats such as species rich grasslands which would compromise work towards tackling the biodiversity emergency. Tree planting often produces a plantation, not a woodland with diverse age structures and rich ecotones. To address the biodiversity emergency as well as the climate emergency, it is preferable to allow natural regeneration with some planting to diversify the species mix so that in the long term a woodland with mixed age and species is achieved. The South Downs

National Park was designated for its natural beauty based on its open sweeping views, so the impact on the wider landscape needs to be considered in any tree planting scheme

Wilding - The aim of Wilding is to manage habitats through natural processes as far as is possible. In ancient times, the countryside would have contained large herbivores and predators which would have been the main drivers of natural landscape processes. Getting the delicate balance of herbivores right should allow species rich grasslands to develop in some places and naturally regenerating woodland in others. While natural regeneration of woodland under light grazing takes longer than tree planting it produces a more diverse, resilient woodland in the long run. It is also desirable to replace missing plant species, by planting a limited number of trees that will then provide seeds for the trees of the future. As soils develop, wilding will provide long term carbon sequestration as well as biodiversity benefits.

City Downland Estate – The council’s rural estate of over 10,000 acres is located within the South Downs National Park. The council acquired the estate in the late 19th and early 20th Century with the aim of protecting water supply and controlling development. The council has long recognised the importance of the Downland Estate, which contributes a great deal to the Downland landscape which surrounds the City

The City Downland Estate plan is being reviewed during 2021-22, with a vision to reconnect the people of Brighton & Hove to a more biodiverse Downland with better education, improved access and a sense of connection to the land. There will be a focus on improving biodiversity; plant, tree and soil health; carbon emissions and sequestration; local food growing, and renewable energy.

City greenspaces –The city’s 2,000 acres of parks, trees and gardens enhance health and wellbeing for residents and are the venue for a dynamic range of activities. These spaces can be managed with a focus on biodiversity, increasing tree cover, and encouraging active travel.

The Living Coast UNESCO World Biosphere Region covers 390km² with the city of Brighton & Hove at its heart. Its mission is to connect people and nature to inspire a positive future, today, through delivering projects under its three objectives: to conserve & enhance nature & culture; support sustainable human development; and to share environmental knowledge, learning, awareness and engagement.

Food – in 2020 the city received a Gold Sustainable Food City award; the bid was led by the Brighton & Hove Food Partnership. The city will build on this success.

Nature & Environment

Key Actions	Deliverable	Impact on CO ₂ emissions	Timeframe	Key Partners
City Downland Whole Estate Plan	Consult & approve the CDEP and develop a 10-year action plan. Linked to BHCC Climate & Biodiversity Emergency declarations, re biodiversity, plant & tree health, carbon emissions and sequestration, renewable energy, soil health 100-year vision for the Downland Estate Mapping of natural capital assets Carbon accounting to be considered	Medium	Short, medium and long-term	The Living Coast, South Downs National Park, Sussex Biodiversity Records Centre
Food	Review the use of council owned land with the aim of encouraging uses that promote biodiversity and mitigate climate change, such as food growing, re-wilding	Low	Medium term	
	Build on Brighton & Hove’s Gold Sustainable Food City award with campaigns for a more plant-based diet; less single-use plastics; and tackling food poverty.	Medium	Short term	Brighton Food Partnership
Invest in the biodiversity of our parks, green & blue networks, development sites and urban fringe.	Encourage and facilitate tree planting, green corridors and restoration of hedgerows & ponds to enhance biodiversity, especially on city-owned assets including parks, planters, community gardens and housing estates	Medium	Short term	Living Coast Biosphere Plumpton College, South Downs National Park
	Restoration of Stanmer Park Masterplan			
Maintain quality of our beaches, and marine conservation	Wilding projects	Low	Medium term	Living Coast Biosphere, National Trust
	Changing Chalk			
	Wilding Waterhall – ecological restoration of golf course by CityParks			National Trust Changing Chalk partnership
	Greening the Cities – creating new urban green space with local downland planting			
	Maintain Blue Flag status for beaches Restore kelp to coastline	Low	Short term	TLC Biosphere, SWT, Southern Water, Greater Brighton

Related plans and policies

- Downland Estate Whole Estate Plan consultation
- Open Spaces Strategy (2017) <https://www.brighton-hove.gov.uk/sites/default/files/migrated/article/inline/2017%20FINAL%20Approved.pdf>

- BHCC City Tree Strategy (DRAFT)
- The Living Coast Management Strategy 2020-2025
- Brighton & Hove Food Strategy Action Plan 2018-23 <https://bhfood.org.uk/wp-content/uploads/2018/11/Final-FULL-WEB-Food-Strategy-Action-Plan.pdf>



Communication and engagement

Only with the participation of individuals and communities will Brighton & Hove be able to act on cutting greenhouse gases and achieving the carbon neutral goal. Involvement from people and businesses is needed to reduce or adapt demand for energy intensive services. New technologies such as electric cars or heat pumps require at least some degree of change from consumers in their purchasing choices and daily lives. Individual choices are key to shifting quickly towards healthier diets, slowing the increase in air flights, and choosing products that last longer and improve resource efficiency. The council has a role in many aspects of community engagement including:

Climate Assembly - During 2020, Brighton & Hove City Council held a Climate Assembly and set up an online platform to engage on climate change with residents and businesses. Local young people designed and delivered a **Youth Assembly**. The keen interest in the assemblies showed the willingness of Brighton & Hove residents to participate in climate action

Engaging stakeholders – the council participates in many citywide and regional partnerships including The Living Coast Biosphere management board and Greater Brighton. Communicating our strategic vision is key to this engagement.

Behaviour change – communicating options and opportunities for residents and organisations to cut their own carbon footprints is something the council already engages in, for example, ensuring social housing tenants are informed about efficient use of their heating systems; responding to demand for electric vehicle charge points. Public Health team are the specialists with campaigns on healthy eating and active lifestyles. With the rapid pace of technological change there will be increasing need to communicate behaviour change messages with residents. Businesses and organisations can be supported in accessing resources that help them reduce their carbon outputs. The stories of local people and businesses that are already working towards a zero carbon city can be recognised and celebrated.

Engaging the whole community including council staff in the ongoing conversation about biodiversity loss and the climate emergency. Providing free civic space such as libraries to facilitate this. On-line consultation is helping to reduce the carbon footprint of consultation and engagement events and can enhance community capacity to engage with council initiatives such as

the Downland Estate review.

Support for community action – In 2020 the council ran a successful grants programme for community projects on climate and biodiversity action. The grants programme supports residents in a wide range of projects including engagement on active travel, rainscaping along Lewes Road, the Craven Vale Association to create their own community apiary and a wildflower and wildlife area in addition to their already planted mini-orchard. In future community groups could be supported to identify the climate and carbon impacts of their projects. Participatory budgeting will enhance community engagement in housing estate improvements.

Health and wellbeing - Wide participation will also help to meet the city's priority of being fair and inclusive and ensuring that everyone can benefit from and participate in climate actions. The council recognises that we need to engage with under-represented and marginalised groups who are often those most affected by the impact of climate change.



Photo Living Coast

Communication and Engagement

Key Actions	Deliverable	Impact on CO2 emissions	Timeframe	Key Partners
Sustainability Carbon Reduction Investment Fund (SCRIF)	Use the SCRIF to accelerate carbon reduction work within the council	Medium	Short term	
Engage young people in climate action	Embed climate change into schools Brighton & Hove Environmental Education (BHee) programme	Enabling action	Short term	Living Coast Biosphere
Community action	Invest in a strong and independent voluntary and community sector through awards of three-year grant through Third Sector Commission and Communities Fund, including a dedicated strand for supporting climate change & biodiversity projects	Low	Short term	Living Coast Biosphere
Engagement and behaviour change campaign	Community engagement on climate action via online platforms. The Living Coast programme connects people and nature in the Biosphere Online advice to residents and council staff on cutting carbon emissions in their homes and consumption Find ways to support businesses to align their corporate social responsibility policies to the city Carbon Neutral target. Support Neighbourhood Plan groups to include carbon reduction and biodiversity as key strands.	Medium	Short, medium and long-term	Living Coast Biosphere
Museums	Deliver a distinctive offer at the Royal Pavilion and RP Garden, Brighton Museum, Booth Museum, Hove Museum & Preston Manor to support learning, creativity, well-being and engagement of diverse audiences and environmental sustainability, collaborating with The Living Coast Biosphere programme.	Enabling action	Short term	Living Coast Biosphere
Sustainable events	Implement the Brighton & Hove Outdoor Events Charter. Encourage event organisers to sign up to the BHCC Environmental Impact Assessment and Action Plan and cut carbon emissions from travel, energy, food & drink, and suppliers.	Medium	Short term	

Jobs, education and skills

Young people have been a vital force in driving action on climate change in the city, participating in climate strikes and a Youth Assembly on transport. BHCC has run a schools and youth climate engagement programme which support schools, city youth engagement events, debates with MPs and a schools Heads climate conference.

A new City Employment and Skills Plan is being developed that is focused on post-Covid recovery. Steps to recovery require stakeholder participation and collaboration between the council, employers, training providers, colleges and universities, the LEP, business and education networks and the third sector. One of the plan's objectives is to facilitate employment and skills interventions which support low-carbon employment and are key to any mass retrofitting project – e.g. installation of solar panels and heat pumps.

This will help to strengthen the local supply chain for green infrastructure. In January 2020 the council unanimously passed a Notice of Motion supporting a 'Green New Deal,' seeking to address climate change in ways that also boost jobs, address poverty and inequality, and restructure our economic system. The Green New Deal approach can help to grow 'green' skills and local jobs, linking public sector decarbonisation initiatives and council retrofit programmes to opportunities for skills and training.



Jobs, Education & Skills

Key Actions	Deliverable	Impact on CO2 emissions	Timeframe	Key Partners
Engage young people in climate action	Embed climate change into schools Brighton & Hove Environmental Education (BHee) programme	Enabling action	Short-term	Living Coast Biosphere
Promote outdoor education and programmes to increase children's exposure to nature, theatre, music and physical activity	Support the city's early years and childcare providers to provide high quality early years services including positive promotion of natural environment and outdoor learning.	Enabling action	Medium-term	
Develop green skills and jobs	Collaborate with education institutions and businesses to plan for future skills needs and increase take up of apprenticeships.	Enabling action	Short & medium-term	
	Secure funding and collaborate with Coast to Capital LEP, FE and HE colleges to create a Decarbonisation Skills Academy	Enabling action	Medium term	Coast to Capital LEP, colleges, universities, Green Growth Platform

Related plans and policies

- Brighton & Hove City Employment and Skills Plan 2021-23 (in development)
- Coast to Capital LEP Build Back, Stronger, Smarter, Greener Plan



Circular economy

In 2018 the Brighton & Hove Economic Strategy (2018-2023) was launched and included a commitment to creating a Circular Economy Routemap to 2035. Circular Economy principles move away from a linear ‘take, make, consume and throw-away society’, towards one that minimises waste and pollution, keeps products and materials in use for as long as possible and supports the regeneration and protection of natural resources.

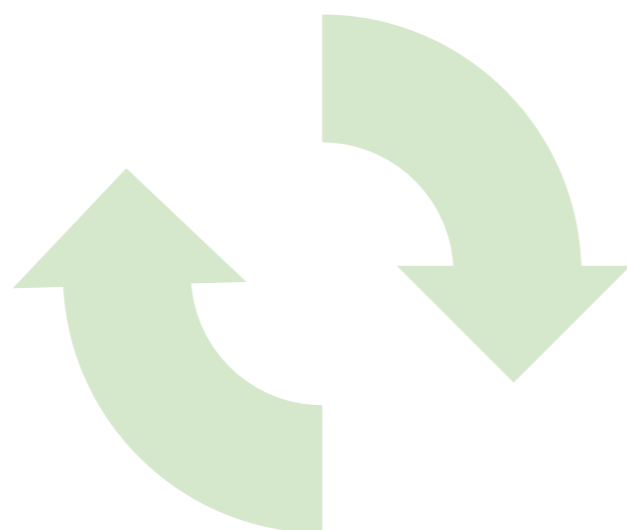
The Routemap will aim to capture and share good circular projects and practices across the city. The Routemap will grow and evolve over time, shaped around new opportunities, learning and collaboration as the city begins to unlock its potential and transition towards circular systems and ways of working – driving sustainable growth, reducing carbon emissions and protecting our communities and the environment. Brighton & Hove City Council plays an important role in leading our city and we can use this position to facilitate a move to circular principles through our own practice as well as introducing policies that affect the whole city.

Many council services are inherently sustainable; for example libraries’ core service is to ‘recycle’ books (and potentially other high-cost / low-use items) for many people to use; and the council’s Communities, Equalities and Third Sector team supports refugee resettlement with second-hand white goods, furniture and clothing. Using the city’s spending power to procure goods and services and working with partners and contractors is key to the development of a local, sustainable, circular economy and the council’s Procurement Team has actively engaged in developing the Circular Economy Routemap.

The planning process can support the incorporation of circular economy principles in the design and construction of new development through appropriate planning policies in development plans. City Plan Part One Policy CP8 ‘Sustainable Buildings’ and Policy WMP3d of the East Sussex, South Downs and Brighton & Hove Waste & Minerals Plan together provide some existing support, and future reviews of both these plans provide opportunities for more explicit policy support that better reflects the Circular Economy Framework.

The council is exploring whole life carbon assessments on new build housing schemes, which will assess the ‘embodied carbon’ locked up in construction materials and manufacturing processes. The council is developing construction specifications to include circular economy principles to reduce waste, reduce operational energy use, and protect and enhance biodiversity, and has identified pilot projects to trial these specifications.

Other priority sectors include the visitor economy, and single-use plastics. In future there’s the potential to focus on fashion, food and other consumables that are produced outside the city.



Circular Economy

Key Actions	Deliverable	Impact on CO2 emissions	Timeframe	Key Partners
Promote a sustainable economy by supporting low carbon growth and encouraging businesses to reduce waste and pollution	Circular Economy Routemap and Action Plan	Medium	Short term	University of Brighton, SOENECS, Circular Brighton & Hove, Good Business Club, CityClean
	Update BHCC design spec to reduce and reuse construction materials in our building projects	Medium	Short-term	
	Explore methodology for quantifying embedded carbon in construction			
	Work with visionary small businesses to identify ways of making the city carbon neutral	Low	Medium term	
	Scope and explore development of a flows analysis for produce and goods consumed in the city but produced elsewhere, e.g. food, drinks and fashion	Medium	Medium-term	
Ensure circular economy principles are fully supported in future development plans	Deliver pilot circular behaviour change and education projects to schools and residents for facilitating citywide engagement in reuse and reduction of waste and materials.	Medium	Short & medium-term	Schools Blueprint
	Dependent upon the outcomes from government planning reforms, embed circular economy principles in the new City Plan and potentially any review of Waste & Minerals Local Plan with policies that identify the circular economy factors required to be addressed and/or incorporated in development proposals.	Medium	Medium & long-term	East Sussex County Council, South Downs National Park Authority

Related plans and policies

- An Economic Strategy for Brighton and Hove 2018 <https://www.brighton-hove.gov.uk/content/business-and-trade/support-businesses/brighton-hove-economic-strategy-2018-2023>
- City Plan Part One
- Waste and Minerals Local Plan

Adaptation

Brighton & Hove is already experiencing the impact of the changing climate, even in our temperate latitudes. The city will need to find ways to adapt to these impacts to protect lives and livelihoods and the natural environment. Challenges include the high upfront capital cost of projects such as coastal defences and looking beyond statutory duties to future proof the city against climate change.

- **Protecting our coastline** - Higher sea levels and large storm waves are putting a strain on coastal defences. In December 2019 part of the Albion groyne collapsed into the sea because of strong wind and rain, and at Seaford, the chalk cliff face has suffered several dramatic rock falls.
- **Extreme storms and flooding** - Climate change is expected to cause warmer, wetter winters, with more intense, heavy rainfall events, and greater risk of flash flooding. Brighton and Hove can suffer from muddy flooding, dumping eroded soil from the South Downs onto roads and drainage systems in the city.
- **Water supplies and quality**- By 2050 dry summers could result in 80% less water in the UK's rivers and reservoirs, especially in the South East which already suffers from water stress. Drought could affect the quality and amount of groundwater supplies available to the city. All Brighton and Hove residents' drinking water comes from the Brighton Chalk Block aquifers, so it is vital we protect and improve the groundwater in this valuable natural resource.
- **Health** - A range of health conditions related to heat, extreme weather and air pollution are predicted to rise. Vulnerable people, including the elderly and children, will be at risk of increased heat exposure during heatwaves, especially in South East England. A recent study in Brighton and Hove identified air pollution from transport as a contributory cause of more than 170 deaths a year in the city.
- **Clean air** – air pollution is associated with adverse health effects particularly affecting the most vulnerable in society – children and older people and those with heart and lung conditions.

Adaptation

Key Actions	Deliverable	Impact on CO2 emissions	Timeframe	Key Partners
Sustainable Urban Drainage	Develop and begin delivery of a city-wide programme of sustainable urban drainage schemes to protect highways and properties from surface water flooding and extreme weather events and to protect the chalk aquifer. Deliver SCAPE SUDs scheme	Low	Short and medium term	The Aquifer Partnership
	Implement Sustainable Urban Drainage Supplementary Planning Document through the planning process and to shape future changes to the urban realm	Low	Short-term	
Protect against coastal erosion and flood risk	Coastal Defence Strategy Shoreline Management Plan Shingle Beach Replenishment & Groynes Proposed Marina to Adur Coastal Protection Scheme	Low	Short & medium term	Lewes DC, Adur & Worthing Councils, Environment Agency
Air Quality	Review Air Quality Management Area (AQMA) designations and develop new Air Quality Action Plan (AQAP)	Medium	Short term	
	Continue to implement Ultra Low Emissions Zone for the city centre and consider expansion of the zone.	Low	Medium	
	Develop options for smoke control areas	Medium	Short-term	



Carbon offsetting

Brighton & Hove City Council has set a target to become a carbon neutral city by 2030. This means reducing greenhouse gases from all consumption and activity across the city as far as possible. However, some emissions are very hard to remove, and it is expected that not all carbon emissions will be eliminated by 2030. So, as a last resort, any carbon emissions that cannot be avoided at source must be offset (or 'neutralised') by schemes that remove or reduce remaining greenhouse gases. Despite energy efficiency improvements and technological advances, a gap between carbon emissions and our target may still remain. It is likely that Brighton & Hove will need to offset carbon emissions in addition to all other efforts to cut emissions over the years to 2030.

Many carbon offsetting projects are nature-based, as our natural environment offers some of the best opportunities for capturing and storing carbon, as well as the benefits for wildlife and natural habitats. Projects which could offset carbon emissions include:

Offsetting potential	Examples
Remove carbon from atmosphere	Plant trees Enhance natural habitats
Prevent carbon being released	Protect natural habitats Soil management
Reduce carbon emissions	Energy efficiency in buildings Renewable energy
Create enabling environment for carbon reduction	Fuel poverty advice Fuel switching Research Behaviour change

The council is exploring the potential for investing in local carbon reduction projects and identifying the carbon reduction that can then contribute towards our carbon neutral target. The aim is to help more carbon reduction projects to happen faster, and to keep investment local. These projects often have other benefits which can be captured locally, such as tackling fuel poverty, improving air quality, creating new habitats for wildlife and benefiting health and wellbeing. BHCC is already engaged in many nature-based projects which help to cut carbon, including planting trees in our streets and parks, the restoration of Stanmer Park, and reviewing the Downland Estate Plan.

Carbon offsetting projects must be additional, verifiable and permanent, which requires a robust framework to give confidence in the delivery of carbon savings. A framework would also help to make carbon saving projects visible and accessible, and help engage public, communities and investors in climate action.

The council is also looking to ensure that contracts are procured with carbon neutral goals in mind and that contractors may be able to partner in local carbon offsetting schemes or may have their own environmental or carbon emissions goals.

Carbon offsetting

Key Actions	Deliverable	Impact on CO2 emissions	Timeframe	Key Partners
Investigate nature-based potential for capturing carbon emissions	Support Sussex Natural Capital Investment Strategy - develop evidence base and methods of calculating carbon savings and biodiversity enhancement in nature-based projects	Medium	Medium & long-term	SNCP, Living Coast Biosphere
New investment models for low-carbon projects and to engage community	Investigate development of a municipal bond or fund to provide opportunities for local people to invest in local low-carbon projects	Low	Medium term	
	Local Authority Insetting research on investing in local carbon offsetting projects	Low	Short term	



Photo BHFP

Procurement

Sustainability is an integral part of the procurement process. The Sustainable Procurement Policy sets out how sustainability is embedded into every procurement process. It was expanded in 2019 to incorporate circular economy principles to encourage reuse and recycling of materials. The Procurement Team has actively engaged in the Circular Economy workshops, discussions and work undertaken so far and is committed to delivering the procurement related actions in the Circular Economy Routemap.

All activity aligns with the council’s priority in achieving its goal to become a carbon neutral city by 2030.

Procurement Examples:

- EV Lamppost Chargers: Energy supplied must be from a renewable source. Helped save approx. 11.1 metric tonnes in carbon emissions in first 2 months of operation.
- A Design Team for phase 1 of the regeneration of Madeira Terrace whereby principles such as enabling zero waste on site are part of the brief.
- Adopting circular procurement models – e.g. Product-as-a-Service (PaaS) and leasing e.g. Multi-Functional Devices (MFDs)



Photo Cary Creed

Procurement

Key Actions	Deliverable	Impact on CO2 emissions	Timeframe
Procure local services for the benefit of communities	Use city’s spending power to procure local services for the benefit of our communities by buying goods and services locally where possible, changing the way we outsource services and bringing services in house if it will increase social value and improve the development and retention of a highly skilled council workforce	Enabling	Short-term
Circular Economy	Create a case study library to aid Circular Economy learning and development Review and refresh existing procurement policies.	Low	Short and Medium-term
	Aim that a % of spend is on circular goods and services Aim that a % of those purchases are supplied by local companies	Medium	Medium – Long term

