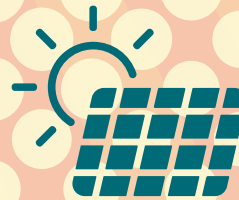


Climate Action Strategy 2023 to 2028

DRAFT



Contents

Foreword 3

Global position 4

Local position 5

Climate and ecological emergency declaration 6

Embedding climate action 7

Our climate strategy strategic aims 8

Strategy themes 12

- People & Communities 15

- Business & Economy 17

- Digital & Smart Places 18

- Transport & Travel 19

- Water Resources & Flooding 21

- Energy Generation & Use 22

- Buildings & Homes 23

- Resources & Waste 25

- Environment & Place 27

Working together 29

Co-benefits realisation 30

Monitoring and evaluation 31

Governance 32

Funding and resourcing 33

Foreword

The impact of climate change is the biggest challenge facing the global community right now. In 2019, Bournemouth, Christchurch and Poole (BCP) Council recognised this threat and declared a climate and ecological emergency. Our organisation is committed to being carbon neutral by 2030, and the BCP area to be carbon neutral, prior to central government's national target of 2050.

We recognise that our journey to meet our targets will be challenging, but the challenge comes with great benefits and opportunities that we want to recognise, embrace and promote. Importantly, the objectives in our Corporate Strategy are firmly reflected in this Climate Strategy. We need to lead our communities towards a cleaner and sustainable future, that preserves our unique environment and provides an outstanding quality of life, where everyone plays an active role.

We have taken an evidence-based approach, building on national data and our own research and studies to tackle local impacts of climate change. Our strategy sets a framework for reducing emissions across the BCP area over the next five years. It has to be challenging and ambitious, but achievable and realistic, and will be supported by a series of Action Plans, produced each year, to mitigate and adapt to climate change.

This strategy will influence all future decisions by the council, including the preparation of the new BCP Local Plan, the updated Local Transport Plan (LTP4) and the implementation of the new BCP Green Infrastructure Strategy (2022-2031).

Tackling climate change means that we all need to make changes to how we live our lives, but we recognise the challenges that doing things differently can bring. Emerging technologies and modern infrastructure will make it easier for us all to reduce greenhouse gas (GHG) emissions, improve air quality and minimise our impact on the special environment we live in. There are many social co-benefits of living a more sustainable and eco-conscious life, including less waste, lower living costs and improved mental health. I'm proud that our council is leading by example and championing these benefits as we encourage our communities to make choices which improve our local environment and everyone's wellbeing.

Councillor Mike Greene

**Portfolio Holder
for Sustainability
and Transport**



**Graham Farrant,
Chief Executive:**



BCP Council does not underestimate the scale of the challenge we face, and we recognise that we have a duty to do all we can to help minimise our impact on the environment and protect local nature and biodiversity. We are working hard, and at pace, to ensure we meet the council's target to be net zero by 2030. Momentum continues to build, as we discover new opportunities and realise the benefits, on our journey to become a more sustainable and environmentally-friendly organisation.

Global position - why we need to act

Climate breakdown is real

The Intergovernmental Panel on Climate Change (IPCC), report that since 1860, average global temperatures have risen by 1.3°C and are expected to increase to 4°C by 2100, compared to pre-industrial levels of global warming. A jump in global temperatures represents a very serious and sharp rise in the context of the last 500 million years of global temperature change, and the effects are expected to be significant and serious for the planet.

As temperatures increase, we are anticipating;

- an increase in coastal and river flooding from sea level rise
- an increase in surface water flooding and inundating natural and main drainage systems
- an increase storms and severe rain events, as witnessed in the UK in 2022 by the close frequency and intensity of storms Dennis, Eunice and Franklin
- a disruption to normal levels of precipitation and temperature variation, as demonstrated in 2022 by wildfires, droughts and floods
- an increase in the harm to biodiversity and growth in the population of pests and disease, such as demonstrated in 2022.

Ecological collapse is real

In the last 50 years alone, we have lost up to 60% of global biodiversity, as confirmed in the World Wildlife Fund, Living Planet Report 2020. Since 1970, Latin America and the Caribbean have seen the most substantive collapses, however this may be because Europe and North America already experienced significant reductions prior to 1970, so the state of the environment is far worse in these regions than the report would suggest. The significance of these reductions cannot be overstated:

No bees and insects = no crop pollination
= no food.

If we damage our eco-systems, we damage our ability to live healthy, productive lives, and risk the ability for life to exist at all.

Unfortunately there are impacts that we probably can no longer avoid. It would seem highly likely that global food production will be affected, along with the stability and certainty of global supply chains and logistics. A greater move towards localism will be required as the globalised systems become less productive, more costly and more uncertain. This will require us to build local capacity to generate decentralised energy and to produce food, goods and services. This will involve investment in local infrastructure, in the

skills and experience to design, construct and operate it, whilst supporting local communities, businesses and organisations to integrate new ways of working as we move towards adapting our environment to meet the environmental challenges.



Local position - BCP Council and area-wide emissions

Strategic aim 1

To make BCP Council and its operations carbon neutral by 2030

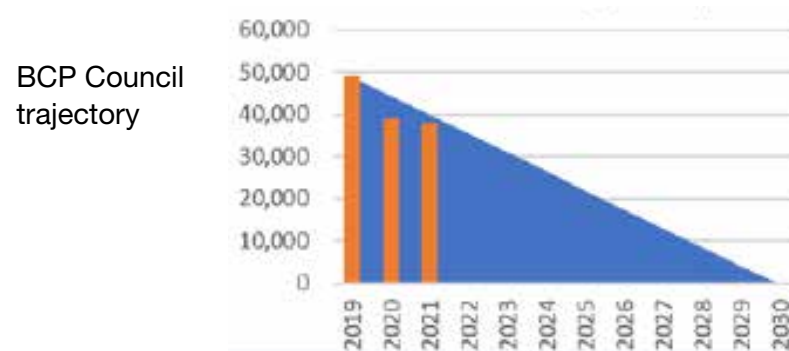
We are currently on track to meet our 2030 Net Zero carbon goal and have reduced scope 1, 2 and 3 emissions* by 22% since 2019. Although we are currently on the correct trajectory, we need to ensure that the gains during the pandemic are maintained and recognise that progress will get increasingly difficult as we move towards carbon neutrality in 2030.

2021/22 BCP Council total emissions = 38,010 tCO₂e

Strategic aim 2

To work with the wider community to make the region carbon neutral before the UK target of 2050

Data published in 2022 estimate area-wide emissions in 2020 to be 1,885,844 tCO₂e.



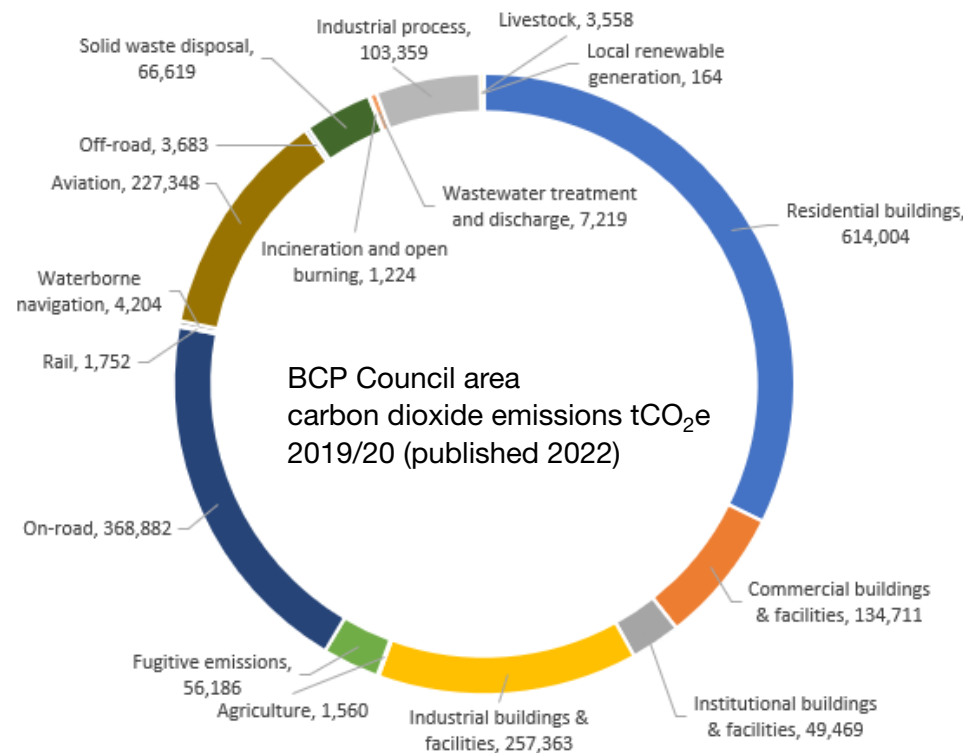
Note:

Data on area-wide emissions (including scopes 1, 2 and 3) is produced by SCATTER, a government-funded initiative hosted by the Tyndall Centre for Climate Research at the University of Manchester.

*** Scope 1** (Direct emissions) are GreenHouse Gas (GHG) emissions from sources located within the area boundary

Scope 2 (Indirect emissions) are GHG emissions occurring as a consequence of the use of grid-supplied electricity, heat, steam and/or cooling within the area boundary

Scope 3 are all other GHG emissions that occur outside the city boundary as a result of activities taking place within the city boundary



CO₂e (carbon dioxide equivalent) is a metric measure that is used to compare emissions from various greenhouse gases on the basis of their Global Warming Potential by converting amounts of other gases to the equivalent amount of CO₂. This way, CO₂e accounts for carbon dioxide and all the other greenhouse gases (GHG) as well: methane, nitrous oxide, and others.

Climate and ecological emergency declaration

Our Declaration

In 2019, in response to the overwhelming international evidence, and growing concern from local communities and residents, BCP Council declared a climate and ecological emergency.

Our declaration recognised the significance of the threat and some of the consequences if we did not act decisively and successfully, by providing:

Clear acknowledgement of the science: “...that climate change is a serious risk to Bournemouth, Christchurch and Poole’s future.”

And clarification of a measure of success: “...help global efforts to keep climate warming below 1.5°C to avoid further environmental damage, population displacement, biodiversity loss and risk to life.”

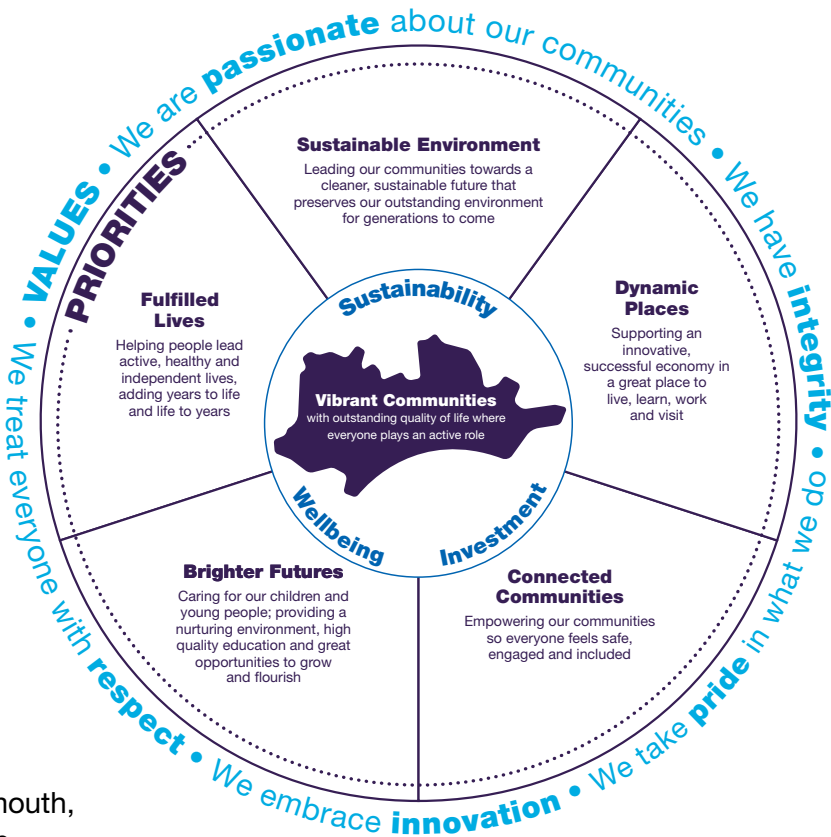
How the declaration supports our Corporate Strategy

To ensure sustainability, wellbeing and investment will deliver “Vibrant communities with outstanding quality of life where everyone plays an active role”.

The climate and ecological emergency declaration directly aligns with the priorities in our Corporate Strategy, ensuring public health, a sustainable natural environment, opportunities for all, adaptive and dynamic places and fulfilled lives.

The BCP Climate Vision

“To deliver adaptation and mitigation measures to enable a climate safe, ecologically rich and resilient Bournemouth, Christchurch and Poole that will be the foundation of the wellbeing capital of the UK”.



The United Nations Sustainable Development Goals address the global challenges we face, including poverty, inequality and climate change. The council has adopted them to help report on the impacts of our Corporate Strategy.



Embedding climate action throughout the organisation

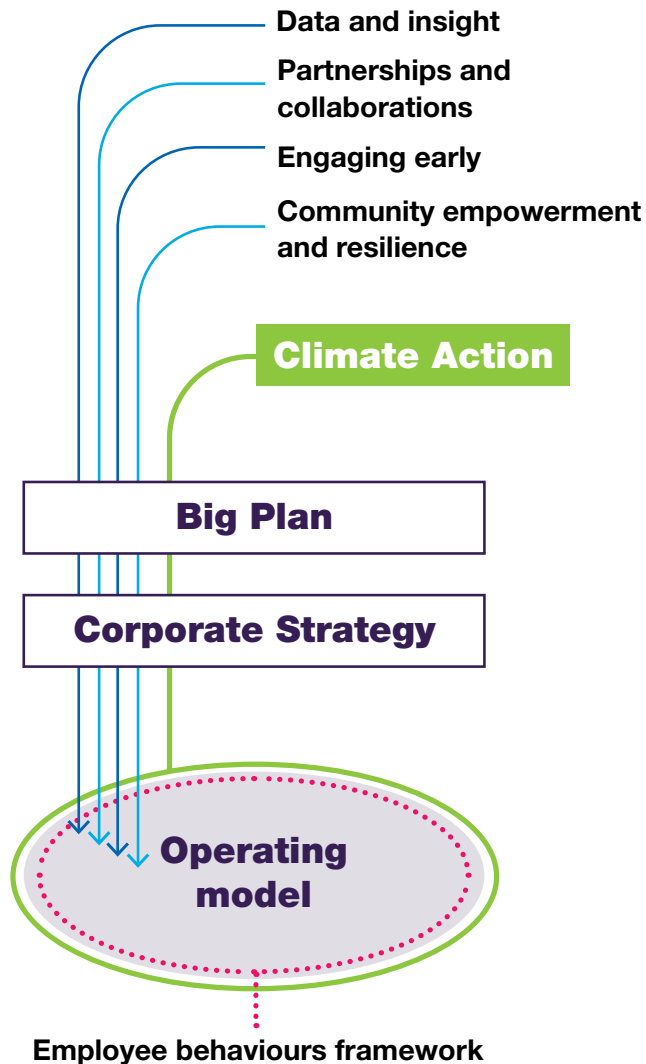
We have a unique opportunity now

We are delivering a significant internal transformation programme, as well as a single consolidated Local Plan for Bournemouth, Christchurch and Poole.

This provides us with an opportunity to integrate the requirements for the climate and ecological emergencies through both of these processes:

- ensure sustainability is embedded at the heart of our policy and strategy development activities to enable good decision making
- ensure new development in the area aligns with our goals by developing policies, through the preparation of a new BCP Local Plan
- insert sustainability requirements for service delivery through development of the council's new Centres of Excellence and back-office functions

- reconfigure the 'Themes' to align with the council's Operating Model and Organisational Redesign to ensure they align with the new governance structures and physical systems we can influence
- ensure our IT systems and service redesign take into account and capture relevant climate data for reporting and monitoring purposes.



Our Climate Strategy

The overarching aim of our strategy is to meet climate change head on by putting into place measures to actively reduce carbon emissions in the area to help Bournemouth Christchurch and Poole adapt to the inevitable effects of global warming. We recognise the plan to reach our aims is complicated, and that some of the actions will change over time because they need to be informed by those closest to the actions. This climate strategy represents the best picture we have right now, but one that we want to change and develop as more information and solutions become available and more stakeholders are engaged.

The strategy is built around the following three strategic aims:

Strategic Aim 1

To make BCP Council and its operations carbon neutral by 2030

Our immediate focus is to act on the local authority estate, assets and operations across the BCP area, reducing its overall carbon footprint in the short term. The ability to act and effect a positive change lies directly within the gift of the council. In order to meet this aim, significant investment, along with a comprehensive review of how services are delivered, how staff travel and work and what is purchased, is needed to identify where carbon savings can be made.

Strategic Aim 2

Work with the wider community to make the area carbon-neutral before the UK target of 2050

This is a medium to long-term aim with the ambition to have delivered many of the actions by 2050 or sooner. We all must collectively take ownership. We recognise that achieving this goal will require a strong commitment from our communities, our businesses, our partners and our residents. We must identify clear pathways by which carbon emissions from all sectors within and beyond the BCP area can be directly reduced, avoided or mitigated against. We have a key role in both leading and supporting others to act on climate change. but our success will rely on significant national and local policy change and the commitment of others to act and rapidly adopt significant changes to existing lifestyles and behaviours.

Strategic Aim 3

To help our area reverse the ecological decline, and be prepared for, and resilient to, the impacts of climate change

This aim will ensure that the BCP area is prepared for, the impacts of climate change and supports nature recovery.

This requires action across all sectors and communities. The biodiversity of our natural environment is already in decline.

As growing seasons change, pests and disease could become more prevalent, and our soils and vegetation will be at risk from extreme climate change effects such as more frequent or longer periods of drought and flood events. More of our land needs to be prioritised for nature and existing nature reserves protected unless there are suitable mitigation measures which result in a clear net biodiversity gain.

Action will need to be taken to adapt or 'future proof' the homes we live in, the places we work, our transport and communication networks and how goods and services are provided and delivered across the area. This requires focusing on providing more green infrastructure and flood defences to enable our built environment to adapt to rising temperatures, changing patterns of rainfall, sea level rise as well as extreme weather events.

Smart Goals

As our programme and process matures, we will develop theme roadmaps setting milestones for delivery to help establish annual carbon reduction targets which can enable transparency and accountability of progress against the aims.

Within our Strategic Aims, we have reviewed and refreshed the goals to make them more specific, measurable, accurate, realistic and timely (SMART) where BCP Council has direct control.

We have aligned our local goals to the scientifically agreed national goals identified through the 2022 IPCC report, the various COP agreements since the Paris Climate Agreement (COP21) in 2015, and the eight risk areas for action in the 2022 UK Climate Change Risk Assessment.

For regional activity we will seek to work with the Local Climate Partnership (see page 29) and others to collectively determine further SMART Goals, as more data emerges.

Climate Mitigation

(GHG emissions reduction)

We will help ensure global efforts are successful to limit emissions to stay within the Paris Accord of 1.5°C of global warming above pre-industrial levels.

This requires that:

CM1: BCP Council (corporate and service areas) reach 'net zero carbon' by 2030

CM2: the BCP area to reach net zero by 2050, or sooner

Climate Adaptation

(managing climate risks to our environment)

We will help ensure sufficient adaptation measures are in place for the current predicted temperature rise of 4°C as per the UK Climate Change Risk Assessment's recommendation:

CA1: To ensure the corporate estate and services are adapted and 'climate safe' in line with identified risks

CA2: Work with partners to make the BCP area as adapted and 'climate safe' as reasonably practicable in line with identified risks

CA3: Start adaptation measures immediately as our local systems are vulnerable

Ecological Recovery and Restoration

The ecological emergency required greater definition in our corporate declaration. We have revisited and revised our goals to reflect the current evidence. As we gather further understanding of the emergency and what our responsibilities are to address it, more urgent actions may be required. This will be, in part, informed by the UN Biodiversity Conference taking place in Montreal 2023.

We will:

ERR1: Seek to reverse the decline of local sensitive habitats and species at risk by 2040

ERR2: Ensure that local habitats and species are in favourable conditions by 2050

ERR3: where practicable council procures products and services that do not exacerbate local and global ecological collapse

ERR4: Discourage production and consumption of products and services in the area that are known to exacerbate local and global ecological collapse

Strategy themes

The Environment Act 2021 brings into UK law the target of reaching net zero carbon emissions by 2050. It also creates a wider framework for environmental governance, including a new direction for resource and waste management. It embeds the principle of biodiversity net gain and air quality improvement by requiring the Government to set new more ambitious targets. It sets into law the principles of the Government's 25-year environment strategy that was published in 2018. This has guided the development of this strategy and the actions it contains.

We understand that the aims set are ambitious and will be challenging to deliver. We are clear of our intention to lead the way by cutting emissions from our own operations to 'Net Zero Carbon' by 2030 and where practicable, ensure services are 'future-proofed' from the impacts of climate change.

We will lobby the UK Government for policy changes and further funding, and work with other organisations across the region to drive change. It is recognised that funding and resources of local authorities are limited. We can't do it alone and we need commitment from organisations, businesses, communities

and residents in Bournemouth, Christchurch and Poole if we are to meet all of our strategic aims.

A number of themes have emerged through the development of this strategy and engagement with our communities. Each theme has key priorities that will support the delivery of our overall objectives.

We have developed nine key delivery themes to achieve the three strategic aims.

People & Communities

Business & Economy

Digital & Smart Places

Transport & Travel

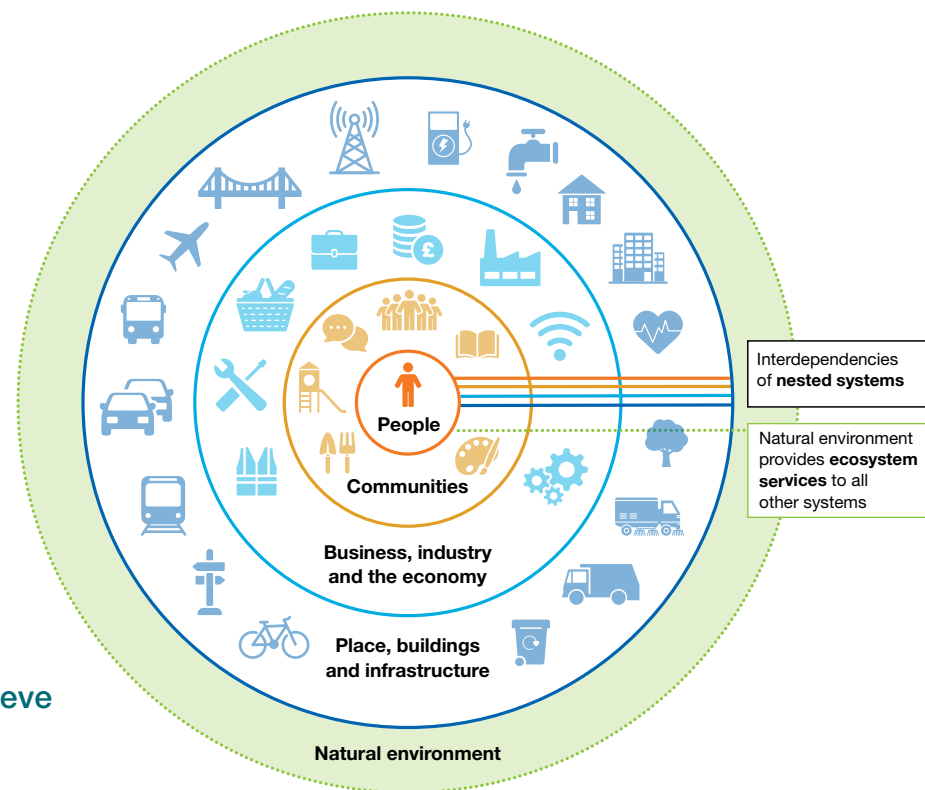
Water Resources & Flooding

Energy Generation & Use

Buildings & Homes

Resources & Waste

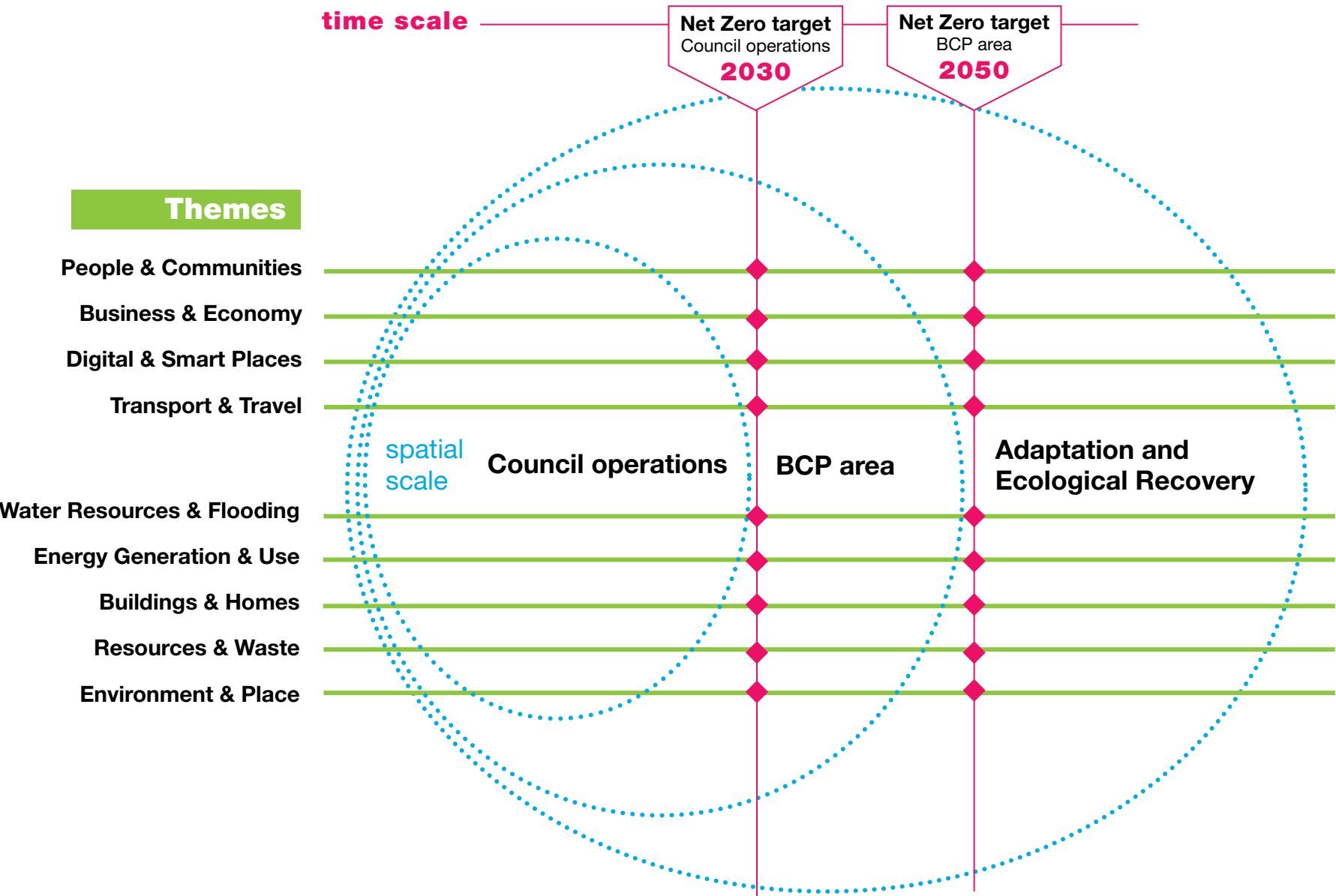
Environment & Place



Actions within the themes that require large resource or financial commitment will be prioritised through an assessment of:

- impact on carbon emissions
- costs versus outcomes
- funding source available
- resources and capacity
- risk of certainty of outcome

Themes - time and spatial scale



Theme summaries

People & Communities

Engaging with our residents to enable us all to make life choices which reduce our impact on the environment locally, nationally and globally. Communities are at risk from climate change and action must be taken to adapt accordingly. Community led responses are recognised as having the potential to contribute significantly to reducing CO₂ emissions from the smallest rural community to the centres of our big cities.



Business & Economy

The priority for business is the creation of a resilient green growth economy. There is a need to develop and grow skills, products, new technologies and innovation to combat climate change. The commitment to net zero will increase demand for low carbon environmental goods and services, both within the BCP area and beyond. The council has an essential role in creating the conditions for growth and attracting sustainable, environmentally responsible low carbon businesses and skilled workers to the area. The Government's Net Zero Strategy sets out to reduce emissions from manufacturing and construction by around 70% by 2035.

The Government's Net Zero Strategy sets out to reduce emissions from manufacturing and construction by around 70% by 2035.



Digital & Smart Places

Changing technology is identified as a key driver for change across the BCP area. Digitalisation is the underlying theme that cuts across all our activities. Technology is at the heart of new solutions that will make a green shift possible. Connectivity and use of data triggers innovation, new knowledge, broaden skills and new ways of operating. It is an enabler that could deliver a significant step change towards a low carbon, resilient BCP area. It is therefore recognised as a key theme in this strategy and that the council will actively prioritise the development and delivery of innovation and digital to support the climate change agenda.



Transport & Travel

Currently 32% of BCP area's carbon emissions are transport related – 20% being due to on-road vehicles. The number of vehicles on the roads needs to reduce, with more people using public transport, walking and cycling instead of using private cars. Modal shift change positively impact peoples' health and provides an opportunity to minimise emissions, reduce congestion and improve local air quality.

In 2022, the Government reported that transport produced 24% of the UK's total emissions in 2020 and remains the largest emitting sector in the UK. The majority (91%) of emissions from domestic transport came from road vehicles (89 MtCO₂e).



Water Resources & Flooding

Climate change affects the availability of water – at times making it scarce, and at others placing too much in the wrong place at the wrong time. How we limit climate change to influence this, whilst adapting to the already occurring droughts, floods and storms, is vital to our continued survival, health and prosperity.

The Government has committed £5.2 billion to address flooding through the Flood and Coastal Erosion Risk Management Investment Programme which runs from April 2021 to March 2027, and in doing so, better protect 336,000 homes and non-residential properties from flood.



Energy Generation & Use

The energy we use has a significant impact on our environment. Fossil fuels are non-renewable and the burning of fossil fuels releases carbon dioxide and other gases into the air. This causes visible issues such as pollution as well as contributing towards global warming. Energy conservation is something that everyone can contribute to by limiting the amount of energy that they use as well as ensuring that as much of that energy as possible is derived from local renewable sources.

The UK Climate Change Committee reported that electricity supply accounted for 11% of UK green house gas emissions in 2021. The Net Zero Strategy has an objective for the energy supply to be fully decarbonised by 2035.



Buildings & Homes

Reducing the carbon impact of our buildings and homes and ensuring that future developments are sustainable will be a major contributor to the reduction of our impact on the climate, whilst creating a good place to live and improving the health and wellbeing of residents.

The UK Climate Change Committee notes that direct emissions from buildings (i.e. excluding emissions from construction and the electricity used in buildings) contributed nearly 20% of UK emissions in 2021.



Resources & Waste

We must reduce our impact on the world's natural resources, and how we handle and treat our waste.

To drive, enable and deliver a reduction in waste and increased reuse, repair, and recycling rates whilst developing and implementing low carbon solutions to waste collection and disposal. The priority for waste will be to work with government and partners to actively drive a reduction the waste generated and promote a circular economy approach across all parts of society from household waste to commercial. This will be delivered through increased producer and consumer responsibility and through behaviour insights, education, technology, and innovation.

According to the UK Climate Change Committee, waste emissions were 65% below 1990 levels and contributed 6% of total UK emissions in 2020. The Government's Net Zero Strategy requires emissions from waste to be reduced by 44% compared to 2019 levels by 2035.



Environment & Place

To protect, enhance, improve and develop the natural environment maximising the opportunity to manage and increase habitats, landscapes, and biodiversity which in turn support carbon sequestration and climate resilience. The priority for this theme will be to work with partners to understand and develop the value of the area's natural capital, as well as the risks to it from climate change and foster sustainable practices that will support carbon sequestration as well as mitigate the impacts of climate change. Protecting the natural environment is a priority that will not only deliver benefits for climate change but will also impact positively on the physical and emotional health and wellbeing of our residents. Access to green open spaces has been continually identified by our residents as one of their key priorities in making the BCP area a good place to live.


Bird populations provide a good indication of the broad state of wildlife in general and recent statistics from DEFRA show a decrease in the combined all-species bird index for 2019 to 10% below the 1970 value.



Our future: Will have healthy and empowered communities creating sustainable, inclusive and thriving places that are net zero and climate resilient.

Latest BCP area performance

The SCATTER 2019/20 scope 1, 2 and 3 emissions total for the BCP Council area is 1,885,844 tCO₂e. Apportioned amongst the 2021 Census population figure of 400,300 individuals, this gives the greenhouse gas contribution made by each person as 4.7 tCO₂e. Other studies only taking account of scopes 1 and 2 place the BCP area in the top 20% of local authority areas, with a per person amount of 3.3 tCO₂e. The 2021 BCP Council climate public consultation revealed respondents' strong support for the realisation that the climate is changing (95%) and that they were most worried about loss of wildlife and habitats (91%) and the impact on future generations (90%).



BCP Council
61st out of
300+ local authorities

Recent highlights from our journey so far:

- The BCP Schools Environment Award gives students the opportunity to learn about and develop environmentally conscious behaviours and help achieve our climate commitments.
- The council led a partnership of statutory and third sector organisations to deliver the £2.6 million Household Support Fund to vulnerable residents during the winter period. Help included grants for food and fuel, as well as energy-saving measures that will reduce emissions.
- A new food and health community project based at Boscombe's Churchill Gardens opened in 2022. The focus on local food growing will help the climate-friendly goals of reduced food transportation and food waste.
- A community steering group has formed with the aim of achieving Fairtrade status for the BCP area. Promotion of Fairtrade helps the wider climate agenda, enabling residents to support sustainable farming.

- The Highcliffe & Walkford Neighbourhood Plan has been 'made' by BCP Council and forms part of the statutory development plan. The vision includes climate-friendly aims related to green spaces, travel and energy efficiency.
- We have initiated a pilot of the Climate Action Network to test the approach to passing responsibility for the development of roadmaps, milestones, trajectories and ideation of projects and programmes to Services.
- The risk of 'extreme heat' was added to the multi-agency and BCP Council severe weather response plan in response to the 2022 heatwave.
- We have initiated the Local Climate Partnership with significant and strategic organisations and it will be formally launched in 2023.

People & Communities continued ...

What each of us can do:

- Volunteer for an environment or community organisation
- Apply for a LEAP visit or grant to make your home energy-efficient
- Reduce your waste and recycle at home
- Encourage biodiversity in outdoor spaces.
- Ask your school to take part in the council's Schools Environment Award
- Tell friends and neighbours about ways you are helping climate change
- Use and promote Fairtrade products
- Grow your own food
- Take part in community engagement activities.



→ Priorities for the **People & Communities** roadmap

- engage with communities to help understanding of climate risks
- support communities to improve resilience to climate change
- support actions to prevent the impacts of climate change disproportionately harming the most vulnerable residents
- maintain responsive emergency plans for the BCP area to react quickly to climate change events

→ How we will adapt

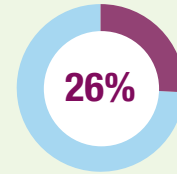
Engage with communities to help understanding of climate risks

Our future: The BCP area is a green economy leader, attracting sustainable, environmentally responsible low carbon businesses and skilled workers to the area who share our vision of a carbon neutral area.

Latest BCP area performance

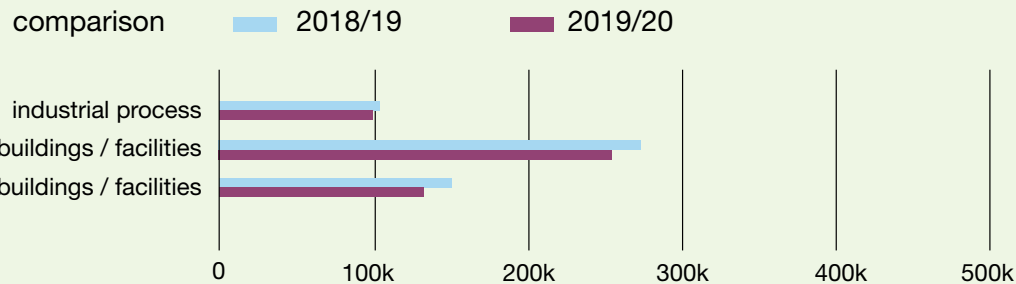
The SCATTER 2019/20 comparison of tCO₂e emissions from commercial and industrial buildings and processes in the BCP Council

area shows they account for 26% of the area emissions - a 7% decrease from 531,546 tCO₂e to 495,433 tCO₂e.



Area emissions from this theme

BCP Council area-wide emissions total tCO₂e



Recent highlights from our journey so far:

- The council's Economic Development strategy includes the intention to respond effectively to the climate emergency and transition to a net zero economy by at least 2050
- In April 2022 funding obtained to allow 250 businesses within BCP area to sign up to Climate Essentials which helps them set up carbon pledges and work towards net zero
- The council has been allocated nearly £4.2m under the UK Shared Prosperity Fund, which will enable us to provide better green spaces and community facilities, improved education and skills and business start-up and growth support. Each Investment Priority includes a sustainability intervention.

What each of us can do:

- Commute sustainably to your workplace, by walking, cycling, public transport, car sharing
- Be a 'Green Champion' in your workplace, forming a group and promoting turning off equipment, recycling waste and other climate-friendly actions that save money
- Ask if your organisation buys green energy or generates energy renewably.

→ Priorities for the Business & Economy roadmap

- develop our green economy
- support green skills growth
- encourage businesses to reduce waste
- encourage businesses to reduce energy use
- encourage businesses to build resilience

→ How we will adapt

Work with the Environment Agency to help residents and businesses adapt and plan for climate risks

Our future: Changing technology is identified as a key driver for change across the region. Technology is an enabler that could deliver a significant step change towards a low carbon, resilient BCP area. It is therefore recognised as a key theme in this strategy and that the council will actively prioritise the development and delivery of innovation and digital to support the climate change agenda.

Recent highlights from our journey so far:

- Acceleration of Gigabit Fibre: The Smart Place programme is leading on the acceleration of the deployment of affordable gigabit fibre through the Neutral Host Operator initiative. This connectivity is necessary for effective videoconferencing making working from home more attractive which is having a profound beneficial impact upon reducing council staff and wider business commuting.
- The 'MyBoscombe' app includes a section on sustainable transport, helping to promote walking, cycling and bus travel. More is planned for the app, to further encourage sustainable travel as well as recycling and use of cleaner energy. The intention is to roll out the app to other neighbourhoods across the BCP area.
- The council's Beach Check app was developed in response to the overcrowding of beaches after the first pandemic lockdown. It enables users to check which beaches are the least congested, with a traffic light system to warn visitors away from crowded sections and the byelaws for cycling and walking dogs along the promenade. This in turn will make it easier for beach-users to avoid creating congestion and pollution in traffic jams and make better choices about their destination. The app is to be rolled out nationally with the support of funding from government.

What each of us can do:

- Make use of the apps that we have created to help you reduce emissions
- Find out the size of your own carbon footprint and how to reduce it at: www.footprint.wwf.org.uk

→ Priorities for the Digital & Smart Places roadmap

- build and maintain data sets to track and report on target performance
- develop performance measures for mitigation and resilience action covering both outputs (what is delivered through actions) and outcomes (the difference made by the outputs)
- improve digital connectivity to reduce travel demand, increase information share
- supporting new 'ways of working' – maximising digital connectivity and reimagining our towns

→ How we will adapt

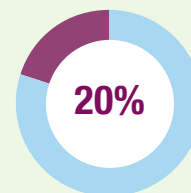
Use Smart Place technologies for monitoring climate impacts and helping to identify adaptation solutions.

Our future: People will be healthier as a result of more active travel and cleaner air. Walking and cycling will be widely accessible and become the default choice for most local journeys. All vehicle including public transport will be electric or use other low carbon fuels.

Latest BCP area performance

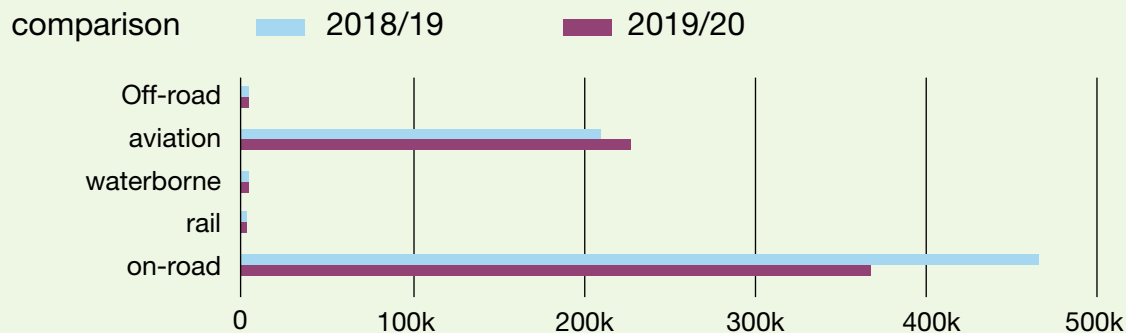
Currently 32% of the BCP area carbon emissions are transport related – 20% being due to on-road vehicles. The number of vehicles on the roads needs to reduce, with

more people using public transport, walking and cycling instead of using private cars.



Area emissions from this theme

BCP Council area-wide emissions total tCO₂e



Recent highlights from our journey so far:

- The council is continuing to deliver the Transforming Cities Fund of over £100M investment in sustainable and active travel infrastructure. This will give people safe, fast, reliable and healthy travel options, particularly for shorter journeys. The new infrastructure will help reduce carbon emissions and provide improved air quality benefits. Over £200k of grants have been given for better school travel facilities and grants are also available for local businesses.
- The number of electric vehicles (EVs) in the council's fleet has risen over the past three years from six to thirty, and a further 10 are on order. EV use has resulted in a carbon saving of 107 tonnes CO₂e in the year 2021/22.
- A new network of 130 rapid electric vehicle charging points (EVCPs) is expanding to over 30 car parks during 2022/23 and the third phase of the EV Charging Programme will include on-street facilities, pending a successful bid for government LEVI funding in 2023.

Transport & Travel continued ...

- The Local Cycling and Walking Infrastructure Plan (May 2022) provides a long-term strategic approach for the walking and cycling infrastructure, which is required across the BCP area.
- £8.9m of Government funding has been secured to support the delivery of the Bus Service Improvement Plan (BSIP) to 2025, and the local bus network will continue to be developed under an Enhanced Partnership between the council and bus operators.
- Beryl bike and e-scooter riders have clocked up over 1.4 million journeys and more than 176,000 users. 30% of trips would otherwise have been by car. We have also extended Beryl into Christchurch and adjoining Dorset Council areas and introduced e-bikes which are being used well across the whole of our network. We plan for many more e-bikes and e-scooters (pending results of a Government trial) and aim to mainstream micromobility as the natural choice given the low journey length for car based trips in the BCP area.
- A 'School Streets' pilot scheme is operating at four schools, closing the road directly outside to help reduce road danger and improve air quality locally. 92% of parents

at the schools want their School Street to be made permanent.

- Poole Hill and Mannings Heath roundabouts have been resurfaced by Miles Macadam with more sustainable road surfacing, achieving a 37% carbon saving over conventional materials.
- BCP Council's Interim Travel Plan was produced in response to the transformation of working arrangements for council staff, to encourage sustainable commuting and business journeys. Beryl bike discounts and bus concessions are available to facilitate the staff shift to active travel.
- We have secured a Government Air Quality Grant for £120k to continue the roll-out of our Clean Air Schools project and provide e-cargo bikes for the seafront operations team. A school clean air behaviour change campaign will teach children and their families about air pollution - the causes and how it can be reduced.
- The council sustainable travel team continued to promote active travel to schools, including: the Bikeability programme, Living Streets Walking to School outreach project, the STEPS pedestrian training programme and the School Streets programme.

What each of us can do:

- Walk, cycle or scoot short distances – use Beryl bikes and scooters
- Replace business travel with video-conferencing – save time and be more productive.
- Avoid air travel wherever possible.

→ Priorities for the Transport & Travel roadmap

- increase cycling and walking across the conurbation
- grow electric vehicle charging network and infrastructure
- delivery of the Bus Service Improvement Plan to 2025
- encourage greener transport choices, such as: vehicle sharing and micromobility (cycles and scooters)

→ How we will adapt

Identify and quantify climate impacts, especially the impact of flooding to the transport network, and the number of roads at risk of roadmelt

Our future: The BCP area has a plentiful supply of clean, safe water and the ecosystems providing it are in excellent condition to support biodiversity. Conversely the water-related risks of climate change, such as sea-level rise, coastal erosion and surface water flooding are assessed, known and adaptations carried out to protect people and property.

Recent highlights from our journey so far:

Coast protection projects which received funding or have been delivered in recent years include:

1. Renourishing seven depleted beach areas from Southbourne to Poole in a £7.5million scheme with 350,000m³ of beach material pumped ashore
2. Renewing timber groynes as part of a two-year, £1.9 million programme from the boundary of Poole/Bournemouth
3. A £2.5m cliff stabilisation scheme at Canford Cliffs following a cliff slip in 2017
4. £12.4m funding for new defences along Back Water Channel to help protect Poole Town Centre and the Old Town from tidal flooding
5. £525k for the development of the Christchurch Bay and Harbour Strategy which could lead to further funding for project delivery

6. £300k has been secured to develop a new BCP-wide Cliff Management Strategy – aiming to completed in 2025.

What each of us can do:

- Only run the washing machine and dishwasher when they're full
- Don't fill the kettle if you only want one cup
- Turn off the tap when you brush your teeth
- Take 4-minute showers instead of baths
- Bournemouth Water has gadgets to help you save water – check their website
- Have your say on consultations about proposed flood prevention measures.

→ Priorities for the Water Resources & Flooding roadmap

- improve flood alleviation for community areas that flood
- seek to ensure that via communication, communities and sectors are aware of future risks, pre-emptive actions and how to mitigate
- ensure BCP area is adapted and 'climate safe' in line with risk profiles
- develop a new BCP-wide cliff management strategy
- develop a new BCP-wide Local Flood Risk Management Strategy

→ How we will adapt

Create Strategies and Action Plans to engage all sectors in adaptation work

Our future is for increased renewable energy generation across both BCP estate and the wider area, including community and business renewable energy generation opportunities, resulting in reduced fossil fuel usage and a reduction in associated emissions in line with our net zero 2030 and 2050 targets.

Latest BCP area performance

The total electricity consumption in the BCP area in 2021 was 1,353.6 GWh, of which 106,123 MWh of electricity was generated locally from renewable sources – mainly solar. The proportion of 2021 electricity consumption generated by renewables is 7.8% - enough to power 29,225 BCP households with average demand.

Government data for 2019/20 ranks the BCP area 61st out of 398, for lowest tCO₂e emissions per capita from energy and fuel use (electricity, gas and transport fuel only). During the same period, there was 140 MW of installed renewable energy capacity in the BCP area. The SCATTER comparison of tCO₂e emissions from all buildings between 2018/19 and 2019/20, shows a decrease across all sub-sectors.

Recent highlights from our journey so far:

- Carried out a study to see which council sites with large energy consumption could be suitable for renewable energy generation for council use.
- Used a local authority energy efficiency framework of engineering firms with net zero expertise to offer outline business cases and investment proposals with guaranteed energy savings for council buildings.
- Commissioned a pre-feasibility study for geo-thermal energy to ascertain the possibility of using this energy for heat networks in the local authority.
- £1.9m Government-funded energy improvements were made to council buildings, including Poole Museum, 2Riversmeet Leisure Centre, BCP Council Civic Centre, Wallisdown Heights, Highcliffe Castle, Poole Library, Bournemouth and Poole Crematoria.

What each of us can do:

- Buy renewable electricity by signing up to a green tariff with your supplier.
- Think about investing in solar panels to make your own electricity from the sun.
- Ask your supplier to install smart meters to help you monitor your energy use.

→ Priorities for the Energy Generation & Use roadmap

- develop and deliver an Energy Plan
- explore options for a geothermal energy network
- reduce energy use and improve energy efficient infrastructure
- increase proportion of energy from renewable sources
- improve energy performance of existing buildings and housing

→ How we will adapt

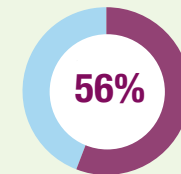
Our Local Area Energy Plan will include actions to help increase the resilience of communities to risk

Our future: Residents and businesses will have much lower energy bills because homes will be retrofitted where possible to be more energy efficient and will store and generate low carbon energy. Natural gas heating will be replaced by low carbon alternatives. All new developments will be net-zero carbon, sustainable and adapted to the effects of climate change.

Latest BCP area performance

Emissions from buildings and homes account for 56% of the BCP area total. The SCATTER comparison of tCO₂e emissions from all buildings between 2018/19 and 2019/20, shows a decrease across all sub-sectors. This can largely be attributed to decarbonisation of the electricity grid, and to a smaller extent the increased efficiency of appliances and continued drive to insulate homes. Homes with a higher energy rating of A, B or C are estimated to make up approximately 40%

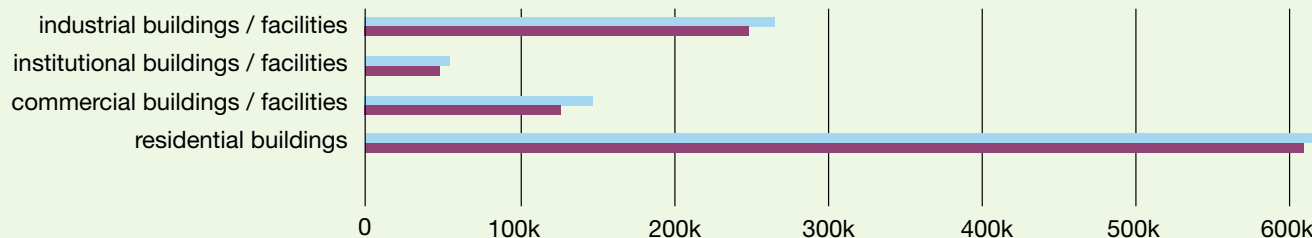
of the BCP area-wide stock. The remaining lower-rated homes will be consuming an estimated 50% more energy. This must be reduced in order to achieve net zero by 2050 and also to address fuel poverty – 10% of BCP households were thought to be at risk of fuel poverty in 2019, a figure that will be higher now given the cost of living crisis. The council works with partners to deliver assistance and grants to households to reduce energy use.



Area emissions from this theme

BCP Council area-wide emissions total tCO₂e

comparison 2018/19 2019/20



Recent highlights from our journey so far:

- Nine brand-new council homes were completed in 2022 at Luckham Road, constructed to the 'Passivhaus' standard, to use about 90 per cent less energy than standard UK buildings. The homes make use of ground source heat pumps (GSHPs) and pipes buried in the garden to extract heat from the earth. This energy is then used to warm radiators and generate hot water in the properties.
- Project level solutions are in development for the council's biggest energy using buildings and land assets (e.g. car parks) and business cases developed to identify energy-saving costs and benefits.
- A draft Housing Sustainability Strategy has been developed and lessons from this will inform the wider sustainability strategy development process.
- We have initiated the formation of programmes across the corporate estate, for our leased buildings, for our homes, and for the delivery of the Local Area Energy Plan.

Buildings & Homes continued ...

- Local Energy Advice Partnership:
In 2021/22, the LEAP scheme carried out 436 home visits to advise residents how to save energy and keep warm. These visits, and the free energy-saving equipment installed will save householders a total of £238,000 on energy costs and reduce carbon emissions from the domestic sector.
- £1.9m Government Public Sector Decarbonisation Scheme funding was secured for energy improvements to Council buildings, including Poole Museum, 2Riversmeet Leisure Centre, BCP Council Civic Centre, Wallisdown Heights, Highcliffe Castle, Poole Library, Bournemouth and Poole Crematoria. Improvements to Poole Museum will reduce the building's carbon footprint by 25%, sympathetically installing 360 solar roof slates for sustainable power, improving energy efficiency with 60 new windows, secondary glazing and new insulation.
- The Durley Environment Hub is nearing completion and will meet energy-efficient passivhaus construction standards with solar panels, green sedum roof and recycled timber cladding. The Hub aims to deliver a venue that models environmentally positive behaviour and systems.

- The council piloted a ground-breaking grant scheme offering fully-funded or reduced cost insulation to all homes with low energy ratings. Since the declaration of the Climate and Ecological Emergency, direct local authority involvement in schemes like this assisting householders save energy has resulted in an estimated £8m of lifetime energy bill savings and over 10,000 tonnes of carbon dioxide emissions avoided.

What each of us can do:

- Turn down radiators in rooms you aren't using or use less could save you up to £70 a year
- Turn appliances off at the socket could save you up to £70 a year
- Wash clothes at a lower temperature could save you up to £40 a year
- Use your tumble dryer less could save you £70 a year
- Close all your curtains and blinds at night

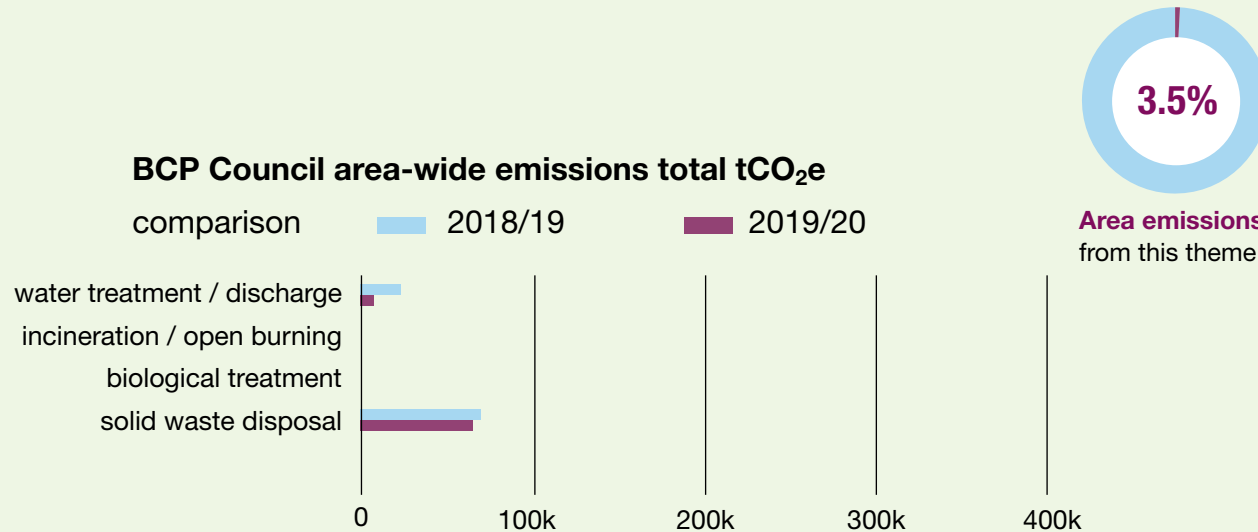
→ Priorities for the Buildings & Homes roadmap

- include net zero carbon policies for new developments in the forthcoming Local Plan
- reduce the carbon impact and improve biodiversity of new developments
- reduce energy use in existing buildings and housing by retrofitting energy efficiency measures
- finalise the Housing Sustainability Strategy
- develop more grant and loan schemes to improve insulation and heating in homes

→ How we will adapt

Develop a local climate change risk assessment and adaptation plan

Our future: Reduced waste volumes, increased reduce, repair and recycling rates moving towards a circular economy across all parts of society from household waste to commercial.



Recent highlights from our journey so far:

- We are a high achieving council (in top third overall) as a very much urban authority we do not benefit as some councils in rural areas from far higher composting rate due to larger gardens, and less flats. 199,145 tonnes of municipal waste were collected and sent for treatment in 2021/22: 47.4% of household waste was recycled and 86.6% was diverted from landfill.

- Four new electric refuse collection vehicles are each saving between 30-40 tonnes of CO₂ annually, whilst reducing noise and improving air quality.
- A pilot scheme used drone-based technology to tackle the issue of litter, with intelligence gathered to inform the future placement of bins, street cleansing schedules and campaigns to encourage visitors to dispose of litter responsibly.

- The BCP Tip Check mobile app launched to help residents plan their use of local recycling centres, providing a traffic light system with live information on how busy a centre is so people can avoid queues when it is busy.
- A waste compositional analysis identified and measured 65 waste types in our recycling and refuse kerbside collections, providing a better understanding of BCP area's waste streams, allowing effective future service planning and targeted communications to residents to improve recycling quality and reduce contamination.
- Grown the BCP 'New to You' reuse facility that make the most efficient use of resources by supporting disadvantaged local people in need of essential items to set up a home and for day to day living, whilst improving environmental performance by diverting material from landfill and increasing reuse.

Resources & Waste continued ...

What each of us can do:

- Recycle Right – refresh yourself on what can and cannot be recycled in your kerbside bin bcpcouncil.gov.uk/recycling
Items for recycling should be clean, dry and empty
- Visit our recycling centres to reuse or recycle items that you can't recycle at the kerbside
- Think about ways to reduce your waste in the first place, such as buying less, selecting reusable items and repairing where possible.



→ Priorities for the **Resources & Waste roadmap**

- reduce waste, increase recycling
- reduce use of non renewable materials
- harmonise waste disposal infrastructure and sites across the BCP area to improve recycling performance
- publish a strategy to set out how the council will manage municipal waste across the conurbation for the next 10 years, aligning with the government's agenda

→ How we will adapt

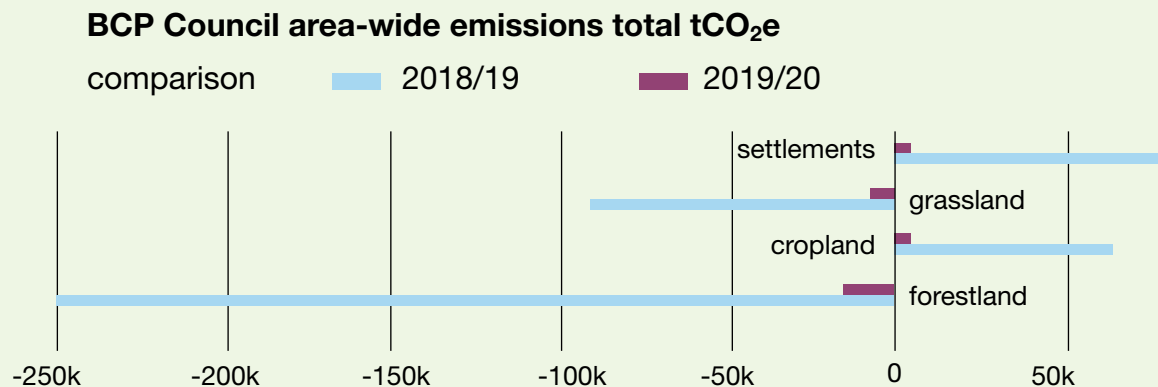
Adapt waste sites and operational procedures to better cope with storms, floods and heatwaves

Our future: The BCP area will have more trees vegetation and green corridors to enjoy. Town centres and residential areas that feel cooler, be less prone to flooding and have cleaner air. Communities will feel more ownership of public green spaces and have an improved sense of wellbeing.

Latest BCP area performance

A change in methodology has resulted in higher emissions in this theme that were not in previous years' reported figures. The SCATTER 2019/20 comparison shows a marked decrease in the amount of carbon previously thought to be stored in the natural environment. The methodology used to calculate area-wide emissions from various sources sometimes changes as new

information becomes available and upon examination, the difference has shown to be caused by a change in the calculation methodology. Nevertheless, this decrease will result in the BCP area having a larger emissions footprint than would have previously been the case. Improvements in other sub-sectors will ensure the total remains below the 2017 data baseline.



Recent highlights from our journey so far:

- An ambitious Green Infrastructure Strategy, adopted in September 2022, sets out how the council will maintain and improve our network of green and blue spaces for the benefit of people and the environment.
- Secured extension funding for an Urban Greening Design code and related work to implement Green Infrastructure, 2023-24.
- The Seafront Strategy, endorsed in April 2022, aims to improve the natural environment and biodiversity along our coastline.
- The Cleaner, Greener, Safer campaign, launched in 2021, focuses on bringing pride to our rural and urban areas to build a sustainable future for all.
- Future Places, the council's wholly owned urban regeneration company launched in 2021 and aims to deliver high quality places to live and work that benefit healthy communities and the environment.
- Throop Nature Park was granted planning approval. The park will help alleviate the pressure on the internationally sensitive Dorset heathlands, provide semi-natural space for residents to enjoy and help improve biodiversity in the local area.

Environment & Place continued ...

- Completed the £3.7m National Lottery Heritage Funded project Poole Park Life, with park quality greatly enhanced with spaces for wildlife and people created and over 100 trees planted.
- The Parks Foundation received £224,000 from the Green Recovery Challenge Fund for the Nature Recovery Project: 550 nature-based activities have been held in 11 parks with an attendance of 5851 people.
- Poole Museum redevelopment included reducing the building's carbon footprint by 25%, sympathetically installing 360 solar roof slates for sustainable power, improving energy efficiency with 60 new windows, secondary glazing and new insulation.
- Arts by the Sea Festival promotes three key messages each year - reduce waste, water refill and sustainable travel,
- The Durley Environment Hub is nearing completion and will meet energy-efficient passivhaus construction standards with solar panels, green sedum roof and recycled timber cladding. The Hub aims to deliver a venue that models environmentally positive behaviour and systems.

What each of us can do:

- Help butterflies, moths and other pollinators by adding a container of nectar plants, such as buddleia, lavender or marjoram to your doorstep, balcony or back garden this spring.
- Keep your garden or greenspace chemical free – pesticides also kill helpful wildlife that prey on the pests you are trying to get rid of.
- Don't use peat – left alone, it stores vast amounts of greenhouse gases and once harvested dries quickly so is of limited benefit to your soil. Better to make your own compost instead.
- Do not use plastic grass surfacing that reduces biodiversity in gardens and minimise sealed hard surfacing that increases water run off
- Dig a pond or make a wild space
- Volunteer for a wildlife or environmental organisation.



→ Priorities for the **Environment & Place** roadmap

- improve biodiversity and green spaces
- reverse habitat and species loss
- improve water quality, flood resilience and habitat
- increase tree and perennial planting

→ How we will adapt

Green our urban areas and towns to reduce the urban heat island effect and grow the green network to benefit biodiversity

Working together

To ensure that we can make the maximum impact, we all need to work together. We will need to deliver our own actions, whilst engaging at a local level with residents, businesses, community groups and others to ensure that they feel empowered and able to play their part. At the same time, we will all need to influence others at a local and national level to create the right laws, policies and programmes that support this.

Internal

Climate Action Network

Purpose

- To connect the top down and bottom up approaches to BCP Climate Action ensuring that the climate goals can be achieved within directorates and across the organisation

Aims

- To work collaboratively with the Climate Action & Sustainability Team in achieving the climate and ecological goals
- To help coordinate the development and implementation of the Service Area Net Zero Roadmap
- To help coordinate the development and implementation of the Service Area Adaptation Plan
- To own theme climate goals, the roadmaps and plans, projects and programmes and ensure their successful delivery
- To report on progress as appropriate

External

Local Climate Partnership

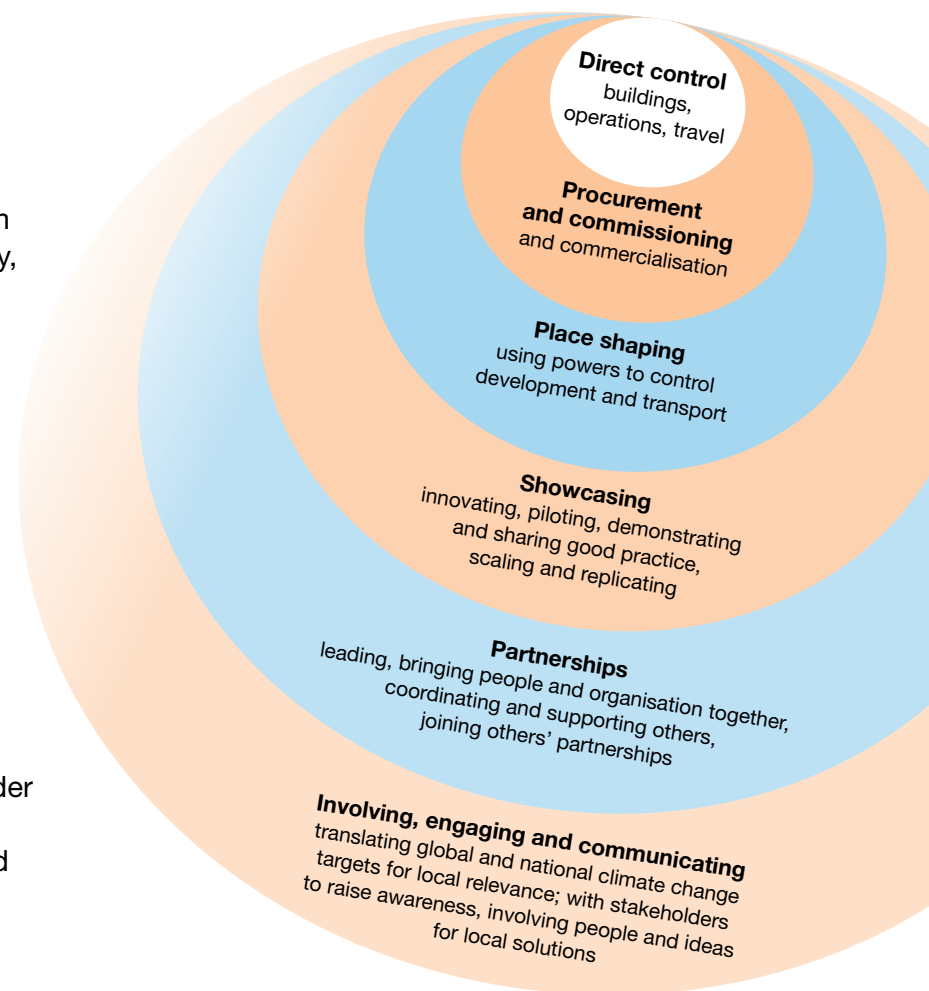
Purpose

- To bring together organisations from the areas public, private, community, education and academic sectors that share the common goal to ensure that the region of BCP and Dorset develops and successfully implements a net zero strategy aligned with the latest science and built on the views of the areas stakeholders.

Aims

- Take urgent action within the scope of their own activities, and
- Work collaboratively through the partnership to help others in the wider area community and economy to take action to reduce emissions and protect against climate risks

The Climate Change Committee has identified six '**spheres of influence**' that councils have over carbon emissions that bridge the gap between internal and external impacts.

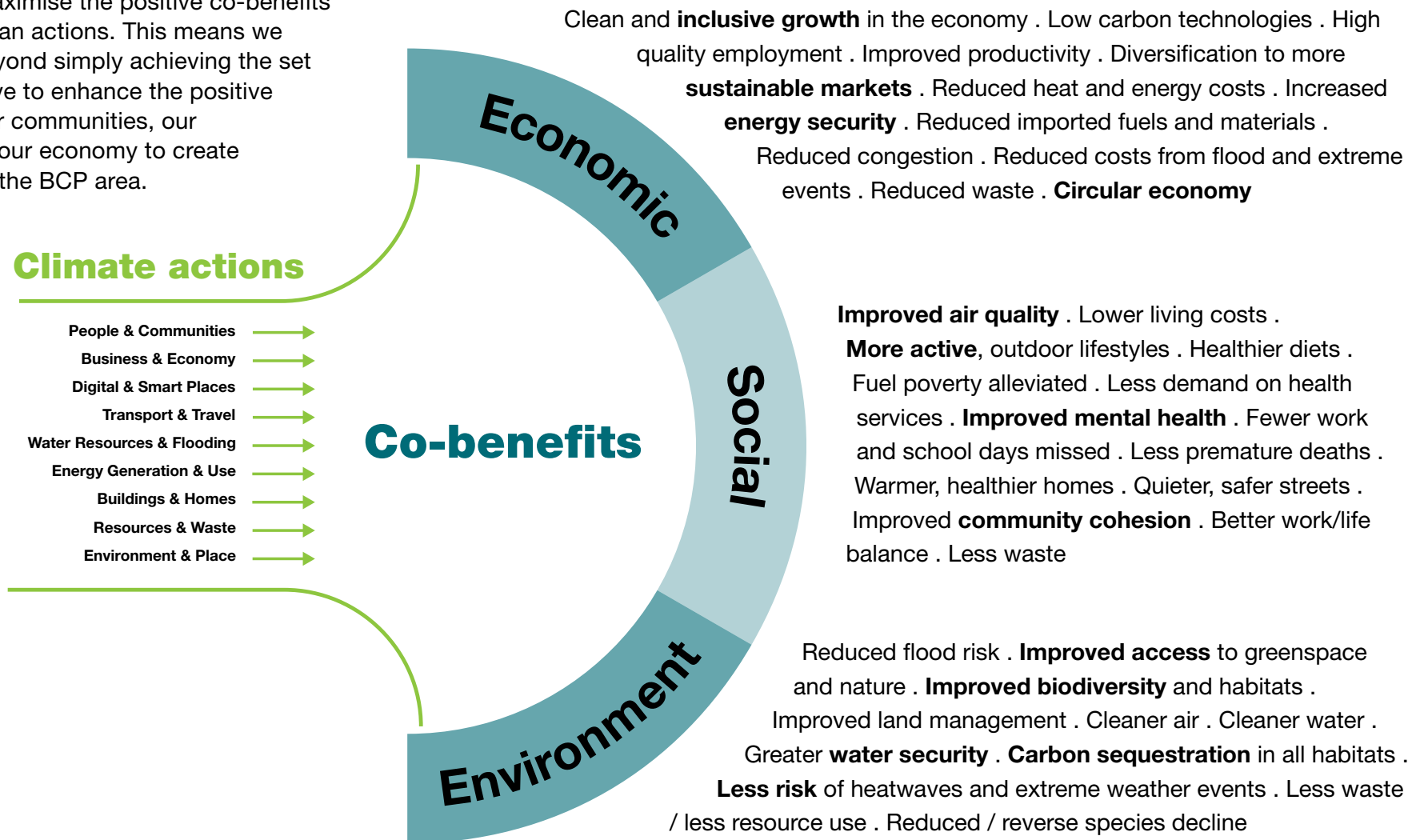


Co-benefits realisation

Co-benefits are additional positive outcomes from actions which expand beyond the main focus of an activity.

Co-benefits from climate action can create new opportunities which benefit both people and planet.

We will seek to maximise the positive co-benefits in all our Action Plan actions. This means we will work to go beyond simply achieving the set actions as we strive to enhance the positive impacts felt by our communities, our environment, and our economy to create a better future for the BCP area.



Monitoring, evaluating and reporting

Once finalised, the strategy will be reviewed every five years, with a new action plan produced each year. It will consider opportunities to accelerate delivery, ensure that the focus of the priorities is valid and that any new risks are taken into account for resilience.

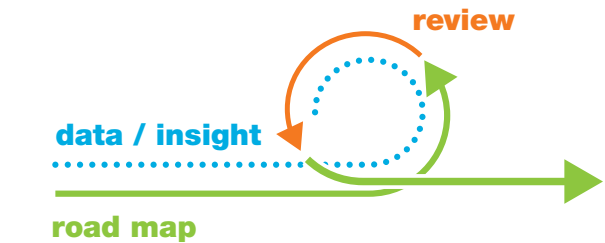
The supporting action plan will be reviewed annually. The climate action plan is based on our understanding of the best available evidence. Our collective understanding of this complex area is changing fast. Many innovative ideas that could offer major solutions are being trialled. So whilst the high-level actions are unlikely to change greatly, the delivery of the actions will. To ensure that the action plan continues to identify and prioritise the most cost-effective approaches, a delivery plan will serve to track detailed actions and be adapted on a regular basis to ensure the plan continues to respond to new circumstances. An agile delivery plan requires careful monitoring.

Strategic Aim 1

To make BCP Council and its operations carbon neutral by 2030

This strategy will be delivered through services across the council, co-ordinated through our climate action team working with groups and organisations in different sectors. An annual monitoring report will be prepared. We will use this to track progress towards our net zero target and to inform the actions we need to collectively take to make progress. We will publish progress on an annual basis. Publishing progress will demonstrate transparency so that residents can ensure we are delivering against our commitments.

A decision-making tool has been developed and implemented for all key council decisions to assess the positive or negative impact on climate change mitigation and resilience. This will be applicable to all key decisions within the council.



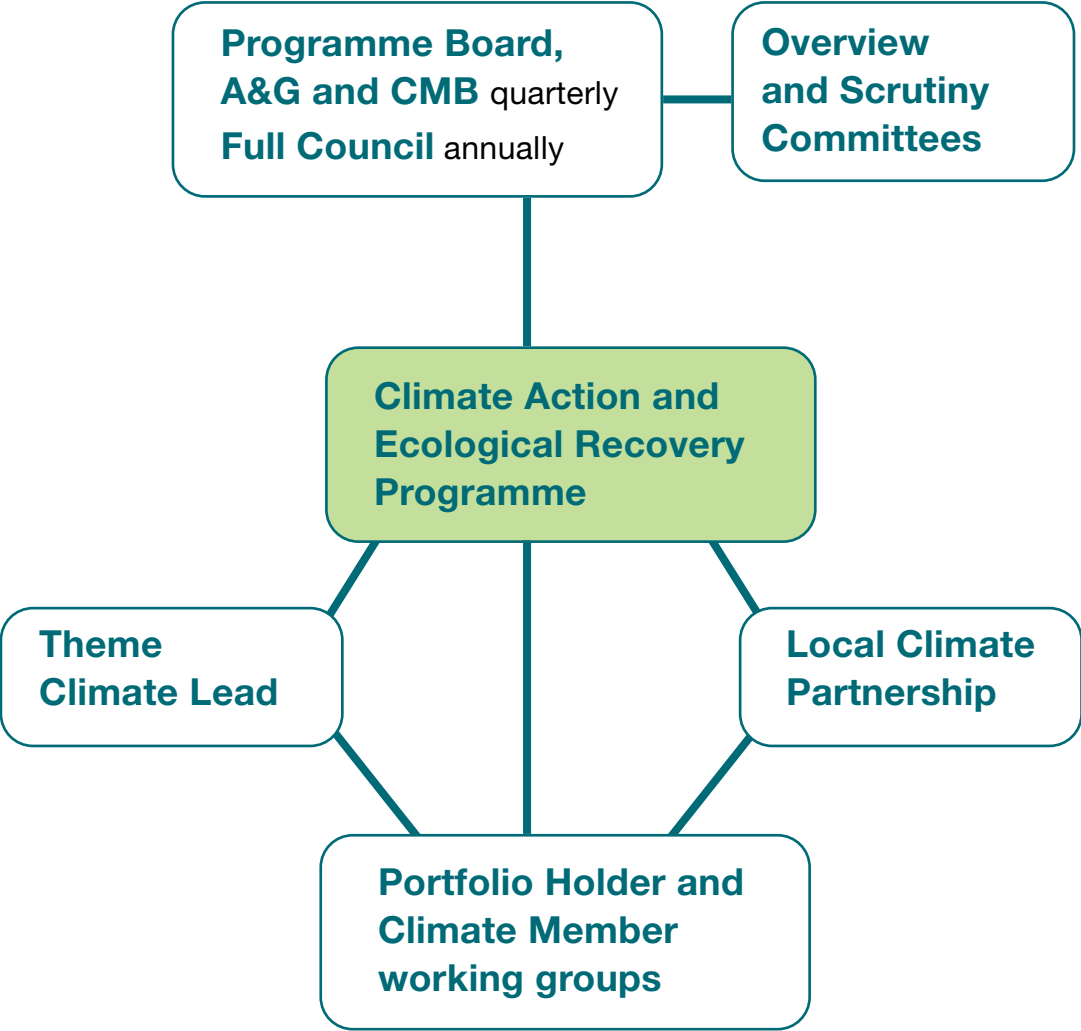
Strategic Aim 2

Work with the wider community to make the area carbon-neutral before the UK target of 2050

We will continue to deliver through existing working groups, partnerships and the emerging Local Climate Partnership. Convening and contributing to working groups as a springboard for collaboration, showcasing, providing leadership and a catalyst for action on climate change.

Delivery will require working with organisations, residents, businesses and the entire community of Bournemouth, Christchurch and Poole. Many of the actions will need to be delivered in partnership with stakeholders in a delivery or an advisory capacity and these will include the (Councillor) Member Climate Working Groups, BCP Local Climate Partnership, partners, businesses, community organisations as well as individual residents. The council will explore effective ways of engaging with partners and stakeholders and look for ways to encourage and support delivery of this strategy through local initiatives.

Governance



Diversity and social inclusion

Climate change is inherently unequal.

Countries that have historically been the cause of today’s changing climate are not necessarily the ones that are feeling the worst effects, and their populations not the most able to readily adapt to new conditions. This strategy has been assessed for equality and sustainability impacts and individual projects will also be subject to these checks to ensure that any adverse effects are minimised. Some inequalities to consider in project design and delivery are; older people are at most risk of extreme heat and cold, people living in deprived areas have less access to green space and are more likely to experience the urban heat island effect, tenants are less able to change their homes to adapt to climate change, Black and Minority Ethnic (BAME) communities are disproportionately affected by air pollution. Young people will be more affected by climate change, so we will seek to involve them to ensure they help shape the world they will grow old in and give them the tools to be resilient in a less climate-stable future.

Funding and resourcing

To achieve the objectives of this strategy, substantial investment will be needed at an international, national and local level, particularly in relation to infrastructure projects and long term programmes, such as the move away from fossil fuel heating systems and investment in sustainable transport solutions.

The UK Government's target for national carbon neutrality by 2050 means at this time funding for initiatives in part remains unclear. With limited resources available for local authorities to deliver projects and infrastructure change, prioritising resource allocation is essential. BCP Council has finite and limited funds, and a significant proportion of this money is already allocated. We must ensure we gain optimal benefits and emissions reductions from all our investments. Whilst there is a role for in-depth analysis and longer-term planning, it should not prevent us from taking immediate action in areas that already have a strong evidence base.

Core base budget funding

A core council climate budget has been established and doubled in 2021 to provide the foundations to fund resources to support climate action progress

External funding

We are actively seeking resources from wherever aligns with the intent and timing of our programme. This includes EU sources and central government, through local partnering and pro-bono support, through new business models, philanthropy and impact investment.

Private finance

In some circumstances it will be appropriate to enable private investment in infrastructure and the development and provision of new products and services. Where this is sought, normal council procurement rules will be utilised, but also we will consider the source and implications of the funding so as to ensure sustainable, balanced outcomes can be achieved. We will not seek external funding from sources that do not align with the principles of sustainable development and the outcomes demanded by the UN's Sustainable Development Goals.

The Green Futures Fund

In 2022 a Public Works Loan Board funding source was agreed and secured for use in delivering the infrastructure and assets required to transition BCP and the council to a climate safe operating space.

The fund is to the value of £20M available over the next 4 years to be spend on capital projects. It can accessed through the Infrastructure Board with Cabinet/ Full Council approval of spend.

The purpose of the fund:

To deliver infrastructure system and asset modernisation: mitigating the causes and adapting to the risks of a more hostile and disrupted future to ensure our continued and improved quality of life and wellbeing

The aims of the fund:

We must use the Green Futures Fund to ensure:

- our critical infrastructure systems (energy, food, buildings, industry, materials) are fit for purpose now and into the future
- that they are resilient to our changing world
- that they provide significant opportunities for regional sustainable development.

**This strategy is produced by BCP Council's
Environment Directorate**

Draft February 2023

References

IPCC: Climate Change 2022: Impacts, Adaptation and Vulnerability

<https://www.ipcc.ch/report/ar6/wg2/>

DEFRA: UK Climate Change Risk Assessment 2022

<https://www.gov.uk/government/publications/uk-climate-change-risk-assessment-2022>

WWF: Living Planet Report 2020_

https://www.wwf.org.uk/sites/default/files/2020-09/LPR20_Full_report.pdf

SCATTER: <https://scattercities.com/>