Belfast CLIMATE ACTION PLAN

April 2025

DRAFT

Belfast City Council

Contents

Belfast City Council

KPMG

Foreword

Tackling climate change remains the challenge of our generation. The scale of the required response means that we all need to play our part and collaborate with others.

We recognise that the City Council must show leadership on this issue. We know that reaching net zero and increasing resilience will be challenging but the potential benefits are worth striving for.

This action plan describes what Belfast City Council is doing to reduce the greenhouse gas emissions within our control and increase the resilience of our assets and operations to withstand the effects of extreme weather events associated with climate change.

Our progress so far

In 2024, we developed an ambitious Local Area Energy Plan for the city which sets out a series of priority decarbonisation investments to support an inclusive, transition to a net zero, resilient future by 2050.

We also completed energy audits on four of our key buildings (City Hall, Duncrue, Adelaide, Cecil Ward) which set out in detail how we will reduce emissions from our buildings, and we have five more audits planned for 2025.

We commissioned a series of studies to de-risk a city centre heat network that could decarbonise the heating of our highest energy consuming buildings.

We've switched our fleet over to HVO, ran a number of recycling pilots and installed Water Refill Stations in City Hall and St Georges Market. We've also developed a draft policy on Single Use Plastics and we're tracking the carbon in our Supply Chain.

We've completed a Tree Strategy and have undertaken survey work at Clement Wilson Park, Barnetts Demesne and Sir Thomas and Lady Dixon Park to understand how flood resilience, carbon sequestration and biodiversity can be improved.

We are committed to ensuring the Council is preparing for climate change, to embedding resilience and mitigation into our Corporate Delivery Plan on an annual basis and to keeping this Action plan under review.

Councillor Róis-Máire Donnelly, Chair of the Climate and City Resilience Committee and Sinn Fein Councillor for Black Mountain

John Walsh, Chief Executive, Belfast City Council

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Executive summary

Executive summary

This Action Plan sets out the scale of the challenge for the Council and the areas where we must take action to mitigate and adapt to climate change

Belfast has a target to be a net zero city and climate resilient by 2050. In response to this, Belfast City Council (BCC) aims to achieve net zero emissions and to increase the resilience of its assets and services to withstand and adapt to changing climate conditions and recover positively from shocks and stresses. This Climate Action Plan provides a roadmap to achieve these targets for the Council.

Our Climate Action Plan features a range of actions across five key themes – Tools for Transition, Adaptation, Energy and Buildings, Transport, Waste Management. The actions in this plan set out to close the gap between BCC's current climate action and its ambition to be a net zero[1] and resilient Council. This plan includes actions to be delivered in the short term (by 2025), medium term (by 2030) and longer term (2030+).

In consultation with Departments, the short-term actions have been mainstreamed into the Corporate Annual Delivery Plan for 2024-25. Going forward, the plan will be reviewed annually with priority actions brought forward by Departments for inclusion in the Council's Annual Delivery Plan. This mainstreaming approach will ensure that the Climate Action Plan supports the delivery of the Annual Delivery Plan and that climate actions are resourced as part of the annual planning cycle.

71 climate actions

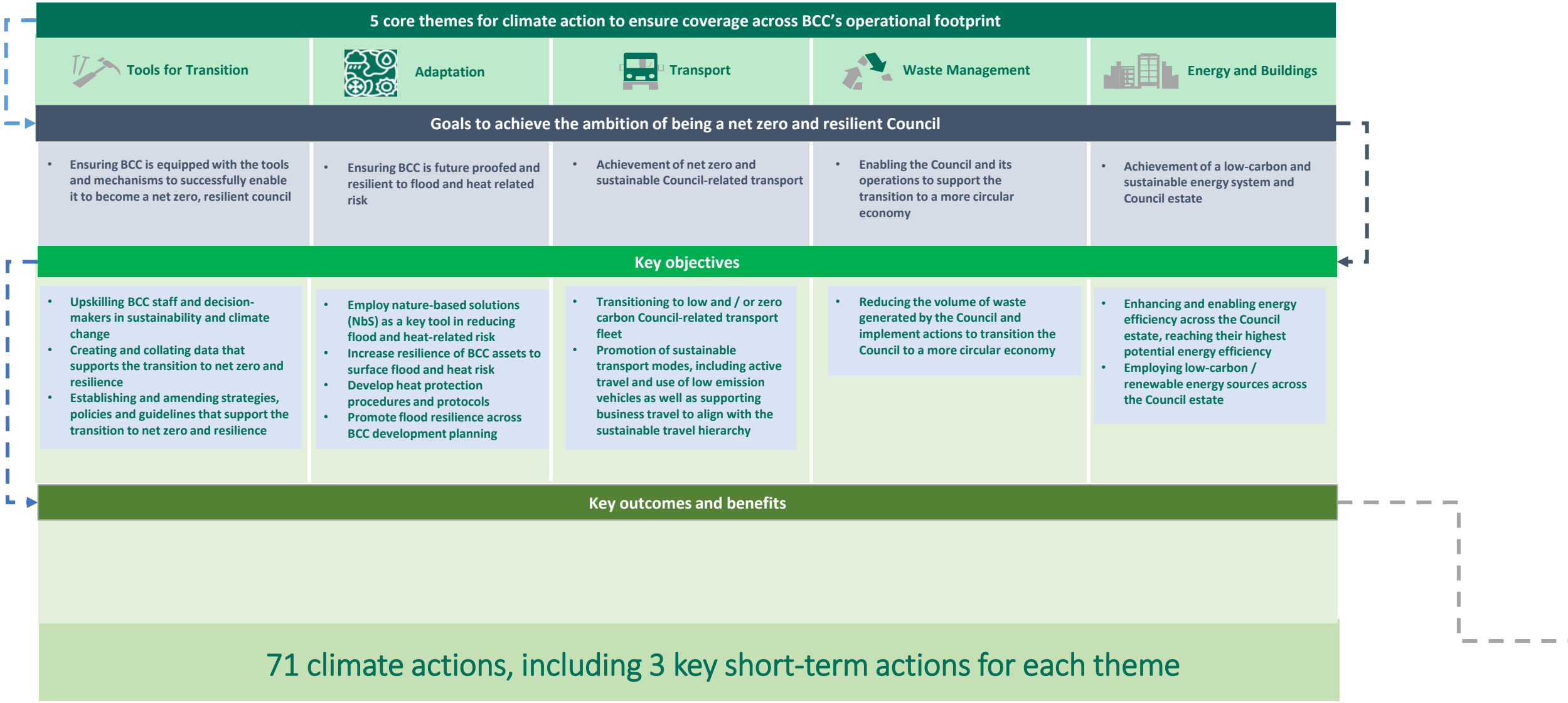
across

5 themes

- Tools for Transition
- Adaptation
- Energy and Buildings
- Transport
- Waste Management

1 Net zero includes scope 1, 2 and 3, and focuses on the Council's own operations

BCC's Climate Action Plan on a page



Key climate actions to be delivered in the short-term

The CAP identifies priority short-term actions for each of the 5 themes which have been integrated into the draft Council's Corporate Annual Delivery Plan 2025/26

Tools for Transition

1. Develop and launch an accessible climate data platform to track progress on delivering climate adaptation and mitigation actions (1.7)
2. Develop a sustainable/ low carbon procurement policy and supplier guidance documents to support a transition to an inclusive, net zero and resilient future (1.12)
3. Develop a sustainable food policy for the Council that addresses waste, sourcing, packaging, emissions measurement and an events protocol (1.14)
4. Prepare departments for data collection required for Public Body Reporting under the Climate Change Act (1.18)
5. Prepare mitigation report (Oct 2025) and adaptation report (March 2026) for submission to DAERA in line with Public Body Reporting requirements (1.19)

Adaptation and Resilience

1. Update the BCC Climate Risk Assessment in line with the new mandatory Public Body Reporting requirements (under the Climate Change Act) (2.2)
2. Apply SUDs policy and guidance (SUDS Manual C753) as standard practice in the Capital Programme (2.3)
3. Start to deliver the Tree Establishment Strategy and continue the One Million Trees Programme (2.19)

Energy and Buildings

1. Complete a second phase of building energy audits - (Andersonstown LC, Lisnasharragh LC, Templemore Av LC, Brook LC) and the Waterfront Hall (3.4)
2. Develop the integration of whole life carbon assessments as standard practice in the Capital Programme (3.8)
3. Launch a phased metering and retrofitting programme across BCC's top energy users based on the findings of the building level audits of Adelaide, Cecil Ward, City Hall and Duncrue (3.11)
4. Scope out a strategy to increase renewable and low-carbon energy use through corporate power purchase agreements (3.15)

Transport

1. Review the Business Travel Policy and develop the Sustainable Staff Travel Plan to encourage modal shift, active travel and more fuel-efficient driving for Council staff (4.1)
2. Through sustainable procurement, aim to use local suppliers to the Council to reduce miles travelled within the confines of procurement legislation and Local Govt Act restrictions (4.4)
3. Conduct a commercial assessment of Council land suitable for installing low emission vehicle (LEV) charging points (4.9)
4. Commence work on repurposing staff parking spaces for cycle racks and integrate appropriate facilities to support active travel e.g. shower and changing facilities (4.10)

Waste Management

1. Initiate an internal Council-level Waste Management Plan which aligns with the Waste Management Hierarchy and with an emphasis on green waste (5.3)
2. Continue to progress the proposal for a single use plastics policy for the Council (5.4)
3. Develop a mechanism to track and report on internal Council generated waste (5.7)

02

Introduction

Context

We know that climate change is already happening as we've seen extreme weather events becoming more frequent, severe and longer. While we must do all we can to reduce greenhouse gas emissions, we recognise the need to re-nature the City to restore biodiversity and increase resilience to the impacts of climate change.

In line with global trends, the climate of Northern Ireland and Belfast is changing - temperatures are increasing, sea levels are rising and patterns of precipitation are changing. These changes are projected to continue and intensify with a wide range of impacts for Belfast and Belfast City Council. A summary of key climate and weather-related changes already observed and projected for Northern Ireland and the city of Belfast is provided below.

Increased temperatures - Average annual temperatures have increased by 0.8ºC for the most recent decade compared to 1961-1990 baseline[1]. During July 2021, the highest temperature on record for Northern Ireland (31.3ºC) was recorded at Castlederg, Tyrone[2]. Under a high emissions scenario (RCP8.5), average annual temperatures in Northern Ireland are projected to increase by up to 2.5°C by 2050, when compared to the 1981-2000 baseline[3]. Average winter temperatures are projected to be up to 2.6°C warmer by 2050, with average summer temperatures 3.2°C warmer[3].

Changing rainfall patterns - Average annual rainfall has increased by 7% for the most recent decade when compared with the 1961-1990 baseline[1]. Approximately 58mm (2.3 inches) of rain fell in 90 minutes in Central Belfast on July 28th 2000[2]. Under a high emissions scenario, an increase of up to 27% in winter precipitation for Northern Ireland is projected by 2050, when compared with the 1981-2000 baseline[1]. Summer precipitation totals are projected to increase under a high emissions scenario by up to 11% by 2050[1].

Increased sea level rise and tidal surges - Sea levels around the United Kingdom have risen by 16.5 cm since 1901[4]. For Belfast Harbour, the 5 highest tidal surges on record have been recorded since 1994[5]. Large proportions of Belfast city centre are situated between 1 and 2 metres below extreme tide level and 6,000 properties are currently considered at significant coastal flood risk[5]. By mid-century, sea levels across Northern Ireland are also predicted to increase by up to 0.3m under a RCP8.5 scenario with respect to the 1981-2000 baseline[1].

Purpose of the plan

The purpose of this plan is to set out the practical steps Belfast City Council will take in the coming years across its own assets and operations to address the climate emergency, some of which are already underway. We aim to adopt an integrated approach to tackling the climate and ecological emergency alongside other city priorities to maximise the co-benefits.

We will mainstream these climate actions into our corporate planning and delivery processes. Each year, we will embed selected mitigation and adaptation actions from this plan into our Corporate Annual Delivery Plan and report on our progress in line with Northern Ireland's Public Body reporting requirements under the NI Climate Change Act.

We will also update this plan regularly to add new actions and remove actions that we have completed.

[1]IPCC, 2023: Climate Change 2023: Synthesis Report. A Report of the Intergovernmental Panel on Climate Change. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, (in press); [2]Ballester, J., et al. (2023) 'Heat-related mortality in Europe during the summer of 2022',. Nat Med 29, 1857–1866.; [3]Jenkins, K. et al. (2022) 'Updated projections of UK heat-related mortality using policy-relevant global warming levels and socio-economic scenarios', Environmental Research Letters, 17(11), p. 114036; IPCC, 2021: Summary for Policymakers. In: Climate Change 2021; [4]The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 3–32,

Global climate change

Global temperatures are rising at an unprecedented rate, this increase is caused by the release of greenhouse gas emissions from human activities. This phenomenon is driving extreme temperatures, changing rainfall patterns, more frequent severe weather events, and increased sea level. These changes are projected to continue and intensify with a wide range of impacts on global populations and ecosystems.

Since 1990, the IPCC has published a series of assessment reports which provide a synthesis of the most up-to-date science and evidence of climate change [1]. The most recent 6th Assessment Report shows that global average temperatures have increased by 1.1°C when compared with pre-industrial conditions (1850-1900) and that this increase is unprecedented since the start of human civilisation. Changes in global climate are being reflected in changes in the frequency and intensity of extreme weather events such as heatwaves, droughts and flooding. As illustrated in the adjacent graph, projections indicate these changes are expected to continue and intensify into the future. Some of the key consequences of ongoing and projected climate change are outlined below:

Extreme Temperatures: Observed increases in the frequency of extreme temperatures are already affecting global populations. During the summer of 2022, 61,672 heat-related deaths occurred in Europe [2]. By the end of this century, projections show that under a high emissions scenario, the number of heat-related deaths across the UK will increase by up to 562%[3].

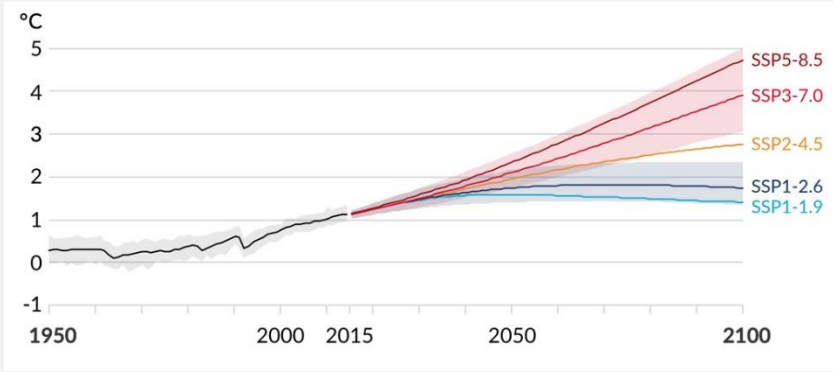
Drought: Increasing global temperatures intensify the risk of drought, resulting in water supply shortages and food production loss. Today approximately half the world's population experiences severe water scarcity for at least one month per year due to climatic and other factors [1]. Under a high emissions scenario (SSP5-8.5), 30% of global crop and livestock areas will become climatically unsuitable by 2100.[1]

Changing rainfall patterns: Increased precipitation represents a threat to low-lying settlements and urban areas. By 2100, the global population exposed to flooding under a high emissions scenario (SSP5-8.5) will increase by up to 400% [1]. Projections show that damage costs and people affected by precipitation and fluvial flooding may double across Europe by the end of the century[1].

Sea level rise: Sea level rise is already impacting ecosystems, human livelihoods and infrastructure. The average rate of global sea level rise was 1.3 mm/yr. between 1901 and 1971, increasing to 1.9 mm/yr. between 1971 and 2006, and further increasing to 3.7 mm/yr. between 2006 and 2018 [1]. Under a high emissions scenario (SSP5-8.5), global sea level is projected to rise by 0.20 – 0.29m by 2050[1]. This will further amplify the currents risks faced by coastal cities and settlements.

Scenario trajectories and temperature outcomes

To project future climate change, scientists develop projections of future climate conditions based on different atmospheric GHG concentrations. The assessed projected change in mean global surface temperature for five future climate scenarios is illustrated on the graph below[4]. Future global temperatures can vary from below 1.5°C to over 4°C by 2100 depending on the levels of future emissions. Under a high emissions scenario (SSP5-8.5) global average temperature is projected to rise by up to 4.4 °C by 2100. Under a 'middle of the road' scenario (SSP 2-4.5), where initial progress towards sustainability is slow, global average temperature will rise by 2.7°C. If strong mitigation actions are taken immediately, global temperatures are projected to rise by 1.5°C under a low emissions scenario (SSP 1-1.9).



[1]IPCC, 2023: Climate Change 2023: Synthesis Report. A Report of the Intergovernmental Panel on Climate Change. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, (in press); [2]Ballester, J., et al. (2023) 'Heat-related mortality in Europe during the summer of 2022',. Nat Med 29, 1857–1866.; [3]Jenkins, K. et al. (2022) 'Updated projections of UK heat-related mortality using policy-relevant global warming levels and socio-economic scenarios', Environmental Research Letters, 17(11), p. 114036; IPCC, 2021: Summary for Policymakers. In: Climate Change 2021; [4]The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 3–32,

International, national and regional response

Global responses to climate change are accelerating, as exemplified by the signing of the Paris Agreement by 196 countries in 2015. Northern Ireland's climate policies and Belfast City Council's plans are evolving in line with national and international requirements to achieve net zero and deliver climate resilience by 2050

Policy and strategic context

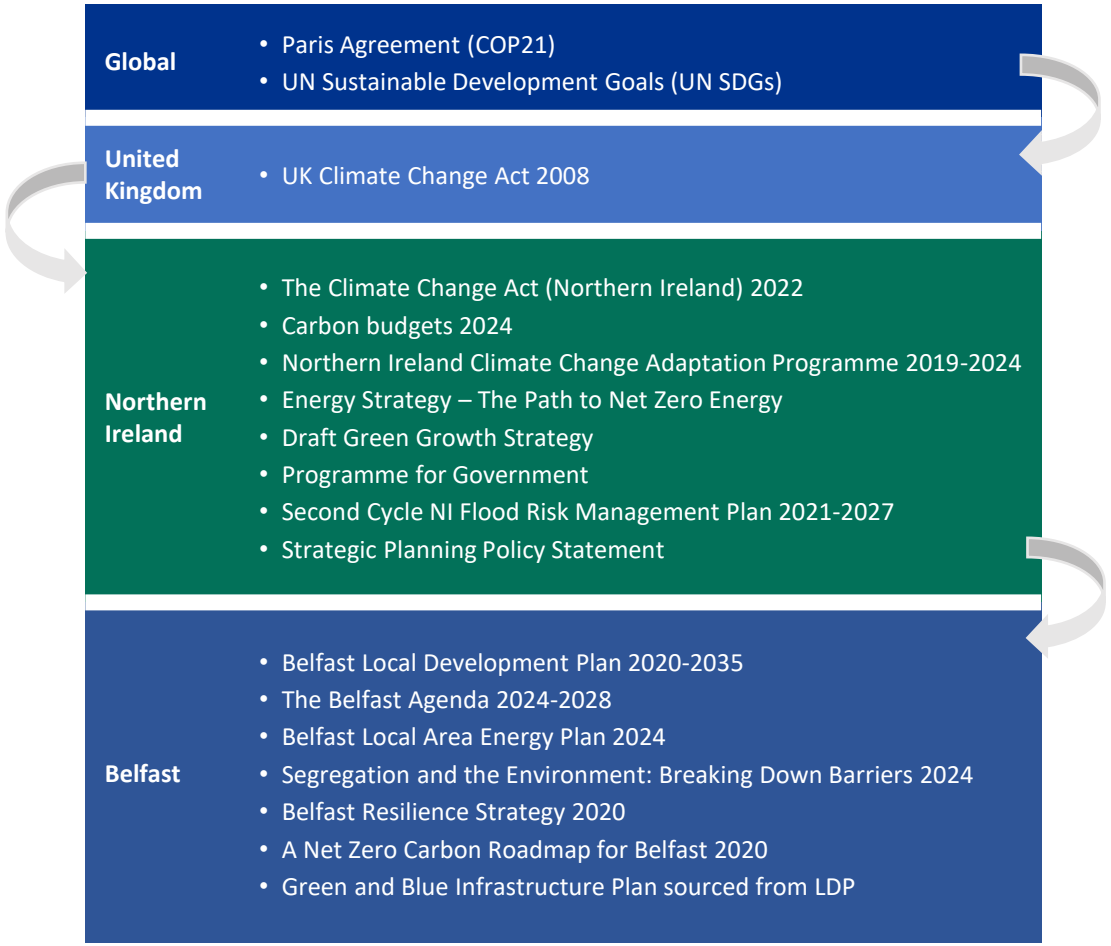
The COP21 Paris Agreement which aims to limit global warming to less than 2ºC above pre-industrial levels, pursue efforts to limit increases to 1.5ºC, build resilience and increase the world's ability to mitigate the impacts of climate change.

The Climate Change Act (Northern Ireland) 2022 sets targets for Northern Ireland to reduce its GHG emissions. The Act sets out a carbon budgeting framework, provisions for reporting against emissions targets and carbon budgets, and the appointment of a Climate Commissioner. The Act sets an interim target of at least 48% reduction in net emissions by 2030 and sectoral targets including at least 80% of electricity consumption from renewable sources and 70% of waste is recycled as well as a target of minimum spend of 10% of overall transport budgets on active travel by 2030.[1] The Carbon Budget (2023-2037) Regulations (2024) set the first three carbon budgets as an average annual reduction of 33% for 2023-2027; 48% 2028-2032; and 62% for 2033-2037.

In 2022, Belfast adopted carbon reduction targets of 66% reduction by 2025, 80% reduction by 2030 and 100% reduction by 2050 (compared to 2000). Belfast's community plan, the Belfast Agenda (2024-2028) outlines priorities of action over the next four years including a programme of work under one of its key themes 'Our Planet which aims to create a sustainable, nature-positive city'.

The 2024 Belfast Local Area Energy Plan outlines a series of priority projects to transition the city to clean, renewable energy sources to reach net zero by 2050. The plan provides a strategic case for investment that will enable a transition to an affordable and decarbonised energy system as well as supporting wider socio-economic goals.

The Segregation and the Environment: Breaking Down Barriers report identifies strong links between a legacy of segregation and division in some parts of Belfast and the city's future ability to respond to the challenges posed by climate change. This segregation handicap is due to a duplication of public services created during the conflict.

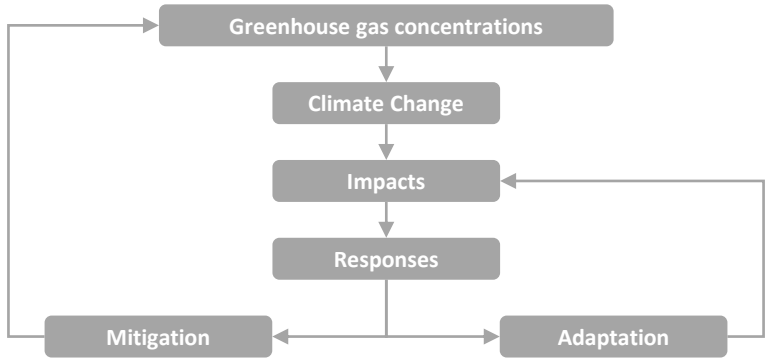


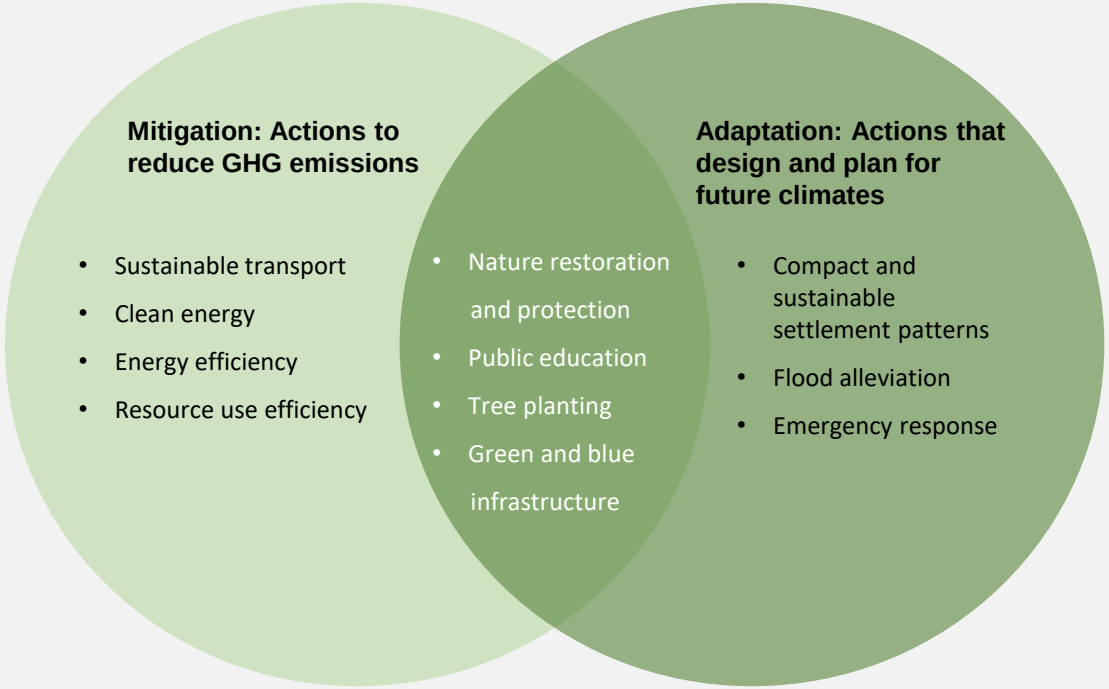
Climate action

There are two categories of climate action: those that aim to reduce emissions (mitigation) and those that aim to increase resilience to climate impacts (adaptation). Climate action also provides co-benefits for actions not directly related to climate change including cleaner air, the creation of green jobs, improved public health from active travel, and biodiversity enhancement.

Traditionally, mitigation and adaptation have been dealt with separately. However, they are complementary approaches and there is an increasing recognition that they need to work in an integrated manner to successfully achieve their respective aims.

1. **Mitigation:** decreasing the causes of climate change by making efforts to prevent or reduce the emission of GHGs into the atmosphere. Mitigation action focuses on limiting the rate and scale of future climate change by reducing levels of greenhouse gas emissions (e.g. by increasing the share of renewable energies or establishing a cleaner mobility system) and increasing GHG sinks (e.g. through afforestation). In short, mitigation is a human intervention that reduces the sources of GHG emissions and/or enhances the sinks.
2. **Adaptation:** anticipating the adverse effects of climate change and taking appropriate action to prevent or minimise the damage caused, coping with the impacts that can't be avoided or taking advantage of opportunities that may arise. Examples of adaptation measures include large-scale infrastructure changes, such as building defences to protect against sea-level rise as well as behavioural shifts, such as individuals reducing their food waste. In essence, adaptation can be understood as the process of adjusting to the current and future effects of climate change.





Adaptation and mitigation are two necessary and complementary routes of action that address two different aspects of climate change.
Adaptation and mitigation can and should work in an integrated manner to maximise co-benefits and to decrease the impacts of climate change on lives and livelihoods.

Belfast City and Climate Action

As the largest city in Northern Ireland, with a population of over 348,000 people[1], Belfast has a key role to play in supporting the achievement of Northern Ireland's decarbonisation targets and ensuring it is resilient to the impacts of climate change.

Belfast declared a climate emergency declaration in October 2019 and has adopted carbon reduction targets of 66% reduction by 2025, 80% reduction by 2030 and 100% reduction by 2050 . The Our Planet Board oversees a programme of work which aims to create a sustainable, nature-positive city, through: Re-naturing the city and increasing resilience to climate change; Creating a sustainable circular economy; and Innovating to net zero. Whilst significant work is still required, Belfast has already made progress in mitigating and adapting to climate change as outlined below (non-exhaustive).

Progress to date by Belfast City in Mitigating Climate Change

	Greenhouse Gas (GHG) Emissions[2]	Belfast emits 1.5 million tonnes of carbon per year. Scope 1 and 2 carbon emissions from Belfast have fallen by 42% since 2000 due to a combination of an increasingly decarbonised electricity supply, structural change in the economy, and the gradual adoption of more efficient buildings, vehicles and businesses. The priority decarbonisation projects outlined in the Belfast Local Area Energy Plan are being progressed through coordinated and collaborative working by the Belfast Net Zero Delivery Group. These include a district heat network, large scale retrofit of buildings, deployment of solar panels and transitioning households on oil to move to low carbon heating.
	Waste Management[3]	In 2021/22 and on a per capita basis, Belfast generated the smallest amount of household waste across Northern Ireland's local authorities at 429kg, compared to 442kg in 2020/21 and 420kg in 2019/20. However, Belfast also had the lowest household waste recycling rates at 41% and has a municipal recycling rate target of 65% by 2035.

Progress to date by Belfast City in Adapting to Climate Change

	Belfast Resilience Strategy[4]	Belfast City Council launched its Resilience Strategy in December 2020. The strategy brought together stakeholders across Belfast and identified a wide range of shocks and stresses faced by the city. The strategy identified the implications of climate change as the single biggest long-term economic risk for Belfast. The strategy is a framework that sets out 38 transformational programmes that aim to safeguard Belfast against future risks.
	Flood Risk Managemen[5]	Belfast is at risk of coastal and pluvial flooding and both are sensitive to climate change. Coastal flooding poses a risk for Belfast with 1,533 properties currently at risk of flooding, 3,400 properties identified as at risk from coastal flooding by 2065 and over 7,900 properties at risk by 2115. Belfast is one of the twelve Areas of Potential Significant Flood Risk (APSFR) listed within the Second Cycle Northern Ireland Flood Risk Management Plan (FRMP) 2021 – 2027. The plan published in 2021, includes specific measures to manage flood risk in each APSFR. Proposed measures specific to Belfast include flood alleviation schemes for the Glenmachan area and the Glenbrook River, feasibility work with regards to a flood alleviation scheme at the Merok Burn Tributaries and the Knock River, and an Enhanced Drainage Area Plan (DAP) for Belfast.
	Nature Based Solutions[6]	Nature based solutions are a key tool for urban centres to support climate mitigation and adaptation. It is estimated that there are 808,000 trees in Belfast, with 63,500 planted since 2020 - providing ecosystem services such as carbon storage, sequestration, pollution removal and avoided runoff – to the benefit of £16.1 million annually.

Source: 1) NISRA Mid-Year Estimate of Population 2022; 2) A Net-Zero Carbon Roadmap for Belfast; 3) DAERA; 4) Belfast Resilience Strategy 5) The Second Cycle Northern Ireland Flood Risk Management Plan (FRMP) 2021 – 2027, 5) Belfast Resilience Assessment, 6) Valuing Belfast's Urban Forest 2022

A Climate Action Plan for BCC

Belfast City Council (BCC) recognises that it needs to show leadership by climate-proofing its own assets and services as well as by supporting both Northern Ireland and Belfast in meeting their climate targets. This Climate Action Plan (CAP) will enable the Council to meet its own emission targets, de-risk its operations and demonstrate its commitment to delivering climate action.

BCC not only has a leading role within Belfast and its communities in setting future directions and bringing together stakeholders to collaborate on solutions, but the services BCC provides play a crucial role in supporting the citizens and communities of Belfast in addressing the challenges and impacts posed by climate change.

Transitioning BCC into a low-carbon, resilient council not only contributes to combatting climate change but also delivers on a range of economic, social and environmental co-benefits as outlined below. Positive outcomes can be achieved across areas such as air quality, health and wellbeing, amenity value, biodiversity and green employment.

Economic Opportunities

- Ensuring assets are future proofed will reduce exposure to current and future climate risks e.g. flooding and extreme heat and associated remediation costs
- Actions that focus on a more localised climate response will support upskilling and the creation of local green employment
- Integrating indigenous, renewable sources of energy will reduce reliance on (imported) fossil fuels, reduce exposure to carbon price hikes/taxation as well as fossil fuel market volatility and improve energy security

Social Opportunities

- Actions that promote the use of sustainable transport and integrate renewable energy as well as increasing open spaces and other nature-based solutions will improve public health by enhancing air quality
- Integrating actions that promote active travel will support improved health and wellbeing by encouraging people to be outside and exercise
- Measures that focus on restoring and regenerating open spaces and wider nature-based solutions will deliver improved amenity value for affected communities
- Implementing retrofit programmes and energy efficiency behavioural change will help to address fuel poverty

Environmental Opportunities

- Implementing measures that support the integration of nature-based solutions and promote the development of open space will improve biodiversity
- Implementing measures such as active travel, switching to renewable energy and sustainable transport will reduce pollution
- Focusing on the transition to a circular economy as well as supporting measures that promote energy and resource use efficiency will reduce pressure on natural resources

N. Ireland Climate Change Act 2022 – Public Body Reporting

The Northern Ireland Assembly passed it first ever climate change legislation in March 2022. The Climate Change Act (Northern Ireland) 2022 received Royal Assent on 6 June 2022 and sets out the legal framework for tackling climate change by reducing greenhouse gas emissions for decades to come in Northern Ireland.

The Climate Change (Reporting Bodies) Regulations (Northern Ireland) 2024, which came into operation on the 3rd May 2024, set climate change reporting duties on specified public body organisations, which are listed within its Schedule. There are 40 public bodies listed in the Schedule and Belfast City Council is one of them. The regulations place reporting duties on the specified public bodies. These duties cover both adaptation and mitigation.

Mitigation – every 3 years

The first mitigation report is due first **– 31st October 2025** and will include:

- a statement, in respect of each of the three preceding financial years, of the amounts and the sources of the Council's greenhouse gas emissions;
- a statement of the Council's proposals and policies for reducing those amounts and otherwise for mitigating the effects of climate change in the exercise of its functions;
- a statement of the time-scales for implementing those proposals and policies; and
- an assessment of the progress made towards implementing the proposals and policies set out in any previous climate change mitigation report.

Adaptation – Every 5 years

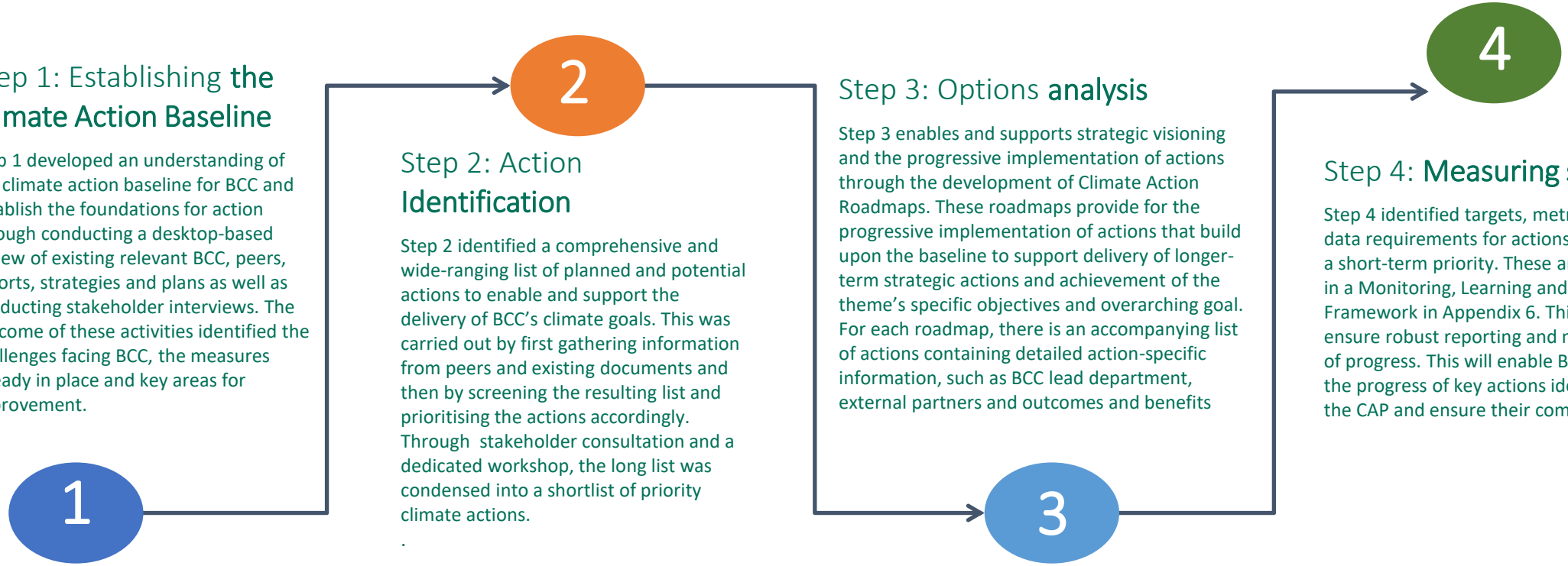
The first adaptation report is due first – **31st March 2026** and will include:

- an assessment of the current and predicted impact of climate change in relation to its functions;
- a statement of Council's proposals and policies for adapting to climate change in the exercise of its functions;
- a statement of the timescales for implementing those proposals and policies; and
- an assessment of the progress made towards implementing the proposals and policies set out in any previous climate change adaptation report.

Key steps of climate action plan development

To develop BCC's CAP a four-step approach was adopted and is outlined below. The following pages describe the four steps in more detail.

The starting point for the development of the CAP was to understand the current status of climate action planning across BCC. This consisted of an assessment of BCC's climate action baseline through a mixture of stakeholder interviews and a desktop review of the Council's relevant policies, plans and strategies. On this basis, key areas of improvement were identified to support BCC in meeting its climate action objectives and a comprehensive list of potential climate interventions was created to support BCC to address these. This comprehensive list was developed by drawing on existing BCC information and documents along with additional resources, including best practice examples from peers and UK / NI Government policy. This list of actions was screened for impact, feasibility and cost by the KPMG team and BCC stakeholders. Collating all of this information and feedback as well as drawing upon expert input, the long list was condensed into a short list of climate actions and associated climate action roadmaps in Step 3. The final phase consisted of the development of a Monitoring, Learning and Reporting Framework for actions considered to be a short-term priority. This framework development included the integration of targets, metrics, outcome indicators and data requirements for each priority action. See Annex for details of each step.



Step 1: Establishing the Climate Action Baseline

Step 1 developed an understanding of the climate action baseline for BCC and establish the foundations for action through conducting a desktop-based review of existing relevant BCC, peers, reports, strategies and plans as well as conducting stakeholder interviews. The outcome of these activities identified the challenges facing BCC, the measures already in place and key areas for improvement.

Step 2: Action Identification

Step 2 identified a comprehensive and wide-ranging list of planned and potential actions to enable and support the delivery of BCC's climate goals. This was carried out by first gathering information from peers and existing documents and then by screening the resulting list and prioritising the actions accordingly. Through stakeholder consultation and a dedicated workshop, the long list was condensed into a shortlist of priority climate actions.

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Step 3: Options analysis

Step 3 enables and supports strategic visioning and the progressive implementation of actions through the development of Climate Action Roadmaps. These roadmaps provide for the progressive implementation of actions that build upon the baseline to support delivery of longer-term strategic actions and achievement of the theme's specific objectives and overarching goal. For each roadmap, there is an accompanying list of actions containing detailed action-specific information, such as BCC lead department, external partners and outcomes and benefits

Step 4: Measuring success

Step 4 identified targets, metrics and data requirements for actions considered a short-term priority. These are captured in a Monitoring, Learning and Reporting Framework in Appendix 6. This is to ensure robust reporting and monitoring of progress. This will enable BCC to track the progress of key actions identified in the CAP and ensure their completion.

Climate Action Plan goals and supporting objectives

The Climate Action Plan (CAP), is structured across the key climate action themes covering Tools for Transition, Energy and Buildings, Transport, Waste Management and Adaptation. Under each of these themes, a specific goal was set in addition to more specific objectives. These goals combined, aim to support the achievement of a net zero and resilient Council. Delivering on each of these goals will yield additional benefits outside of outcomes for climate mitigation and resilience, for community development and environmental sustainability.

Themes	Goals	Objectives
Tools for Transition	**Ensuring BCC is equipped with the tools and mechanisms to successfully enable it to become a net zero, resilient council**	• Upskilling BCC staff and decision-makers in sustainability and climate change • Creating and collating data that supports the transition to net zero and resilience • Establishing and amending strategies, policies and guidelines that support the transition to net zero and resilience
Energy and Buildings	**Achievement of a low-carbon and sustainable energy system and Council estate**	• Enhancing and enabling energy efficiency across the council estate, reaching their highest potential energy efficiency • Employing low-carbon / renewable energy sources across the Council estate
Transport	**Achievement of net zero and sustainable Council-related transport**	• Transitioning to low and / or zero carbon Council-related transport fleet • Promotion of sustainable transport modes, including active travel and use of low emission vehicles as well as supporting business travel to align with the sustainable travel hierarchy
Waste Management	**Enabling the Council and its operations to support the transition to a more circular economy**	• Reducing the volume of waste generated by the Council and implement actions to transition the Council to a more circular economy
Adaptation	**Ensuring BCC is future proofed and resilient to flood and heat-related risk**	• Employ NbS as a key tool in reducing flood and heat-related risk • Increase resilience of BCC assets to surface flood and heat risk • Develop Heat protection procedures and protocols • Promote flood resilience across BCC development planning

Outcomes and benefits

Reduced emissions and increased circularity

Increased climate resilience and re-naturing of natural assets

Climate leadership strengthened through political commitment, awareness and upskilling

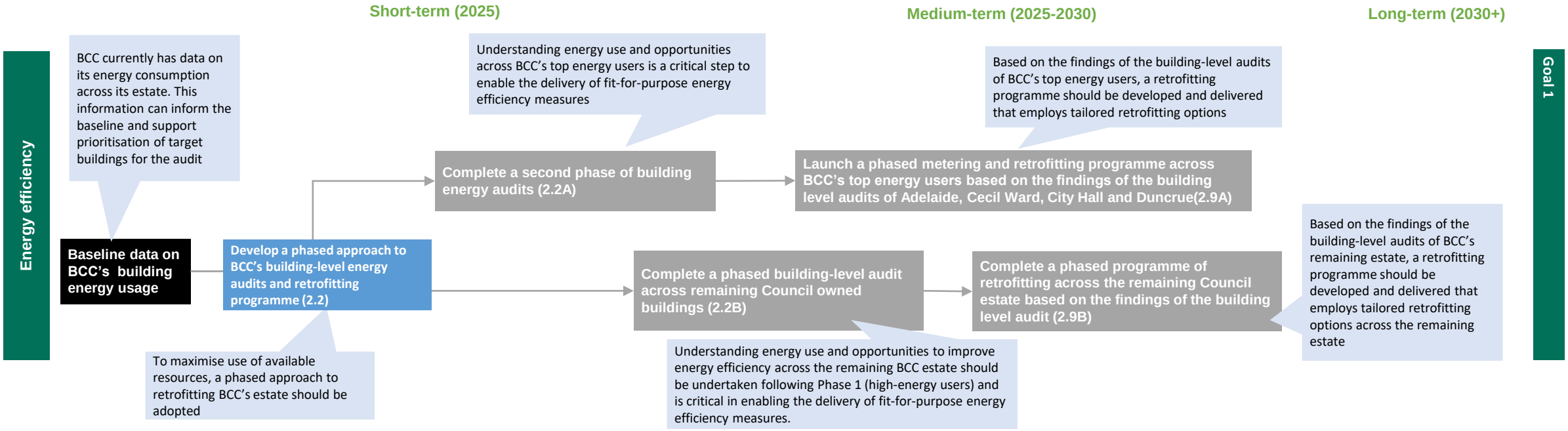
Environmental sustainability improved

Climate Action Roadmaps

The current climate action baseline has been used as the starting point for the action roadmaps with strategic actions developed to meet the objectives of each of the five key climate action themes. Importantly, the action roadmaps identify enabling actions that progressively build upon the baseline to support delivery of strategic actions. Below provides an illustrated excerpt from the Energy and Buildings action roadmap.

Climate Action Roadmap for increasing energy efficiency across the BCC Estate

BCC has 295 sites with 1826 buildings which are a key source of its Scope 1 and 2 emissions. Implementing energy efficiency measures through retrofitting will be a key tool in reducing GHG emissions and meeting climate targets. To achieve this, BCC should conduct building-level energy audits to enhance its existing understanding and data on energy use and to identify opportunities to improve energy efficiency. To make best use of available resource, this programme should adopt a phased approach and first target BCC's highest energy users and then progress across the remaining estate.



Measuring success

For each theme, a Monitoring, Learning and Reporting (MLR) framework has been developed to provide timely and effective information that supports improved decision-making. The MLR framework is designed to be flexible as planning for climate action is considered an iterative process that requires learning-by-doing.

The MLR framework focuses on the short-term actions, in the first and second steps of the roadmaps of each theme (Tools for Transition, Energy and Buildings, Transport, Waste and Adaptation), as these are enabling actions that provide the basis for subsequent actions. Subsequent actions may require revision and fine-tuning based on the outcomes of the actions in the MLR framework.

MLR frameworks are prepared for each theme and specify the objective(s) of each action, the metric(s) related to measuring progress, the target(s), outcome indicators and data required to complete the actions – an example is provided below.

The recommendations included in the framework are meant as a guide to the CAP workstream owners, and the KPIs identified should be integrated into existing implementation and reporting processes and into the day-to-day activities of KPI owners.

Please see Appendix 5 for the Monitoring, Learning and Reporting Frameworks.

Example of MLR Framework for Transport climate action theme

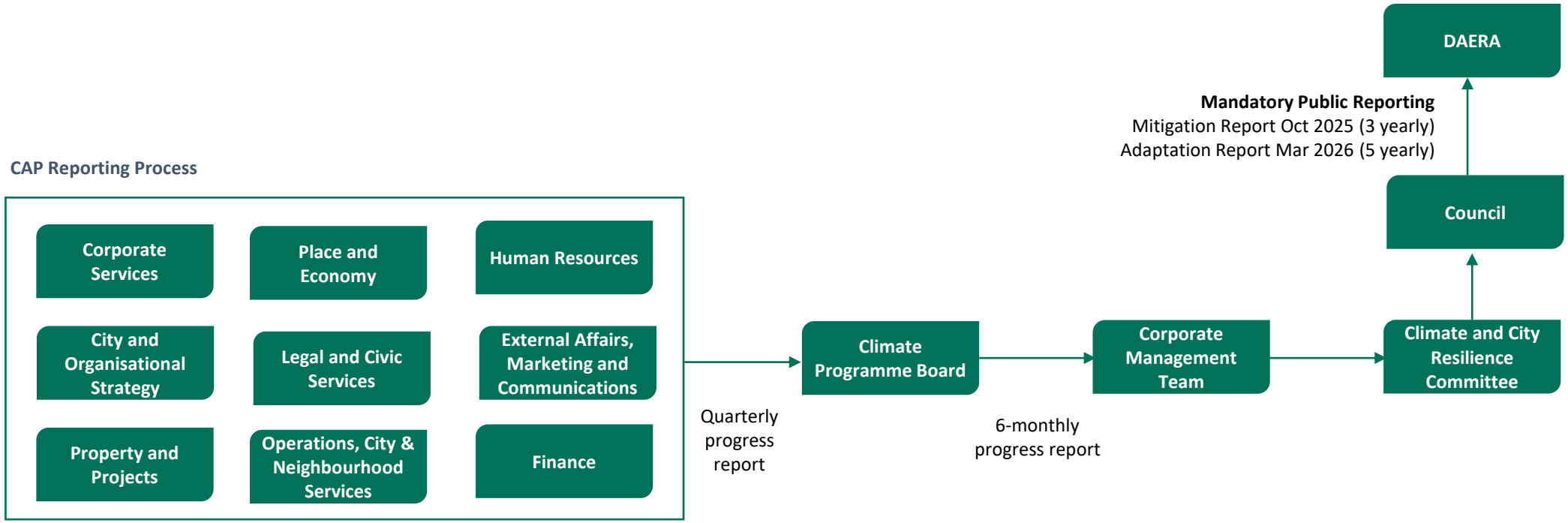
Action	Objectives	Metric	Target	Outcome indicator	Data requirements
4.1 Review the Business Travel Policy and develop the Sustainable Staff Travel Plan to encourage modal shift, active travel and more fuel-efficient driving for Council staff	• To improve knowledge across Council staff on BCC sustainable transport initiatives • To support the uptake of sustainable transport across BCC staff • To decrease scope 3 emissions	• No. of education campaigns run • No. of people reached by campaigns • No. of people changing their travel habits (pre and post campaign) • Scope 3 emissions, CO_2e	• Agreed communications and education plan to inform BCC staff on sustainable transport • Annual review in place to monitor plan • Decrease in scope 3 emissions	• More frequent communication • BCC staff more confident in making sustainable travel choices • Increased use of sustainable transport activities across BCC staff • Scope 3 emissions, CO_2e	• Existing and planned BCC sustainable transport initiatives • Communications and educational content on sustainable transport • Baseline awareness of BCC staff on sustainable travel options • Scope 3 emissions baseline associated with employee commuting

Governance structure

The council already has a robust internal governance framework to oversee its climate programme with the Climate Programme Board providing scrutiny for the overall programme of work

The Climate Programme Board will provide oversight of the delivery and updating of the Climate Action Plan ensuring that the actions are delivered in line with agreed timelines, challenges to its delivery are identified and mitigated and that CAP targets are being met. Heads of Departments will be responsible for securing resources for the implementation of their respective actions and for reporting progress via the Climate Data Platform with regular updates to the Climate Programme Board.

The Climate Programme Board will review progress on a quarterly basis with six-monthly progress reports provided to the Corporate Management Team and the Climate and City Resilience Committee. An annual report will be prepared by the Climate Team by August each year ahead of the submission dates for mandatory public body reporting in October 2025 (Mitigation Report) and March 2026 (Adaptation Report) respectively. The Climate Team will monitor and review progress through the Climate Data Platform and provide advisory support to departments where required.



03

Climate Action Plan

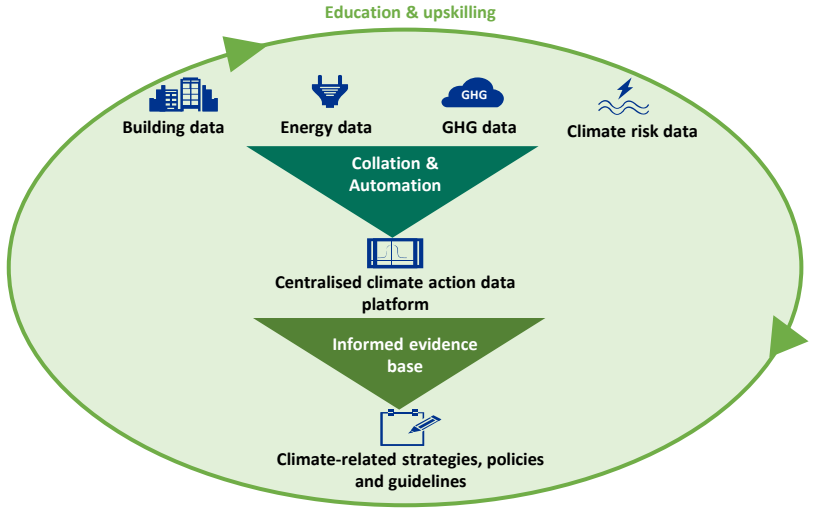
Tools for Transition: Introduction

The Tools for Transition theme aims to equip BCC with the appropriate building blocks to implement effective climate action.

Baseline and context

Ensuring the appropriate building blocks are in place to support climate action is essential to deliver the CAP. Tools for Transition is a sector-agnostic cross-cutting theme that covers areas such as education and upskilling, data as well as development of policies, strategies and guidelines.

- Strengthening current approaches in relation to education and training on sustainability and climate change is essential for BCC to deliver on climate action.
- Furthermore, the integration of climate-related data and automation of processes and systems can strengthen BCC's understanding of progress against targets as well as exposure to climate risks and can streamline BCC's efforts to deliver on climate action.
- In addition, aligning policies, strategies and guidelines with BCC's climate ambition is crucial to ensure climate action is effectively built into the Council's strategic goals and decision making, e.g. developing low carbon/ sustainable procurement policy and supplier guidance documents with the Net Zero transition including a focus on circular economy.



Developing climate actions for Tools for Transition

Developing structures to facilitate the collation and management of climate related data collation, education and upskilling, and the implementation of effective policies will support an informed evidence base and capacity for BCC to deliver climate actions.

Goal: To equip BCC with the tools and mechanisms to successfully enable them to become a net zero, resilient council.

***Obj. 1*: Upskilling BCC staff and decision-makers in sustainability and climate change**

***Obj. 2*: Creating and collating data that supports the transition to net zero and resilience**

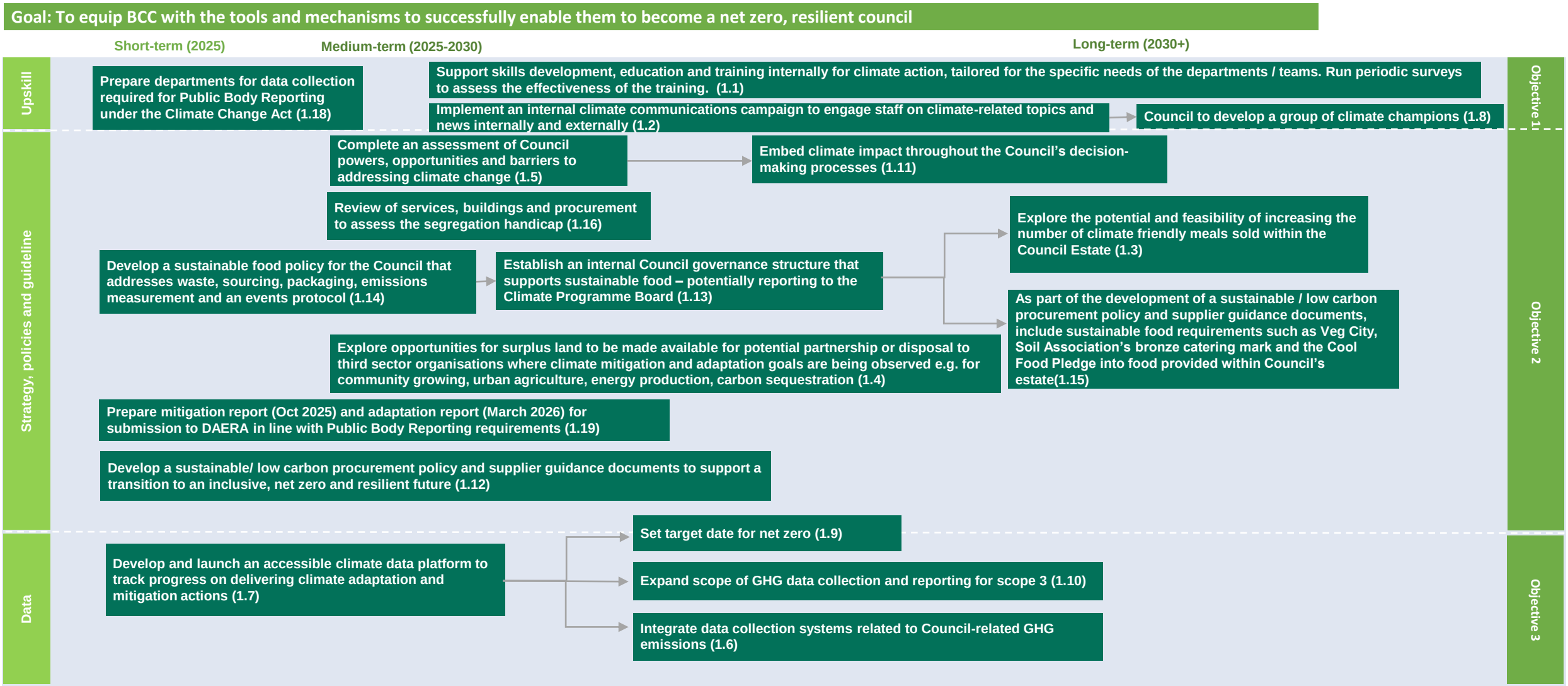
***Obj. 3*: Establishing and amending strategies, policies and guidelines that support an affordable and inclusive transition to net zero and resilience**

Key short-term actions

1. Develop a sustainable food policy for the Council that addresses waste, sourcing, packaging, emissions measurement and an events protocol (1.14)
2. Develop a sustainable/ low carbon procurement policy and supplier guidance documents to support a transition to an inclusive, net zero and resilient future (1.12)
3. Develop and launch an accessible climate data platform to track progress on delivering climate adaptation and mitigation actions (1.7)
4. Prepare departments for data collection required for Public Body Reporting under the Climate Change Act (1.18)
5. Preparate a mitigation report (Oct 2025) and adaptation report (March 2026) for submission to DAERA in line with Public Body Reporting requirements (1.18)

Tools for Transition: Action Roadmap

Goal: To equip BCC with the tools and mechanisms to successfully enable them to become a net zero, resilient council



Tools for Transition

Goal: To equip BCC with the tools and mechanisms to successfully enable them to become a net zero, resilient council

No	Action	Timeframe	Lead department	Supporting partners	Indicator(s)	Outcomes and benefits
Education / awareness raising						
1.1	Support skills development, education and training internally for climate action, tailored for the specific needs of the departments / teams. Run periodic surveys to assess the effectiveness of the training	M	Director of City and Organisational Strategy	Northern Ireland Local Government Association (NILGA), Climate NI, Sustainable NI	• No. of courses completed • No. of attendees to courses	
1.2	Implement an internal climate communications campaign to engage staff on climate-related topics and news internally and externally	M	Director of City and Organisational Strategy	BCC Marketing and Corporate Communications	• Climate Communications Campaign developed • No. Climate-related comms delivered	
Capacity building						
1.3	Explore the potential and feasibility of increasing the no. of climate friendly meals sold within the Council estate	M	Director of City and Organisational Strategy	Belfast Sustainable Food Partnership	• Feasibility study completed	
1.4	Explore opportunities for surplus land to be made available for potential partnership or disposal to third sector organisations where climate mitigation and adaptation goals are being observed e.g. for community growing, urban agriculture, energy production, carbon sequestration	M	City and Neighbourhood Services, Property and Projects	Director of City and Organisational Strategy	• Opportunities assessed	
1.5	Complete an assessment of Council powers, opportunities and barriers to addressing climate change	M	Director of City and Organisational Strategy	n/a	• Assessment completed	
1.6	Integrate data collection systems related to Council-related GHG emissions	M	Director of City and Organisational Strategy	Strategic Director of Corporate Services	• No. of data systems integrated	
1.7	Develop and launch an accessible climate data platform to track progress on delivering climate adaptation and mitigation actions	S	Strategic Director of Finance and Resources	Director of City and Organisational Strategy	• Use of climate data platform • Integration of climate data platform	
1.8	Council to develop a group of climate champions	M	Director of City and Organisational Strategy	n/a	• Climate Champions working group established	
• **Policy/planning**						
1.9	Set target date for net zero	M	Director of City and Organisational Strategy	n/a	• Target date set	
1.10	Expand scope of GHG data collection and reporting for scope 3	M	Director of City and Organisational Strategy	n/a	• No. of Scope 3 categories reported on	
1.11	Embed climate impact throughout the council's decision-making processes	M	Director of City and Organisational Strategy	n/a	• No. of decision-making processes that include climate aspects	

See Appendix 1 for status, timeframe and outcomes and benefits key

Tools for Transition

Goal: To equip BCC with the tools and mechanisms to successfully enable them to become a net zero, resilient council

No	Action	Timeframe	Lead department	Supporting partners	Indicator(s)	Outcomes and benefits
Policy / planning						
1.12	Develop a sustainable/ low carbon procurement policy and supplier guidance documents to support a transition to an inclusive, net zero and resilient future	S	Strategic Director of Corporate Services	n/a	• Procurement policy and supplier guidance documents updated	 
1.13	Establish an internal Council governance structure that supports sustainable food – potentially reporting to the Climate Programme Board	M	Director of City and Organisational Strategy	n/a	• New working group established	  
1.14	Develop a sustainable food policy for the Council that addresses waste, sourcing, packaging, emissions measurement and an events protocol.	S	Director of City and Organisational Strategy	BCC Procurement	• Policy implemented	  
1.15	As part of the development of a sustainable/ low carbon procurement policy and supplier guidance documents, include sustainable food requirements such as Veg City, Soil Association's bronze catering mark and the Cool Food Pledge into food provided within Council's estate	M	Director of City and Organisational Strategy	Nourish NI	• Policy updated	  
1.16	Review of services, buildings and procurement to assess the segregation handicap	M	Director of City and Organisational Strategy	City and Neighbourhood Services	• Completion of reviews of services, buildings and procurement with findings shared with senior management	   
1.17	Prepare departments for data collection required for Public Body Reporting under the Climate Change Act	S	Director of City and Organisational Strategy		• Successful upload of data by Departments to climate data platform	
1.18	Prepare a mitigation report (Oct 2025) and adaptation report (Mar 2026) for submission to DAERA in line with Public Body Reporting requirements	S	Director of City and Organisational Strategy		• Submission of report to DAERA	

See Appendix 1 for status, timeframe and outcomes and benefits key

Adaptation to Extreme Weather: Introduction

The adaptation theme aims to ensure BCC is future proofed and resilient to the impacts of severe weather resulting from our changing climate

Assessing Climate Risk for BCC

There are a range of key climate risks arising from climate and weather-related impacts. They are extreme heat, surface water flooding, coastal flooding, windstorms, and extreme cold. Under a changing climate, Belfast will experience hotter drier summers and warmer wetter winters, with more extreme weather and rising sea levels.

In 2023, a Climate Change Risk Assessment was carried out of BCC assets. It looked at a range of extreme weather that the Council would be exposed to under a range of emissions scenarios identified in the UK Climate Projections (2018). The Risk Assessment mapped what areas and assets of the BCC Estate are most at risk from extreme heat and flooding. Projections indicated that extreme heat events will increase substantially for Belfast. There will be an increase in average winter precipitation and in the frequency of heavy rainfall events. This, coupled with sea level rise represents a significant climate risk.

There are also projected changes in storminess, and whilst extreme cold events are projected to become less frequent in the future, they pose a significant risk to BCC. The 'Big Freeze' of 2010 and the 'Beast from the East' in 2018 highlight that cold/snow events remain a possibility despite the overall warming trend.

Challenges exist particularly in understanding the cumulative impacts of one or more extreme weather events happening together or consecutively, placing additional strain and risk on services. Any increased attention on managing the risks from heat should not lead to a subsequent decline in attention to managing the risks from cold. Both heat and cold related health impacts will require health service interventions in the future.

By 2070, winters are projected to be up to 3.9°C warmer while summers could be up to 4.9°C hotter.

By 2070, winters are projected to be up to 25% wetter, while summers are projected to be 38% drier.

By 2100, sea levels are projected to rise by up to 94cm.

Goal: Ensuring that BCC is resilient and future-proofed to the impacts of climate change

Obj. 1: **Integrate nature-based solutions across Council's Estate**
Obj. 2: **Increase the resilience of BCC assets to be able to cope and adapt to the impacts of climate change**
Obj. 3: **Promote the integration climate resilience planning across the Council's Estate**

Key short-term actions

The following short term key actions have been identified and are the first step in realising the 3 objectives above.

1. Update the BCC Climate Risk Assessment in line with the new mandatory Public Body Reporting requirements (under the Climate Change Act) (2.2)
2. Apply SUDs policy and guidance (SUDS Manual C753) as standard practice in the Capital Programme (2.3)
3. Start to deliver the Tree Establishment Strategy and continue the One Million Trees Programme (2.19)

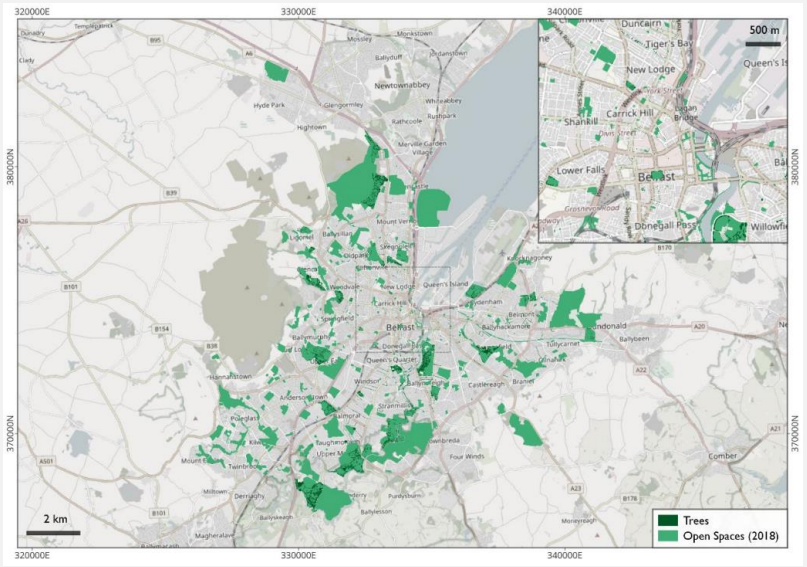
Adaptation to Extreme Weather: Flooding

A Climate Change Risk Assessment (CCRA) has been carried out identifying what BCC assets are most at risk.

Baseline and Context

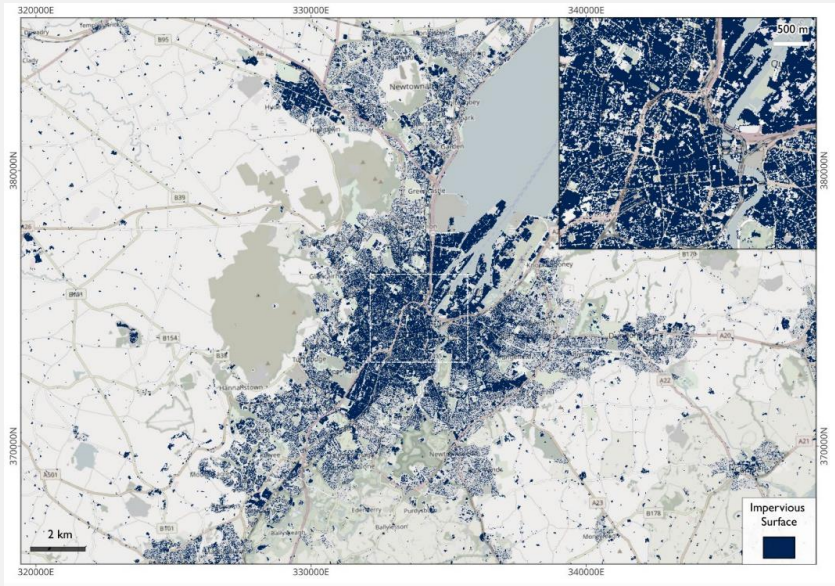
BCC assets have been mapped against the UK Climate Projections 2018 data, and a range of factors have been taken into account to give an indication of climate risk. These include the amount and proximity of trees and green space to the asset and how much impervious surface there is surrounding each site. Sensitivity factors such as the number of BCC staff at different locations also affects the risk to BCC.

Belfast is exposed to both surface water and coastal flooding due to its topography and location within the River Lagan catchment area. For example, for Belfast harbour, the 5 highest tidal surges have all been recorded since 1994. Large proportions of Belfast City Centre are between 1 and 2 m below extreme tide level, with 6,000 properties currently considered at significant coastal flood risk. Climate projections indicate that sea levels around Northern Ireland are expected to rise by up to 0.94m by the end of the century. This will be the main driver of increased coastal inundation risk. Climate projections also indicate an increase in the frequency of heavy rainfall events with the potential to increase the frequency and extent of surface water flooding.



More trees and green space within close proximity of BCC assets can help reduce their climate risk through cooling, providing drainage and sequestering and storing carbon. (Source: BCC Open and Linked Data)

To offset the increased surface water and coastal flood risk faced by BCC assets and as outlined in The Second Cycle Northern Ireland FRMP 2021 – 2027, a number of coastal and surface water flood protection works are already underway in Belfast. In addition, BCC has already carried out an important step in increasing the resilience of its assets to flood risk by mapping and assessing exposure to both coastal and surface water flood risk. These assessments provide BCC with an understanding of the areas and assets at risk and allow for the targeting of measures. BCC should focus on increasing its understanding of the physical vulnerability of assets identified at risk and any existing flood mitigation measures in place. For example, buildings with basements or which house critical infrastructure are considered particularly vulnerable to surface water flood risk. On this basis and through retrofitting, additional resilience and protection measures can be put in place where required.



Impervious surfaces across Belfast which can increase climate risk through the urban heat island effect (UHI) and increased flood risk. (Source: Copernicus Land Monitoring Service)

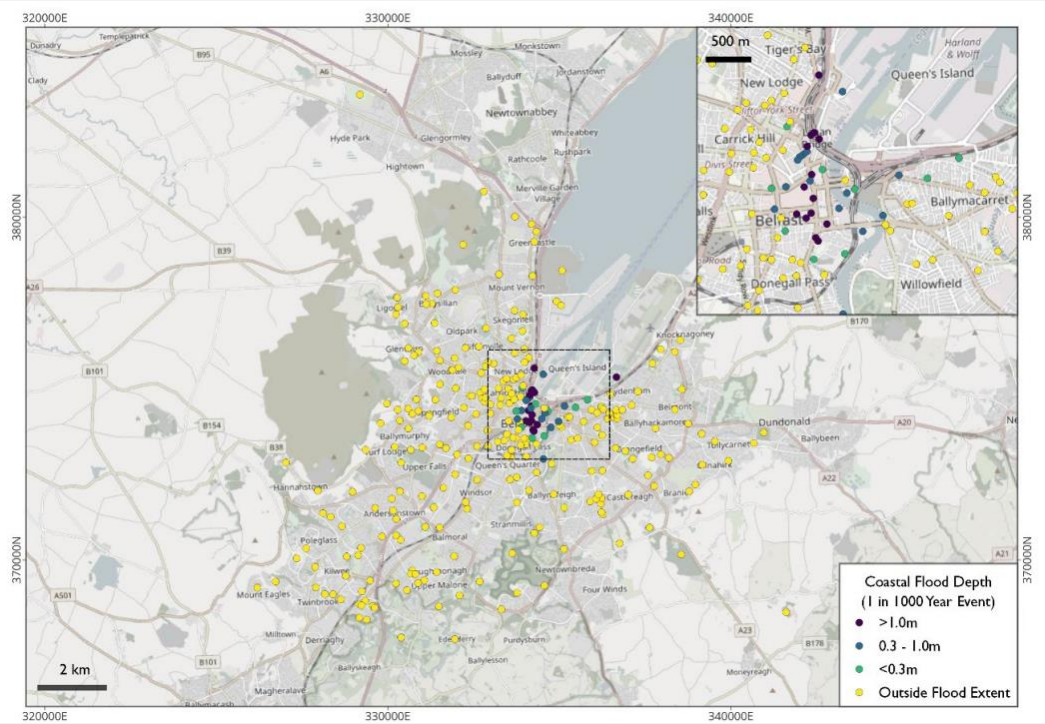
Adaptation to Extreme Weather: Flooding

A Climate Change Risk Assessment (CCRA) has been carried out identifying what BCC assets are most at risk.

DFI Coastal Flood Risk Assessment

Coastal flood risk extent has been assessed employing DFI coastal flood modelling. The 2080 tidal flood risk assessment is based on projected sea level rise under a medium emissions scenario (RCP4.5) and accounts for both a 1/200 year flood and 1/1000 year flood. The recently installed Belfast Tidal Flood Defences are accounted for and highlight residual risk associated with coastal flood risk for BCC. Significant areas of the city centre remain exposed to coastal inundation with key assets such as St Georges Market, Victoria Park and 9 Gloucester Street at potential flood risk under extreme conditions.

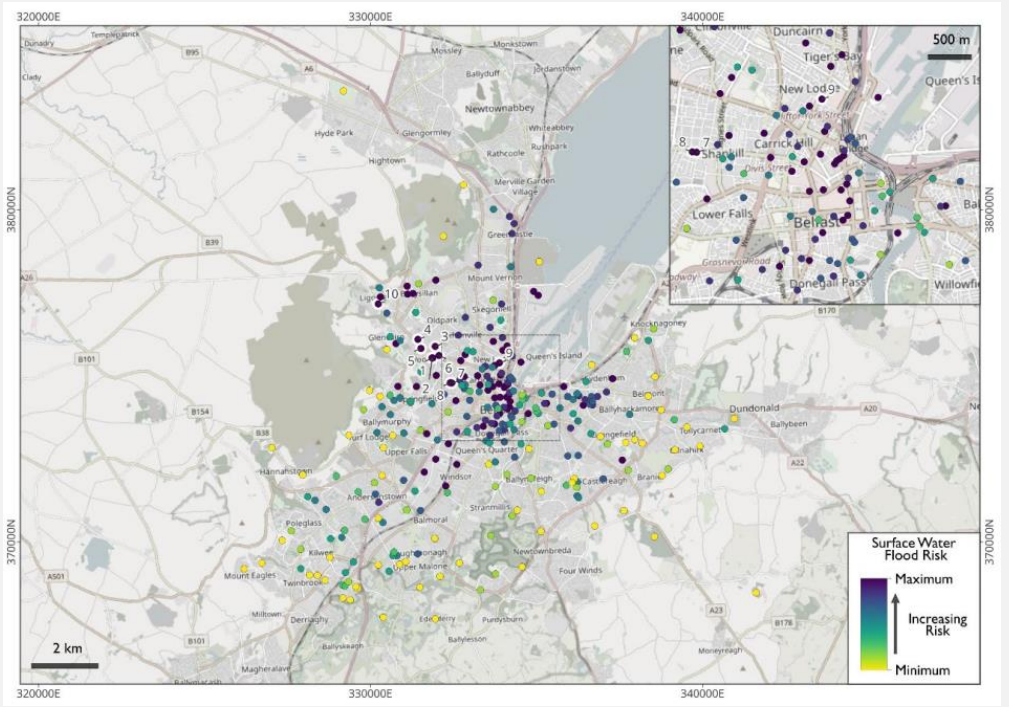
BCC assets at risk from Coastal Flooding



KPMG Surface Water Flood Risk Assessment

Climate projections indicate an increase in the frequency of heavy precipitation across Belfast City and this is particularly the case for the area situated to the northwest of the city centre. Under a high emissions scenario (RCP8.5) and the likely projection, this area of the city could expect over four heavy rainfall (> 30 mm) days per year by 2070. This is likely to increase the frequency of intense precipitation leading to surface water flooding with implications for essential services. At the city scale, there is a need to increase the capacity of the drainage system and increase permeability of surfaces through sustainable drainage systems (SUDs) and nature based solutions (Nbs) as part of street upgrades, regeneration projects, and other planned construction projects.

BCC assets at risk from Surface Water Flooding



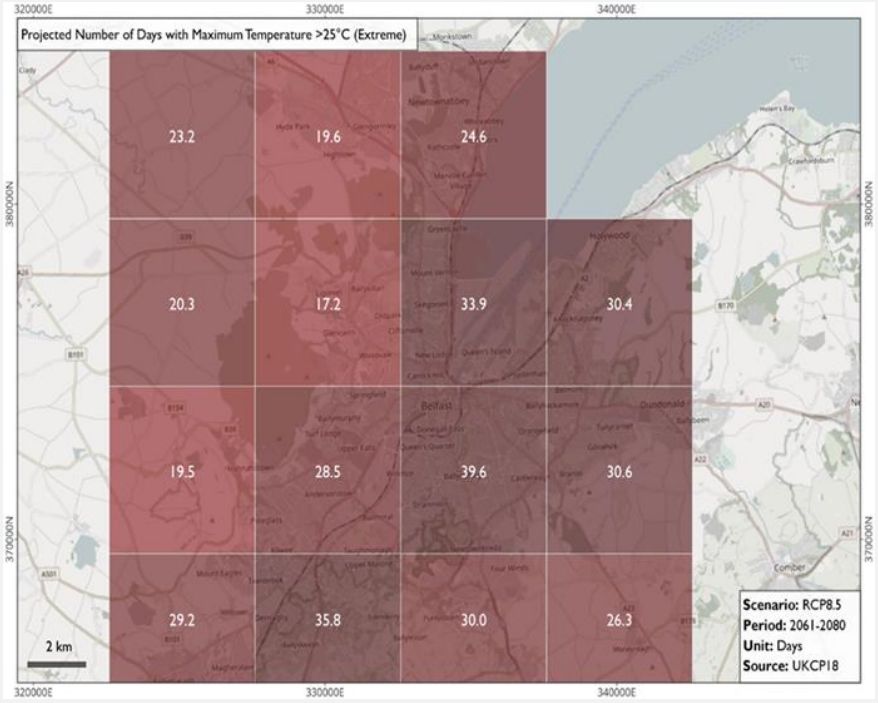
Adaptation to Extreme Weather: Heat-related risk

A Climate Change Risk Assessment (CCRA) has been carried out identifying what BCC assets are most at risk.

Extreme Heat assessment

To assess projected changes in frequency of heatwaves for Belfast, KPMG employed the UK Climate Projections 2018 (UKCP18) and more specifically the UKCP18 Local projections (2.2 km). The image below shows the projected annual average number of warm days (one on which daily maximum temperatures are greater than 25°C) for 2070 (2061-2080) under a high emissions scenario. Areas to the southwest of the city centre are expected to experience the highest frequency of warm days per year with up 40 warm days (39.6) per year projected for the period 2061-2080. This is likely a reflection of the built-up area exacerbating projected temperature increases as a result of the Urban Heat Island (UHI) effect.

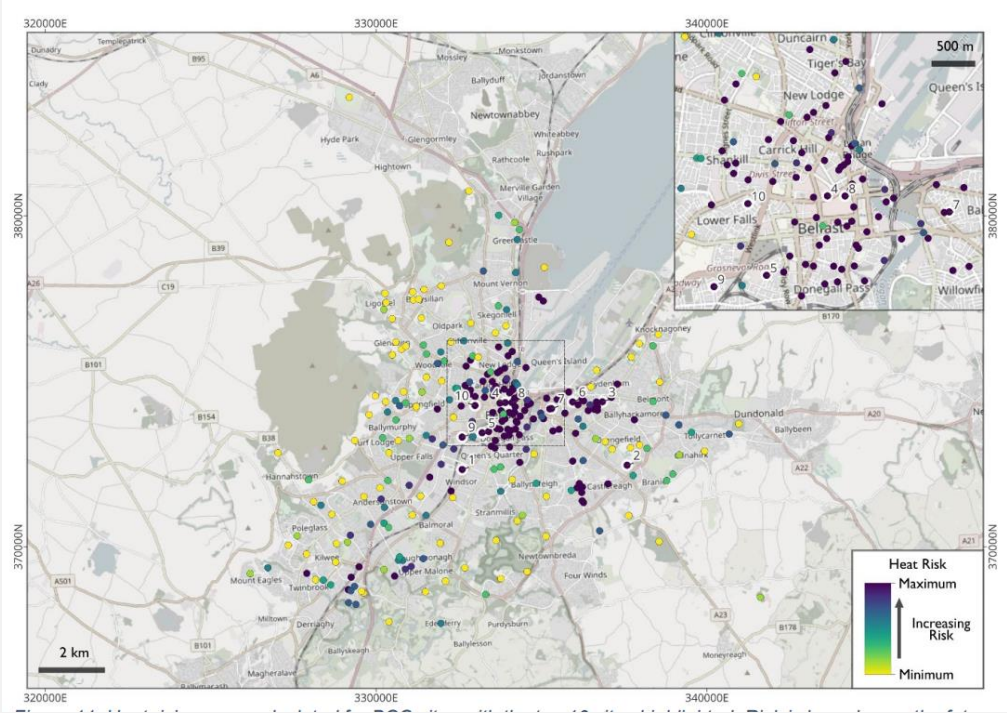
Projected numbers of days above 25°C for the RCP8.5 extreme scenario for 2061-2080



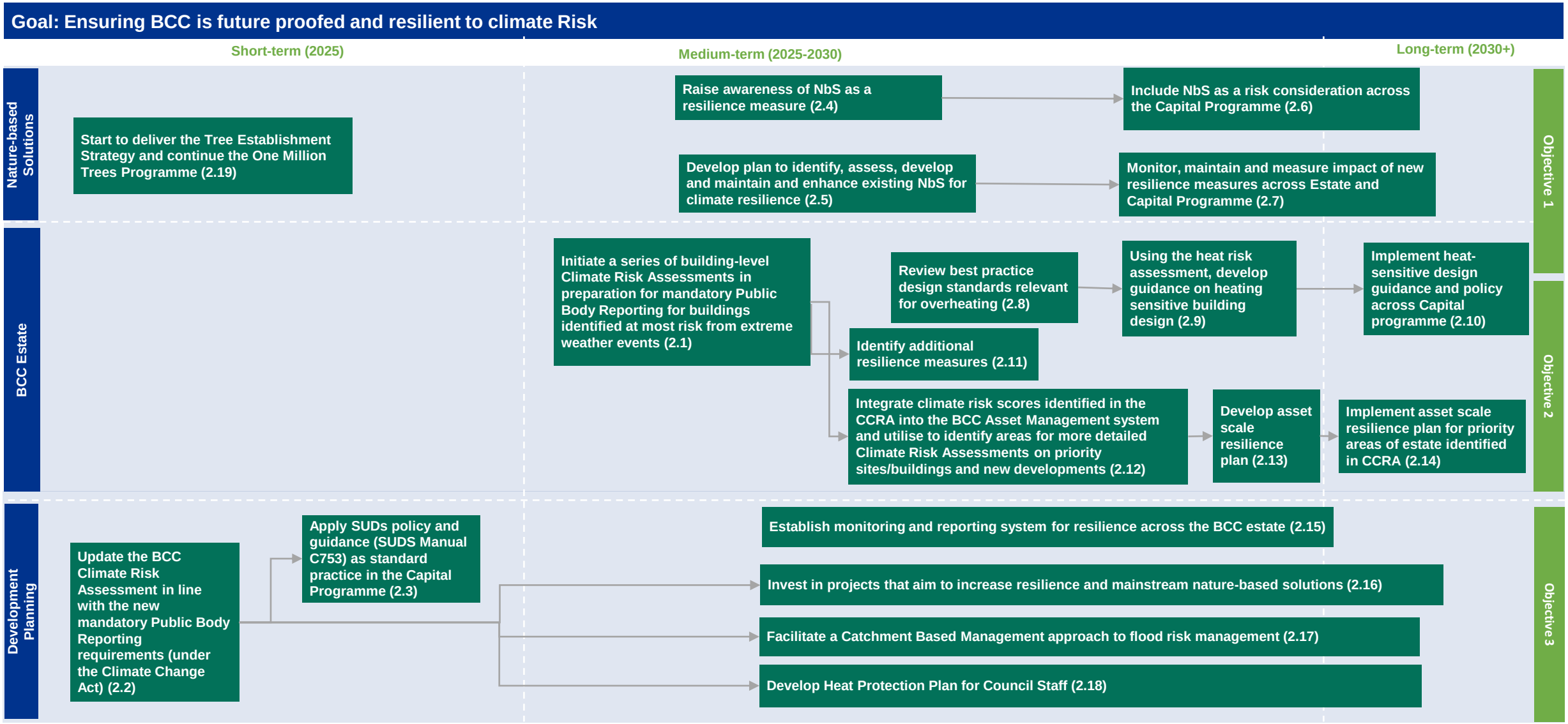
Exposure of BCC assets to heat-related risk

The CCRA also assessed the impact of heat-related risk on BCC assets. The table below details the 10 BCC assets considered at the highest level of risk. These sites are situated in the urban area where levels of heat-related risk are being driven by not only projected number of warm days but also as a result of the proportion of sealed surface in proximity to the site and a deficit of open space and trees. Sealed surface such as asphalt, concrete and buildings which have replaced the natural landscape and vegetation exacerbate the UHI effect. Green/open space and trees also serve to decrease the UHI effect and provide areas of reprieve for populations during extreme heat events.

BCC sites considered to be at the highest level of risk from extreme heat.



Adaptation to Extreme Weather: Action Roadmap



Adaptation Extreme Weather: Action Roadmap

Goal: Ensuring BCC is future proofed and resilient to flood risk						
No	**Action**	**Timeframe**	**Lead department**	**Supporting partners**	**Indicator(s)**	**Outcomes and benefits**
2.1	Initiate a series of building-level Climate Risk Assessments in preparation for mandatory Public Body Reporting for buildings identified at most risk from extreme weather events	M	Director of Property and projects	City and Organisational Strategy	• Increased capacity of BCC staff	
2.2	Update the BCC Climate Risk Assessment in line with the new mandatory Public Body Reporting requirements (under the Climate Change Act)	S	City and Organisational Strategy	City and Organisational Strategy	• Updated CRA approved by CMT	
2.3	Apply SUDs policy and guidance (SUDS Manual C753) as standard practice in the Capital Programme	S	Director of Property and Projects	City and Organisational Strategy	• SUDs policy and guidance approved by CMT/Committee	
2.4	Raise awareness of NbS as a resilience measure	M	City and Organisational Strategy	City and Organisational Strategy	• Increased capacity of BCC staff	
2.5	Develop plan to identify, assess, develop and maintain and enhance existing NbS for climate resilience	M	Director of Property and Projects	City and Organisational Strategy	• Developed plan to maintain and enhance existing NbS for flood protection	
2.6	Include NbS as a risk consideration across the Capital Programme	M	Director of Property and Projects	City and Organisational Strategy	• Increased capacity of BCC staff to implement NbS as a resilience measure	
2.7	Monitor, maintain and measure impact of new resilience measures across Estate and Capital Programme	M	Director of Property and Projects	City and Organisational Strategy	• Maintenance and enhancement plan implemented	
2.8	Review best practice design standards relevant for overheating	M	Director of Property and Projects	City and Organisational Strategy	• Summary document of best practice design standards in context of overheating	
2.9	Using the heat risk assessment, develop guidance on heating sensitive building design	M	Director of Property and Projects	City and Organisational Strategy	• Guidance on heat sensitive building design developed	GHG

See Appendix 1 for status, timeframe and outcomes and benefits key

Adaptation Extreme Weather: Action Roadmap

Goal: Ensuring BCC is future proofed and resilient to flood risk						
No	**Action**	**Timeframe**	**Lead department**	**Supporting partners**	**Indicator(s)**	**Outcomes and benefits**
2.10	Implement heat-sensitive design guidance and policy across Capital programme	M	Director of Property and Projects	n/a	• No. of new builds where heat-sensitive design standards where implemented	
2.11	Identify additional resilience measures	M	Director of Property and Projects	City and Organisational Strategy	• No. of additional resilience measures identified	
2.12	Integrate climate risk scores identified in the CCRA into the BCC Asset Management system and utilise to identify areas for more detailed Climate Risk Assessments on priority sites/buildings and new developments	M	Director of Property and Projects	City and Organisational Strategy	• Risk scores integrated into BCC asset management system • Completed detailed flood risk assessments, including audit of existing flood defence measures	
2.13	Develop asset scale resilience plan	M	Director of Property and Projects	City and Organisational Strategy	• Asset scale resilience plan approved by CMT/Committee	
2.14	Implement asset scale resilience plan for priority areas of estate identified in CCRA	M	Director of Property and Projects	City and Organisational Strategy	• Plan implemented	
2.15	Establish monitoring and reporting system for resilience across the BCC estate	M	Director (Operational) of Property and Projects/Facilities Management	City and Organisational Strategy	• Monitoring and reporting system approved by CMT/Committee	
2.16	Invest in projects that aim to increase resilience and mainstream nature-based solutions	M	Director of Property and Projects	City and Organisational Strategy	• Projects implemented	
2.17	Facilitate a Catchment Based Management approach to flood risk management	M	CNS	City and Organisational Strategy		
2.18	Develop Heat Protection Plan for Council Staff	M	Director of Property and Projects	City and Organisational Strategy		
2.19	Start to deliver the Tree Establishment Strategy and continue the One Million Trees Programme	S	CNS	City and Neighbourhood Services	• No. Tree Strategy targets achieved	

See Appendix 1 for status, timeframe and outcomes and benefits key

Energy and Buildings: Introduction

The Energy and Buildings theme aims to decarbonise and improve the energy use efficiency across the BCC estate.

Baseline and context

It is estimated that BCC has 199 operational assets[1] and based on BCC data, the top 3 electricity and natural gas users across the estate are Waterfront Hall, Belfast Zoo and Andersonstown Leisure Centre.

Raising awareness and engaging BCC staff on building energy use is a quick-win for BCC to strengthen its energy efficiency through behavioural change e.g. switching off lights in the office and turning off laptops after use.

While it is important to consider the full estate, efforts will be targeted on the top energy users as a first step to deliver material impact. BCC has already completed energy audits on four of its sites (City Hall, Duncrue, Adelaide and Cecil Ward) with a audits commissioned for a further five sites (mostly leisure centres). This phased approach to energy audits will continue in parallel with commencing retrofit works.

A whole building approach will be taken as part of a phased retrofit programme to improve the building fabric, improve controls and reduce peak electricity demand such as LED lighting. As part of the Capital Programme, BCC will undertake whole life carbon assessments. Additional interventions that focus on NbS and biodiversity enhancements will also provide an indirect opportunity for climate mitigation for the estate through enhanced carbon sequestration.

Outside of retrofitting the existing estate, BCC will enhance its procurement and generation of renewable energy. This will include consideration of entering into power-purchase agreements. In the medium to long-term BCC will focus on exploring the feasibility of micro-generation and energy storage.

Source:1) DfE 2) DAERA

Developing climate actions for Buildings and Energy

Achieving a net zero estate and energy system is essential to enable BCC to achieve its decarbonisation targets. To achieve this, both existing and new developments need to be considered.

Goal: Achievement of a low-carbon and sustainable energy system and Council estate

Obj. 1: **Enhancing and enabling energy efficiency across the Council estate**

Obj. 2**: Use low-carbon / renewable energy sources across the Council estate**

Key short-term actions

The following key, short-term actions identified for BCC comprise a subset of the actions identified in the roadmap (next page), to help with the start of CAP implementation.

1. Scope out a strategy to increase renewable and low-carbon energy use through corporate power purchase agreements
2. Complete a second phase of building energy audits
3. Launch a phased metering and retrofitting programme across BCC's top energy users based on the findings of the building level audits of Adelaide, Cecil Ward, City Hall and Duncrue
4. Develop the integration of whole life carbon assessments as standard practice in the Capital Programme

Energy and Buildings: Action Roadmap

Goal: To achieve a low-carbon and sustainable energy system and Council estate

	Short-term (2025)	Medium-term (2025-2030)	Long-term (2030+)	
Energy efficiency	Develop a phased approach to BCC's building-level energy audits and retrofitting programme (3.2)	Launch a phased metering and retrofitting programme across BCC's top energy users based on the findings of the building level audits of Adelaide, Cecil Ward, City Hall and Duncrue (3.11)	Incorporate smart meters and C corporate energy management software (3.6)	Objective 1
	Complete a building-level energy audit of BCC's top four energy users (3.3)	Raise awareness and engage key staff on building energy use (3.1)		
	Complete a second phase of building energy audits - (Andersonstown LC, Lisnasharragh LC, Templemore Av LC, Brook LC) and the Waterfront Hall (3.4)	Complete a phased programme of retrofitting across the remaining Council estate based on the findings of the building level audit (3.12)		
	Develop the integration of whole life carbon assessments as standard practice in the Capital Programme (3.8)	Ensure NbS such as green roofs are integrated in all Council-supported and new Council developments (3.9)		
		Integrate biodiversity net gain assessments as standard practice in new Council development projects (3.10)		
Low-carbon / renewable sources	Scope out a strategy to increase renewable and low-carbon energy use through corporate power purchase agreements (3.15)	Map low carbon and renewable energy sources across Belfast (3.5)	Explore the development of renewable microgeneration at Council-owned sites (3.13)	Objective 2
		Ensure a supportive Council-level policy context for renewable energy generating facilities considering technologies such as hydrogen, wind, solar, bio-methane and HVO, geothermal and tidal (3.7)	Explore the development of energy storage at Council-owned sites (3.16)	
		Invest in projects that aim to promote additional renewable energy across BCC (3.14)		

Energy and Buildings

Goal: To achieve a low-carbon and sustainable energy system and Council estate

No	Action	Timeframe	Lead department	Supporting partners	Indicator(s)	Outcomes and benefits
Education / awareness raising						
3.1	Raise awareness and engage key staff on building energy use	M	Director of City and Organisational Strategy	n/a	• No. of staff educational initiatives implemented focused on sustainable building energy use	GHG
Capacity building						
3.2	Develop a phased approach to BCC's building-level energy audits and retrofitting programme	S	Director of Property and Projects	n/a	• n/a	GHG
3.3	Complete a building-level energy audit of BCC's top four energy users	S	Director of Property and Projects	Service provider, to be selected	• Completed building-level audit for top energy users	GHG
3.4	Complete a second phase of building energy audits - (Andersonstown LC, Lisnasharragh LC, Templemore Av LC, Brook LC) and the Waterfront Hall	S	Director of Property and Projects	Service provider, to be selected	• Completed building-level audit for all buildings	GHG
3.5	Map and analyse low carbon and renewable energy sources across Belfast	M	Director of Property and Projects	Director of City and Organisational Strategy	• No. of analyses, e.g. Local Area Energy Plan completed	GHG
3.6	Incorporate smart meters and corporate energy management software	M	Director of Property and Projects	Potentially with service provider, to be selected	• Number of smart meters installed • Number of buildings integrated into the energy management system	GHG
Policy/planning						
3.7	Ensure a supportive Council-level policy context for renewable energy generating facilities, considering technologies such as hydrogen, wind, solar, bio-methane and HVO, geothermal and tidal	M	Director of Property and Projects	NIE Networks Department for the Economy	• n/a	GHG
3.8	Develop the integration of whole life carbon assessments as standard practice in the Capital Programme	S	Strategic Director Place & Economy	Potentially with service provider, to be selected	• Inclusion of Whole Life Carbon Assessments as standard practice in the Capital Programme	GHG
3.9	Ensure NbS such as green roofs are integrated in all Council-supported and new Council developments	M	Director of Property and Projects	Director of City and Organisational Strategy	• No. of new developments integrating NbS	GHG

See Appendix 1 for status, timeframe and outcomes and benefits key

Energy and Buildings

Goal: To achieve a low-carbon and sustainable energy system and Council estate						
No	**Action**	**Timeframe**	**Lead department**	**Supporting partners**	**Indicator(s)**	**Outcomes and benefits**
Delivery / implementation						
3.10	Integrate biodiversity net gain assessments as standard practice in new Council development projects	M	Director of Property and Projects	Potentially with service provider, to be selected	• No. of biodiversity net gain assessments completed	
3.11	Launch a phased metering and retrofitting programme across BCC's top energy users based on the findings of the building level audits of Adelaide, Cecil Ward, City Hall and Duncrue	S	Director of Property and Projects	Director of City and Organisational Strategy	• No. of buildings with completed retrofitting	
3.12	Complete a phased programme of retrofitting across the remaining Council estate based on the findings of the building level audit	M/L	Director of Property and Projects	Director of City and Organisational Strategy	• No. of buildings with completed retrofitting	
3.13	Explore the development of renewable microgeneration at Council-owned sites	M	Director of Property and Projects	NIE Networks	• No. of Council-owned sites with microgeneration	
3.14	Invest in projects that aim to promote additional renewable energy across BCC	M	Director of Property and Projects	Potentially with renewable energy project developers, to be selected	• No. of renewable energy projects invested in	
3.15	Scope out a strategy to increase renewable and low-carbon energy use through corporate power purchase agreements	S	Director of Property and Projects	Potentially with service provider, to be selected	• No. of buildings / sites with CPPA / GPA	
3.16	Explore the development of energy storage at Council owned sites	L	Director of Property and Projects	NIE Networks	• No. of sites assessed	

See Appendix 1 for status, timeframe and outcomes and benefits key

Transport: Introduction

The Transport theme aims to decarbonise BCC's fleet and reduce emissions associated with employee commuting and business travel.

Baseline and context

Transport includes the emissions associated with BCC's fleet, business travel and employee commuting. BCC currently has 432 vehicles[1] which emit approximately 1,582,415 $kgCO_2e$ per year and account for approximately 11% of BCC's calculated carbon footprint[2]. Of these vehicles, refuse collection vehicles account for over 50% of the carbon emissions. To transition the fleet to net zero, BCC has completed work on converting compatible vehicles to hydrotreated vegetable oil and has started procuring low emission vehicles (LEV). Business travel accounts for approximately 0.5% of BCC's calculated carbon footprint and the Council currently does not track emissions associated with employee commuting – which is recommended under Tools for the Transition (Action 1,10) to expand scope of GHG data collection and reporting for scope 3.

BCC has completed a Fleet Review[1] that aims to transition its fleet to net zero. This fleet replacement strategy is currently being considered under the financial thematic sessions for the BCC's medium-term plan but has not yet been formally accepted. BCC will focus on delivering on the fleet replacement strategy to support the achievement of low and zero carbon Council owned fleet - decarbonising an important source of BCC's scope 1 emissions. Outside of BCC's fleet, the Council will also target emissions associated with business travel and employee commuting.

To reduce emissions associated with employee commuting, BCC will enhance existing- and create incentives, policies and initiatives to enable behaviour change and to embrace low carbon transport related operations. Options include: expanding the existing cycle to work scheme; installing staff LEV chargers at preferred parking spaces at Council-owned sites; and repurposing parking spaces for car clubs and cycle parking and integrating appropriate facilities to support active travel e.g. shower and changing facilities. For new developments the Council will establish a policy for them to prioritise walking and cycling infrastructure, including the integration of NbS such as green corridors. BCC should also run communication and education campaigns to socialise the Council's sustainable transport initiatives and the Sustainable Staff Travel Plan. This form of awareness raising can be an effective tool to achieve behavioural change.

To decarbonise business travel emissions, BCC will review its Business Travel Policy to align with the sustainable travel hierarchy i.e. promotion of active travel, public transport, shared travel over private car use and air travel.

Developing climate actions for transport

BCC will transition its fleet to net zero, reduce business travel emissions and promote sustainable transport for employee commuting.

Goal: Achievement of net zero and sustainable Council-related transport

Obj. 1: Transitioning to low and / or zero carbon Council-related transport fleet

Obj. 2: Promotion of sustainable transport modes, including active travel and use of low emission vehicles as well as supporting business travel to align with the sustainable travel hierarchy

Key short-term actions

The following key, short-term actions identified for BCC comprise of a subset of the actions identified in the roadmap (next page), to help with the start of CAP implementation.

1. Through sustainable procurement, aim to use local suppliers to the Council to reduce miles travelled within the confines of procurement legislation and Local Govt Act restrictions (4.4)
2. Review the Business Travel Policy and develop the Sustainable Staff Travel Plan to encourage modal shift, active travel and more fuel-efficient driving for Council staff (4.1)
3. Conduct a commercial assessment of Council land suitable for installing low emission vehicle (LEV) charging points (4.9)
4. Commence work on repurposing staff parking spaces for cycle racks and integrate appropriate facilities to support active travel e.g. shower and changing facilities (4.10)

Source: 1) AECOM Fleet Review 2) APSE Net Zero Carbon Emissions Trajectory for Belfast City Council

Transport: Action Roadmap

Goal: To achieve net zero and sustainable Council-related transport

	Short-term (2025)	Medium-term (2025-2030)	Long-term (2030+)	
Fleet		Agree Council approach to funding for fleet replacement strategy (4.3) →	Deliver on the Fleet Replacement Strategy, including the transition to HVO and conversion to LEVs (4.8)	Objective 1
Supporting sustainable transport	Review the Business Travel Policy and develop the Sustainable Staff Travel Plan to encourage modal shift, active travel and more fuel efficient driving for Council staff (4.1)	Run communication and education campaigns to socialise the Council's sustainable transport initiatives (4.6)		Objective 2
	Through sustainable procurement, aim to use local suppliers to the Council to reduce miles travelled within the confines of procurement legislation and Local Govt Act restrictions (4.4)	Establish a Council-level policy for new developments to prioritise walking and cycling infrastructure, including the integration of NbS such as green corridors, in line with the Local Development Plan (4.2) →		
	Commence work on repurposing staff parking spaces for cycle racks and integrate appropriate facilities to support active travel e.g. shower and changing facilities (4.10)	Develop employee incentives to encourage sustainable transport across the Council (4.5)		
	Conduct a commercial assessment of Council land suitable for installing low emission vehicle (LEV) charging points (4.9)	Expand existing cycle-to-work scheme (4.11)		
		Improve Council-related freight operations (4.7)		

Transport

Goal: To achieve net zero and sustainable Council-related transport

No	Action	Timeframe	Lead department	Supporting partners	Indicator(s)	Outcomes and benefits
Education / awareness raising						
4.1	Review the Business Travel Policy and develop the Sustainable Staff Travel Plan to encourage modal shift, active travel and more fuel-efficient driving for Council staff	S	Director of City and Organisational Strategy, Director of External Affairs, Marketing and Communications	Director of Human Resources	• No. of education campaigns run • No. of people reached by campaigns • No. of people changing their travel habits (pre and post campaign) • Scope 3 emissions, CO_2e	
Policy/planning						
4.2	Establish a Council-level policy for new developments to prioritise walking and cycling infrastructure, including the integration of NbS such as green corridors, in line with the Local Development Plan	M	Director of Property and Projects	Strategic Director of Place and Economy	• Policy developed	
4.3	Agree Council approach to funding for fleet replacement strategy	M	Strategic Director of Finance and Resources	City and Neighbourhood Services	• Funding plan agreed and complete	
4.4	Through sustainable procurement, aim to use local suppliers to the Council to reduce miles travelled within the confines of procurement legislation and Local Govt Act restrictions	S	Strategic Director of Corporate Services	Director of City and Organisational Strategy	• Updated procurement policy	
4.5	Develop employee incentives to encourage sustainable transport across the Council	M	Director of Human Resources	Director of City and Organisational Strategy, Active Travel Working Group	• No. of incentives rolled out • No. of staff availing of incentives	
4.6	Run communication and education campaigns to socialise the Council's sustainable transport initiatives	M	Director of Human Resources	Director of City and Organisational Strategy	• Policy developed	
4.7	Improve Council-related freight operations	M	Director of City and Neighbourhood Services	Director of City and Organisational Strategy	• No. of vehicles impacted • % improvement in freight operation efficiencies • Tonnes of CO_2 reduced as a result of improvement • % carbon reduction achieved	

See Appendix 1 for status, timeframe and outcomes and benefits key

Transport

Goal: To achieve net zero and sustainable Council-related transport						
No	**Action**	**Timeframe**	**Lead department**	**Supporting partners**	**Indicator(s)**	**Outcomes and benefits**
4.8	Deliver on the Fleet Replacement Strategy, including the transition to HVO and conversion to LEVs	M	Director City and Neighbourhood Services	n/a	• No. of vehicles replaced / introduced • % of strategy implemented • Tonnes of CO_2 reduced as a result of strategy • % carbon reduction achieved	 
4.9	Conduct a commercial assessment of Council land suitable for installing low emission vehicle (LEV) charging points	S	Director of Property and projects	Director of City and Organisational Strategy	• Assessment report approved by Council	  
4.10	Commence work on repurposing staff parking spaces for cycle racks and integrate appropriate facilities to support active travel e.g. shower and changing facilities	S	Director of Finance	Director of City and Organisational Strategy	• No. of parking spaces repurposed • No. Shower/changing facilities implemented	  
4.11	Expand existing cycle-to-work scheme	M	Director of Human Resources	Strategic Director of Finance and Resources	• No. of staff availing of scheme	  

See Appendix 1 for status, timeframe and outcomes and benefits key

Waste Management: Introduction

The Waste Management theme aims to reduce waste generated by BCC and its associated emissions and to transition the Council to a circular economy.

Baseline and context

The generation and management of waste is an everyday challenge for BCC. At an organisational level, BCC currently does not track internal waste generation through its own operations i.e. across BCC owned and controlled buildings, events etc. However, progress has been made at the city-level to track and report on waste generation as well as the associated carbon impacts through the recent More Circularity Less Carbon report which found that the carbon impact of household waste is estimated at 360,000 tCO_2e/year - nearly 20x higher than BCC's quantified carbon emissions (18,783 tCO_2e)[1,2].

Data on waste generated across Belfast indicates that food, paper, cardboard and plastic waste are the largest waste streams[1]. Understanding the carbon impact of waste flows and management types is critical to support future decision making. For example, sending paper and card straight to landfill results in 50x carbon emissions compared to sending to a recycling facility, based on latest emissions factors[3]. However, the embodied carbon impacts of waste material (i.e. emissions from the extraction of resources, production, manufacturing, etc. of the corresponding products) are always the highest contributor to the net carbon impacts of waste[1], which is why waste prevention offers the greatest carbon savings.

Looking beyond the organisational level, BCC has an important role in facilitating the transition to a circular economy through education and awareness campaigns as well as through the provision of sustainable waste management services - actions to strengthen this role should be assessed as part of the Belfast city-wide CAP.

For BCC as an organisation, an internal Waste Management Plan can support the Council to effectively understand, manage and reduce waste it generates. A robust plan will also embrace the circular economy, rethinking the approach to waste and viewing waste as a valuable resource, whilst optimising and supporting reuse, repair and refurbishment activities. BCC should additionally implement measures that track and report on internal waste generation whilst ensuring staff are informed on the climate impact of waste as well as ways to reduce associated impacts and embrace the circular economy. These actions will enable more targeted interventions to be identified and implemented and for progress to be tracked for the Council at an organisational level.

Source: 1) More Circularity Less Carbon 2) APSE Net Zero Carbon Emissions Trajectory for Belfast City Council 3) BEIS GHG conversion factors

Developing climate actions for waste management

Sustainable waste management is a key area to be addressed for BCC to mitigate climate change. To achieve this, BCC should implement measures to track waste generated in its operations and establish an internal Waste Management Plan to establish a roadmap of initiatives to support the transition to a circular economy. When developing climate actions under waste management, the focus of each action was aligned with the achievement of the following goal and associated objectives:

Goal: Enabling the Council to support the transition to a more circular economy

Obj. 1: Reduce the volume of waste generated by the Council and implement actions to transition the Council to a more circular economy

Key short-term actions

The following key, short-term actions identified for BCC comprise of a subset of the actions identified in the roadmap (next page), to help with the start of CAP implementation.

1. Continue to progress the proposal for a single use plastics policy for the Council (5.4)
2. Initiate an internal Council-level Waste Management Plan which aligns with the Waste Management Hierarchy and with an emphasis on green waste (5.3)
3. Develop a mechanism to track and report on internal Council generated waste (5.7)

Waste Management: Action Roadmap

Goal: Enabling the Council and its operations to support the transition to a more circular economy

Short-term (2025)

Medium-term (2025-2030)

Reduce the volume of waste generated by the Council and implement actions to transition the Council to a more circular economy

- Develop a mechanism to track and report on internal Council generated waste (5.7)
- Integrate more climate messaging into existing communication and education campaigns for staff to improve waste management (5.1)
- Review the findings from the 'More Circularity, Less Carbon' project and BCC waste management pilot studies (5.2)
- Initiate an internal Council-level Waste Management Plan which aligns with the Waste Management Hierarchy and with an emphasis on green waste (5.3)
- Continue to progress the proposal for a single use plastics policy for the Council (5.4)
- Introduce an internal Council circular economy initiative with links to the Sustainable Food Partnership internal coordination group (5.5)
- Work in partnerships with food re-distribution centres/organisations to reduce food waste (5.6)

Objective 1

Waste Management

Goal: Enabling the Council and its operations to support the transition to a more circular economy						
No	**Action**	**Timeframe**	**Lead department**	**Supporting partners**	**Indicator(s)**	**Outcomes and benefits**
Education / awareness raising						
5.1	Integrate more climate messaging into existing communication and education campaigns for staff to improve waste management	M	Director of External Affairs, Marketing and Communications	Director of City and Organisational Strategy	• No. Of campaigns • No. of workshops held • No. of people engaged • No. of actions resulting from engagement	
Capacity building						
5.2	Review the findings from the 'More Circularity, Less Carbon' project and BCC waste management pilot studies	M	Director of City and Neighbourhood Services	Director of City and Organisational Strategy	• No. of actions implemented	
Policy/planning						
5.3	Initiate an internal Council-level Waste Management Plan which aligns with the Waste Management Hierarchy and with an emphasis on green waste	S	Director of City and Neighbourhood Services	Director of Economic Development, Director of City and Organisational Strategy	• Council-level Waste Management Plan completed that supports the reporting and tracking of Council generated waste and sets out targeted, time-bound actions to transition the Council to a more circular economy	
5.4	Continue to progress the proposal for a single use plastics policy for the Council	S	TBC	Director of City and Organisational Strategy	• Single Use Plastics Policy completed	
5.5	Introduce an internal Council circular economy initiative with links to the Sustainable Food Partnership internal coordination group	M	Director of City and Organisational Strategy	Director of External Affairs, Marketing and Communications	• Internal initiative implemented	
5.6	Work in partnerships with food re-distribution centres/organisations to reduce food waste	M	Director of City and Neighbourhood Services	Director of City and Organisational Strategy	• No. of partnerships set up • Reduction (in tonnes) of food waste	
Delivery/implementation						
5.7	Develop a mechanism to track and report on internal Council generated waste	S	Director of City and Neighbourhood Services	To be identified by BCC if required.	• Tracking system set up • Reporting system set up	

See Appendix 1 for status, timeframe and outcomes and benefits key

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Appendices

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Appendix 1 Monitoring, Learning and Reporting Framework

Tools for Transition : MLR

Action	Objectives	Metric	Target	Outcome indicator	Data requirements
1.14 Develop a sustainable food policy for the Council that addresses waste, sourcing, packaging, emissions measurement and an events protocol.	• To develop a council food policy	• Policy established	• n/a	• Cross departmental group established and policy created	• Internal food waste • Finance data relating to food • Events data
1.7 Develop and launch an accessible climate data platform to track progress on delivering climate adaptation and mitigation actions	• To have all the risks and actions in one accessible place	• No of staff accessing the platform	• Platform created with all climate risks and actions accessible	• Council has a data platform that is used by all staff	• Climate risk data • Adaptation actions • Mitigation actions
1.12 Develop a sustainable/ low carbon procurement policy and supplier guidance documents to support a transition to an inclusive, net zero and resilient future	• To reduce scope 3 emissions associated with purchased goods and services • To support climate action across the value chain for BCC	• Scope 3 emissions associated with purchased goods and services	• All procurement policy and supplier guidance documents updated to align with the net zero transition and circular economy	• Procurement policy and supplier documents updated to with the net zero transition, including a focus on the circular economy • Reduced scope 3 emissions associated with purchased goods and services	• Existing procurement policy and supplier guidance documents • Scope 3 emissions from purchased goods and services • Net zero and circular economy criteria for suppliers
1.18 Prepare departments for data collection required for Public Body Reporting under the Climate Change Act	• To be ready for Public Body Reporting under the Climate Act	• No of staff engaged in data collection	• Data collected on time and in the right format	• All data needed for Public Body Reporting is collected on time and in the right format	• Lists of staff with access to data • List of existing related datasets
1.19 Prepare mitigation report (Oct 2025) and adaptation report (March 2026) for submission to DAERA in line with Public Body Reporting requirements	• To create a mitigation report and an adaptation report	• 2 reports created	• Both reports created on time	• Both reports are submitted to DAERA in line with requirements	• All data relating to scope 1 and 2 emissions (gas, electricity, oil, fuel) • Planned and delivered actions from this CAP

Adaptation Climate Risk: MLR

Action	Objectives	Metric	Target	Outcome indicator	Data requirements
2.2 Update the BCC Climate Risk Assessment in line with the new mandatory Public Body Reporting requirements (under the Climate Change Act)	• To ensure BCC Climate Risk Assessment in line with the new mandatory Public Body Reporting requirements	• Updated CRA	• Precautionary approach defined • Implementation of a precautionary approach to Capital Programme development projects	• Guidance document outlining precautionary approach to Capital Programme developed • Capital projects undertaken in line with developed precautionary approach.	• Risk assessment (flood, frost, heat etc) • Register of proposed Capital Programme developments
2.3 Apply SUDs policy and guidance (SUDS Manual C753) as standard practice in the Capital Programme (2.3)	• The development of policy and guidance to enhance existing NbS for flood protection across the BCC estate	• Policy and guidance developed • Review of existing infrastructure/ existing NbS for flood protection	• Completed policy and guidance that promotes flood protection • Increase in flood resilience delivered through NbS	• SUDs included as a flood protection considerations as part of all capital works.	• Register of existing NbS • Maintenance and enhancement plans • Best practice NbS flood protection measures
2.19 Start to deliver the Tree Establishment Strategy and continue the One Million Trees Programme	• To continue to plant trees etc as outlined in the Tree strategy	• No of trees etc planted and where	• See appendix 6	• Tree and plant coverage in the city is expanded	• Logs of the number of trees • The locations of the trees

Energy and Buildings: MLR

Action	Objectives	Metric	Target	Outcome indicator	Data requirements
3.4 Complete a second phase of building energy audits - (Andersonstown LC, Lisnasharragh LC, Templemore Av LC, Brook LC) and the Waterfront Hall	• Collect data on existing energy efficiency levels • Prioritise buildings to focus the implementation of decarbonisation measures	• No. of completed building-level audits for top energy users	• Top 4 energy users	• Available data for planning retrofitting actions	• To be confirmed by service provider
3.8 Develop the integration of whole life carbon assessments as standard practice in the Capital Programme	• To ensure new developments align with low-carbon and net zero ambitions	• Inclusion of Whole Life Carbon Assessments as standard practice in the Capital Programme	• All new development plans approved in 2024 and after to include Whole Life Carbon Assessment requirements	• Reduced emissions from new BCC buildings	• Methodology on Whole Life Carbon Assessment • Methodology and emissions Data
3.11 Launch a phased metering and retrofitting programme across BCC's top energy users based on the findings of the building level audits of Adelaide, Cecil Ward, City Hall and Duncrue	• To reduce energy use, and, • Consumption in BCC buildings • Changing energy use behaviours • To reduce scope 1 and 2 emissions	• No. of meters installed • No. of buildings retrofitted by retrofit type	• Adelaide, Cecil Ward, City Hall and Duncrue – metered/retrofitted	• Adelaide, Cecil Ward, City Hall and Duncrue – metered/retrofitted and data used for future management and development of other buildings in the council estate	• Results from the energy audits of the 4 listed buildings • Current scope 1 and 2 emissions
3.15 Scope out a strategy to increase renewable and low-carbon energy use through corporate power purchase agreements	• To increase renewable and low-carbon energy use in the council	• No. of renewable energy systems across council buildings • No. of low carbon energy systems used across council	• Increase in renewable energy and low carbon energy systems in council	• Reduced energy related emissions	• Current numbers of renewable energy and low carbon energy systems in council

Transport: MLR

Action	Objectives	Metric	Target	Outcome indicator	Data requirements
4.1 Review the Business Travel Policy, and develop the Sustainable Staff Travel Plan to encourage modal shift, active travel and more fuel efficient driving for Council staff	• To improve knowledge across Council staff on BCC sustainable transport initiatives • To support the uptake of sustainable transport across BCC staff • To decrease scope 3 emissions	• No. of education campaigns run • No. of people reached by campaigns • No. of people changing their travel habits (pre- and post campaign) • Scope 3 emissions, CO_2e	• Agreed communication and education plan to inform BCC staff on sustainable transport • Annual review in place to monitor plan • Decrease in scope 3 emissions	• More frequent communications • BCC staff more confident in making sustainable travel choices • Increased use of sustainable transport activities across BCC staff • Scope 3 emissions, CO_2e	• Existing and planned BCC sustainable transport initiatives • Communications and educational content on sustainable transport • Baseline awareness of BCC staff on sustainable travel options • Scope 3 emissions baseline associated with employee commuting
4.4 Through sustainable procurement, aim to use local suppliers to the Council to reduce miles travelled within the confines of procurement legislation and Local Govt Act restrictions	• To reduce Scope 3 emissions associated with purchased goods and services	• Updated procurement policy	• Updated policy to support local procurement • Annual review in place to monitor policy	• Reduced scope 3 emissions associated with purchased goods and services	• Scope 3 emissions associated with purchased goods and services
4.9 Conduct a commercial assessment of Council land suitable for installing low emission vehicle (LEV) charging points	• To improve accessibility to charging infrastructure	• Assessment completed • No. of charging points installed		• More LEV charging facilities	• Current numbers of charging facilities and • Areas of suitable land
4.10 Commence work on repurposing staff parking spaces for cycle racks and integrate appropriate facilities to support active travel e.g. shower and changing facilities	• To encourage changing behaviours • To reduce emissions • To promote active travel methods	• No. of spaces repurposed for cycle parking • No. of facilities improved • No. of facilities created to facilitate active travel	• Improved facilities in City hall • Increased number of spaces for cycle parking	• More staff actively traveling to work	• Current numbers of changing facilities, and, • Locations • Current number of cycle parking facilities

Waste Management: MLR

Action	Objectives	Metric	Target	Outcome indicator	Data requirements
5.4 Continue to progress the proposal for a single use plastics policy for the Council	• To avoid and reduce our use of SUPs • To promote and support activities in the wider community that relate to SUP minimisation and best practice – such as supporting community groups and local businesses • To Raise awareness of SUPs with council staff	• Number of SUP items ordered (per year)	• We will reduce the amount of SUPs used across our facilities and operations. • We will work with our suppliers to reduce SUPs. • We will raise awareness and promote the reduction of SUPs both internally and with members of the public. • We will continue to work on our education and community litter programme to tackle SUPs in our environment.	• Reduction in SUP across council services • Reduction in associated scope 3 emissions	• Current SUP usage figures by type
5.3 Initiate an internal Council-level Waste Management Plan which aligns with the Waste Management Hierarchy and with an emphasis on green waste	• To support improved waste management and the transition to a circular economy for BCC operations	• Council-level Waste Management Plan completed that supports the reporting and tracking of Council generated waste and sets out targeted, time-bound actions to transition the Council to a more circular economy	• Completed BCC-level Waste Management Plan • Annual review in place to monitor plan	• Reduced emissions associated with BCC-generated waste	• BCC generated waste (volume and composition)
5.7 Develop a mechanism to track and report on internal Council generated waste	• To support the measurement of waste streams • To increase accuracy of scope 3 emissions	• Mechanism in place • Weights of internal waste	• To have a figure for internal waste before the end of 2025/26	• BCC staff have access to waste data • Reduced volume of total BCC-generated waste • Reduced share of waste sent to landfill	• Weights of internal waste • Current methods • Methodologies from other councils/organisations

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Appendix 2

Abbreviations, Glossary, Key & Definition of Action Categories

List of abbreviations

APSE	Association for Public Service Excellence	**MLR**	Monitoring, Learning and Reporting
BCC	Belfast City Council	**NbS**	Nature Based Solutions
CAP	Climate Action Plan	**NIE**	Northern Ireland Electricity
COP	Conference of the Parties	**RCP**	Representative Concentration Pathway
CPPA	Corporate Power Purchasing Agreement	**SDG**	Sustainable Development Goal
LDP	Local Development Plan	**SME**	Small and Medium Sized Enterprises
GHG	Greenhouse Gas	**SuD**	Sustainable Drainage System
HVO	Hydrotreated Vegetable Oil	**tCO_2e**	Tonnes of Carbon Dioxide Equivalent
IPCC	Intergovernmental Panel on Climate Change	**UHI**	Urban Heat Island
LEV	Low Emissions Vehicle	**UKCP**	UK Climate Projections

Glossary

Adaptation: Altering our behaviour, systems, and sometimes ways of life to protect our families, our economies, and the environment in which we live from the impacts of climate change.

Biodiversity: The variability among living organisms from terrestrial, marine and other ecosystems. Biodiversity includes variability at the genetic, species and ecosystem levels

Climate: The long-term average weather of area, usually taken over 30 years

Climate projection: A climate projection is the simulated response of the climate system to a scenario of future emission or concentration of greenhouse gases (GHGs) and aerosols, generally derived using climate models

Climate resilience: The capacity of societies, economies, and ecosystems to cope with a hazardous event, trend or disturbance

Coastal flooding: Coastal flooding occurs when sea levels along the coast or in estuaries exceed neighbouring land levels, or overcome coastal defences where these exist, or when waves overtop over the coast

Coastal inundation: When sea water rises high enough that it floods infrastructure and buildings or endangers peoples' safety.

Exposure: The presence of people, livelihoods, species or ecosystems, environmental functions, services, and resources, infrastructure, or economic, social, or cultural assets in places and settings that could be adversely affected

Extreme weather event: An extreme weather event is an event that is rare at a particular place and time of year

Fluvial flooding occurs when rivers and streams break their banks and water flows out onto the adjacent low-lying areas (the natural floodplains)

Glossary

Greenhouse gas: Gases in Earth's atmosphere that trap heat e.g. carbon dioxide.

Hazard: The potential occurrence of a natural or human-induced physical event or trend or physical impact that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems and

Mitigation: Climate change mitigation refers to efforts to reduce or prevent emission of greenhouse gases.

Nature based solutions: Solutions which involve working with nature to address societal challenges, providing benefits for both human well-being and biodiversity

Net zero: The equal balance between the amount of greenhouse gas (GHG) that's produced and the amount that's removed from the atmosphere

RCP4.5 : An intermediate stabilisation pathways in which radiative forcing is stabilised at approximately 4.5 W/m2 after 2100 (the corresponding ECPs assuming constant concentrations after 2150)

RCP8.5: One high pathway for which radiative forcing reaches >8.5 W/m2 by 2100 and continues to rise for some amount of time (the corresponding ECP assuming constant emissions after 2100 and constant concentrations after 2250)

Renewable energy: Energy derived from natural sources that are replenished at a higher rate than they are consumed

Representative concentration pathways (RCPs): Scenarios that include time series of emissions and concentrations of the full suite of greenhouse gases (GHGs) and aerosols and chemically active gases, as well as land use/land cover

Risk: The potential, when the outcome is uncertain, for adverse consequences on something of value (lives, ecosystems, assets, services, etc.)

Shared socioeconomic pathway (SSP): Shared socioeconomic pathways are scenarios that examine how global society, demographics, and economics might change over the next century (2100).

Tidal flooding: Temporary inundation of coastal areas during exceptionally high tides or storm surges

Tidal surges: A coastal flood or tsunami-like phenomenon of rising water commonly associated with low-pressure weather systems, such as cyclones.

Vulnerability: The propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt

Appendix 2

Key for action areas

Throughout the action areas in this CAP a number of rankings and metrics are utilised, such as timeframe, outcomes and benefits and status. The below overview should be referred to when reviewing each action.

Status

- The current status of each action at BCC

- Action not started

- Action in progress

- Action completed

Timeframe

Action to be commenced by	
S	2025
M	2025-2030
L	2030 +

Outcomes and benefits

- Action has benefits for climate mitigation

- Action has benefits for climate resilience

- Action has benefits for community development

- Action has benefits for environmental sustainability

Definition of climate action categories

As discussed, the CAP is structured across five core themes and within each theme there are four integrated action phases with outcomes defined. When implementing the CAP, the completion of each phase is a pre-requisite of starting the next one; actions within each phase are enablers for the actions in the subsequent phases. In this plan, we have provided recommended actions for all themes and phases.

Category	Themes				
	Tools for Transition	Energy and Buildings	Transport	Waste Management	Adaptation
Phase 1: Education/ Awareness raising	General education and training on net zero	Awareness on energy management, low-carbon options and awareness on related societal and technological changes	Internal and external communication on staged changes to active travel.	General education and training on waste management and circular economy	Awareness and knowledge on climate change for staff; platform to disseminate information to wider stakeholders
Phase 2: Capacity building	Research, assess, identify, review to gain more detailed, specific information.				
Phase 3: Policy / planning	Develop, introduce, integrate, explore, ensure, expand, facilitate influence, support, update and embed specific actions and projects.				
Phase 4: Delivery / implementation	Not applicable	Implement, build, achieve, contribute, deliver convert, repurpose, improve, encourage actions that decrease Belfast City Council's emissions and climate impact.			Create, increase, develop, incorporate, integrate and maintain actions that enhance the resilience against the changes brought by climate change.
Desired outcome	Ensuring BCC is equipped with the tools and mechanisms to successfully enable them to become a net zero, resilient council	Focusing on the achievement of a net zero and sustainable energy system and Council estate	Focusing on the achievement of net zero and sustainable Council-related transport	Enabling the Council and its operations to transition to a more circular economy	Ensuring BCC is future proofed and resilient to the impacts of climate change

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Appendix 3
BCC Consultees & Documents Reviewed

BCC consultees

Step 1 – stakeholder interviews

Interviewee	Position
Trevor Wallace	Head of Finance
Debbie Caldwell	Climate Commissioner
Cathy Matthews	Operational Director, Resources and Fleet
John McConnell	City Services Manager, Resources & Fleet
Sinead Grimes	Director of Property & Projects
Gerry McFall	Property Maintenance Manager
Richard Treacy	Energy Manager

Step 2 – action prioritisation

Stakeholder	Position
City and Neighbourhood Services	
City Innovation	
Belfast Regional City Deal	
Richard Treacy	Energy Manager
Claire O'Prey	Head of Audit Governance and Risk Services
Legal & Civic Services	
Corporate Health and Safety	
Resources and Fleet	
Callie Persic	Development Manager
Mark Whittaker	Senior Planner

Step 2 – stakeholder workshop

Stakeholder	Position
Mura Quigley	Adaptation and Resilience Advisor
Alison Diver	Climate Programme Manager
Cathy Matthews	Operational Director, Resources and Fleet
Stephen Leonard	Director, City & Neighbourhood Services
Joanne Delaney	Portfolio & Programme Co-ordinator
Mark Whittaker	Senior Planner
Dermot O'Kane	Town Planner
James Noakes	City Innovation Broker
Callie Persic	Development Manager
Richard Treacy	Energy Manager
Mark Challis	Performance and Improvement Officer
Jill Graffin	Principal Auditor
Gerry McFall	Property Maintenance Manager
Lisa McKee	Equality and Diversity Officer

Step 3 – draft report comments

Stakeholder	Position
Mura Quigley	Adaptation and Resilience Advisor
Alison Diver	Climate Programme Manager
Debbie Caldwell	Climate Commissioner
Claire Shortt	Monitoring, Learning & Reporting Officer
City Regeneration & Development	
Emergency Planning	
Energy Team	
Human Resources Active Travel Team	
Inclusive Growth and Anti-Poverty Team	
Planning Team	
Procurement	
Waste Team	

Appendix 3

Documents reviewed

The tables below summarise the documents reviewed and used to inform climate actions for BCC.

Documents reviewed for climate actions

Document
A Net Zero Carbon Roadmap for Belfast
CNS Business Plan
APSE Energy - Belfast City Council
NI Energy Strategy
Belfast Region City Deal
UK Climate Change Committee – Sixth Carbon Budget report
UK Climate Change Committee - Sixth Carbon Budget Local Authorities report
Belfast City Air Quality Action Plan 2021-2026
Belfast Green and Blue Infrastructure Plan
Belfast Local Development Plan
Belfast Improvement Plan
NI Waste Management Strategy
C40 Cities
Climate Adapt
Solihull Metropolitan Borough Council Net Zero Action Plan Report
City of Edinburgh Council Emission Reduction Plan
Somerset County Council Climate Emergency Strategy
Note: some actions refined based on BCC feedback and KPMG SME input

Document (cont'd)
BCC Climate Adaptation Plan
Living With Water in Belfast Plan 2021
Draft Green Growth Strategy
Belfast Climate Risk Assessment for Infrastructure Assets (ARUP)
Belfast Resilience Strategy
Belfast Agenda
BCC Organisational Structure
Climate City Council Structure
A Bolder Vision for Belfast
Belfast iTree Eco Report
Belfast Open Spaces Strategy
BCC Environmental Sustainability Review
The Waste Agenda Framework (Belfast)
Belfast City Council - Business Continuity Management Policy
Neighbourhood Regeneration Fund (programme summary)
Belfast Heat Pack
BCC - Climate Risk Assessment asset information car parks
Current Physical Programme - Dashboard - P1 Jun2022
Workshop - IAHR - 2 (Numerical simulation of the coastal flooding in urban centres with underground spaces)
Belfast Heat Pack

Document (cont'd)
Belfast City Council Fleet Review 20211102
Northern Ireland Kerbside Waste Composition 2017
More Circularity Less Carbon Report
Diesel-HVO Vehicle Emissions Trial Report
Belfast City Council Carbon Trajectory Report
Belfast City Council Green Economy Scoping Labour Market Opportunities
NI Climate Change Bill
Waste Management Plan for Northern Ireland (DAERA)
Waste Management Plan (arc21)
Northern Ireland Flood Risk Management Plan 2021-2027
Planning and Flood Risk Draft Supplementary Planning Guidance
Edinburgh Adapts - Climate Change Adaptation Action Plan
Fingal County Council Climate Change Action Plan
Mayo County Council Climate Adaptation Strategy
Dún Laoghaire - Rathdown County Council Climate Change Action Plan
East Devon District Council Climate Change Action Plan

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Appendix 4
Responses to BCC Key Questions

Summary responses to BCC's key questions

Analysis and assessment made during the development of the Climate Action Plan (CAP) is aimed at providing a roadmap that enables BCC to focus its resources on a climate action programme that is efficient and effective. As part of that aim, KPMG have also summarised answers to key questions specified in BCC's proposal.

Key Question	Key Response	Gaps Identified	Recommendations
Is the initial net zero target developed by Council sufficiently ambitious yet realistic?	BCC's net zero by 2050 target is in line with Northern Ireland's legislated target.	In the absence of a robust and quantified carbon baseline as well as agreed and quantified interventions across BCC's emissions sources, it is not possible to critique the level of ambition and reality of targets set to date.	One of the key themes of the CAP is Tools for Transition. This 'theme', its goals, objectives and actions, include a number of capacity building actions to support the assessment of the initial net zero target. These actions are essential to enable the successful delivery of the plan and to support achievement of a net zero Council.
What measures will be most impactful and cost effective in achieving the net zero target?	To determine the level of impact and cost associated with specific measures, there is a requirement to first develop an understanding of key emission sources in more detail as well as existing and planned interventions.		Whilst the actions identified for potential implementation in the medium to long term will support BCC's achievement of net zero, the short-term underpinning actions are considered to be essential for BCC to develop evidence-based and targeted actions to achieve effective decarbonisation and wider resilience.
What role can the Council's open spaces play in mitigating climate change, increasing resilience to climate risks and enhancing biodiversity?	BCC's open spaces can play a key role in mitigating climate change impacts, increasing resilience and enhancing biodiversity.	At present the effectiveness of BCC's open spaces in delivering desired outcomes (i.e. climate mitigation and adaptation as well as enhancing biodiversity) has not been assessed.	BCC's open spaces are leveraged through the 5 thematic areas of the CAP which provides the basis for maximising the role of these valuable resources sequestering carbon and enhancing the resilience of BCC and the wider community.
How can the Council minimise the exposure of its assets and services to flood risk, heat stress and other climatic factors?	BCC is in the process of developing a robust evidence base to determine the most effective options to increase the resilience of its assets and services to climate change risks.	Asset scale vulnerability information is lacking in addition to information on measures already in place to offset adverse climate impacts.	The CAP seeks to address existing knowledge gaps in the short term with actions identified to centralise and further develop asset-scale information on vulnerability and existing adaptive capacity.
What metrics should be used to track progress?	The CAP provides a Monitoring and Learning Framework which identifies key metrics to track progress towards goals, assign responsibilities and propose partners for delivery. The framework focuses on actions to be delivered in the short term which are an essential foundation for further actions.		
Where are the capacity gaps and how can these be plugged?	In establishing the climate action baseline, the CAP identifies key capacity gaps (e.g. data and information, governance and understanding) to be addressed to ensure BCC is equipped with the information, knowledge and skills to deliver the CAP and enable evidence-based climate action.		
What role can the Council's procurement processes play in mitigating climate change, increasing resilience to climate risks and enhancing biodiversity?	Procurement is a key lever to support climate mitigation and adaptation for BCC whilst driving wider supply chain decarbonisation through the integration of sustainability criteria in tendering processes. Examples include procuring renewable energy and low carbon building materials for new developments, integrating a zero-waste/circular economy focused procurement policy and requiring suppliers to implement decarbonisation plans and targets.		

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Appendix 5 Methodology

Step 1: Climate action baseline

Step 1 established the climate action baseline for BCC by identifying the challenges faced by BCC, the measures already in place and key areas for improvement. On this basis the key themes for climate action planning were identified.

Key Tasks for Step 1

Key tasks in this step include:

- A desktop review of internal and publicly available BCC plans, policies and strategies (see Appendix 2 for full list of documents reviewed).
- Targeted interviews with BCC stakeholders covering key service lines such as Fleet and Resources, Energy, Finance and Property and Projects. These interviews provided an additional understanding of BCC's existing climate response as well as highlighting areas that are currently challenged (see Appendix 2 for full list of interviewees).

Outcomes of Step 1

As an outcome of the interviews conducted and documents reviewed, five key climate action themes and associated goals and objectives were identified to focus BCC's efforts to support the overall achievement of a net zero and resilient Council:

01 Tools for Transition	02 Energy and Buildings	03 Transport	04 Waste Management	05 Adaptation
Ensuring BCC is equipped with the tools and mechanisms to successfully enable them to become a net zero, resilient council	Achievement of a low-carbon and sustainable energy system and Council estate	Achievement of net zero and sustainable Council-related transport	Enabling the Council and its operations to support the transition to a more circular economy	Ensuring BCC is future proofed and resilient to heat-related and flood risk

A set of specific objectives to support the achievement of each goal

The five themes have been prioritised as a result of assessing what has the greatest impact on BCC operations as well as benchmarking the key areas of climate action of peer organisations and relevant international frameworks. The data for this plan was collected on BCC's current baseline. The following pages describe the context and findings of each key theme identified.

Step 1: Climate action baseline

Based on BCC's climate action baseline assessment, five key climate action themes were identified

	Tools for Transition	Energy and Buildings	Transport
Context	Raising awareness, knowledge building and capacity building around climate change, including its effects and mitigation and adaptation actions are essential to ensure commitment to climate action and promote organisational and behavioural change.	Buildings and associated energy use is a key source of emissions which is essential to decarbonise via retrofitting and ensuring new developments and developments supported by BCC are aligned with BCC's climate goals.	Transport impacts BCC's scope 1 and scope 3 emissions. Decarbonising the Council's fleet, ensuring sustainable business travel and supporting staff to transition to sustainable commute options will support the Council's decarbonisation efforts.
Action Baseline	There is ample evidence of BCC's commitment to climate action including: • The establishment of the role of Climate Commissioner. • Preparing a Climate Change Risk Assessment and Climate Action Plan. • There is further evidence of awareness and climate knowledge within BCC leadership and experts, e.g. energy managers.	Progress has been made on understanding current GHG emissions, including the following actions: • Scope 1, 2 and partial scope 3 emissions calculated (18,783 tCO_2e) and a draft net zero carbon emissions carbon trajectory report completed by APSE; • Data collated on building energy use (electricity at 17,451,880 kWh and natural gas at 50,125,265 kWh) and floor area (completeness uncertain); and • 4 building audits completed	A series of initiatives have been undertaken to decarbonise transport, including: • A detailed fleet review completed by AECOM that is awaiting approval. The review includes an assessment of the annual carbon footprint of the BCC fleet (1,582 tCO_2) as well as pathways to transition the fleet to net zero); • LEVs procured for BCC vehicle fleet; • HVO trial completed and bunker supplied fleet transitioned to HVO; and • Employee initiatives in place to promote active travel (e.g. cycle-to-work scheme).
Identified Gaps	While BCC has made initial efforts to establish the building blocks for integrating effective climate action, a more complete and unified approach is needed across areas of education and upskilling, data and policy.	A complete and robust set of data for all buildings is required to inform understanding of energy and emissions - likely informed by a building survey, that includes data points such as building number and location, building type/use, floor area and construction year. Once sufficient data is available, benchmarks (local or national) can be applied to estimate energy consumption and associated carbon emissions, enabling a robust and realistic understanding of the highest energy users informing targeting of measures. The Council's Capital Programme is currently not subject to climate screening or whole life carbon assessments to minimise operational and embodied carbon emissions of new developments across the estate.	BCC's fleet review is considered robust and to avoid duplication of recommendations, fleet-related actions in the CAP relate to the Council actioning the recommendations of the fleet review. Wider actions to reduce the impact of business travel and employee commuting impacts are also set out in the CAP.

Step 1: Climate action baseline

	Waste Management	Adaptation
Context	Waste generation impacts BCC's scope 3 emissions and integrating more sustainable waste management practices can support decarbonisation and a transition to a circular economy.	BCC's assets, infrastructure and human resource are already at risk from climate and weather-related events and these risks are projected to increase and intensify in the future. Key risks identified for BCC are associated with flooding (coastal and pluvial) and extreme heat. Ensuring the resilience of BCC is essential to ensure continuity of service and to offset adverse impacts of climate change.
Action Baseline	The More Circularity Less Carbon report and NI Kerbside Waste Composition study quantified the carbon intensity of waste flows and management types of household waste in Belfast city. The carbon impact of household waste is estimated at 360,000 tCO_2e/year - nearly 20 times higher than BCC's carbon emissions. The required reduction in waste (90,025 tCO_2e) is around 5 times higher than BCC's carbon emissions.	A range of climate projection data is available to BCC through UKCP18 and DFI; this information has been employed to develop a high level understanding of climate change risks for BCC with priority risks identified (coastal and pluvial flooding, extreme heat). Semi-quantitative assessment of priority risks has been undertaken to establish asset-scale risks scores on the basis of climate hazard, environmental and asset information. A draft adaptation plan has been developed which focuses on actions relating to communication, financial planning, governance, data, nature-based solutions, emergency planning and local scale risk assessment.
Identified Gaps	Currently there is no tracking of internal Council-generated waste, therefore an understanding of BCC's own waste related emissions has not been possible. Data required to estimate carbon impact of waste produced through BCC operations include: • Waste volumes • Waste types • Disposal routes • Organisation boundary In the absence of these data, it is difficult to provide a quantitative analysis of BCC scope 3 waste emissions and provide targeted actions to support emissions reduction. The Belfast area household waste has been used as a case study to show the carbon intensity of waste streams, supporting education and awareness raising.	As identified through the semi-quantitative risk assesment and draft BCC adaptation plan, local and asset scale vulnerability information is required to determine potential adaptation requirements. Nature-based solutions (NbS) are a key asset to support the delivery of adaptation across BCC. Ensuring the incorporation of climate risk requirements into maintenance and development of NbS is critical to further enhance the resilience of Belfast and BCC. Developing adaptation across BCC will require BCC to deliver adaptation solutions across the existing BCC estate and to ensure that adaptation considerations are integral to all capital development.

Step 2: Action identification

A comprehensive list of climate actions was identified to enhance the resilience of the Council's assets and services and reach net zero emissions

On completion of Step 1, an understanding of BCC's climate action baseline was obtained as well as the identification of key gaps and areas of improvement for each climate action theme. This information provided the foundation to develop a comprehensive and wide ranging list of climate actions that would build on BCC's climate action baseline to close out the gaps identified and support the achievement of the goals and objectives established for each climate action theme.

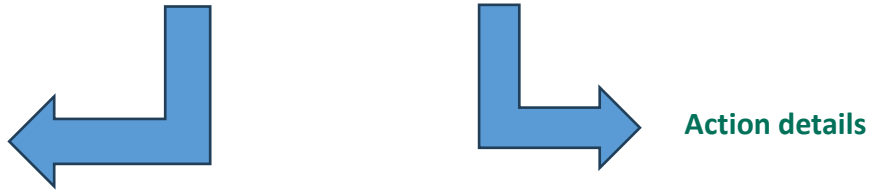
To develop the list of actions, the information gathered in Step 1 was supplemented with additional climate action plans, policies, strategies and reports from government, peers and industry. Documents and resources reviewed included the C40 Cities initiatives, UK Climate Change Committee reports, UK and ROI local authority climate action plans, European climate action case studies, the Northern Ireland Energy Strategy and the Net-Zero Carbon Roadmap for Belfast.

This review, in addition to expert input, resulted in the collation of climate action guidance, benchmarks and actions of relevance to the achievement the specific objectives identified. This information was applied to the BCC baseline context to develop the long list of climate actions.

As noted in Step 1, the climate actions were grouped into five key themes. The actions were further categorised by their characteristics - differentiating between actions aimed at awareness raising, capacity building, policy/planning and delivery/implementation - as demonstrated in the adjacent table.

Example output of the long list of climate actions

Theme	Category	Action No.	Action details
1. Tools for the Transition	Education/ Awareness raising	1.1	Support skills development, education and training internally for climate action, tailored for the specific needs of the departments / teams. Run periodic surveys to assess the effectiveness of the training
1. Tools for the Transition	Education/ Awareness raising	1.2	Implement an internal Climate Communications campaign to engage staff on climate-related topics and news internally and externally
1. Tools for the Transition	Capacity building	1.3	Explore the potential and feasibility of increasing the number of climate friendly meals sold within the Council Estate
1. Tools for the Transition	Capacity building	1.4	Explore opportunities for surplus land to be made available for potential partnership or disposal to third sector organisations where climate mitigation and adaptation goals are being observed e.g. for community growing, urban agriculture, energy production, carbon sequestration
1. Tools for the Transition	Capacity building	1.5	Complete an assessment of Council powers, opportunities and barriers to addressing climate change
1. Tools for the Transition	Capacity building	1.6	Integrate data collection systems related to Council-related GHG emissions
1. Tools for the Transition	Capacity building	1.7	Integrate a climate data platform for climate risks and climate adaptation and mitigation actions
1. Tools for the Transition	Capacity building	1.8	Establish a Climate Champions working group
1. Tools for the Transition	Policy/planning	1.9	Set target date for net zero



Step 2: Action identification – screening assessment

To prioritise actions for potential implementation, each of the actions identified through the long list of climate actions were screened according to a number of key criteria (timeframe, technical feasibility, cost and impact). All four criteria were assessed for each action, based on information provided by BCC and leveraging expertise within KPMG's team. This assessment was then circulated among BCC stakeholders to collect feedback, validate the action and provide the opportunity to identify any enabling actions or implementation challenges.

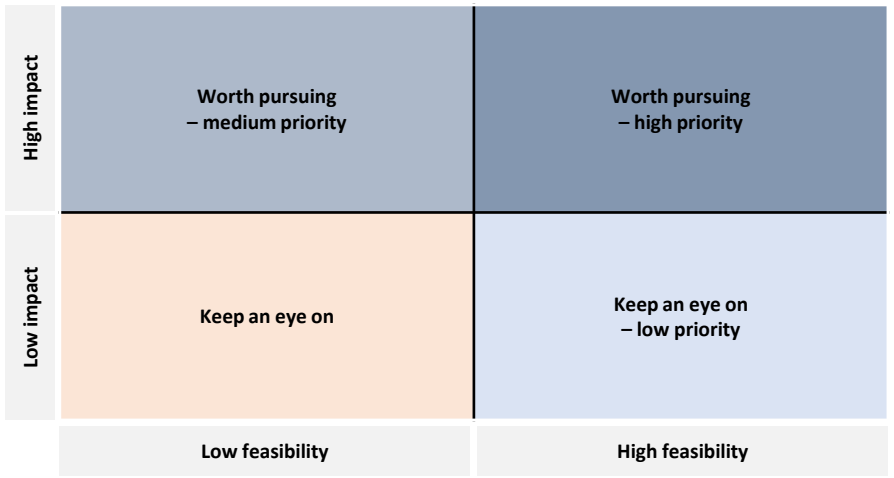
Screening criteria employed to rate identified actions

Timeframe: short, medium or long term action	
S	2022-2025
M	2025-2030
L	2030 +
Technical feasibility	
H	Technology / expertise readily available, expertise available within BCC
M	Technology / expertise can be made available, may require external expertise
L	Technology / expertise not readily available, technology still developing
Cost	
H	Additional capital expenditure required, long-term projects
M	Additional budget requirement from internal / external sources, medium- and long-term projects
L	Can be completed within existing budgets, ongoing, short to medium-term projects
Impact	
H	Significant, direct contribution to net zero and resilience goals
M	Directly contributes to enabling actions that support delivering net zero and resilience goals
L	Provides foundation / may contribute indirectly to delivering net zero and resilience goals

BCC stakeholders changed the ranking of 26 actions in addition to providing comments, barriers and enabling actions which were taken forward to the action prioritisation phase.

Prioritisation of actions after feedback is collated

The KPMG team collated the responses from BCC stakeholders into a master-list. The team then completed an action prioritisation exercise by converting the qualitative scores for S,M,L and H,M,L for timeframe, technical feasibility, cost and Impact into numeric scores to rank and screen out actions in line with the below matrix. The aim of this phase of work was to identify priority actions and enabling actions for BCC to deliver on mitigation and adaptation goals.



Step 2: Action identification – stakeholder workshop

On the basis of action screening, a initial implementation plan was developed and shared with BCC stakeholders for validation. Stakeholders agreed with the approach to CAP development and provided additional input to further refine the actions.

The KPMG team presented the updated action list to BCC stakeholders at a workshop in November 2022 to get additional feedback to support the options analysis phase. Actions had been previously grouped into the key themes identified and during the workshop each theme was discussed in detail by relevant department(s) and stakeholders in break-out rooms. (For a list of attendees at the workshop, please see Appendix 2).

While stakeholders agreed to the approach of developing the CAP, feedback received related to a lack of data and tracking systems in place to understand baseline conditions and to track progress as well as governance and resourcing challenges. These challenges were either tied to specific actions or were considered as cross cutting while some of the actions identified were deemed outside the remit of the CAP. Feedback was also given on initiatives already underway within the departments.

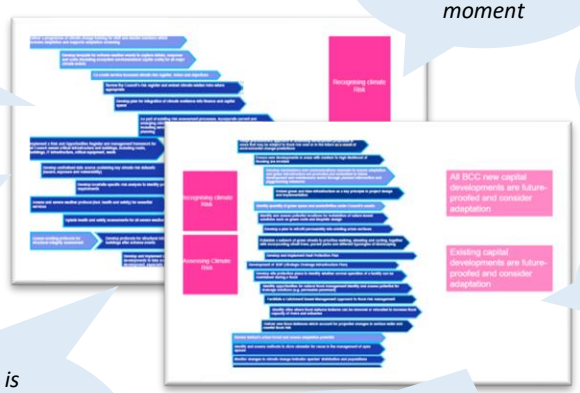
Example of feedback received via workshop

*Unsure if **datasets** are readily available for **building assets***

*Fundamental **resource issue** in BCC at the moment*

*There is a **capacity issue** and also communicating that this is a fundamental requirement to make decisions on building performance*

*There is a lot of **data** out there, but it needs to be made accessible*



***Baselines and impact of current interventions** need to be identified*

*Centralised **data system** is needed to show how they are performing now (developing a baseline). Can't manage what you can't measure*

*Key thing is realising these steps in practice and how these will be **resourced internally***

*The question surrounds **roles and ownerships** for various departments and where the actions will sit within wider BCC*

Summary of outcome of workshop

The feedback from the workshop informed the development of KPMG's core recommendation for BCC to focus on foundational issues in order to implement effective action, notably in the areas of:

- **Education and awareness raising**
- **Data and audits**
- **Targets and timeframe**
- **Coordination and communication**
- **Partnerships**

Step 3: Options analysis

During the options analysis phase, the long list of climate actions was refined based on the outcomes of the stakeholder workshop (Step 2) and feedback from BCC stakeholders as well as using expert judgement. The approach is outlined below

Following the action prioritisation stakeholder workshop, the action list was refined with the aim to develop easy to follow, practical and comprehensive Climate Action Roadmaps for each of the five themes. These Climate Action Roadmaps provide a time-bound, phased approach to action implementation and to support the overall achievement of the relevant climate action goals and objectives. A number of considerations were applied to refine the climate action list as summarised below. The key consideration was identifying the essential short-term enabling actions that need to be implemented in order to deliver the more impactful climate actions in the medium to long term. The Actions List and related Action Roadmaps were circulated to BCC stakeholders and on the basis feedback received were updated and finalised.

Prioritised Actions (presented at Workshop)

Considerations applied to refine action list to provide easy to follow, comprehensive Action Roadmaps

- The **prioritisation scores** (qualitative estimate on timeframe, cost and feasibility) were considered to prioritise actions. During this assessment, many of the short-term actions with high feasibility but low impact scores were enabling actions, and so while they would have been de-prioritised per the analysis framework, they were included to ensure that the pre-requisite conditions are established that enable the implementation of subsequent (and more impactful) climate actions
- Where required, **enabling actions** were identified to provide for the delivery of longer-term strategic actions – this dependency and relationship between actions is illustrated in the action roadmaps
- Actions considered to be too **out of scope** for the climate action plan, such as actions that can be taken forward in the city-wide climate action plan
- Amendments to and wording and actions based on **feedback from BCC**

Outcome of additional review and consolidation exercise

- To enable and support strategic visioning and the progressive implementation of actions, action roadmaps were developed for each theme. BCC's climate action baseline was used as the starting point for each action roadmap. The action roadmaps identify short-term enabling actions that progressively build upon the baseline to support delivery of longer-term strategic actions and achievement of the theme's specific objectives and overarching goal.

Step 4: Measuring success

Planning for climate action is considered as an iterative and learning-by-doing process which is strategic in focus and subject to a wide range of uncertainties. As a result, Monitoring, Learning and Reporting (MLR) frameworks are essential for climate action planning and implementation.

MLR frameworks assess the performance of climate actions and their implementation and supports improved decision-making under various uncertainties, including those presented by climate change. As part of the planning for implementing the CAP, BCC will need to develop a detailed implementation plan. The Monitoring, Learning and Reporting (MLR) framework has been developed to support implementation and with a specific focus on short-term actions.

In developing the MLR framework, a two-step approach was adopted:

01

Development of CAP Governance Structure

The success of a climate action plan is dependent upon the establishment of a fit-for-purpose governance structure to ensure oversight and accountability.

To support this aim, building on the progress already made by BCC in governance development and in consultation with BCC, a CAP governance structure has been developed which identifies the oversight body, action owners and independent advisers, detailing reporting lines and frequency of reporting.

02

Development of Monitoring, Learning and Reporting Framework

An MLR framework has been developed for the CAP that focuses on the short-term actions which are considered essential enablers to subsequent actions. MLR frameworks have been prepared for each theme and specify the objective(s) of each action, the metric(s) related to measuring progress, the target(s), outcome indicators and data required to complete the actions.

Step 4: Measuring success

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02

Development of Monitoring, Learning and Reporting Framework

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Appendix 6

An Integrated Approach to Deliver the Tree Strategy and One Million Trees Programme

Tools for Transition Action 2.19 – How the Belfast Tree Strategy and One Million Trees Initiative will support the CAP

The targets set out in the Tree Strategy support the delivery of the CAP Action 1.16 'Develop an integrated approach to the delivery of the Tree Strategy[1] targets that supports climate mitigation and adaptation through alignment of the Tree Strategy with the One Million Trees Programme'. Below are a list of targets that support both the delivery of the Tree Strategy and the CAP.	
Tree Strategy Target 1	Carry out a detailed canopy cover assessment to establish accurate potential canopy cover and the amount of tree cover also provided by woodland and hedges. (Links to T1 in TS)
Tree Strategy Target 2	Establish a tree population suited to the urban environment, adapted to the overall region and to 2050 climate scenarios. (Links to T4 in TS)
Tree Strategy Target 3	Move to an integrated GIS based tree inventory system, assessing current management practices and stress levels in existing tree population. (Links to T5 in TS)
Tree Strategy Target 4	Identify parcels of land where natural regeneration might be possible. (Links to T6 in TS)
Tree Strategy Target 5	Prioritised zones to be identified where specific benefits can have the highest impact. Species choice related to species ability to deliver required benefits. (Links to T10 in TS)
Tree Strategy Target 6	Governance of the urban forest is coordinated by a dedicated body in Belfast and integrated with current Million Trees programme governance. (Links to C1 in TS)
Tree Strategy Target 7	Internal coordination within BCC to advance goals for improving Belfast's urban forest, linked into Million Trees programme. (Links to C2 in TS)
Tree Strategy Target 8	Review current tree management software, protocols for data collection and sharing, inclusion of hedges and hedgerows. ((Links to R1 in TS)
Tree Strategy Target 9	Establish a tree valuation method as part of an asset management approach (Links to R2 in TS)
Tree Strategy Target 10	Map canopy at the ward level and assess 30% canopy cover goal against climate adaptation needs (Links to R3 in TS)
Tree Strategy Target 11	Complete tree opportunity map and identify areas that would have greatest adaptation potential for targeted planting (Links to R4 in TS)
Tree Strategy Target 12	Deliver on the requirements of the Local Development Plan's tree policies (Links to R10)
Tree Strategy Target 13	Map and identify areas of Council owned natural areas and public green space. Develop system for recording trees in woodlands (Links to R12)
Tree Strategy Target 14	Develop a biosecurity strategy for the urban forest in Belfast (Links to R14)
Tree Strategy Target 15	Support the development of local community tree nurseries and develop long term tree supply plan (Links to R14)
Tree Strategy Target 16	Commission a feasibility study on utilising urban wood and green waste (Links to R15)
Tree Strategy Target 17	Establish an R&D agenda and strategy, and assign a clear responsibility for research coordination. Set up a research advisory board. Prioritised topics for R&D include biosecurity and climate change. (Links to R17)

Belfast Tree Strategy

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