CORK COUNTY COUNCIL CLIMATE ACTION PLAN 2024-2029

Comhairle Contae Chorcaí
Cork County Council

FOREWORD

MESSAGE FROM MAYOR: CLLR. FRANK O'FLYNN

I would like to warmly welcome the publication of the Cork County Council Climate Action Plan 2024 to 2029.

Climate change is one of the most critical, long-term global challenges of our time and its effects are already impacting Cork County. Sea levels in the Cork Harbour area have risen by 40 cm since 1842. We are seeing average rainfall increasing and record-breaking summer temperatures. Heatwaves, droughts, flooding and coastal erosion are expected to occur more frequently into the future as a result of climate change.

Therefore, it is essential that greenhouse gas emissions are cut in order to meet climate commitments at a local, national and EU level. Making this happen depends on the co-operation of a wide range of stakeholders and involves all of us together changing how we behave.

On behalf of Cork County Council, I am confident that we are well positioned to tackle this challenge by collaborating both at a national level and by working locally with our residents, communities and businesses across Cork County to deliver real, sustainable and lasting change. This plan shows how as a Council, we can work to influence, facilitate and coordinate the climate actions of communities and other stakeholders by detailing how the Council will take direct action to meet national targets in respect of its own activities and assets while supporting other sectors in their ambitions.

MESSAGE FROM CHIEF EXECUTIVE: VALERIE O'SULLIVAN

Climate change is one of the most pressing global public policy challenges facing governments today which Cork County Council has put it to the forefront of its agenda.

Our Climate Change Action Plan sets out how the Council will improve energy efficiency and reduce greenhouse gas emissions in its own buildings and operations while making Cork a more climate resilient county, with engaged and informed citizens. Cork County Council will continue to work with key stakeholders to influence and support carbon reduction initiatives across the county.

This plan focuses on interrelated themes and associated actions which provide a framework to support the delivering of a transition towards a more climate resilient county. In addition, this plan makes provision for Cork County's first Decarbonising Zone of Macroom to be established, which will identify and pilot community led projects to demonstrate how emission reductions can be realised in a targeted way.

We look forward to the contributions this plan will make to the development of Cork County over the next five years, with progress reports and updates on its implementation continuing through our climate governance and reporting structures.

I would like to express my appreciation to our Mayor, the Elected Members of Cork County Council, staff, those who made submissions, interested groups, statutory bodies and all stakeholders, who have actively contributed to and informed the development of this plan.

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EXECUTIVE SUMMARY

Internationally, national and local governments are increasingly compelled to take ambitious action to increase resilience to climate change within their organisations and their functional areas through adaptation and mitigation measures. Legislative requirements and targets set for the local government sector are extremely challenging and achieving these targets will be dependent on central government providing significant funding and resources.

The Climate Action Plan 2024-2029 sets out the actions that Cork County Council will take across its own services to meet national emissions targets and to increase the resilience of its human and infrastructural assets against climate change impacts. This plan also specifies how the local authority will work with its communities to advocate for change and with national government and state agencies to deliver climate action.

This plan aims to create a low carbon and climate resilient County, by delivering and promoting best practice in climate action, at the local level and to align to the Government's overall National Climate Objective, which seeks to pursue and achieve, by no later than the end of 2050, the transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy.

This Climate Action Plan sets a pathway for Cork County Council to actively translate national climate policy to local circumstances with the prioritisation and acceleration of evidence-based measures including to:

- Reduce its direct carbon emissions by 51% by 2030,
- Assist in the delivery of the climate neutrality objective at local and community levels; and
- Identify and support the development of a Decarbonising Zone (DZ) within the local authority area.

In order for Cork County Council to achieve these measures, this Climate Action Plan sets out the current and future climate change impacts and greenhouse gas emission levels in the County through evidence-based climate action mitigation and adaptation.

The mitigation baseline provides an assessment of the greenhouse gas emissions that the Council was directly responsible for and a breakdown of emissions from other sectors (residential, commercial & industrial, agriculture, transport, land use, land use change & forestry, waste and municipal). This found that the total baseline carbon emissions within the Cork County boundary area equates to 8,083 ktonnes CO2e in 2018. Cork County Council's own direct emissions fall under the Municipal sector which comprises less than 1 percent of the County's emissions.

The climate change risk assessment has identified that the effects of climate change are already impacting Cork County and are projected to increase in their intensity and frequency. Cork County has experienced high temperatures with the highest temperature in the County of 31.6°C recorded on June 18th, 2018 at Glengarriff. At Cork Airport, four of the hottest summers recorded were in the last 10 years, based on records extending back to 1961. The number of days with increased rainfall has increased, with average annual rainfall at Cork Airport increasing by 3% for the most recent period (1981-2010) compared to the 1961-1990 baseline. In addition, extreme rainfall events have been recorded, including the 230mm of rain that fell during the 2020 Rosscarbery flood which was the highest recorded since 1961. Sea levels in the Cork Harbour area have also risen by approximately 40cm since 1942. The climate risk assessment predicts that the risk of existing hazards such as river and coastal flooding and coastal erosion is likely to increase in the future because of changes in both hazard frequency as a result of climate change and impact due to changes in exposure and vulnerability. Heatwaves, droughts, and pluvial flooding, although already experienced in Cork County, are expected to occur more frequently in the future due to climate change and with a greater impact on Cork County. Extreme past weather events and projected increases in frequency and intensity, highlight the need to reduce the impacts that climate change is having on the environment, economy and people of Cork County.

This Climate Action Plan strengthens the links between national and international climate policy and the delivery of effective climate action at local and community levels, through place-based climate action. The specific climate actions to address the aims of the plan have been developed having regard to the baseline emissions inventory and climate change risk assessment. The framework for climate action is set out in the context of defined goals, overarching objectives and mitigation and adaptation actions within the following themes – community, biodiversity / natural environment / heritage / land use, economy, transportation, built environment and waste. The identified actions have many additional benefits, such as improved health and wellbeing, environmental / habitat protection and economic benefits which are highlighted throughout the plan.

In order for the Council to achieve sectoral targets in relation to GHG reduction from direct energy use and energy efficiency, this plan has developed actions that will focus on providing a 51% reduction in GHG emissions from the 2016/2018 baseline resulting from the council's electricity usage, thermal heating and transport use. The specific actions identified in the plan also seek a 50% increase in energy efficiency from the 2009 baseline. As climate change is a challenge that exists across the entire range of the Council's functions and activities, Cork County Council will support a multi-disciplinary approach to climate action, delivered through a clearly defined governance structure. The plan also includes actions in order for the Council to achieve the plan's governance goal 'to make climate change central to the operation of the Council'.

This plan also makes provision for Cork County's first Decarbonising Zone (DZ) to be established within the local authority area. The Council has selected Macroom Town as a DZ and the plan sets out a range of climate mitigation, adaptation and biodiversity measures within this area. The DZ will identify and pilot projects at a community level to assist in the delivery of the National Climate objective and from which successful projects and initiatives can be replicated elsewhere in the County.

The Council is also committed to supporting and administering the Community Climate Action Programme (CCAP) funded by national Government to support and build low carbon communities, which will allow communities to apply for grants to enable climate projects at a local level.
In order to deliver on the climate objectives of this five year plan, the Council will each year prepare an Annual Implementation programme, which will align with the annual budgetary process and enable national developments in relation to grants and funding to be taken into account and to allow for regular monitoring of the plans progress.

Cork County Council's Climate Action Plan will offer an opportunity to bring together critical stakeholders across communities and all sectors, to build a vision for a climate neutral future and make climate action a priority in Cork County.

Comhairle Contae Chorcaí
Cork County Council

CHAPTER 2
INTRODUCTION

Comhairle Contae Chorcaí
Cork County Council

2.0 INTRODUCTION

Cork County Council has prepared this Climate Action Plan 2024-2029, to lead the transition to a low carbon and climate resilient County, by delivering and promoting best practice in climate action, at the local level. This is aligned to the Government's overall National Climate Objective that Ireland will be a climate resilient, biodiversity rich, environmentally sustainable and climate neutral country no later than the end of 2050.

This is set out in the Climate Action and Low Carbon Development (Amendment) Act 2021, which also frames Ireland's legally binding climate ambition, to delivering a reduction in greenhouse gas emissions of 51% by 2030. This will place the country on a trajectory to achieving climate neutrality by the end of 2050. In preparing this plan, the Council has also taken account of other relevant climate legislation and policy, a climate change risk assessment and a climate mitigation baseline assessment, at a County scale, which are included as part of this Plan.

The Climate (Amendment) Act 2021 specifically requires all local authorities in Ireland to prepare and make a Climate Action Plan, in consideration of wider national climate and energy targets, addressing both mitigation and adaptation measures:
- **Climate Change Mitigation** relates to changing how we live, move, consume and manufacture, so as to reduce and/or eliminate the production of harmful greenhouse gases, it also includes how we best use our land; and
- **Climate Change Adaptatio**n refers to dealing with the impacts of climate change and involves taking practical actions to manage risks, protect communities and strengthen the resilience of the economy (e.g. from flooding, sea level rise etc).

This Climate Action Plan sets a clear pathway for Cork County Council to actively translate national climate policy to local circumstances with the prioritisation and acceleration of evidence-based measures including:

- Reduce its direct carbon emissions by 51% by 2030
- Assist in the delivery of the climate neutrality objective at local and community levels; and
- Identify and support the development of a Decarbonising Zone (DZ) within the local authority area to act as a test bed for a range of climate mitigation, adaptation and biodiversity measures in a specifically defined area, through the identification of projects and outcomes that can be replicated in other parts of the County (if proved successful).

Set against the backdrop of an evolving and ambitious framework of national climate policy, Cork County Council maintains a strong commitment to mainstreaming climate action across its own operations and functions, whilst also pursuing a leadership role on climate action, at the local level. This plan demonstrates a coherent approach to climate action across the administrative and political structure of the local authority. This Plan was Approved by the Elected Members of Cork County Council on the 12th February 2024, following public consultation and engagement. A range of other plans, including Cork County Council's Corporate Plan and Cork County Council's Development Plan also support this Climate Action Plan.

This Plan sets out how Cork County Council will be responsible for enhancing climate resilience, increasing energy efficiency and reducing greenhouse gas emissions, across its own assets, services and infrastructure (which it is fully accountable for) whilst also demonstrating a broader role of influencing, advocating and facilitating other sectors, to meet their own climate targets and ambitions. This is necessary to ensure that the environmental, social and economic benefits that come with climate action, can be fully realised.

Figure (i) illustrates the scope of the local authority's responsibility on climate action.

Local Authority Scope on Climate Action
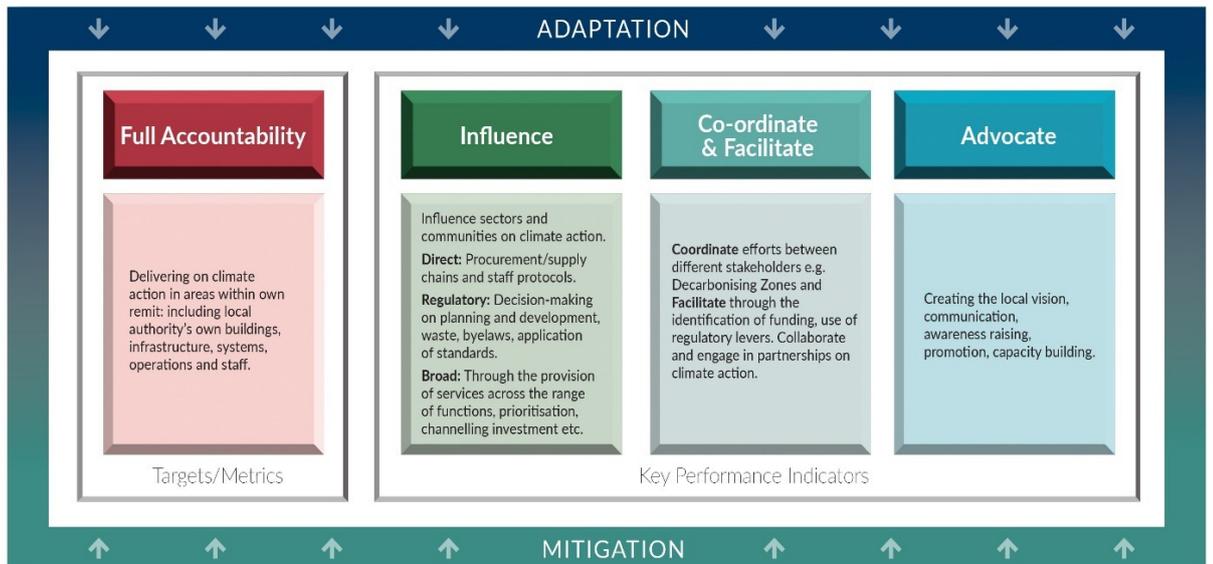
Figure (i): Local Authority Scope on Climate Action
(Source: Local Authority Climate Action Plan Guidelines, 2023)

The Council will also continue its efforts in rolling out ambitious climate action projects, drawing down available sources of funding and pursuing citizen and stakeholder engagement. Cork County Council will also launch the Climate Action Fund Strand 1 - Building Low Carbon Communities. This is a fund for local authorities across the country, to support and build low carbon communities.

Cork County Council is Ireland's largest local authority and the largest, based on geographical size. County Cork is characterised by rich and diverse inland and coastal landscapes, numerous environmentally sensitive sites and a growing population.

The Council has a total administrative area of 7,457km2 characterised by a diverse inland and coastal landscape, a wealth of natural resources and providing home to a rich array of biodiversity. This County is rich in natural capital along its 1,118km coastline, natural harbour's, 125 rivers, lakes, forests and woodlands. Cork County is home to numerous protected species and environmentally sensitive sites, including 30 Special Areas of Conservation (SAC's), 18 Special Protection Areas and 8 Natural Heritage Areas.

Cork County Council's population is 360,152 (CSO 2022) which represents an 8% increase compared to 2016. The main industries of employment within the region include Professional Service (22.7%), Commerce and Trade (21.3%), Manufacturing Industries (16.2%) and Agriculture/Forestry/Fishing (8.3%). The County is also home to the Inniscarra hydro power station. The County's total agricultural land area is 530,000 hectares which includes the highly productive Golden Vale farmland.

The population of Cork County is expected to continue to increase with 66,000 more people by 2031 and the County will require more housing and infrastructure to accommodate this growing population with 22,600 new housing units required by 2028. Cork County has a number of key renewable energy projects including 38 commissioned wind farms with capacity to produce 603mw and 43 permitted solar farms with a capacity to produce 358mw.

Cork County Council recognises this need and the requirement to plan sustainably by putting in place sustainable development strategies and actively planning for and investing in the transition to a low carbon climate resilient society and economy. In a changing climate, the aim is to become more resilient to all future possibilities, allowing local communities to thrive and work towards real solutions that are meaningful, inclusive, fair and accessible for all, thereby prioritising a just transition.

Spatial planning has a pivotal role in enabling and delivering positive climate action measures. The Council's commitment to climate action is a core consideration of the Cork County Development Plan 2022 which shapes the plan as an important climate action tool, ensuring that all development considers climate change mitigation and adaptation, and that the location of development seeks to promote climate action and maximise climate action opportunities, particularly through the integration of transport and land uses.

2.1 OVERVIEW OF CLIMATE CHANGE

Climate change is increasingly understood to be the most critical, long-term global challenge of our time, its impacts continuing to be felt both worldwide and at home. The **Intergovernmental Panel on Climate Change (IPCC's) Working Group I Sixth Assessment Report**, confirms overwhelming evidence that the climate has changed since the pre-industrial era and that human activities, through greenhouse gas emissions are the principal cause of that change. It states the unequivocal cause of global warming has been human activities, with global surface temperatures reaching 1.1°C above 1850-1900, in the 2011-2020 period.

Ireland's climate echoes that statement. Figure (ii) compares the global temperature rise since 1900 to Irish temperatures. Ireland is in line with the global temperature increases, following 2022, being a year of record-breaking extremes, in both temperature and precipitation (rainfall). Met Éireann stated that 2022 was 'the warmest year on record'. This would see Ireland's temperature above the long-term average for the 12th consecutive year. Furthermore, 2022 saw record breaking temperatures observed in Ireland during the summer, recording the second highest temperature ever recorded in Ireland at 33°C.

Island of Ireland 1900-2022 Temperature (°C) Anomalies (difference from 1961-1990)

Island of Ireland Temperature Anomalies/Difference from Annual Average (9.5°C) 1961-1990 inclusive — Above — Below

Data valid from Monday 1 January 1900 to Thursday 25 May 2023 inclusive
Data from Malin Head, Co Donegal, Birr/Gurteen, Co Offaly/Tipperary, Phoenix Park, Co Dublin, Valentia Observatory, Co Kerry and Armagh Observatory, Co Armagh (Armagh data courtesy of Armagh Observatory and Met Office, UK)
Global Temperature Anomalies: HadCRUT5 Near-Global (Land+Sea), Climatic Research Unit, University of East Anglia

Figure (ii): Island of Ireland 1900-2022 Temperature (°C) Anomalies (difference from 1961-1990 (Source: Met Éireann)
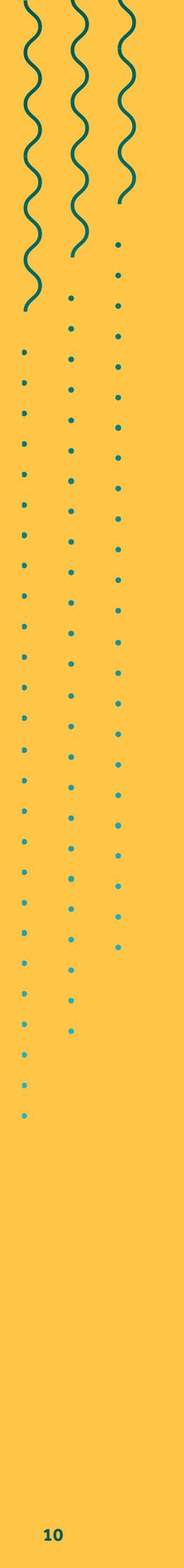
The 30 year period from 1991-2020 shows a 7% increase in the average annual rainfall in Ireland when compared to the previous 30 years of 1961-1990. Significant reductions are expected in average levels of annual, spring and summer rainfall. Projections indicate a substantial increase in the frequency of heavy precipitation events in Winter and Autumn (approx. 20%) (reference: epa.ie)

Global mean sea level increased by 20cm between 1901 and 2018. The trend in global mean sea level rise has been consistently rising since 1901. Ireland has so far seen a similar rise in sea level with an average of 2-3mm per year. A warming climate has caused a rise in sea level, through the loss of sea ice and thermal expansion (the increase in the volume of water due to heating) resulting from the warming ocean. In relation to the frequency and intensity of storms, this will be covered in chapter 3 and is also outlined the Cork County Baseline Summary Evidence Report (https://www.corkcoco.ie/en/resident/environment/climate-action-plan/climate-action-plan-pre-draft-public-consultation).

Ireland has suffered from adverse climate impacts already and recent extreme weather events have highlighted the vulnerability of individuals, businesses, communities, sectors and infrastructure to climate change, emphasising the need for urgency on climate action across all sectors of society.

For example, storms such as Arwen and Barra in 2021 most notably, left 59,000 homes and businesses without power. The adverse impacts of climate change can often compound wider reaching social, environmental and economic challenges. This can increase vulnerability and sensitivity to a changing climate and climate extremes.

Based on observed changes in climate and its impacts, Met Éireann, the Environmental Protection Agency (EPA) and other climate scientists, can make robust projections on future climate patterns in Ireland and globally. The EPA, Marine Institute and Met Éireann published "The Status of Ireland's Climate Report" in July 2021. Future climate projections for Ireland can be summarised as follows:
- Climate projections indicate that the climate trends observed over the last century will continue and intensify over the coming decades;
- Temperatures are increasing and are expected to continue to increase across all seasons;
- Significant reductions in levels of average precipitation (rainfall) are expected in Spring and Summer, whilst projections indicate the increased occurrence of extreme precipitation events, particularly during Winter.
- Projections show little change in average wind speed and direction. The frequency of extreme wind conditions is expected to increase, particularly during Winter;
- Based on current trends, Ireland will see an increase in sea level rise, similar to what has been experienced to date. Ireland is extremely vulnerable to sea level rise, due to its expansive coastline and the large number of the population that has settled on the coast;
- Increases in the frequency of fluvial (river) and pluvial (surface water) flooding;
- Increases in the frequency and intensity of coastal flooding and erosion;
- Increases in the frequency and intensity of summer heat waves, extreme temperatures and drought;
- Reductions in the frequency of frost and snowfall; and
- An increase in the duration of the growing season (phenological cycle).

The state of Ireland's climate today and how it may look in the future can be brought together in one simple conclusion. Ireland's climate has changed relative to the 1900's, it has undoubtedly warmed along with global temperatures, bringing about an array of impacts that are associated with a warmer climate and more extreme weather events.

2.2 CLIMATE POLICY CONTEXT

Climate action is given impetus by the scientific evidence that supports the findings of human influence on climate change and the most recent legally binding international treaty on climate change, which sets the framework for ambitious and strengthened policy responses, the Paris Agreement 2015. Consequently, this Climate Action Plan is set within a broader context of international, EU, national and sectoral climate policy. This is represented in Figure (iii).

United Nations Framework Convention on Climate Change (UNFCCC)

Paris Agreement 2015

2030 Agenda for Sustainable Development

European Green Deal
European Climate Law

Climate Action & Low Carbon Development (Amendment) Act 2021

National Climate Objective
A Climate Resilient, Biodiversity Rich, Environmentally Sustainable & Climate Neutral Economy

Local Authority Climate Action Plans

Consistent with
Long-Term Climate Action Strategy
National Climate Action Plan
National Adaptation Framework
Sectoral Adaptation Plans
City/County Development Plans

Informed by
Local Authority Climate Action Charter
Local Authority Climate Action Plan Guidelines
DECA 2030

Figure (iii): Legislation and Policy Context for the Climate Action Plan (Source: Climate Action Regional Offices)

2.3 INTERNATIONAL CLIMATE CHANGE POLICY

It has been recognised that successfully tackling climate change requires cooperation and ambition on an international level. Since the establishment of the United Nations Framework Convention on Climate Change (UNFCCC) in 1994, countries have sought to build international cooperation to limit the increase in the average global temperature and deal with the impacts of climate change that result from these temperature increases.

These efforts led to the signing of the Paris Agreement 2015 at the Conference of the Parties 21 (COP21). The Paris Agreement 2015 is a legally binding international treaty on climate change which was signed by all 196 member countries, including Ireland, and entered into force on 4th November 2016. Through two clearly defined goals, the Paris Agreement strives for progressive and ambitious climate action over time to avoid dangerous climate change by:

i.   Holding global average temperature increases to well below 20C and pursuing efforts to limit the temperature increase to 1.50C above pre-industrial levels; and

ii. Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience.

Another International agreement closely linked with the Paris Agreement is the 2030 Agenda for Sustainable Development which was adopted by UN Member States in September 2015. At the Agenda's core are 17 Sustainable Development Goals (SDGs) . These goals aim to "end poverty, protect the planet and improve the lives and prospects of everyone, everywhere." The 17 SDGs contain 169 targets to be achieved by 2030. In 2019, World leaders called for a 'decade of action' in order to achieve the Goals within this timeframe.

Towards achieving greenhouse gas emission reductions, as part of Paris Agreement commitments, the European Commission, in December 2019, announced the European Green Deal aimed at making Europe the first climate neutral continent. The Deal seeks to achieve no net emissions of greenhouse gases by 2050, to decouple economic growth from resource use, and to leave no one behind. The EU introduced a set of proposals to align the EUs climate, taxation, energy, and transport policies to support achieving this aim. The European Climate Law made these targets legally binding, which also includes achieving a reduction in net greenhouse gas emissions of at least 55% by 2030. The EU Taxonomy for Sustainable Activities is a classification system that sets out standards that economic activities must meet in order to be deemed environmentally sustainable.

2.3.1   CLIMATE CHANGE POLICY IN IRELAND

Climate change policy in Ireland now reflects the ambition of the EU and that it is required to confront the challenges of climate change. Working towards the National Climate Objective the Climate (Amendment) Act 2021, promotes a sustainable economy and society where greenhouse gas emissions are balanced or exceeded by the removal of greenhouse gases. Through progressive economy-wide carbon budgets, sectoral ceilings, a suite of strategies devised to promote a combination of adaptation and mitigation measures, as well as robust oversight and reporting arrangements, climate policy is working to scale up efforts across all of society and deliver a step change on ambitious and transformative climate action to 2030 and beyond to 2050.

The Climate Action Plan 2023, launched on the 21st of December 2022, is the second annual update to the States' Climate Action Plan 2019. It is also the first to be prepared under the Climate Action and Low Carbon Development (Amendment) Act 2021. This follows the introduction in 2022, of economy-wide carbon budgets and sectoral emission ceilings. The Climate Action Plan 2023 sets out a roadmap to 2025 towards taking decisive action to halve emissions by 2030 and to reach net zero, no later than by the end of 2050, as committed to in the Programme for Government.

Ireland published its first National Adaptation Framework (NAF) in 2018, which set out the context to ensure key sectors and local authorities, can assess the key risks and vulnerabilities of climate change, implement climate resilient actions, and ensure climate adaptation considerations are mainstreamed into national, regional and local policy making.
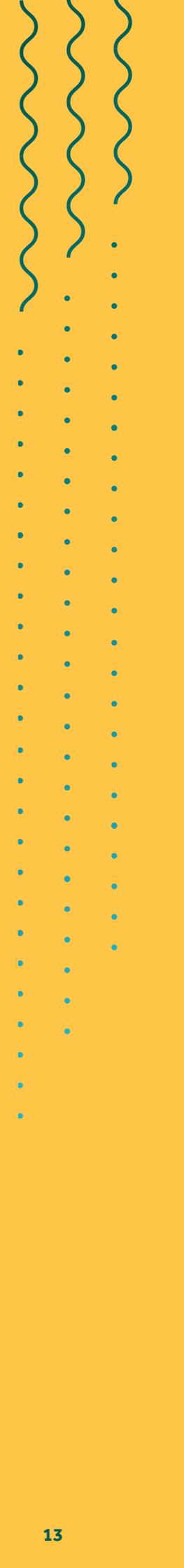
Ireland's current Long-term Strategy on Greenhouse Gas Emissions Reductions sets out indicative pathways, beyond 2030, towards achieving carbon neutrality for Ireland by 2050. The Strategy builds upon the decarbonising pathways set by the carbon budgets, sectoral emissions ceilings and the national Climate Action Plan, to ensure coherent and effective climate policy. It is underpinned by analysis of transition options across each key sector of the economy and provides a crucial link between Ireland's 2030 climate targets and the long-term goal set by Ireland's National Climate Objective and the European Climate Law.

Sectoral Climate Adaptation Plans have been published across Government departments, in response to the National Adaptation Framework. Each Plan identifies the key risks faced across the sector and the approach being taken to address these risks and build climate resilience for the future. They were developed applying a six-step adaptation planning process described in Sectoral Planning Guidelines for Climate Change Adaptation, published by the Department of the Environment, Climate and Communications. The Plans address the following sectors: Agriculture, Forestry and Seafood, Biodiversity, Built and Archaeological Heritage, Transport Infrastructure, Electricity and Gas Networks, Communications Networks, Flood Risk Management, Water Quality and Water Services Infrastructure and Health.

Central Government has a lead role to play in developing policy and ensuring that resources are made available to realise Ireland's commitment to achieving a net zero carbon energy system objective for Irish society and in the process, create a climate resilient vibrant and sustainable Country. Central and local Government will work in partnership to ensure an effective response to the challenges presented by climate change.

The Climate Action Charter (please see appendix 1) agreed between Cork County Council and all Departments of Government in 2019 was signed by the Cork County Council Chief Executive and the Minister for Communications, Climate Action and Environment on behalf of all Government Departments and represents a commitment to scale up efforts and play a key role locally and nationally in delivering effective climate action. It tasks Cork County Council with providing robust leadership in advancing climate action at regional and local levels and with adhering to the UN SDGs, in particular Goal 13 Climate Action. Alongside reducing emissions from its' own operations, Cork County Council commits to collaborate and partner with local enterprise, community groups, citizens as well as public, private, and educational sectors on climate action initiatives.

Delivering Effective Climate Action 2030 (DECA 2030) is the local government strategy on climate action published in April 2021. The strategy represents an overarching sectoral commitment to ensuring a coherent approach to climate action across the administrative and political structures of all 31 local authorities. At a sectoral level the strategy communicates a general strategic intent through an envisaged leadership position, to engage the local authority network in effective climate action. Within the sector, the overall strategy represents a top-level consensus on the approach to climate action and a strong commitment to the prescribed leadership role. The strategy is a stated roadmap for local authorities in delivering the required decarbonising and adaptation responses to climate change.

2.4 THE NEED FOR CORK COUNTY COUNCIL'S CLIMATE ACTION PLAN

The Cork County Council Climate Action Plan strengthens the links between national and international climate policy and the delivery of effective climate action at local and community levels, through place-based climate action. The intrinsic value of the climate action plan is that it plays a significant role in reinforcing the commitment by the local government sector to lead on climate action at local and national levels, as reflected in the local government strategy DECA 2030. Over its preparation and implementation, Cork County Council's Climate Action Plan will offer an opportunity to bring together critical stakeholders across communities and all sectors, to build a vision for a climate neutral future.

Cork County Council and other local authorities across Ireland, are already well positioned at the forefront of climate action in Ireland. Cork County Council plays a significant role in terms of delivering adaptation and mitigation measures at local and community levels. We are entrusted to work through our regulatory and strategic functions to operationalise the ambitious national climate targets and policy at local levels, to assist in the delivery of the National Climate Objective. Central Government resources are provided through the National Development Plan and the Council acts as agents for Government departments in many areas such as the Social Housing Retrofit and active travel grant schemes, amongst others.

The Cork County Council Climate Action Plan is part of longer-term efforts that require a sustained and planned response to support the delivery of the climate neutrality objective at local and community levels. The Climate Action Plan provides a mechanism for bringing together both adaptation and mitigation actions to help drive positive climate action and outcomes across the local authority and its administrative area. The framework of climate actions set within the plan, configures the arrangement of climate actions within a defined structure that ensures alignment between on the ground actions and the high-level vision that the plan aspires to deliver.

This Climate Action Plan has been prepared in accordance with the Local Authority Climate Action Plan Guidelines, published by the Department of the Environment, Climate and Communications in March 2023.

2.5 STRUCTURE OF THE CLIMATE ACTION PLAN

Cork County Council's Climate Action Plan has taken into full consideration international and national climate change policy and legislation as well as the most up-to-date knowledge on current levels of climate change as well as its impacts and projections for the future. In showing the outcome of this process, this Climate Action Plan is set out in four parts.

The evidence base contained in Chapter 3 sets out the status of County Cork's emissions and climate risks and is used to inform on climate action within the jurisdictional area of Cork County Council.

The framework for climate action is contained within chapter 4 and this includes the Vision, Strategic Goals, Objectives and Actions.

The development of a Decarbonising Zone in Cork County is outlined in chapter 5 of this document. Macroom has been designated as the DZ for Cork County Council based on its socio-economic and physical environmental characteristics which have been deemed an appropriate fit against a set of defined DZ criteria. This chapter of the plan will include the Vision for the DZ, DZ Strategic Priority Areas and DZ Actions.

The final Part of this Plan sets out Cork County Council's approach to implementing actions, measuring progress, the use of metrics as well as how the Council will report on actions over the lifetime of the Plan (chapter 6).

2.6 CONCLUSION

Climate action and decarbonisation policy in Ireland is underpinned by a number of national policies, plans and legislation which are realised and implemented at both a regional and a local level. There has been a substantial shift in national policy in recent years across the State, with climate action occupying a central and fundamental role in policy formulation and decision-making across all levels of national, regional and local government in Ireland. Some of the key policies and plans influencing climate action and decarbonisation in both Ireland and, at a local level in Cork County, have been referenced in this chapter.

Policy objectives and targets are driven at a national level and are supported by regional and local policies, plans and strategies which assist in realising these targets at local level. This has been underpinned by The Climate Action and Low Carbon Development (Amendment) Act 2021, which establishes a legally binding framework with clear targets and commitments set in law and ensures that the necessary structures and processes are embedded on a statutory basis to ensure Ireland will achieve national, EU and international climate goals and obligations in the near and long term.

This chapter has outlined some of the key national, regional and local policies in Cork County that are supporting Ireland (and Cork County's) journey and transition to Net Zero and aiding the targeted delivery of a climate neutral economy by no later than 2050.

Cork County Council has an ambitious plan to capitalise on our unique position to advance climate action in the County. This plan specifies actions that the Council will take across its own services to meet national emissions targets and to increase the resilience of its human and infrastructural assets against climate change impacts. This plan also specifies how the local authority will work with it's communities to advocate for change and with national government and state agencies to deliver climate action.

CHAPTER 3 EVIDENCE BASED CLIMATE ACTION

Comhairle Contae Chorcaí
Cork County Council

INTRODUCTION

The Climate Action Plan is based on evidence gathered by Cork County Council and laid out in this chapter. This evidence consists of two elements.
- **the county wide carbon Baseline Emissions Inventory (BEI),**
- **the county wide Climate Change Risk Assessment (CCRA)**

3.1 COUNTY CORK'S BASELINE EMISSIONS INVENTORY (BEI)

Local Authorities were guided in the CARO Technical Annex C to collect emission data for the baseline year 2018, or as close to 2018 as possible. This year was chosen so that the data would align with Ireland's national emission targets which are set against that baseline year.

In 2022 - 2023, Cork County Council compiled a Baseline Emissions Inventory (BEI) baseline-evidence-summary-report-pdf.pdf (corkcoco.ie) of the County's greenhouse gas emissions for the year 2018 following the guidance above.

In 2019 the boundary between Cork County and Cork City Local Authorities changed with the city area increasing. The 2018 BEI was adjusted so that it would represent the BEI for all lands within the functional area of Cork County Council after the 2019 boundary change.
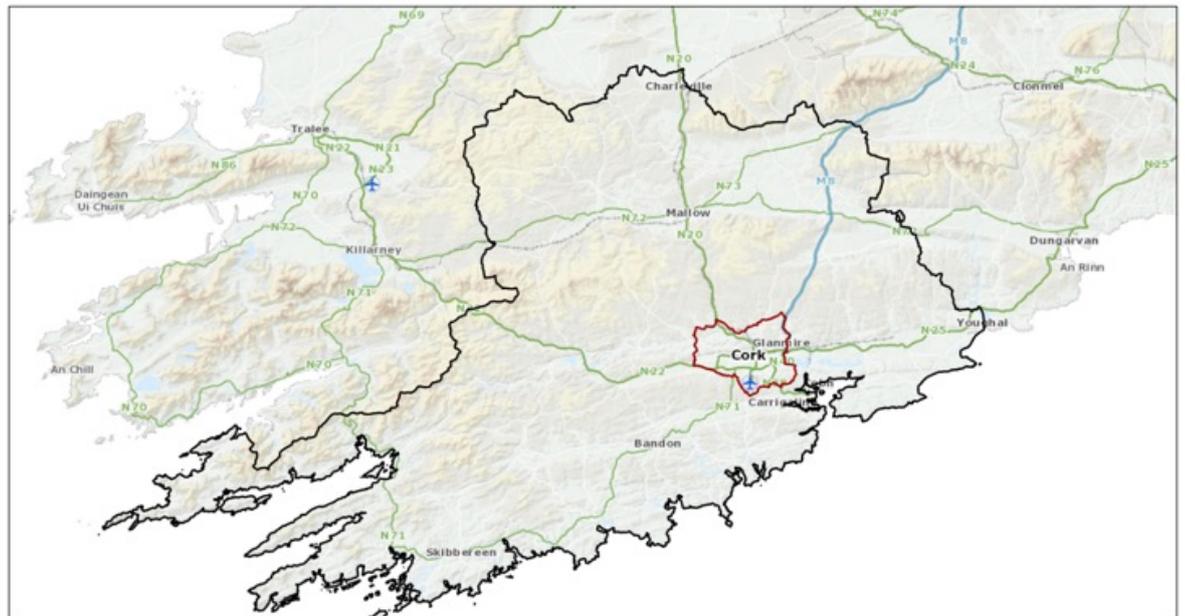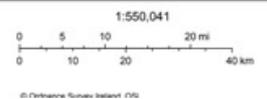
Figure 3.1: County Cork and Cork City borders post 2019 boundary Change

BEI SECTORS

This assessment covered both the emissions that Cork County Council was directly responsible for, and the emissions from other sectors, as outlined in the National Emissions Inventory. These sectors are:

- Residential
- Commercial & industrial
- Agriculture
- Transport
- Land use, land use change & forestry (LULUCF)
- Waste
- Municipal

THE SIGNIFICANCE OF CARBON EMISSIONS ON CLIMATE CHANGE

The Earth has a natural greenhouse effect due to trace amounts of water vapour (H_2O), carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O) in the atmosphere. These gases let the solar radiation reach the Earth's surface, but they absorb infrared radiation emitted by the Earth and thereby lead to the heating of the surface of the planet.

This effect has become enhanced due to increased concentrations of greenhouse gases induced by human activities. The main greenhouse gases whose concentrations are rising include carbon dioxide, methane, and nitrous oxide.

To understand and compare impacts across GHGs, the Global Warming Potential (GWP) is used. This GWP provides a common unit of measure, CO_2 equivalents (CO_2e), reflecting how much energy the emissions of 1 tonne of a GHG will absorb over a given period of time relative to the emissions of 1 tonne of CO_2.

The table below provides an overview of the GWP of CO_2, CH_4 and N_2O, as aligned to the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (AR6):

GREENHOUSE GAS	GLOBAL WARMING POTENTIAL (GWP)
Carbon Dioxide, CO_2	1
Methane, CH_4	27.9
Nitrous Oxide, N_2O	273

Table 3.1: Global Warming Potential (GWP) of main Greenhouse Gases

BEI TIERS

Cork County Council's Baseline Emissions Inventory (BEI) was developed following the CARO guidance document 'Technical Annex C: Climate Mitigation Assessment'.

Cork County Council carried out both a Tier 1 and Tier 2 BEI assessment for the county.

TIER 1 'TOP-DOWN' ASSESSMENT
- The Tier 1 approach is the simplest and quickest approach to estimate carbon emissions at a County Council level.
  - o   The approach is informed by publicly available data, including the Environmental Protection Agency's (EPA) MapEire database as well as the Central Statistics Office (CSO).
  - o   The MapEire system takes the EPA National greenhouse gas emissions data set and maps it onto Ireland.

TIER 2 'BOTTOM-UP' ASSESSMENT
- The Tier 2 approach allows for a more detailed look at drivers and hotspots of carbon emissions through use of more detailed datasets.

Both Tiers are informed predominantly by publicly available datasets held by such as the Environmental Protection Agency's (EPA) MapEire database and the Central statistics office. The Tier 2 assessment include more data sources such as the Transport Omnibus and the BER register.

Where there was insufficient data to carry out a full Tier 2 assessment for a sector, the Tier 1 assessment must suffice.

BEI TIER 1 RESULTS

The results of the Tier 1 'Top-down' assessment are illustrated below with carbon emissions reported as carbon dioxide equivalent (CO_2e). As explained earlier, this unit allows for the impact of the different greenhouse gases (GHG) to be reported as one number.

The pie chart below shows the emissions for the BEI Tier 1, broken down by percentage per sector.
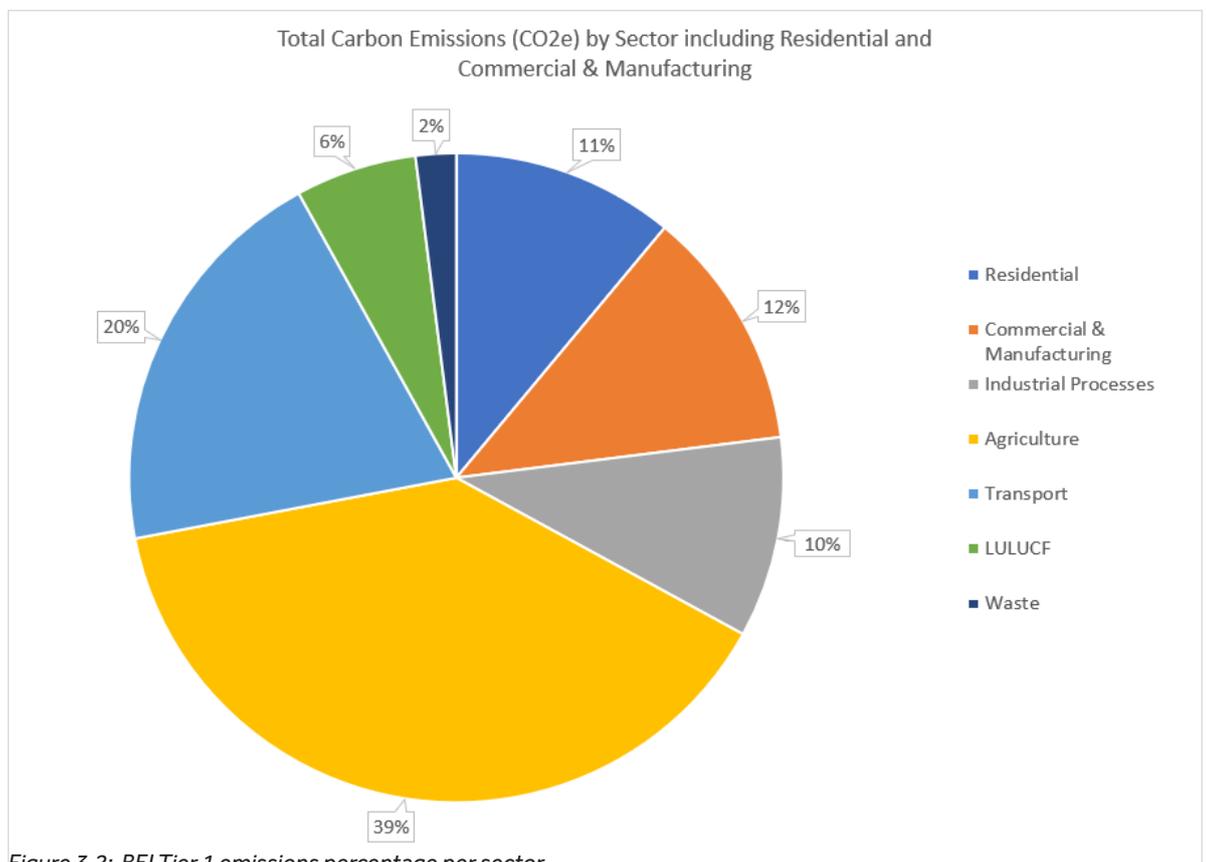
Figure 3.2: BEI Tier 1 emissions percentage per sector

Note this pie chart excludes emissions from electricity generating facilities as these emissions are accounted for where the electricity is consumed. Developing the knowledge of where the energy is being consumed, allows for appropriate and specific mitigation actions to be developed.

The Total baseline carbon emissions within the Cork County boundary area equates to 8,083 ktonnes CO2e.

The greatest sectoral contribution to the emissions is the agriculture sector, followed by transport sector.

A breakdown of the different greenhouse gasses in this overall emission follows.

BEI TIER 1 - RESULTS BY GREENHOUSE GAS TYPE
As earlier stated, the BEI, Includes emissions of several different greenhouse gasses. These include Carbon dioxide, Methane, Nitrous Oxide and other gasses. The principal individual gases in the BEI are shown, per sector, in the pie charts below.

Total carbon dioxide emissions (CO_2) by sector

- Energy industries — 38.88%
- Industrial Processes — 16.95%
- Agriculture — 1.00%
- Transport — 33.89%
- LULUCF — 8.97%
- Waste — 0.32%
- 0.00%
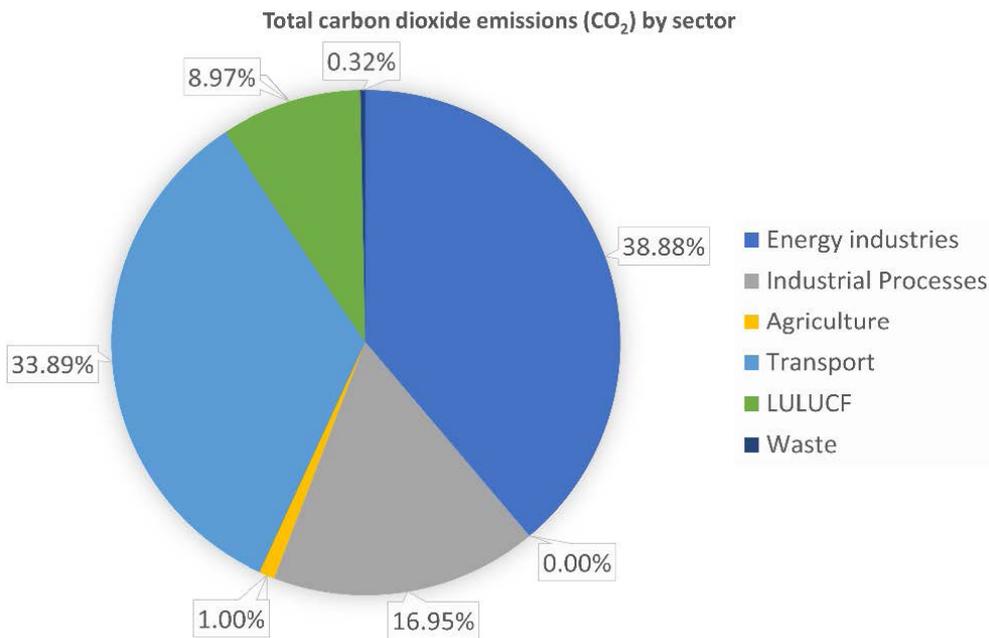
Figure 3.3: Tier 1 Carbon Dioxide emissions per sector

Total Methane Emissions (CH_4) by sector

- Energy Industries — 4.00%
- Industrial Processes — 0.00%
- Agriculture — 89.86%
- Transport — 0.05%
- LULUCF — 2.00%
- Waste — 4.00%
- 0.09%
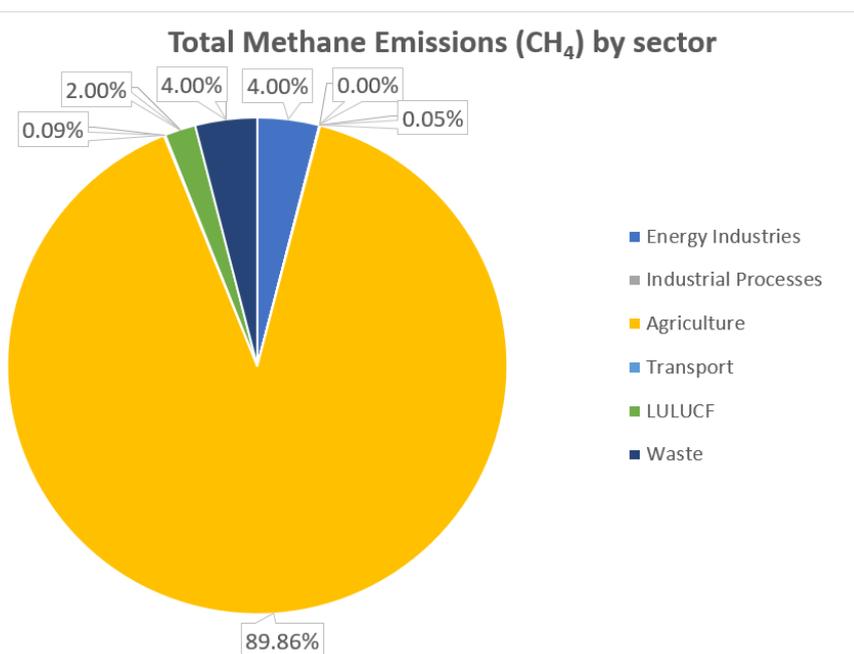
Figure 3.4: Tier 1 Methane emissions per sector

As can be seen both the methane and nitrous oxide gas emissions are dominated by the agricultural sector. This reflects, the Livestock numbers within the sector, and also the use of fertilizer.

Total Nitrous Oxide emissions (N₂O) by sector

Total Nitrous Oxide emissions (N_2O) by sector

Legend:
- Energy industries
- Industrial Processes
- Agriculture
- Transport
- LULUCF
- Waste

3.00% 4.00% 1.00% 2.00% 1.00% 89.00%
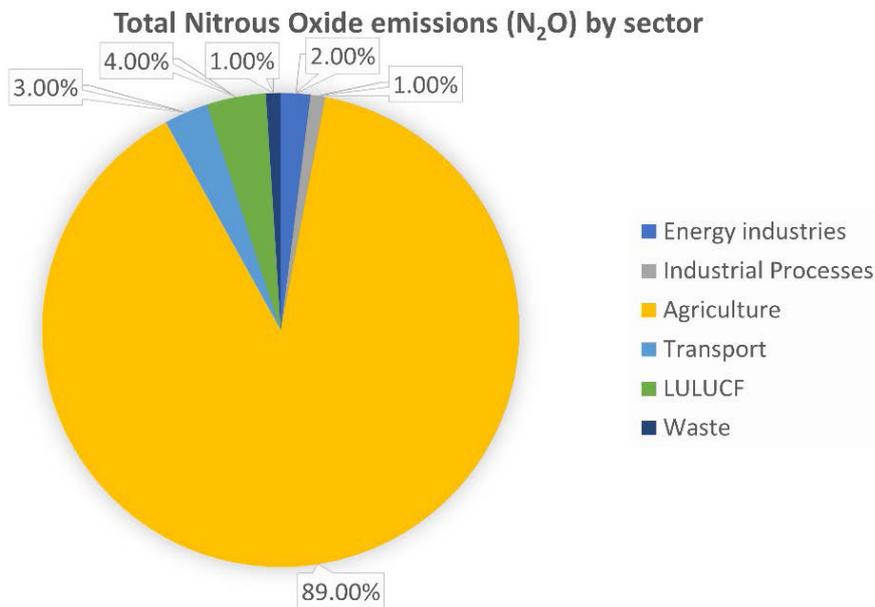
Figure 3.5: Tier 1 Nitrous Oxide emissions per sector

BEI – TIER 2

The Tier 2 assessment's purpose is not to override the Tier 1 assessment, but rather to provide an additional layer of granularity to inform targeted decision making.

The Tier 2 'Bottom-up' approach allows for a more detailed look at drivers and hotspots of carbon emissions through the use of more detailed datasets.

BEI TIER 2 – RESULTS

The percentage BEI Tier 2 emission by each sector are shown in the pie chart below.

Total Carbon emissions(CO_2e) by sector using the Tier 2 "Bottom Up" approach

Legend:
- Municipal
- Commercial & Manufacturing
- Industrial Processes
- Agriculture
- Transport
- LULUCF
- Waste
- Residential

10.00% 1.00% 7.00% 15.00% <1% 13.00% 11.00% 42.95
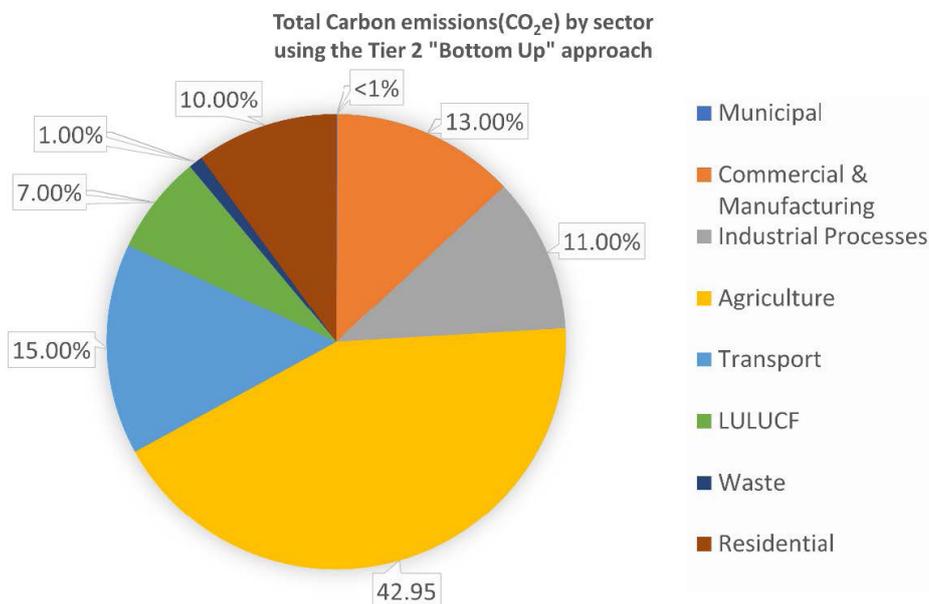
Figure 3.6: BEI Tier 2 emissions, percentage per sector

The Tier 2 figures, naturally, mirror the Tier 1 BEI results with Agriculture the largest source of emissions, followed by Transport.

The following sections of the Tier 2 assessment goes through each sector individually, setting out key insights, results, data source and assumptions and limitations. The results and analysis within the Tier 2 approach is highly dependent on data available.

Methodology Note
For the BEI Tier 2 'bottom-up' assessment, estimates of a number of sector's total carbon emissions has not been possible ('Commercial & Manufacturing', 'Industrial Processes' and 'LULUCF'). For these sectors, results of the Tier 1 assessment have been included and are shown on Figure 3.6.

CORK COUNTY COUNCIL'S DIRECT EMISSIONS

Cork County Council's own direct emissions fall under the Municipal sector which comprises less than 1 percent of the County's emissions as per the pie chart (Figure 3.6).

Cork County Council is responsible for, and has control over, the energy used in our buildings and operations within the administrative region, as well as the public lighting in this area and our fleet vehicles.

Energy and carbon related emissions under Cork County Council's control are captured in the SEAI's public sector Monitoring and Reporting (M&R) system and are summarised below

EMISSIONS SOURCE	ELECTRICITY	THERMAL	TRANSPORT FUELS (MINERAL OIL FUELS)	TRANSPORT BIO-FUELS	TOTAL
Municipal Buildings, facilities, public lighting (tCO2)	11,687	4,142			5,828
Municipal Fleet (tCO2)			4,235	0	4,235
					20,064

Table 3.2: Cork County Council's direct carbon related emissions

COUNCIL'S INFLUENCING ROLE

While the Council's own emissions are relatively small, the Council has a role Co-ordinating, facilitating and advocating for climate action among the other sectors and communities within the county as illustrated below.

Enabling and Engaging
Inspiring Action, Providing Information, etc..

Partnerships
Joint Delivery, Supporting, etc.

Leadership
Showcasing Good Practice, etc..

Regulatory Control
Planning, Licensing, etc...

Indirect Control
Procurement, Goods and Services, etc...

Direct Control
Council's Own Buildings, Fleet, Public lighting etc
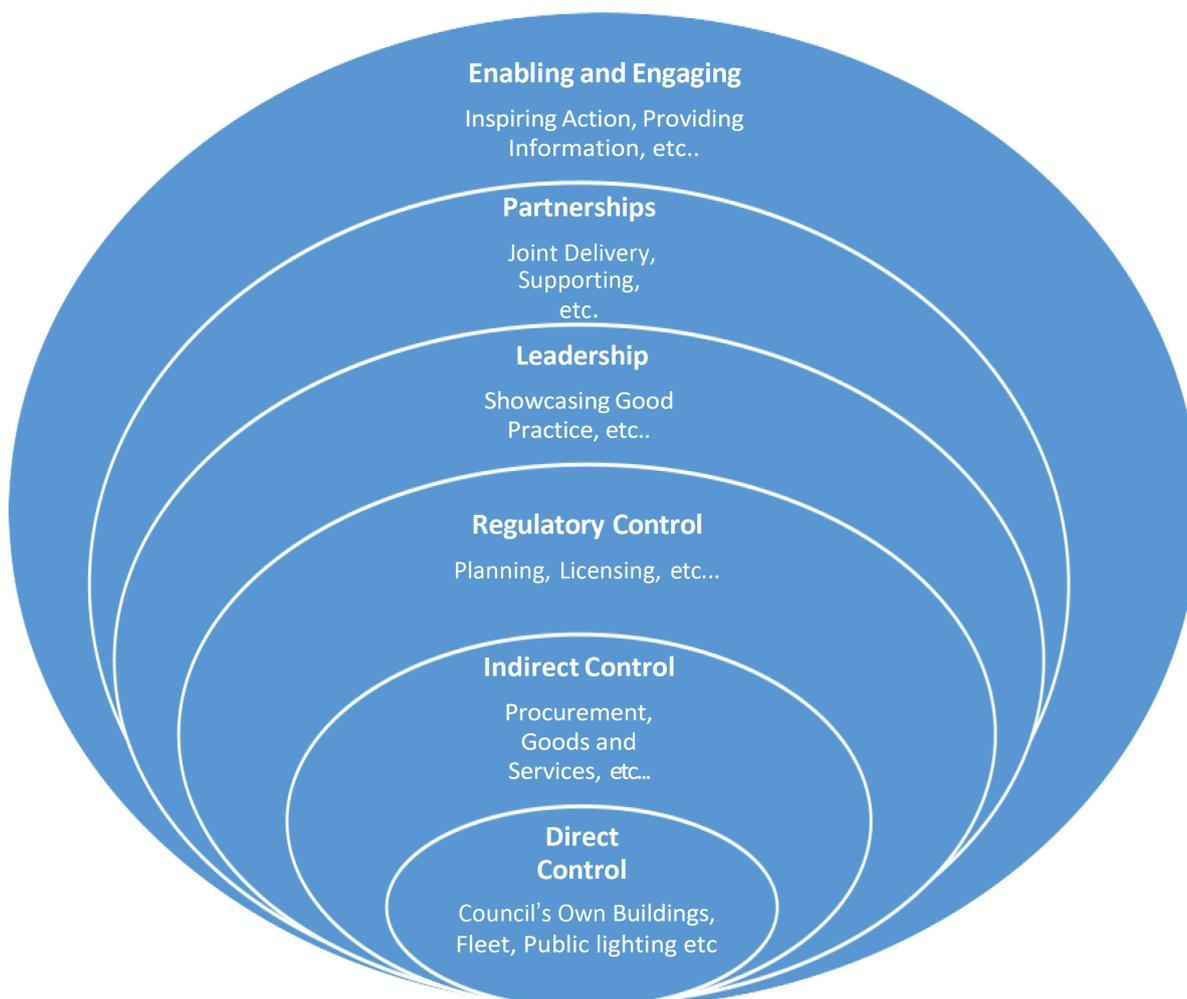
Figure 3.7 Cork County Council's Influence with other Sectors

RESIDENTIAL

The residential sector provides 10 % of the County's emissions. The energy consumption and carbon emissions associated with the residential sector were calculated in three steps:

1) taking data from the SEAI Buildings Energy Rating (BER) tool and multiplying with the total housing stock (by type) in Cork County;

2) breaking down total energy consumed by fuel and electricity with the help of the SEAI National Energy Balance;

3) using the SEAI conversion factors, converting the energy consumed into emissions.

RESIDENTIAL BUILDING TYPE	COAL	PEAT	OIL	NATURAL GAS	RENEWABLES	ELECTRICITY	TOTAL
Flat or apartment	6,793	6,158	39,316	18,928	2,225	22,025	95,445
Detached house	83,288	75,507	482,081	232,082	27,287	270,058	1,170,302
Terraced house	37,628	34,113	217,798	104,851	12,328	122,009	528,727
Semi - detached house	59,479	53,922	344,272	165,738	19,487	192,859	835,756
Total MWh	187,187	169,699	1,083,467	521,599	61,327	606,951	**2,630,230**

Table 3.3: Residential Sector - Energy Consumption in MWh

RESIDENTIAL BUILDING TYPE	COAL	PEAT	OIL	NATURAL GAS	RENEWABLES	ELECTRICITY	TOTAL
Flat or apartment	2,314	2,266	10,142	3,874	-	8,264	26,859
Detached house	28,368	27,780	124,357	47,507	-	101,326	329,338
Terraced house	12,816	12,551	56,183	21,463	-	45,778	148,791
Semi - detached house	20,258	19,839	88,808	33,927	-	72,361	235,193
Total tCO2e	63,756	62,436	279,490	106,771	-	227,728	**740,181**

Table 3.4: Residential Sector - CO2e Emissions in tCO2e

COMMERCIAL & INDUSTRIAL

The energy consumption and carbon emissions associated with the Commercial & Industrial sector was calculated in as shown.

1) extracting benchmarking data from CIBSE Energy Benchmarking tool and multiplying by the average energy consumption by building type in Cork County;
Average energy consumption calculated by multiplying average floor area by type of building for Cork County in 2018.

2) breaking down total energy consumed by fuel and electricity, supported by the SEAI National Energy Balance;

3) using the SEAI conversion factors, converting the energy consumed into carbon emissions.

ENERGY SOURCE	TOTAL AVERAGE ENERGY CONSUMPTION BY ENERGY SOURCE (KWH)	TOTAL AVERAGE CARBON EMISSIONS BY ENERGY SOURCE (TCO2E)
Coal	3,411	1
Bituminous Coal	3,997,789	1,362
Oil	1,580,033	1,007
Kerosene	1,042,770	208
Fuel oil	10,670	3
LPG	1,170,527	268
Gasoil / Diesel /DERV	1,773,822	468
Natural Gas	2,155,669	441
Electricity	1,382,344	519

Table 3.5: Industrial and Commercial sector - Average Energy Consumption and Emissions by Energy Source

AGRICULTURE

The energy consumption and carbon emissions associated with the agriculture sector was calculated in three steps:
 1) the emissions from the agriculture sector was taken from the MapEire database;

2) breaking down total energy consumed by energy use with the help of the Teagasc, Defra;

3) using the SEAI conversion factors, converting the energy consumed into emissions.

CROPLAND	HECTARES OF CROPLAND FARMING	ENERGY REQUIREMENTS			CARBON EMISSIONS (TCO2)		
		ELECTRICITY	HEATING	NATURAL GAS	MOBILE MACHINERY	HEATING	MOBILE MACHINERY
Total crops, fruit & horticulture	11,248	43,261,346	8,436,300	12,935,660	16,232	2,168	3,414
Total cereals	35,423	16,443,310	4,845,853	52,468,399	6,170	1,245	13,846
				TOTAL	22,401	3,414	17,260
				TOTAL	**43,075**		

LIVESTOCK	NUMBER OF LIVESTOCK ON FARMS	ENERGY REQUIREMENTS			CARBON EMISSIONS (TCO2)		
		ELECTRICITY	HEATING	MOBILE MACHINERY	ELECTRICITY	HEATING	MOBILE MACHINERY
Total cattle	1,104,794	149,943,625	-	545,224,087	56,259	-	143,885
Total sheep	238,836	126,464,975	-	214,017,650	47,450	-	56,479
Total pigs	285,580	23,478,650		39,733,100	8,809	-	10,486
				TOTAL	112,518	3,414	210,850
				TOTAL	**323,368**		

Table 3.6: Agriculture Sector - Energy Consumption and Emissions (tCO2)

TRANSPORT

The energy consumption and carbon emissions associated with the Transport sector was calculated in two steps:
1) breaking down total energy consumed by transport mode and fuel with the help of the SEAI National Energy Balance;
2) using the SEAI conversion factors, converting the energy consumed into emissions.

TRANSPORT MODE	GASO-LINE	LPG	GASOIL / DIESEL / DERV	SUBTO-TAL: OIL	NATURAL GAS	BIO FUELS	ELEC-TRICITY	SUBTO-TAL: RE NEWA-BLES	GRAND TOTAL
Road Freight	-	-	239,193	**3,874**	8	-	-	**0**	
Road Light Goods Vehicle	-	-	124,435	**47,507**	-	-	-	**0**	
Road Private Car	12,816	604	492,418	**21,463**	-	-	567	**568**	
Public Passenger Services	20,258	-	31,621	**33,927**	-	-	-	**0**	
Total	243,162	604	887,667	**1,131,433**	8	-	567	**568**	**1,132,009**

Table 3.7: Total Carbon Emissions by Transport Mode and Fuel Source (tco2e)

NATIONAL TRANSPORT AUTHORITY (NTA) CARBON EMISSIONS

The National Transport Authority (NTA) issued part of its regional road model to Cork County Council. The model displays the road network within the Council's administrative boundary with its CO2 emissions emitted shown along each road segment.

The model results in carbon emissions from road transport (car, public transport, walking and cycling) as 810 ktonnes CO2. In addition, the NTA model provides a modal split reflecting activity on Cork County Council roads, shown in the table below.

The NTA model outputs focus on only a proportion of transport modes shown in the table across.

Therefore, NTA model outputs should be used in conjunction with other Tier 2 outputs.

TRANSPORT TYPE	%
Car	80
Public Transport	5
Walk	13
Cycle	1

Table 3.8: NTA Road Transport Modal Split
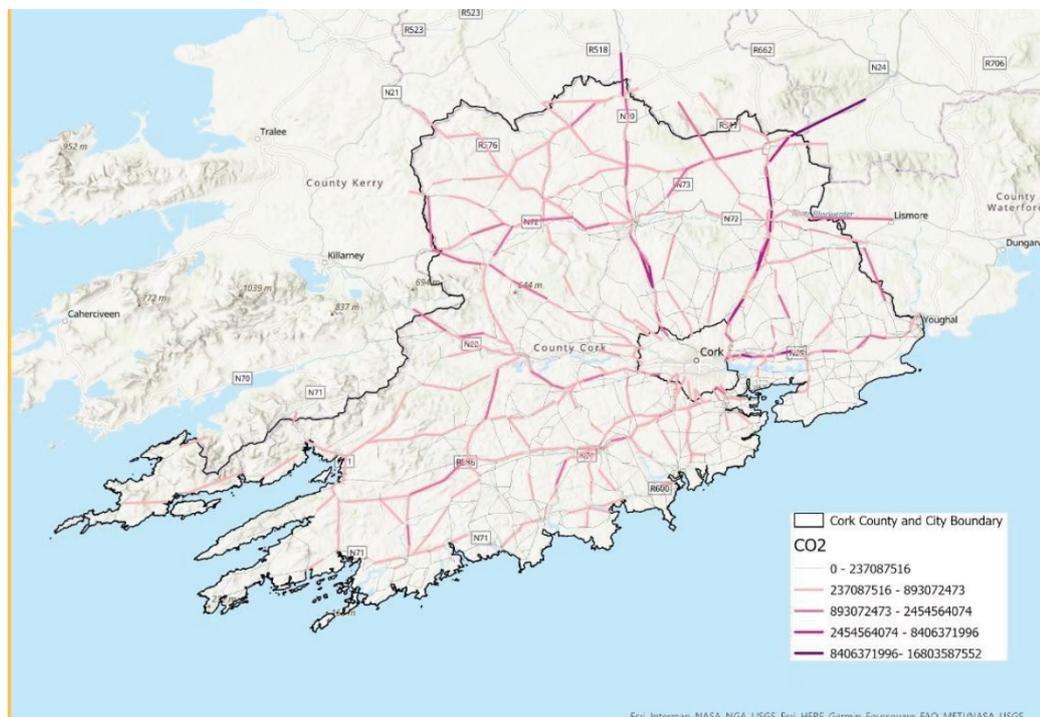
Figure 3.8: Extract of NTA Regional Road Model

LULUCF

The energy consumption and carbon emissions associated with the LULUCF sector have been calculated using data from the Corine dataset. https://gis.epa.ie/GetData/Download.

The Corine database is the best available data at time of BEI analysis. It provides a breakdown of land use types within Cork County.

Emissions cannot be allocated to land type at this stage as land types emit various levels of carbon emissions and it is not a simple exercise of splitting across area. However, % land cover is useful to inform decision making going forward.

The percentages of land use in the county are shown in the table below, note that 'pastures', covers around two-thirds of the Cork County Council area.

TYPE OF LAND USE (AS PER CORINE 2018)	AREA (HECTARES HA)	% OF CORK COUNTY COUNCIL AREA
Pastures	469,118	64.20%
Land principally occupied by agriculture, with significant areas of natural vegetation	49,303	6.70%
Non-irrigated arable land	41,241	5.60%
Peat bogs	37,517	5.10%
Coniferous forest	33,522	4.60%
Transitional woodland-shrub	28,332	3.90%
Moors and heathland	21,102	2.90%
Complex cultivation patterns	12,131	1.70%
Mixed forest	7,977	1.10%
Discontinuous urban fabric	7,223	1.00%

Table 3.9: Types of Land Use by percentage in Cork County 2018

WASTE

The energy consumption and carbon emissions associated with the Waste sector was calculated in two steps:

1. Total methane emissions for each licensed facility across Cork City and County provided by the Pollutant Release & Transfer Register (PRTR) has been collated;
2. Total methane emissions divided by the total population of Cork City and County (kg CH4/capita). This was then multiplied by the total population of Cork County Council to understand emissions within the Council boundary.

There may be other waste facilities present within the assessment boundary which have not been included within the EPA database. For some waste facilities, there is no emissions data available.

Waste facilities likely service all of Cork City and Cork County Council. Therefore, the most robust approach to adopt is to include emissions associated with all waste facilities and adjust appropriately to reflect the population within Cork County Council boundary area.

WASTE FACILITY NAME	TOTAL METHANE EMISSIONS (KGCH4)	TOTAL CARBON EMISSIONS (TCO2E)
Ballyguyroe Landfill Site, Ballyguyroe North, Mallow, Cork.	403,837	11,267
Kinsale Road Landfill, South City Link Road, Cork.	3,031,941	84,591
East Cork Landfill Site, Rossmore, Carrigtwohill, Cork.	468,791	13,079
Youghal Landfill, Youghal Mudlands, Youghal, Cork.	981,685	27,389
Benduff Landfill Site, Benduff, Rosscarbery, Cork.	181,823	5,073
Derryconnell Landfill, Derryconnell, Schull, Cork.	196,574	5,484
Total		147,774
Total in Cork County Council		90,698

Table 3.10: Waste Sector - Methane and Carbon emissions

BEI TIER 2 EMISSIONS BY SOURCE PER SECTOR

As outlined in this section, each sector has been informed by publicly available data. In some cases, no data has been available, so the level of granularity provided on a sector's emissions breakdown has been limited.

Below sets out the summary tables of the emissions baseline broken down by firstly energy source and secondly, associated carbon emissions.

EMISSIONS SOURCE	RESIDENTIAL	MUNICIPAL	TRANSPORT
Coal	187,187	-	-
Peat	169,699	-	-
Oil	1,083,467	-	3,363,649
Thermal	-	9,480	-
Gasoline	-	-	965,866
LPG	-	-	2,626
Natural Gas	521,599	-	38
Biodiesel	-	0.001	144,198
Bioethanol	-	494	31,964
Electricity	606,951	31,148	1,515,
Total (Mwh)	**2,630,230**	**56,677**	**4,509,311**

Table 3.11: Summary table of BEI Tier 2 broken down by energy source (Mwh)

EMISSIONS SOURCE	RESIDENTIAL	MUNICIPAL	TRANSPORT	WASTE
Coal	63,756	-	-	-
Peat	62,436	-	-	-
Oil	279,490	-	887,667	-
Thermal	-	4,142	-	-
Gasoline	-	-	243,162	-
LPG	-	-	604	-
Natural Gas	106,771	-	9	-
Renewables	-	-	-	-
Biodiesel	-	-	-	-
Bioethanol	-	-	-	-
Electricity	227,728	11,687	567	-
Electricity	**740,181**	**15,829**	**1,169,184**	**90,698**

Table 3.12: Summary table of BEI Tier 2 broken down by associated carbon emissions. (tCO2e)

3.2 CLIMATE CHANGE RISK ASSESSMENT

Climate change is increasingly understood to be the most critical, long-term global challenge of our time, its impacts continuing to be felt both worldwide and at home.

A selection of climate and weather-related changes and hazards observed in Cork County are detailed below.

Temperature:
- Highest temperature in Cork County recorded on June 18th, 2018 at Glengarriff 31.6°C.
- At Cork Airport, 4 of the hottest summers recorded were in the last 10 years based on records extending back to 1961

Increased rainfall
- Average annual rainfall at Cork Airport increased by 3% for the most recent period (1981-2010) compared to the 1961-1990 baseline
- 230mm of rain fell during the 2020 Rosscarbery flood (highest recorded since 1961

Sea Level Rise
Sea levels in the Cork Harbour area have risen by approximately 40cm since 1942*

RISK ASSESSMENT OUTLINE
The Climate Hazard Risk Assessments below will follow this outline.
Current Climate Risk Assessment
- record the history of severe weather events.
- Identify the hazards and their frequency of occurrence.
- assess the impact of each hazard
- carry out a Risk Assessment of each hazard.

Future Climate Risk Assessment
- predict the change in the frequency and intensity of Severe Weather Events
- predict the impact allowing for the predicted change in vulnerabilities
- carry out a Risk Assessment of each hazard based on these predictions

EXTREME WEATHER EVENTS IN CORK COUNTY 1985– 2022
The chart below lays out the extreme weather events in Cork County between 1985 to the present.
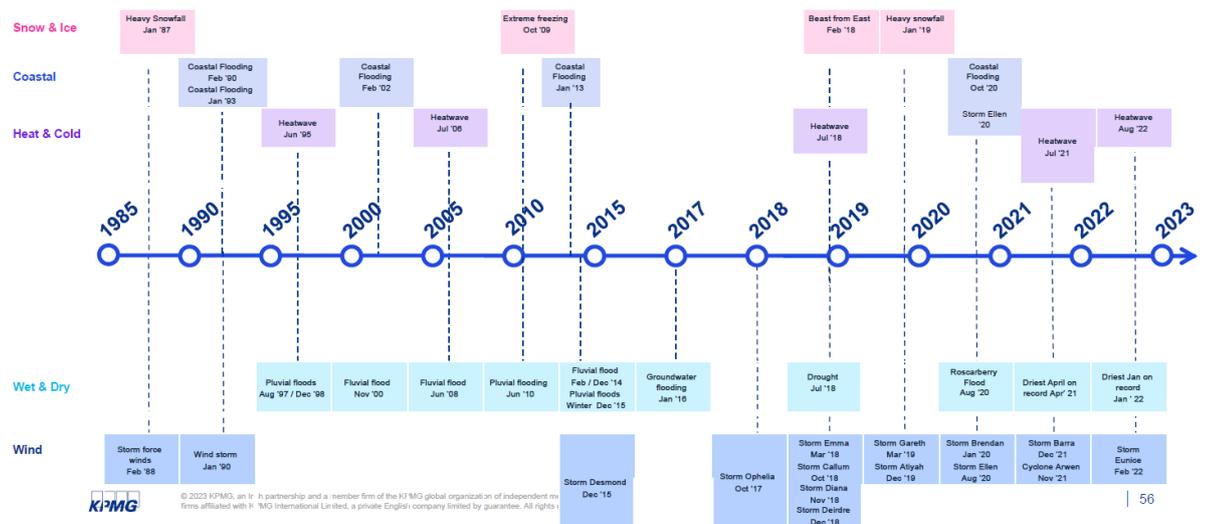
Figure 3.9: Severe weather events in Cork 1985 – 2023

It is worth noting that three heatwaves have been recorded since 2018.

Descriptions of the impacts of the severe weather events, from the last ten years, is given in the table below:

WEATHER EVENT	DATE	IMPACTS
Heatwave	Aug-2022	High rail temperatures. Deformation of road surfaces across the County.
Storm Eunice	Feb-2022	Approx. 17 council offices & amenity sites closed due to storm risks. Approx. 22 incidents of fallen trees and road disruption. Highest gust observed at Roches Point, Co. Cork at 137 km/h (74 kt).
Storm Barra	Dec-2021	Tidal flooding of 23 premises in Bantry. Over 3,000 power outages, disruption to water supply affected several hundred homes.
Heatwave	Aug-2021	Red Flags raised at beaches across the county due to appearance of an invasive species, Portuguese man o' war, the stings of which can be fatal
Heavy winds & heavy rainfall	Oct-2020	Heavy winds, heavy rainfall, and a coastal surge caused 15 properties in Bantry to flood.
Storm Ellen	Aug-2020	ESB reported 40,000 premises lost power in Cork, including Schull, Bantry, Skibbereen, Clonakilty, Dunmanway. Damaged boats and facilities at the new Cobh Marina in Cork Harbour.
Storm Francis	Aug-2020	Heavy rainfall caused roads to become dangerous, with debris and surface flood water along with debris and surface flood water along with a risk of falling trees.
Rosscarbery Flood	Aug-2020	230 mm of rain fell during the 2020 Rosscarbery flood (highest recorded since 1961). Damages to roads and property.
Storm Atiyah	Dec-2019	Peak sustained wind speed was 91 km/h at Sherkin Island. Roads closed due to fallen trees and other debris. Flights cancelled at Airport.
Heatwave	Jul-2018	High temperature & drought conditions. 30.1°C recorded at Moore Park. Driest summer on record in 56 years.
Storm Emma & Beast from East	Mar-2018	Disruption to transport network; deep drifting of snow on roads caused cars to be abandoned. 15 cm of snow recorded at Cork Airport with minimum temperature of -7oC on March 1st.
Storm Eleanor	Jan-2018	Storm force winds caused coastal flooding of Bantry town square.
Hurricane Ophelia	Oct-2017	Wind speeds of up to 156 km/h recorded at Roche's Point, widespread damage to buildings and infrastructure across Cork County and significant disruption to transport, energy and communications networks.
Freezing conditions	Dec-2010	Temperatures of -7.2°C recorded. Widespread closure of business and significant damage to water and energy networks and infrastructure.

Table 3.13: Severe weather events in Cork 2010 − 2023

CLIMATE HAZARDS – FREQUENCY OF EVENTS:
The hazard frequency for each weather event, as outlined earlier, is shown in the chart below.

Frequency of Identified Events According to Category (1985 - 2022)

- Storm — 38%
- Extreme Freezing — 3%
- Heavy Snow — 8%
- Drought — 3%
- Heatwave — 13%
- Groundwater Flooding — 3%
- Fluvial Flood — 10%
- Pluvial Flood — 13%
- Coastal Flood — 13%
- Flooding Events - Combined — 35%
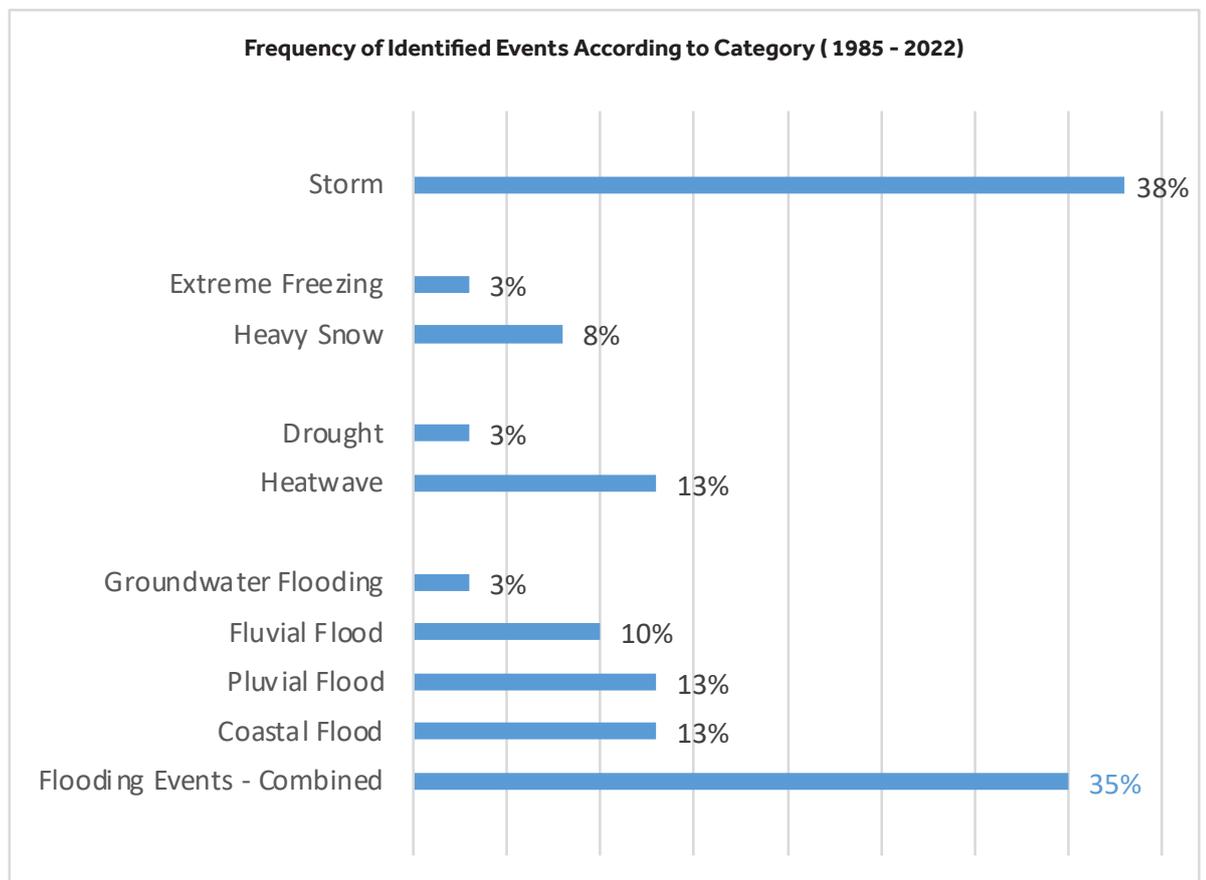
Fig 3.10: Frequency of Severe Weather events in Cork County 1985 - 2022

The Climate Hazard frequency is summarised in the table below

HAZARD TYPE	FREQUENCY	
Heatwave	Common	once in a 2-to-10 years period
Drought	Occasional	once in a 10-to-100-year period
Cold Spell	Occasional	once in a 10-to-100-year period
Heavy Snowfall	Occasional	once in a 10-to-100-year period
Severe Windstorm	Frequent	once in a 1-to-2-year period
Coastal Flood	Common	once in a 2-to-10 years period
Coastal Erosion	Common	once in a 2-to-10 years period
Pluvial Flood	Occasional	once in a 10-to-100-year period
River Flood	Common	once in a 2-to-10 years period
Groundwater Flood	Rare	Once in over 100 years

Table 3.14: Frequency of Climate Hazards

The Frequency Classification used above are taken from the Technical Annex B Climate Change Risk Assessment Guidelines,

CLIMATE HAZARDS - EXPOSURE, VULNERABILITIES AND IMPACTS
Having recorded the climate hazards the Exposure, Vulnerability and Impacts of Cork County to these events were determined. Some examples of these are given below:

- During Storm Ellen in August 2020, ESB reported that approx. 40,000 premises were left without power.
- The coastal flooding in October 2020 was the worst in 6 years. Bantry and Youghal were most affected, and multiple road closures were attended by council fire services.
- In August 2021, 230mm of rainfall fell on Rosscarbery, the highest recorded rainfall since 1961. This resulted in flooding of 15 properties, the closure of part of the main N71 and serious damage to road surfaces.
- By the start of February 2022, Cork County Fire service had already responded to 10 wildfires due to dry January conditions.

CLIMATE HAZARDS – RISK IMPACT ASSESSMENT PROCESS.
The process of establishing the exposures, vulnerabilities, risks and impacts associated with the identified Climate Hazards is illustrated below, in this case for the Coastal Flooding Hazard.

Some of Cork County Council buildings have been identified as exposed to coastal flooding. The buildings with insufficient drainage would be considered more vulnerable to this hazard. If these buildings were to be flooded, one of the possible impacts would be the disruption of Cork County Council's ability to deliver its services.

HAZARD

COASTAL FLOODING

EXPOSURE

BUILDING STOCK

INUNDATION OF BUILDINGS

VULNERABILITY

BUILDINGS WITH INSUFFICIENT DRAINAGE SYSTEMS

IMPACT

DISRUPTION OF CORK COUNTY COUNCIL SERVICES DELIVERY
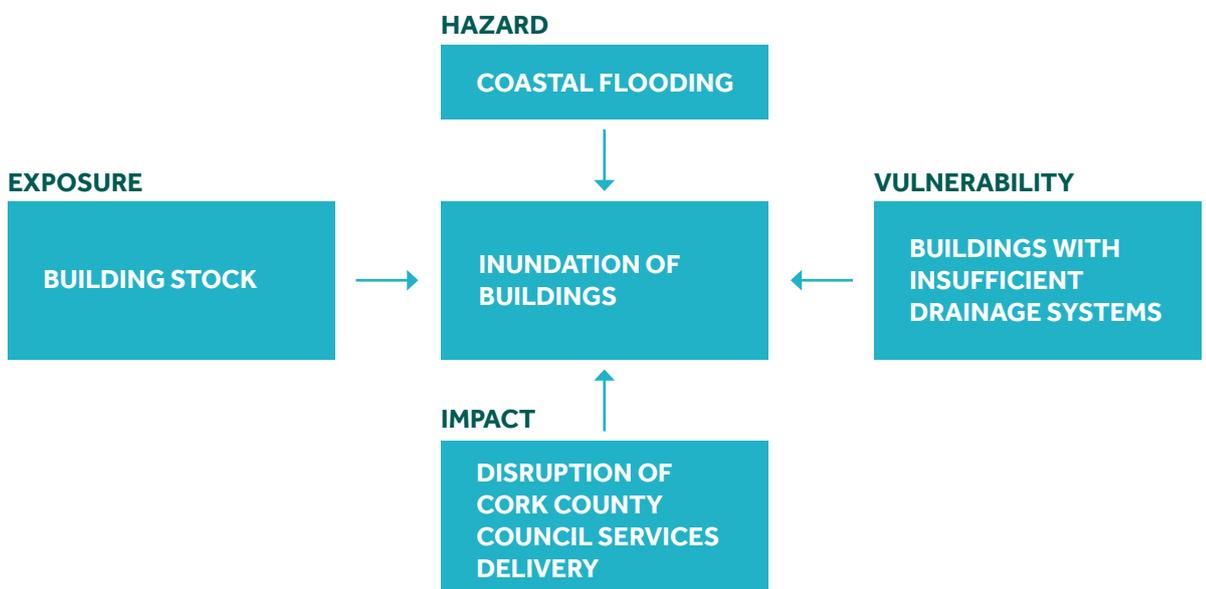
Fig 3.11: Climate Risk Assessment Process

This process was undertaken for each identified climate hazard. The resulting Impacts on the Council's ability to maintain its level of service are shown on the following table.

IMPACTS OF CURRENT CLIMATE RISKS ON COUNCIL SERVICE DELIVERY

The climate hazards identified above can be expected to impact on the on the delivery of services and functions of the Council.

The assessment of the climate hazard Impact on the Council's services was undertaken in accordance with the criteria provided through the CARO document Technical Annex B: Climate Change Risk Assessment.

Each service delivery area was assigned an impact category as explained below.

HAZARD	COUNCIL SERVICES											
	BUSINESS SERVICES	ROADS, FOOT-PATHS, BRIDGES:	BUILDING STOCK	COMMUNITY IN-FRASTRUCTURE	CULTURAL HER-ITAGE	STORMWATER / SEWERAGE	WASTE WATER	WATER SUPPLY	WATER QUALITY	BIODIVERSITY	COMMUNITY DEV.	EMERGENCY RE-SPONSE
Heatwave	Min.	Mod.	Min.	Mod.	Min.	None	None	None	Min.	Mod.	Min.	Mod.
Drought	None	None	None	None	None	None	None	Mod.	Min.	Min.	Min.	Mod.
Cold Spell	Mod.	Mod.	Mod.	Mod.	Min.	Mod.	Mod.	Mod.	Mod.	Min.	Mod.	Mod.
Heavy Snow-fall	Mod.	Mod.	Mod.	Min.	Min.	None	None	Min.	Min.	None	Min.	Mod.
Severe Wind-storm	Mod.	Mod.	Mod.	Mod.	Mod.	Minor	None	None	Min.	Mod.	Mod.	Mod.
Coastal Flood	Min.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	Mod.	None	Min.	Mod.	Mod.
Coastal Erosion	None	Min.	None	Min.	Mod.	None	None	None	None	Mod.	Min.	Min.
Pluvial Flood	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.
River Flood	Min.	Mod.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Mod.
Groundwater Flood	None	Min.	None	None	None	None	None	None	None	None	None	Min.

Table 3.15: Climate Hazard Impacts on Delivery of Council Services

IMPACT	ICON	DESCRIPTION
Moderate	Mod.	Appreciable decline in service provision at community level.
Minor	Min.	Isolated but noticeable examples of service decline.
None	None	No Impact

Table 3.16: Impact Categories' Description

OVERALL SEVERITY OF CLIMATE HAZARDS TO THE COUNCIL IN KEY RISK AREAS

Having assessed the Council's exposure, vulnerability, and the service delivery impact, the climates hazard's overall severity to the Council in key risk areas was calculated. The Risk Assessment score of the impacts identified is shown below.

HAZARD	RISK AREAS								
	FREQUENCY	ASSETS	HEALTH AND WELL-BEING	ENVIRONMENT	SOCIAL	CULTURAL HERITAGE	FINANCIAL	REPUTATIONAL	OVERALL IMPACT SCORE
Heatwave	Common	Mod.	Min.	Mod.	Neg.	Min.	Neg.	Neg.	1.9
Drought	Occasional	Neg.	Neg.	Mod.	Min.	Min.	Neg.	Neg.	1.6
Cold Spell	Occasional	Mod.	Mod.	Min.	Min.	Min.	Mod.	Min.	2.4
Heavy Snowfall	Occasional	Mod.	Mod.	Min.	Mod.	Min.	Mod.	Min.	2.6
Severe Windstorm	Frequent	Mod.	Mod.	Min.	Min.	Min.	Mod.	Min.	2.4
Coastal Flood	Common	Mod.	Mod.	Min.	Min.	Min.	Min.	Mod.	2.4
Coastal Erosion	Common	Min.	Neg.	Mod.	Min.	Min.	Min.	Min.	2
Pluvial Flood	Occasional	Min.	Min.	Mod.	Min.	Min.	Min.	Min.	2.1
River Flood	Common	Mod.	Mod.	Min.	Min.	Min.	Min.	Mod.	2.4
Groundwater	Rare	Min.	None	None	Neg.	None	Neg.	None	0.6

Table 3.17: Overall Impacts of Current Climate Risks in Key Areas to Cork County Council

IMPACT	ICON	DESCRIPTION
Moderate	Mod.	Service provision under severe pressure. Appreciable decline in service provision at community level.
Minor	Min.	Isolated but noticeable examples of service decline.
Negligible	Neg.	Appearance of threat but no actual impact on service provision
None	None	No Impact

Table 3.18: Impact Categories' Description

CURRENT CLIMATE IMPACT MATRIX

Using the frequency of each climate hazard and the impacts of current climate risks, a current climate impacts matrix was developed to illustrate the assessment of climate impacts on Cork County Council. The matrix shows the current risk for the identified hazards within Cork County. Hazards that occur more often will plot closers to the right of the chart. Hazards which have a greater impact on the County will plot closer to the top of the chart.

CURRENT CLIMATE IMPACTS ASSESSMENT
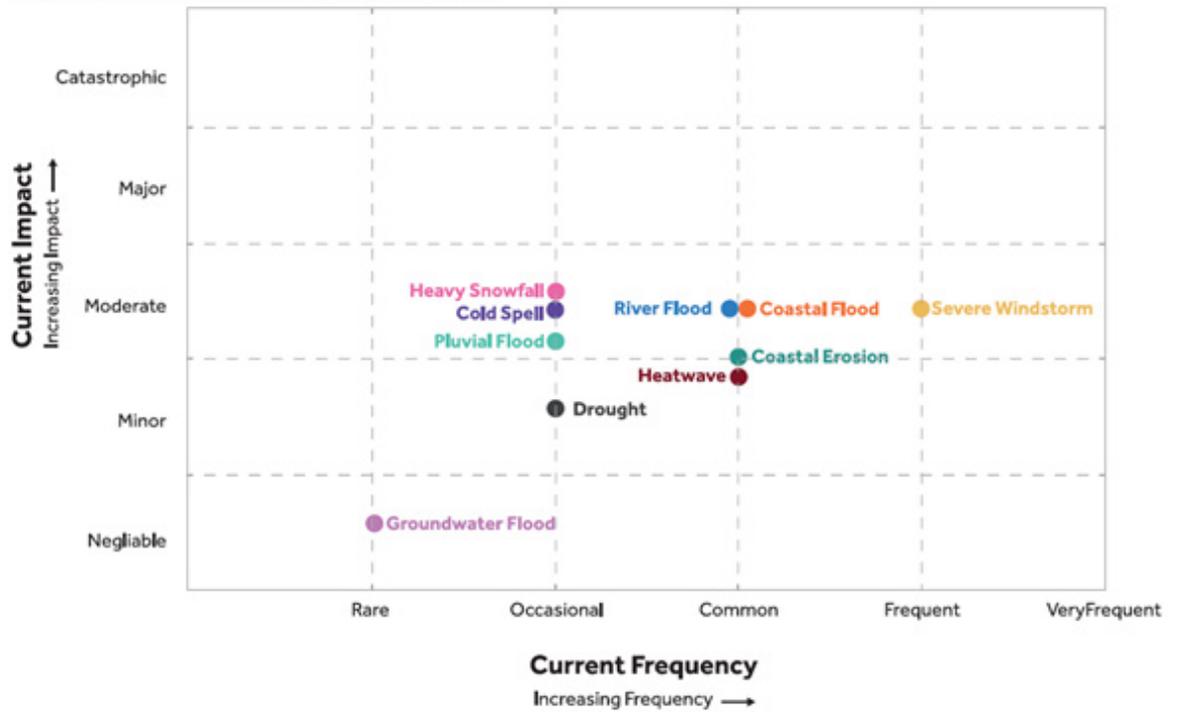
Fig 3.12: Current Climate Impacts Assessment

This assessment identified the highest overall impact on the local authority was associated with severe windstorms, heavy snowfall, and coastal and river flooding. Severe windstorms were the most frequent hazard that the local authority has to deal with.

For the purposes of this CCRA, hazards have been assessed on an individual basis, but hazards can and often do occur in combination. This is particularly the case for estuarine environments around Cork County (e.g. Bantry) where pluvial, fluvial and coastal flooding occur in combination.

PREDICTED CHANGE, BY 2050, IN CLIMATE HAZARDS - COUNTY CORK

Global Climate prediction scenarios have been developed based on the level of carbon emissions, where greater emissions result in greater climate change impacts. The climate of Cork County is projected to change in line with these global projections.

Below is an overview of projected changes in the intensity and frequency of climate hazards for Cork County by 2050.

HAZARD	PREDICTED CHANGE	PREDICTED CHANGE IN FREQUENCY
Heatwaves	•Projections indicate an overall increase in average temperature of between 1.1 and 1.5°C for Cork County. •Under a high emission scenario, projections indicate that heatwaves will become more frequent (bottom middle) by mid-century and on an almost annual basis for some parts of Cork County.	Increase
Droughts	•Summer rainfall is expected to reduce by between 5 and 15% in the future when compared with the baseline period of 1981 to 2000, contributing to potential drought conditions.	Increase
Cold Spell	•As a consequence of the increasing temperatures, a decrease in the number of frost days, ice days, and snowfall in the 2041-2060 future period when compared with the baseline period of 1981 to 2000, is predicted.	Decrease
Heavy Snowfall	•The annual snowfall in the region is projected to decrease substantially by the middle of the century.	Decrease
Severe Windstorms	•Projections of storms are subject to a high level of uncertainty. By mid-century, projections indicate that average wind speed will remain similar to those currently experienced but an increase in more intense storms which are currently rare events is projected.	Same
Coastal Flooding	•Rising sea levels projections under a high emissions scenario indicate an increase of up to 0.26 m by 2050 which will increase the frequency of coastal inundation for Cork County.	Increase
Coastal Erosion	•A rising sea level is strongly linked with an increase in coastal erosion and increases the risk of inundation of coastal areas.	Increase
Pluvial/River Flooding	•Projections indicate an increase in the frequency of heavy rainfall days (days with precipitation >30mm) for Cork County with some areas projected to see increase of up to 52%. This will likely result in an increased frequency of associated fluvial and pluvial flooding.	Increase
Groundwater Flooding	•Projections of changes in groundwater flooding are currently not available, therefore there is uncertainty in the change in groundwater flooding frequency that can be expected.	Same

Table 3.19: Climate Projections for Cork County by 2050

CURRENT & PREDICTED SEVERITY OF CLIMATE HAZARDS TO THE COUNCIL IN KEY RISK AREAS

Cork County's population is expected to increase by 66,000 by 2031, projections of future climate risk, are considered in combination with projected changes in population and socio-economic development.

The table below shows the current and predicted future(by 2050) Severity of Impacts to the Council in key risk areas. For each climate hazard there is a current (Cur) and future (Fut) impact assessment.

HAZARD	RISK AREAS													
	ASSETS		HEALTH & WELLBEING		ENVIRONMENT		SOCIAL		CULTURAL HERITAGE		FINANCIAL		REPUTATION	
	CUR	FUT	CUR	FUT	CUR	FUT	CUR	FUT	CUR	FUT	CUR	FUT	CUR	FUT
Heatwave	Mod	Maj	Min	Mod	Mod	Maj	Neg	Min	Min	Mod	Neg	Min	Neg	Min
Drought	Neg	Neg	Neg	Min	Mod	Maj	Min	Min	Min	Mod	Neg	Min	Neg	Min
Cold Spell	Mod	Mod	Mod	Mod	Min	Min	Min	Min	Min	Min	Mod	Mod	Min	Min
Heavy Snowfall	Mod	Mod	Mod	Mod	Min	Min	Mod	Mod	Min	Min	Mod	Mod	Min	Min
Severe Windstorm	Mod	Mod	Mod	Mod	Min	Min	Min	Min	Min	Min	Mod	Mod	Min	Min
Coastal Flood	Mod	Maj	Mod	Maj	Min	Mod	Min	Mod	Min	Mod	Min	Mod	Mod	Maj
Coastal Erosion	Min	Mod	Neg	Neg	Mod	Mod	Min	Min	Min	Mod	Min	Mod	Mod	Mod
Pluvial Flood	Min	Mod	Min	Mod	Mod	Maj	Min	Mod	Min	Mod	Min	Mod	Min	Mod
River Flood	Mod	Maj	Mod	Maj	Min	Mod	Min	Mod	Min	Mod	Min	Mod	Min	Maj
Groundwater Flood	Min	Min	None	None	None	None	Neg	Neg	None	None	Neg	Neg	None	None

Table 3.20: Overall Severity of Impacts to Cork County Council of Current and Future (by 2050) Climate Risks in Key Risk Areas

IMPACT	ICON	DESCRIPTION
Catastrophic	Cat.	Widespread service failure with services unable to cope with wide-scale impacts.
Major	Maj.	Services seen to be in danger of failing completely with severe/widespread decline in service provision.
Moderate	Mod.	Service provision under severe pressure. Appreciable decline in service provision at community level.
Minor	Min.	Isolated but noticeable examples of service decline.
Negligible	Neg.	Appearance of threat but no actual impact on service provision
None	None	No Impact

Table 3.21: Impact Categories' Description

PROJECTED RISKS COMPARED TO CURRENT RISK

The risk matrix below shows the predicted future (2050) change in risk with the hollow marker showing the current risk and the solid marker the future risk. The dotted line shows the change between the current and future risk. It is important to note that for the purposes of this CCRA, hazards have been assessed on an individual basis, but hazards can and often do occur in combination.

Climate Risk Matrix
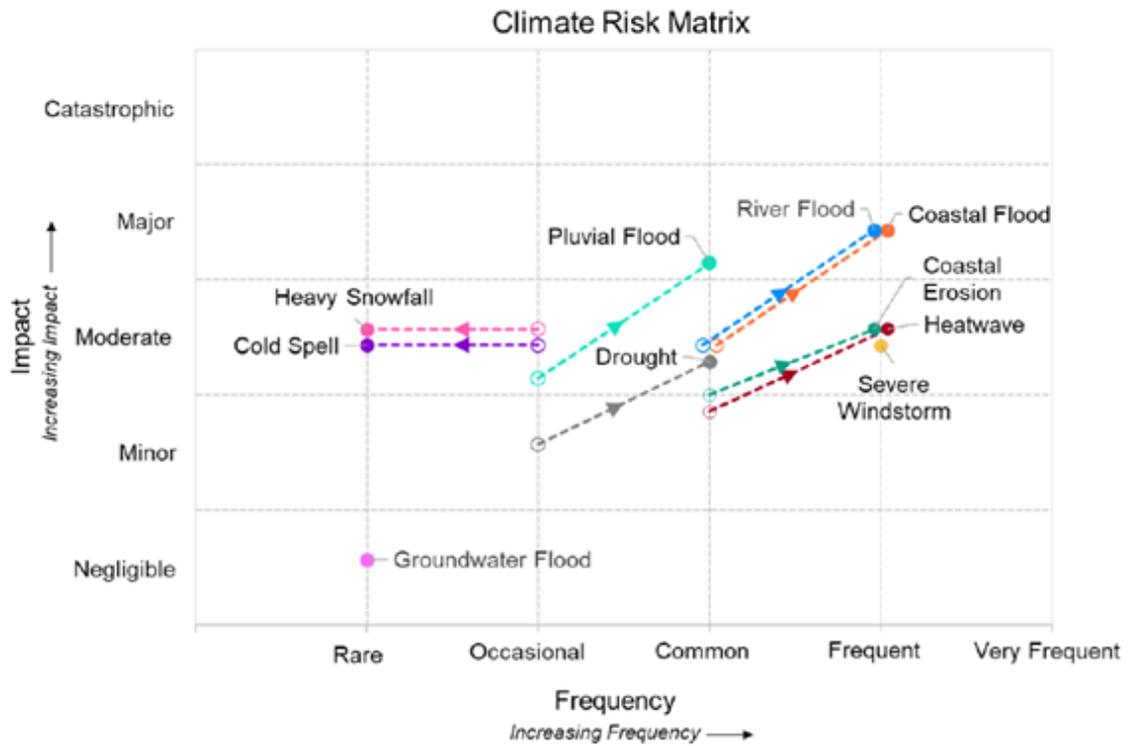
Fig 3.13: Current and Projected Climate Risk Matrix

The risk of existing hazards such as river and coastal flooding and coastal erosion is likely to increase in the future because of changes in both hazard frequency as a result of climate change and impact due to changes in exposure and vulnerability.

Heatwaves, droughts, and pluvial flooding, although already experienced in Cork County, are expected to occur more frequently due to climate change and with a greater impact on Cork County in the future. Although the frequency and impact of severe windstorms is thought to be unchanged in the future, these events will remain a risk for Cork County.

The future impact and frequency of groundwater flooding is also unchanged, meaning the future risk remains low.

The impact of heavy snowfall and cold spells on Cork County remains constant, however, due to the potential decrease in hazard frequency, the overall risk of these hazards is likely to reduce in the future, resulting in less risk.

CHAPTER 4 FRAMEWORK OF CLIMATE ACTIONS

Comhairle Contae Chorcaí
Cork County Council

INTRODUCTION

Supported by the robust evidence base outlined in chapter 3, this chapter outlines the framework of climate actions within a defined structure including:

- **Goals:** The goals are set in the context of themes and establish a structured arrangement of objectives and actions within a framework of both mitigation and adaptation actions. The goals are context-specific and support tailored actions to respond to local issues.
- **Overarching Objectives:** The objectives support the delivery of the goals and frame the actions. The objectives are not intended to be measurable but rather they serve to generally define key areas, from which measurable climate actions are seeking to deliver upon.
- **Actions:** The actions are defined and measurable and are focused upon delivering the overarching objectives.

All tiers help to shape and support climate actions within this framework. The framework forms the basis for implementation and the reporting mechanisms required over the duration of the five-year plan period.

An annual implementation programme will be prepared for each of the five years to align this plan with the annual budgetary process within the Council. It will also allow this plan to be dynamic in nature adapting to changing to national, EU and international policy. These implementation programmes will provide further detail and key performance indicators for each year.

THE ROLE OF THE COUNCIL

In terms of climate change, Cork County Council has a crucial role to play as a transition to a climate neutral society, will require changes to be made in our society and economy including the built environment, transport, waste, biodiversity and more. This will require a collaborative effort by local and central government, business, communities and individuals. It will also require changes in individual behaviours including how we work, heat our homes, travel, produce our food, consume goods and services and manage our waste.

Cork County Council has a role both as a community leader, setting an example by adopting our own policies and plans to affect change, as well as encouraging and influencing others. To this end, we have a role in reducing our own carbon footprint whilst also providing the information and resources to help residents to reduce their carbon footprint, be it personal, domestic or transport. Furthermore, the Council has a wider role in influencing the business community and in collaborating with stakeholders, other local authorities and other sectors to achieve these goals.

As many of the changes required to achieve carbon neutrality are the responsibility of others (including public, private, other sectors and individuals), the Council will adopt both a direct and an indirect role by:
- Delivering actions where the Council can directly deliver a defined outcome.
- Influence, co-ordinate, facilitate and advocate for actions that are outside of the Council's area of full responsibility.

This means that Cork County Council will provide an inward (organisational) and an outward (community) focus on building resilience to the negative impacts of climate change in the following ways:

A Direct Role: The Council will work to reduce greenhouse gas emissions from its own assets. This will build on Cork County Council's extensive knowledge and experience of the natural and built environments within its functional areas. It acknowledges the already established engagement in climate action measures including examples such as: emergency response to severe weather events, flood alleviation measures, infrastructural provision, supporting the transition to sustainable transport, protection of the natural environment, energy reduction/efficiency, biodiversity and housing retrofits for social housing.

An Indirect Influencing Role: The Council will work to assist the delivery of transformative change and measurable climate action across Cork County, through leadership, example and mobilising action at a local level. This aspect of developing and influencing communities is about enabling people to enhance their capacity to shape the society of which they are a part. It helps groups and communities to articulate needs and viewpoints and influence the processes that structure their everyday lives', whilst recognising that the ability to participate fully in society is more open to some groups and individuals than others. The concrete benefits of this development comes through local people changing attitudes, behaviours and practices, mobilising existing and new skills, improving networks, thinking differently about problems and using community assets in new ways.

The goals and overarching objectives outlined in this chapter are underpinned by the following set of principles:

- We will ensure that a 'just transition' is at the heart of our approach and it is inclusive of everyone, young, old and vulnerable.

- We will explore opportunities to partner or collaborate on climate action initiatives across the public, private and all sectors and with community groups and NGO's.

- We will align our actions with the Sustainable Development Goals (https://sdgs.un.org/goals) most notably with goal 13 on Climate Action.

- We will learn from best practice, run pilot projects and monitor and report on progress.

As part of this, the Council has selected a Decarbonising Zone (DZ) within the local authority area which will act as a test bed for a range of climate mitigation, adaptation and biodiversity measures. The DZ will identify and pilot projects that could assist in the delivery of the National Climate objective and from which successful projects and initiatives can be replicated elsewhere in the County. This is outlined in chapter 5.

4.1
WHY CORK COUNTY COUNCIL

Local authorities are community leaders, experienced in mobilising the multi-stakeholder partnerships and relationships required to tackle complex challenges. The sector is vital in ensuring that climate action can be effectively embedded in place-making strategies; ensuring the continued development of our County as a sustainable place in which to live, work, visit and invest.

Many national organisations and government departments seeking to reach communities and businesses in relation to climate action will rely on local authorities as the sector is best placed to deliver strategic, meaningful and consistent engagement. Cork County Council's local knowledge and broad operational remit, through the delivery of numerous services, gives it unique ability to mitigate critical threats such as weather events, major emergencies and the Covid-19 pandemic. The following outlines ways in which the Council is suited to this role in the community.

4.1.1   CONNECTIONS WITH COMMUNITIES
Cork County Council has very close connections to the people that live, work and study in our administrative areas, as well as the businesses, farmers, community and sports organisations, universities, colleges, schools, other public sector organisations, individual households and other sectors. Cork County Council already provides a range of socio-economic and community development services and are well placed to enable and support a Just Transition, identifying ways and means to undertake climate action. Cork County Council, as a community leader, is experienced in brokering partnerships between multiple stakeholders, mobilising networks and reaching local communities.

4.1.2   LEADERSHIP
Cork County Council has the capability to lead the community, build partnerships across sectors, as well as identify networks and early adopters, from which we can learn. Using existing structures and processes, Cork County Council can facilitate the creation of a collective voice for climate action. This can be through its executive and elected representatives, the public participation networks, strategic policy committees and collaboration with outside organisations, community groups and sectors.

4.1.3   CAPABILITY
The Council has the capacity to design and enforce local authority services and regulations to meet the challenges of climate change and climate action. This includes understanding the existing assets and strategic opportunities, targeting resources and funding where needed and available, mobilising public, private and voluntary organisations, and unlocking finance to build momentum for climate action.

4.1.4   EMPOWERMENT
Cork County Council has the capability to empower communities using the wide network of community development, environmental, biodiversity, arts, heritage, green business and climate action resources. Cork County Council has established channels to create meaningful dialogue, deliberation and participation with communities such as the Public Participation Network (PPN) as well as library networks, other community facilities, tidy towns networks and creative and cultural events.

4.1.5   PLACEMAKING
Placemaking is the process of creating quality places within which people want to live, work, play and learn. Adapting to climate change is a significant challenge and Cork County Council is ideally placed to identify innovative opportunities and possibilities, to reimagine our County as resilient and sustainable places, that better serve our communities, in collaboration with other stakeholders. We do this through developing and delivering existing plans such as the County Development Plan, the Local Economic and Community Plan, the Pollinator Plans, amongst others and climate action is and will be integrated into all of these plans and processes.

4.1.6   RESEARCH, SENSEMAKING AND LEARNING

Cork County Council applies multiple approaches to learning, monitoring and evaluation. Through existing structures such as the CAROs, PPNs, Local Community Development Companies (LCDCs), Strategic Policy Committees (SPCs) and other statutory and non-statutory consultation and engagement, Cork County Council can source and exchange ideas, as well as cultivate collaboration.

The Council recognises the amount of work already happening in the County, work undertaken both by itself and by other organisations and examples of these are included in Appendix 2. The Council will work in collaboration with these initiatives and others, and support and promote them as part of the delivery of this Climate Action Plan.

4.2 GOVERNANCE

Cork County Council will fulfil a number of roles and duties to effectively deliver and implement this Climate Action Plan. This includes areas for which Cork County Council will have a full mandate and areas where it can exert its influence more broadly to maximise and support the climate action efforts of other stakeholders. This includes assuming a co-ordination and facilitation role, as well as a broader advocacy role on climate action.

As Climate Change is a challenge that exists across the entire range of the Council's functions and activities, Cork County Council will support a multi-disciplinary approach to climate action, delivered through a clearly defined governance structure. Existing governance structures will be utilised, and new structures will be developed, where necessary. The governance structure will be supported by strong leadership, commitment, and accountability by Cork County Council. All Council plans, policies and strategies will be aligned to this Climate Action Plan. The Council is committed to ensuring this plan remains aligned with other high-level plans (i.e., National Climate Action Plan and the National Planning Framework) and programmes. The National Climate Action Plan will be taken into consideration when developing annual implementation programmes. Strengthened internal and external monitoring and reporting frameworks will be fundamental to accountability and to sustained implementation.

VISION & MISSION
The proposed Vision Statement for Cork County Council is:

> **"TO BECOME A CLIMATE RESILIENT AND LOW CARBON ORGANISATION THAT INSPIRES, LEADS AND SUPPORTS AMBITIOUS AND JUST CLIMATE ACTION ACROSS THE COUNTY".**

Our vision aligns to the Sustainable Development goals and the delivery of a Just Transition for the people of Cork County. It commits Cork County Council to acting in accordance with the interconnected nature of the twin crises of Climate Change and the Biodiversity Crisis.

While Cork County Council's Vision Statement defines where it would like to lead the County, its mission statement speaks to its grounded purpose in delivering and mainstreaming effective climate action across all services and functions. The action-oriented mission statement helps guide representatives and stakeholders of Cork County Council in co-ordinating their work towards the defined vision.

The Mission for Cork County Council is:

> **"TO LEAD BY EXAMPLE, SUPPORT AND INSPIRE CLIMATE ACTION AMONGST ITS CITIZENS TO ENSURE CORK REMAINS AN ATTRACTIVE, COMPETITIVE AND SUSTAINABLE PLACE TO LIVE, VISIT AND DO BUSINESS".**

This plan commits to this county-wide vision and mission with a clear commitment to implementation. The vision values and promotes ambition and innovation and is a commitment to preparedness for future change.

SOURCING FUNDING

This plan commits the Council to seeking funding from internal sources, external sources (such as nationally and from the EU) and privately, such as an energy performance contracts (EPC's) with third party contractor's (Energy Services Company/ESCO).

The enormity of delivering effective climate action poses an extreme financial burden and it is vital that limited financial resources are deployed to maximum efficiency and that climate action is a core consideration in financial decisions, both in sourcing funding and in ensuring that budgets are fully aligned to deliver prioritised action. The Council will each year prepare an Annual Implementation programme to deliver on the climate objectives of this plan. This will align the implementation programme with the annual budgetary process within the Council, in order that funding can be sought for climate actions.

STAFF CAPACITY

Our staff are central to the success of this Climate Action Plan, and we commit to assisting staff, across all service areas, so that they are trained and equipped to deal with rapid changes and are capable of acting to integrate climate action considerations in their work. We aim to have an informed, progressive and effective team to promote climate actions.

GREEN PROCUREMENT

Green procurement is an important objective of this plan. Green Public Procurement (GPP) is a process where public authorities seek to source goods, services or works with a reduced environmental impact. GPP is acknowledged as a vital policy lever in meeting environmental policy objectives. The Government of Ireland's annual public sector purchasing accounts for 10% to 12% of Ireland's GDP, a large part of economic activity and demand. This provides Ireland's public sector with significant influence to stimulate the provision of more resource-efficient, less polluting goods, services and works within the marketplace.

Along with green procurement, a requirement will be included that contractors, working for the Council, must report any contracted carbon arising from non-capital projects.

STAKEHOLDER ENGAGEMENT

There are numerous organisations that are working on their own Climate Action Plans including other local authorities, NGO's, business and community network groups and other state agencies. Climate action is a complex undertaking and engaging and collaborating with other stakeholders where work often overlaps or has an influencing affect upon one another, will strengthen the delivery of our climate action objectives. Cork County Council will also collaborate with adjoining local authorities in relation to climate action mitigation and adaptation measures.

COUNCILLORS

The function of elected members is at the core of local democracy and the delivery of community-oriented action. Supporting councillors in their role presents an opportunity to integrate actions that cross multiple functions of the local authority.

ENVIRONMENTAL GOVERNANCE PRINCIPLES
The following Environmental Governance Principles will be implemented to underpin all Climate Action

REF	ENVIRONMENTAL GOVERNANCE PRINCIPLES
EG1	Promote climate action projects that support and maximise environmental co-benefits, such as biodiversity protection and enhancement; improved air, water or soil quality; or enhanced recreation, amenity and cultural heritage value, to ensure win-win benefits are gained.
EG2	Support or facilitate climate action related projects and initiatives which seek to make improvements in soil structure, management and health by increasing soil organic carbon - which will create the environmental co-benefits of improving flood resilience by enhancing water holding capacity of soils and increasing the level of GHG sequestration associated with land use functions.
EG3	Ensure all development underpinned or supported by climate action is planned and implemented in a manner that appropriately considers the potential for environmental co-benefits, potential environmental impacts and environmental protection requirements.
EG4	Flood defence projects or related maintenance works supported by plan actions shall be carried out in a manner that promotes climate action-biodiversity related co-benefits, and shall have due regard for the protection and enhancement of rare, protected or important habitats and species.
EG5	Ensure climate action related projects are carried out in a manner that promotes climate action-cultural heritage co-benefits, and do not result in unauthorised physical damage to cultural, archaeological or architectural features, or unauthorised or inappropriate alteration of the context of sensitive cultural heritage features.
EG6	Ensure climate action related projects are carried out in a manner that promotes climate action water quality co-benefits, and align with the provisions of the Water Framework Directive and relevant River Basin Management Plan.
EG7	Promote climate action projects that support protected trees, hedgerows and other habitats such as wetlands, floodzones which contribute to green infrastructure.
EG8	Support opportunities to improve ecological connectivity of non-designated habitats and sites to improve overall ecosystem resilience and functioning while supporting climate action within the county.
EG9	Ensure all projects supported by the council have taken the necessary precautions to identify and manage invasive species, particularly with regard to Schedule III species. No climate action related development project that is likely to cause the spread of invasive species listed in Schedule III shall be supported.
EG10	Support opportunities to support peatland restoration, rehabilitation and maintenance while achieving climate targets through the implementation of the climate actions within the plan.

The EPA's State of the Environment Report (SOER) 2020 identifies thirteen 'Key Messages for Ireland' in delivering Ireland's long-term sustainable development and environmental objectives. The EPA are currently preparing the next iteration of the SOER report, which is due to be published in 2024. Cork County Council will take account of any relevant recommendations in the SOER 2024 report, once published, in implementing the Plan over its lifetime.

4.2.1 GOVERNANCE GOAL AND OBJECTIVES:
The necessary governance structures will enable Cork County Council to fulfil its roles with a goal, in relation to governance, to:

Goal 4.2.1- Make Climate Change Central to the Operation of the Council.
As detailed in the last section, Cork County Council has a number of objectives in order to fulfil this goal and these are outlined more fully below including the related actions.

Objective 4.2.1.1   We commit to a clear, county-wide vision and mission for climate action

NO.	ACTION
4.2.1.1.1	All Council plans shall align with the Climate Action Plan vision and mission.

Objective 4.2.1.2 We commit to using existing internal structures for aligning and integrating climate action throughout Cork County Council, and developing new structures, where necessary.

NO.	ACTION
4.2.1.2.1	The existing internal structure for the development of this plan will remain in place initially and will be adapted throughout the lifetime of the plan to respond to new challenges as they occur. This structure will nurture inter-departmental co-operation to ensure that progress on the 'implementation monitoring' of the plans actions is being reported on to deliver this plan. This structure is as follows: 1. A high-level senior management Steering Group, chaired by the Chief Executive, the purpose of which is to set the overall targets for the delivery of the Climate Action Plan, including budgets and resources. This group meets 1-2 times per annum. 2. An Operational Group which is chaired by the Divisional Manager with responsibility for the Environment Directorate. This is also a senior management group and it reports to the Steering Group. The purpose of this group is to ensure that the individual and specific actions included in the Climate Action Plan are undertaken by the directorates. This group meets 2-4 times per annum. 3. An Implementation Group, which will include a representative from all directorates and functions, which is made up of middle management who review the day-to-day logistics and implementation of individual actions. This group will be chaired by the Climate Action Co-ordinator and will meet as required and at a minimum of once a quarter.
4.2.1.2.2	Support the Climate Co-Ordinator team in the monitoring and reporting of the Council's Climate Action Plan.
4.2.1.2.3	Ensure that relevant actions from this Climate Action Plan are incorporated into all Council plans, strategies and policies including departmental work plans, team plans and staff meeting agendas.
4.2.1.2.4	Incorporate Climate Action Plan into existing stakeholder engagement groups, networks, forums and platforms.
4.2.1.2.5	Communication and collaboration with the CARO office will be continued and strengthened.
4.2.1.2.6	A communications plan will be developed and implemented to report climate action progress and promote climate action in a coordinated manner across council communications processes and platforms.
4.2.1.2.7	With the support of CARO, the Council will monitor European and national policy developments and incorporate as appropriate to the Council's approach to Climate Action.

Objective 4.2.1.3: We commit to seeking funding for climate action from external and internal sources

NO.	ACTION
4.2.1.3.1	To deliver this five-year plan, an annual implementation programme will be prepared. This programme will be dependent on the availability of external funding (e.g. national, European, SEAI, etc.) and internal funding and resources.
4.2.1.3.2	Support and administer the Community Climate Action Programme (CCAP) funded by the Department of the Environment, Climate and Communications, which will allow communities to apply for grants to enable climate projects at a local level.
4.2.1.3.3	Continue with the provision of existing grants for communities and make climate action a central component to these grants.
4.2.1.3.4	Participate in and maximise the benefits of EU-funded environmental and climate-related European Projects such as the HYBES project.

Objective 4.2.1.4 We commit to enhancing our staff capability to deliver effective climate action

NO.	ACTION
4.2.1.4.1	Increase climate action awareness and engagement among staff and promote positive behavioural change. Specifically, promote awareness and understanding of the role and implications of this Climate Action Plan and build capacity of public-facing council employees to "talk climate".
4.2.1.4.2	Support the up-skilling and re-skilling of staff to enable the implementation of climate action in their roles.
4.2.1.4.3	Work with CARO to ensure ongoing climate action training for staff.
4.2.1.4.4	Strengthen feedback systems with staff, for improved communication and ideas generation.
4.2.1.4.5	Review remote working arrangements at suitable intervals to ensure optimum use of space is achieved, for example through desk sharing and a reduction in offices.

Objective 4.2.1.5 : We commit to continuing to develop the Green Procurement Policy

NO.	ACTION
4.2.1.5.1	Continue to implement the national Green Public Procurement strategy to ensure that Green Procurement is mainstreamed through all sections of Cork County Council. Ensure that procurement of all works/services follows the Department of Public Expenditure and Reform circular 20/2019.
4.2.1.5.2	Ensure that greenhouse gas emissions are factored into financial decisions.
4.2.1.5.3	Cork County Council's Finance Department, will facilitate monitoring and reporting of climate activity expenditure.

Objective 4.2.1.6: We commit that climate will be central when replacing and acquiring new assets and replacing existing assets.

NO.	ACTION
4.2.1.6.1	All existing assets owned by Cork County Council to be reviewed to assess if they can be reduced or re-organised in order to save carbon emissions.
4.2.1.6.2	Any additional or replacement of existing assets needs to take into account the need for sustainability and the 2030 and 2050 greenhouse gas emissions reduction targets.

Objective 4.2.1.7: We commit to Stakeholder Engagement and Collaboration

NO.	ACTION
4.2.1.7.1	Undertake stakeholder mapping for broadened engagement and for collaborating effectively on climate action across Cork County. Assess the role of strategic partners to deliver on certain projects.
4.2.1.7.2	Collaborate and work with other sectors and agencies to deliver programmes that support climate action, build and mobilise community capacity.
4.2.1.7.3	Use the Decarbonising Zone in Macroom to engage stakeholders in innovative actions, using pilot projects designed to reduce emissions.
4.2.1.7.4	Establish an open-source GIS tool to map community climate action across the County, including description of project, location and progress to inform the Council and its' stakeholders on projects in the County and clusters, gaps, linkages.

Objective 4.2.1.8: We commit to strengthening monitoring and reporting frameworks

NO.	ACTION
4.2.1.8.1	Establish a reporting and monitoring system to track the progress of climate actions and report locally and nationally.
4.2.1.8.2	Continue Cork County Council's regular liaison with the Climate Action Regional Office (CARO) Atlantic Seaboard South and provide appropriate progress reports.

Objective 4.2.1.9: We will support councillors in their roles as public representatives to deliver climate action

NO.	ACTION
4.2.1.9.1	Implement an engagement programme to inform councillors on climate and environmental action in order to build knowledge, confidence and capacity to 'talk climate' at a local and a policy level.
4.2.1.9.2	Support the training programme for councillors run by the Climate Action Regional Offices.

Having now reviewed the governance aspects of this Climate Action Plan, we will now turn to examine actions according to individual themes, in the following sections.

4.3 COUNCIL EMISSIONS FOR WHICH THE COUNCIL HAS FULL RESPONSIBILITY

The Climate Action and Low Carbon Development (Amendment) Act 2021, which also frames Ireland's legally binding climate ambition, requires a reduction in greenhouse gas emissions by Cork County Council of 51% by 2030 from the 2016/2018 average baseline and a 50% increase in energy efficiency from a 2009 baseline. The Council has three sources of direct emissions:-

- Electricity,
- Thermal (heating of buildings),
- Transport (Councils fleet).

Each of the above must include contracted carbon. Contracted carbon is the carbon resulting from a contractors onsite energy used in non capital projects in the provision of council services. Examples of contracted carbon are:-

- The fuel used by a hedge contractor on the site, excluding the fuel used getting to or from the site,
- The energy used in a contracted data centre storing council data,
- The energy used to store council paper files offsite at a third-party facility,
- The energy used on site in a tar and chipping road maintenance job, excluding the fuel used getting the staff, equipment, or materials to or from the site,
- Where a swimming pool is leased to an operator the fuel used at the pool.

Examples of carbon sources that are not contracted carbon are:-

- Where an industrial unit is leased to a company, other than for the provision of a public service,
- Where a building is leased to a community, other than for the provision of a public service.

The rules governing the council requirements in relation to carbon emissions does not include all council assets and the following sources of emissions are not included:-

- Social housing stock,
- Staff mileage using their own vehicles,
- Capital works,
- Embedded carbon.

Also, not all council actions that reduce emissions are credited against the Council's required greenhouse gas emissions savings:-

- Travel savings from working from home policy,
- Renewable energy generated by the council but not used on the generation site,
- Tree planting,
- Retrofitting social housing stock to improve energy performance.

When developing implementation programme to reach the 2030 targets available finances and resources along with the relative reduction in emissions by projects must be taken into account. With the greening of the electricity grid and works already underway by the Council it is predicted that the electricity target will be met and ongoing monitoring of the grid greenhouse gas emissions will take place to ensure the target will be met. In the transport area EV fleet options are not available for all our vehicle types or uses and low emission fuels are not widely available therefore significant progress in fleet greenhouse gases reduction may be in the later end of the decade rather than uniformly throughout the decade. Thermal GHG reduction will form a central part of the council's work programme in the short term and achieving our 2030 target will be accelerated thus enabling transport to become the central focus closer to 2030 as developments in the fleet area allows.

The funding requirement to reach compliance by the Council will be substantial and consequentially funding will be pursued from the following sources to supplement council's direct funding:-

- European funding:
  This is usually through specific project funding.
- National funding:
  Currently funding is through SEAI grant schemes.
- Private funding:
  Currently this funding would be through "energy performance contract". Energy performance contracting is a 'pay for performance' approach to installing and operating energy technologies in your business. A contractor installs energy efficient works and through the contract, guarantees savings. The client pays the contractor from these savings over a number of years. If savings fall short, the contractor covers the difference.

Another type of contract is Local Energy Supply Contract (LESC). An Energy Services Company (ESCO) installs works and supplies energy (usually electricity or heat) to a particular point at the client/host's facility. The ESCO is paid for the quantity of energy supplied over the term of the contract. An example of this type of contract would be where a contractor installs a solar pv array on a building and the council buys this energy.

To manage the process to reach the 2030 targets it is proposed to break the implementation programme to annual implementation programmes where budgets and resource, national developments in relation to grants/funding can be taken into account. Annual programmes also allow for regular monitoring of progress and quick Adaptation to requirements to reach the 2030 targets.

Reporting on the council's performance is through SEAI who have access to electricity and gas accounts and data is submitted for fuel use in heating and fleet operations. As greenhouse gas emissions related to a fuel source can vary from year to year SEAI calculate the appropriate factor each year and thus calculate the equivalent carbon emissions for each emission type.

Goal 4.3.1 – Achieve sectoral targets in relations to GREEN HOUSE GASES reduction from direct energy use and Energy Efficiency

Objective 4.3.1.1 - 51% reduction in GREEN HOUSE GASES from the 2016/2018 baseline resulting from the council's electricity usage

NO.	ACTION
4.3.1.1.1	Assess electricity demand sources, e.g. buildings, equipment, etc to identify opportunities to eliminate demands.
4.3.1.1.2	Upgrade lighting to LED where financially viable, while ensuring the lumen levels and spectral range are maintained or reduced/controlled to avoid effects to biodiversity.
4.3.1.1.3	Investigate opportunities for renewable energy sources to identify projects for annual implementation programme, having due regard to planning and environmental protection considerations.
4.3.1.1.4	Replace equipment with more efficient alternatives when available and financially viable whilst ensuring WEEE generated as a result of this action is appropriately managed.
4.3.1.1.5	Continue to monitor developments in technology and equipment which reduce electricity consumption to identify projects for annual implementation programme.
4.3.1.1.6	Collect data from all contracts to report contracted carbon.

Objective 4.3.1.2 - 51% reduction in GREEN HOUSE GASES from the 2016/2018 baseline resulting from the council's thermal heating

NO.	ACTION
4.3.1.2.1	Assess heating demand sources to identify opportunities to eliminate demands.
4.3.1.2.2	Assess opportunities to replace oil/gas burners usage with renewable alternatives to identify projects for annual implementation programme, having due regard to planning and environmental protection considerations.
4.3.1.2.3	Assess opportunities to upgrade building insulation to identify projects for annual implementation programme; having due regard to environmental sensitivities such as local human receptors, protected species, European sites and biodiversity, and the need to appropriately conserve protected structures.
4.3.1.2.4	Assess opportunities to upgrade building air tightness to identify projects for annual implementation programme; having due regard to environmental sensitivities such as local human receptors, protected species, European sites and biodiversity, and the need to appropriately conserve protected structures and features.
4.3.1.2.5	Continue to monitor and utilise developments in technology and equipment which reduce reduce/replace fossil fuels consumption to identify projects for annual implementation programme.
4.3.1.2.6	Collect contracted carbon data from all contracts.

Objective 4.3.1.3 - 51% reduction in GREEN HOUSE GASES from the 2016/2018 baseline resulting from the council's transport use

NO.	ACTION
4.3.1.3.1	Assess transport demand sources to identify opportunities to eliminate demands.
4.3.1.3.2	Assess opportunities to replace vehicles with EV where alternatives available and financially viable consumption to identify projects for annual implementation programme, whilst ensuring energy/fuel used to power electric vehicles is sustainably sourced, and appropriate end-of-life management practices are in place for Electric Vehicles.
4.3.1.3.3	Assess opportunities to utilise low emission fuels where available and financially viable to identify projects for annual implementation programme, whilst ensuring energy/fuel used to power low emission vehicles is sustainably sourced.
4.3.1.3.4	Continue to monitor and utilise developments in technology and equipment which reduce fossil fuel consumption to identify projects for annual implementation programme.
4.3.1.3.5	Collect contracted carbon data from all contracts.

Objective 4.3.1.4 - 50% increase in energy efficiency from the 2009 baseline

NO.	ACTION
4.3.1.4.1	Monitor electric grid developments in relation to carbon reduction to calculate contribution.
4.3.1.4.2	Replace equipment with more efficient when available and financially viable, whilst ensuring WEEE generated as a result of this action is appropriately managed.
4.3.1.4.3	Continue to monitor developments in technology and equipment which increases energy efficiency.

4.4 CITIZEN ENGAGEMENT AND COMMUNITY LEADERSHIP

Goal 4.4.1: Mobilise climate action in local communities and ensure a just transition.

Cork County Council has very close connections to the people that live, work and study in our administrative area and is at the frontline in terms of community engagement. The Council is a community leader, experienced in mobilising the multi-stakeholder partnerships and relationships required to tackle complex challenges. In this plan, the Council commits to mobilising climate action in local communities, whilst striving to achieve a 'Just Transition' for communities that may be disadvantaged by decarbonising projects. This section will outline the broad objectives in relation to this goal along with actions. Detailed actions will be contained in the annual implementation plan.

OVERARCHING OBJECTIVES

Citizen engagement and capacity building are key to the delivery of climate action within communities. There are many benefits to collective community action as citizens coming together to tackle climate change can inspire others to get involved. The following objectives will ensure that Cork County Council engages with and empowers communities to take action, using existing and enhanced structures, processes and networks.

Cork County Council will work with communities to co-create visions of carbon neutral towns, villages and rural areas. The Council will use existing models and explore new models, formats and channels to progress meaningful dialogue, deliberation and participation with communities such as the Public Participation Network (PPN), Sustainable Energy Communities (SEC), Tidy Towns, amongst others. Cork County Council understands that climate change impacts are not the same everywhere and they are attuned to the needs of communities in the County.

Cork County Council will engage with a wide range of stakeholders in the delivery of this plan including community organisations, NGO's, other local authorities, network groups, educational facilities and Government bodies. The Council will also work through existing structures such as the CAROs, PPNs, Local Community Development Committee's (LCDCs), Strategic Policy Committees (SPCs) and other statutory and non-statutory bodies in order to consult, exchange ideas and to collaborate on projects. Collaboration is key to the delivery of this plan.

As detailed in chapter 3 of this plan, the Council recognises the current and growing impacts of climate change (e.g. flooding) in Cork County and the negative impacts it can have on communities. The Council commits to engage with these communities to increase their resilience to these impacts and to increase their preparedness for negative climate events.

Increasing awareness about climate action and encouraging behavioural change is an important element of this plan. It will involve encouraging the public and communities, to make changes to lower their carbon footprint and decrease their carbon emissions. This is likely to impact the lifestyles of the public including behaviours and practices relating to how people live, heat their homes, travel, eat, what they purchase and how they deal with waste. Providing education and supports in relation to this will be central to changing patterns of behaviours. Protecting and assisting those who are more vulnerable in our society will also form a critical element of this plan.

Learning from best practice is important and the Council will conduct research to inform its' work. Pilot projects will be undertaken from which we will learn and duplicate. We will capture insights from our projects so we can continually develop.

Objective 4.4.1.1 : We commit to support Communities to co-create a vision for a low carbon, biodiversity rich and climate-resilient County.

NO.	ACTION
4.4.1.1.1	Support communities to co-create a vison for climate action by working with existing community models/mechanisms (e.g. the SEAI Sustainable Energy Communities, PPN etc.) and also supporting new models, where appropriate.
4.4.1.1.2	Trial the EU funded HYBES project 'living lab' in the Decarbonising zone; having appropriate regard to environmental sensitivities such as sensitive human receptors, European sites and biodiversity, and the need to appropriately conserve protected structures.

Objective 4.4.1.2 : We commit to inform, educate and create awareness about climate action and promote engagement

NO.	ACTION
4.4.1.2.1	Create awareness about, and promote understanding of, climate change in Cork County through communications and education. Communications strategies will be tailored to particular audiences and may include: campaigns, talks, debates, online information, guidance documents, webinars, podcasts, video, radio and information disseminated through the Cork County libraries network (with 26 branches).
4.4.1.2.2	Develop links with young citizens (e.g. the Comhairle Na nÓg) to give voice to their concerns about climate change and to enhance their awareness and the actions that they can take.
4.4.1.2.3	Engage older people in climate action by working with the Age Friendly networks and the Older People's Council to ensure that awareness of climate action is raised and to promote and enhance the actions that they can take as a response to climate change.
4.4.1.2.4	Promote public engagement with climate action through arts linking in with the climate change pillar of Creative Ireland.
4.4.1.2.5	Liaise with other agencies to develop and promote Climate Community Leadership that will: • Build knowledge, confidence and capacity of community members to initiate climate action in their neighbourhoods • Build capacity of community leaders/change agents to "talk climate" in their networks • Identify and acknowledge existing community climate action 'champions/heroes' and acknowledge and amplify their cam paigns
4.4.1.2.6	Build on Cork County Council's awareness month "Make One Change: Cork County Cuts Carbon" (initiated by the Council in 2022)
4.4.1.2.7	Continue to promote schools' programmes such as Green Flags, School Gardens, Climate Literacy.
4.4.1.2.8	Develop partnerships with external agencies and community organisations to enable climate action projects at community level.
4.4.1.2.9	Support and work with LAWPRO to encourage a community response to enable water conservation and greater water use efficiency in the community , in association with local community groups.

Objective 4.4.1.3: We commit to support the allocation of Government funds and support active engagement in climate action at a local level.

NO.	ACTION
4.4.1.3.1	Local Climate Action projects will be funded through the new Community Climate Action Programme (CCAP). The CCAP will operate under the following themes. • Home(Community)/Energy • Travel • Food and Waste • Shopping and Recycling • Local Climate and Environmental Action.
4.4.1.3.2	Ensure that climate change is a consideration in other community grants administered by the Council.

4.4.1.4 Objective: We commit to gather data and capture insights

NO.	ACTION
4.4.1.4.1	Research and collate data on community-based climate action in the County and map same with descriptions. Set up an easily accessible method for the public to access same. Disseminate information to Cork County communities to promote local action.
4.4.1.4.2	Capture insights from engagement activities to provide an evidence base to inform the implementation of the Climate Action Plan.
4.4.1.4.3	Research and learn from best practice in Ireland and internationally.

4.4.1.5 Objective: We commit to working for a Just Transition

NO.	ACTION
4.4.1.5.1	Work with stakeholders to understand key risks and drivers for a just transition in Cork that will provide insights and recommendations to understand and navigate the climate transition in a way that is fair and equitable. Support and assist stakeholder action to help those who are most vulnerable to change. This action will ensure that Cork County Council are active in enabling a 'just transition' and protecting the health and wellbeing of communities across Cork County.

4.4.1.6 Objective: We commit to helping those most affected by weather-related climate impacts

NO.	ACTION
4.4.1.6.1	Work with communities to ensure that community Rest Centres are prepared in the event of people being displaced e.g. by flood.
4.4.1.6.2	Develop a template for community emergency plans to assist communities to prepare their own location specific emergency community plans.

4.4.1.7 Objective: We commit to assisting sectors of society that need additional support in the transition to a low carbon economy

NO.	ACTION
4.4.1.7.1	Work with agencies, organisations and community groups to assess the barriers and obstacles to climate action by certain sectors of society and to develop new approaches to address these e.g. methods to assist with housing upgrades for the elderly or vulnerable.

4.4.1.8 Objective: We commit to promoting Active Travel

NO.	ACTION
4.4.1.8.1	Participate in and support activities of the Transport and Mobility Forum.
4.4.1.8.2	Continue the implementation of 'safe routes to school' and neighbourhood greenways to further enhance localised active-travel infrastructure; having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites and local air quality.
4.4.1.8.3	Continue promotion and support for the Active Travel Green Flags; having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites and local air quality.
4.4.1.8.4	Support active travel promotional events of stakeholders e.g. Mix Your Mode, Bike Week etc.
4.4.1.8.5	Continue to encourage the development of bottom-up sustainable transport initiatives and engage with communities on new initiatives, where appropriate; having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, local air quality etc.

4.4.1.9 Objective: We commit to promote and encourage self-sufficient communities

NO.	ACTION
4.4.1.9.1	Promote and support community growing projects, allotments and community gardens, where suitable land is available, as a way that communities can grow their own food, lower food miles and food waste.
4.4.1.9.2	Promote the circular economy to communities including waste reduction, re-use and upcycling.
4.4.1.9.3	Encourage communities to buy local (to reduce food miles and to support the local economy) and work with stakeholders and communities to reduce food waste.
4.4.1.9.4	Initiate a 'think before you buy' campaign to encourage people to buy only what they need promoting conscious consumption.

4.5: BIODIVERSITY, THE NATURAL ENVIRONMENT, HERITAGE & LAND USE, LAND USE CHANGE AND FORESTRY (LULUCF)

The goals of this theme are to protect, restore and enhance biodiversity, while increasing the natural environment's climate resilience, preserving and promoting our heritage to foster a sustainable society. It aims to develop the role of biodiversity in climate mitigation and adaptation, and support work towards a vision of Cork where biodiversity is valued and used sustainably, so as to maintain ecosystem services and benefits essential for all people.

The goals of land use, land use change and forestry (LULUCF) are to understand land use in Cork County and how to most effectively capture and store carbon and produce better, greener food and energy and to future proof LULUCF activities for climate change adaptation.

In pursuing this aim, Cork County Council is committed to fulfilling its role in demonstrating leadership through the implementation of evidence-based measures within its own operations. Outwardly, this local authority also has a vital role to facilitate, co-ordinate and collaborate with the effort of communities and stakeholders, to guide and influence through service provision and regulation, and to advocate and promote climate action awareness and engagement.

BACKGROUND CONTEXT:

The theme of biodiversity, natural environment and heritage encompasses multiple aspects. This range of aspects includes natural physical features such as rivers, lakes and coastlines; archaeological, architectural and cultural heritage such as monuments, protected structures, music and tradition; as well as natural heritage, wildlife and ecology.

The broad and varied character of this theme results in a complex interrelationship with climate change. It is vital to note that while we and the natural world are threatened by the climate crisis, biodiversity loss itself represents an existential threat. Therefore, the issue of biodiversity in the context of climate change is relevant to every theme of this plan. However, it is within this theme that actions where Biodiversity is the primary focus will be examined.

Biodiversity is the complex inter-related network of life that makes up all our natural world. It encompasses all species of animal, plant, insect, and micro-organism, and includes the genetic diversity that occur within species, as well as the complex ecosystems and habitats in which they and we live.

People, wildlife and the economy depend upon a healthy natural environment for the ecosystem services it provides. These include clean air and water, food and pollination, waste and nutrient management, natural flood alleviation, medicine and materials (such as timber and fibre), as well as tourism, recreation, amenity, culture and general wellbeing. Importantly, biodiversity is also capable of absorbing carbon.

Globally and locally, multiple pressures – including climate change – are driving a drastic decline in biodiversity and the quality of the natural environment, with a rate of global species extinction tens to hundreds of times higher than average for the last 10 million years, the rate of which is accelerating.

These environmental pressures are human-driven. In Ireland, the main causes of biodiversity decline include degradation of the natural environment through habitat loss and fragmentation from human land use (such as urbanisation, intensive agricultural and forestry practices); pollution; invasive species; and over-exploitation (including fishing and cutting of peatlands). Climate change is a further driver of biodiversity decline.

The National Parks and Wildlife Service (NPWS) released Ireland's sixth national report to the UN Convention on Biological Diversity which found that in Ireland 91% of protected habitats are in poor or inadequate condition. Ireland's Environment, an Integrated Assessment 2020 report prepared by the EPA found that nearly half of surface waters are failing to meet water quality standards. The National Biodiversity Data Centre reports that, of 10% of Irish species assessed so far, 20% are threatened with extinction.

The seriousness of the situation has been recognised by the Dáil through the declaration of a Climate and Biodiversity Emergency in 2019. The impacts of climate change are expected to worsen and overtake these other pressures to become the most significant driver of biodiversity loss and changes in ecosystem services by the end of this century.

Risks posed to the natural environment by climate change arise in multiple ways. These include risks to terrestrial species and habitats from changing climatic conditions and extreme events, including temperature change, water scarcity, wildfire, flooding, wind, and altered hydrology. Ireland's coastal and marine ecosystems are vital resources. Coastal habitats and flood plains are particularly prone to change with rising sea levels, while warming seas and ocean acidification due to increasing CO_2 levels threaten marine life. Evidence of long-term shifts in the distribution and abundance of some terrestrial, freshwater and marine species due to higher temperatures is now discernible and can be expected to become more widespread. Increasing temperatures and changes in precipitation may result in the increased occurrence of disruptive invasive species and habitat degradation, as well as contribute to the drying out and erosion of wetlands, erosion of soils, and deforestation according to the 'Climate Ireland' website, developed as part of the EPA funded project 'A Climate Information Platform for Ireland'. This not only reduces the natural environment's ability to sequester carbon but results in it becoming a source of further carbon emissions, exacerbating the rate of climate change.

The National Climate Action Plan states that Ireland's land use, land use change and forestry sector is currently a carbon source rather than a carbon sink. Activities in LULUCF provide a method of offsetting emissions, either by increasing the removal of greenhouse gases from the atmosphere (i.e., by planting trees or managing forests), or reducing emissions (i.e., curbing deforestation and the associated burning of wood).

OVERARCHING OBJECTIVES:

Biodiversity, and the Natural Environment
Climate change and the degradation of biodiversity and the natural environment are mutually reinforcing. Conversely, measures to protect, restore and enhance the natural world are beneficial to climate action, both for adaptation and mitigation. Increasing the resilience of the natural environment to change, supports its ability to continue to provide vital ecosystem services, thereby also improving human adaptive capacity. Measures such as woodland regeneration, restoration of wetlands and conserving healthy soils and vegetation can increase carbon sequestration, while also benefitting biodiversity and the natural environment in its own right. Blue carbon sequestration from coastal and marine eco-systems is also recognised for its role in Climate Change , with many co-benefits. Therefore, an appropriate strategy for climate action is to reduce and manage stresses on species, ecosystems and the natural environment, and to support its enhancement.

- The delivery of a Biodiversity Action Plan will identify opportunities and means across the county to enact such measures, rooted in best practice and aligned with wider biodiversity and climate action policy, while engaging and supporting the capacity of citizens and sectors of society in the conservation of their natural heritage.
- Measures to improve the health of habitats will be examined in a planned and strategic manner, identifying and prioritizing opportunities to protect and enhance habitat quality and connectivity, and identifying opportunities for climate mitigation and collaboration with partners in restoration and expansion.
- The aim of biodiversity net gain will be embedded in the placemaking and development process to focus considerations on biodiversity protections, health, and expansion, and requiring the use of nature-based solutions.
- The council will lead by example, in seeking to integrate best practice guidelines into its work practices, in identifying opportunities in council-held assets to integrate biodiversity restorations, expansions and supports, and in piloting demonstrations of nature-based solutions and measures which benefit the health of biodiversity.
- The council will prepare an alien invasive species policy, to address the threats to biodiversity and to human health posed by invasive species and will work to support citizen and community understanding and engagement.

A healthy, climate resilient environment
- The council will continue to work with partners and citizens to improve water quality, to work towards inspection targets and to promote awareness and understanding of the importance of water health and best practice.
- The council will continue to work with stakeholders to preserve air quality and to support the promotion of awareness and understanding to citizens of the impacts of air quality.
- The council will seek to advance the protections and management of our coastlines, assessing areas of high vulnerability to erosion and change, and work with partners to identify measures of defence, using natural management approaches where possible.

Preserve and promote our heritage to foster a sustainable society
The theme of heritage offers particular opportunities in tackling the climate crisis, where we aim to preserve our natural heritage, but also our connection to it and thereby leverage heritage to foster sustainable development and social cohesion. We all share in our heritage, locally and globally, and this provides a role for everyone in the conservation of that heritage, centering climate justice and inclusivity. Heritage also connects us with time: it links us with our past, helps us to understand ourselves in the present, and shapes our view of the future. This chronological anchoring provides an important tool in tackling the climate crisis, by supporting our ability to take a long view informed by an intergenerational perspective, wherein we are the present custodians of not only resources but the heritage and environment we have inherited and which we pass on to future generations.
- The council will continue to work to preserve and manage Ireland's unique heritage in the context of climate change and identify opportunities for increasing climate resilience and fostering sustainable social development.
- The council will work to promote engagement with, and appreciation and understanding of heritage and its role in connecting us to the natural environment, while working with partners to promote sustainable heritage practices.

Land Use, Land Use Change & Forestry
The National Climate Action Plan recognises that in order to reduce emissions and move to an overall store of carbon, this will involve increased afforestation, further bog rehabilitation, rewetting of organic soils, improved management of grasslands on mineral soils and increasing the use of cover crops in tillage.

Cork County Council has a broad role in facilitating the LULUCF sector to become a long-term sustainable net sink rather than a net source of GHG emissions, in order to make a positive contribution to combating climate change, minimising emissions and optimising GHG sequestration opportunities, while balancing environmental, social, and economic considerations. The council will continue to co-ordinate and work in partnership with other stakeholders to facilitate and enable the delivery of appropriate climate initiatives.

All measures undertaken are necessarily subject to sufficient finance and availability of resources. It is, however, vital to embed biodiversity into the heart of climate action, and to capitalise where possible on the beneficial synergies between action on climate and the opportunities provided by the protection and restoration of the natural environment. Simultaneously, it is essential to recognise the complexity of healthy ecosystems and the importance of not contributing to the overall worsening of biodiversity decline.

Actions taken in this theme contribute to our shared pursuit of the Sustainable Development Goals, which aim to protect the planet and ensure that by 2030 all people enjoy peace and prosperity. By promoting sustainable cultural practices, we contribute to Decent Work and Economic Growth (SDG 8) and Sustainable Cities and Communities (SDG 11). Additionally, involving local communities in the decision-making process and recognizing their cultural rights helps fulfil Peace, Justice, and Strong Institutions (SDG 16) while other actions contribute to meeting Climate Action (SDG 13), Life Below Water (SDG 14), and Life on Land (SDG15).

4.5.1 Goal: Protect, restore, and enhance Biodiversity

4.5.1.1 Objective: Implement the Biodiversity Action Plan with cognisance of the impacts of climate change.

NO.	ACTION
4.5.1.1.1	Continue to implement the County Biodiversity Action Plan.
4.5.1.1.2	Work with stakeholders and communities to identify suitable areas for Nature Recovery opportunities.
4.5.1.1.3	Continue to expand delivery of Pollinator Plans throughout towns in the county.
4.5.1.1.4	Work and support the Heritage Council's Biodiversity programme to take an inclusive, community-centric approach to biodiversity action and promote community responsibility for conservation.
4.5.1.1.5	Work with stakeholders to promote engagement and awareness of National Biodiversity Data Centre projects and initiatives.
4.5.1.1.6	Promote citizen science initiatives including targeting key sensitive species and empower communities to support local habitat restoration and protection.

4.5.1.2 Objective: Increase the quality and connectivity of habitats in the county area, to increase benefits to ecology and to increase resilience of biodiversity to the impacts of climate change

NO.	ACTION
4.5.1.2.1	Work with stakeholders to create a Climate Risk Register of all natural heritage assets at a habitat level.
4.5.1.2.2	Work with stakeholders to carry out a county wide survey to identify and map wetlands; protect and restore wetlands in Local Authority control; and to support landowners and others to protect and restore wetlands in accordance with relevant environmental protection requirements, including water quality, habitat and protected species related requirements.
4.5.1.2.3	Work with stakeholders to support the establishment of Marine Protected Areas.
4.5.1.2.4	Work with stakeholders protect and enhance biodiversity of Cork Harbour.
4.5.1.2.5	Work with stakeholders to examine the feasibility of mapping of green and blue infrastructure assets in the County.
4.5.1.2.6	Identify opportunities to preserve, enhance and develop ecological connections between areas of high biodiversity value, having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites and local air quality

4.5.1.3 Objective: Embed Biodiversity retention and net gain in development and placemaking with a nature positive goal.

NO.	ACTION
4.5.1.3.1	Promote biodiversity net gain in all new public and private developments: Require the submission of a green infrastructure statement for all development, ensuring environmental protection requirements are appropriately considered during the planning of green infrastructure. Continue to integrate ecological expertise within the development management process including at pre-planning and planning application stages.
4.5.1.3.2	Continue to integrate ecological expertise and biodiversity protections through placemaking measures in the development and management of public projects including housing, transport infrastructure and public realm projects etc, having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, and local air quality.
4.5.1.3.3	Retention and protection of existing biodiversity shall be a key consideration in all works or developments.
4.5.1.3.4	Review and improve existing priority-based enforcement operations, procedures, and systems to better assess and advance enforcement files which have a potentially significant environmental and biodiversity impact.

4.5.1.4 Objective: Identify and pursue opportunities for biodiversity enhancement in council-held assets, and lead by example.

NO.	ACTION
4.5.1.4.1	Develop and integrate Biodiversity Best Practice Guidelines into the work practices of the authority and identifying staff training needs required for delivery.
4.5.1.4.2	Undertake review of existing council-owned housing estates to supports residents in identifying areas suitable for community led biodiversity protective measures in accordance with best practice (e.g., native tree planting, wildflower meadows, pollinator zones etc.).
4.5.1.4.3	Identify a range of potential pilots to demonstrate sustainable measures including nature-based SuDS; and pilot a biodiversity- and climate-led design for Council-led social housing developments with measures such as green roofs, green walls, wetland & pond SUDS, green carparking, nest boxes in facades, grasslands, and wildlife friendly native shrubs and trees in open space; having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, and local air quality.
4.5.1.4.4	Identify council-held assets for opportunities where biodiversity measures, e.g. wildflower/hay meadows, rewilding, hedgerows, and habitat integration methods (e.g. bat boxes, swift boxes / nest boxes) can be implemented in accordance with best practice guidelines, in partnership with appropriate bodies e.g. Birdwatch Ireland.
4.5.1.4.5	Recognise natural regeneration of woodland and identify opportunities for native tree planting and native woodland creation within authority's landbank - and aim to avail of the Creation of Woodland in Public Lands Scheme and other grant aided schemes to extend native woodland cover in the county, particularly where co-benefits can be achieved.
4.5.1.4.6	Continue to promote actions taken to enhance ecological integrity taken in council-held assets and lands, to lead by example.

4.5.1.5 Objective: - Reduce the threat and impacts of Alien Invasive Species

NO.	ACTION
4.5.1.5.1	Develop an Invasive Alien Species Policy for the county and examine benefits of preparing response plans to specific invasive species.
4.5.1.5.2	Continue to manage and treat Invasive Alien Plant Species, in line with developed IAPS Management Plans, in the scheme areas for flood relief schemes and coastal projects.
4.5.1.5.3	Work with partners to promote understanding of the role and impacts of Invasive species on local biodiversity, and promote best practice for citizens, businesses and vendors.

4.5.2 Goal: A safe, healthy natural environment with increased climate resilience

4.5.2.1 Objective: Improvement of water quality

NO.	ACTION
4.5.2.1.1	Support the Water Framework Directive Regional Operational Committees' activities and assist in the improvement of water quality standards and monitoring arrangements, so that they remain fit for purpose and data generated can be shared with other decision makers.
4.5.2.1.2	Support LAWPRO in their community climate programmes and projects.
4.5.2.1.3	Work with partners LAWPRO, Uisce Eireann, etc. to identify the climate impacts on critical and vulnerable receptors in accordance with the River Basin Management Plan and Water Framework Directive and assist in the improvement of river water quality and restoration projects, whilst promoting the need to consider environmental protection requirements during such projects.
4.5.2.1.4	Utilise natural flood management where feasible and financially viable, having due regard to the need to protect environmental sensitivities at these locations, including water quality, biodiversity, European sites, riparian corridors and aquatic ecology.
4.5.2.1.5	Expand promotion of awareness of best practice to all users in reducing the impact of biocides on water bodies.
4.5.2.1.6	Promote citizen science initiatives including those focusing on water quality.
4.5.2.1.7	Monitor and administer waste water discharges to waters and undertake inspections to ensure compliance with discharge licence requirements.
4.5.2.1.8	Meet annual targets for domestic waste-water treatment systems inspections per EPA National Inspection Plan.

4.5.2.2 Objective: Improvement of Air Quality

NO.	ACTION
4.5.2.2.1	Implement the National Clean Air Strategy and with the support of central government and the EPA ensure monitoring arrangements remain fit for purpose, so that data generated can be shared with other decision makers.
4.5.2.2.2	Monitor and enforce Solid Fuels Regulations and Low Smoke zones, with inspections of fuel suppliers to address unauthorised sales of unapproved solid fuels.
4.5.2.2.3	Promote awareness of the importance of clean air and the impacts of air quality.

4.5.2.3 Objective: Advance the protections and management of coastlines

NO.	ACTION
4.5.2.3.1	With partners, undertake a Coastal Vulnerability Assessment of the Cork coastline to assess the impact of sea level rise to shoreline change of the Cork Coastline, to inform integrated coastal zone management and identify areas with particular requirements, and to address coastal erosion and implement coastal flooding prioritising ecosystem-based adaptation actions, having due regard to environmental sensitivities such as European sites and biodiversity.
4.5.2.3.2	Assist in the development of a Coastal Vulnerability Index and GIS tool. This is intended to illustrate the exposure risk along the entire Cork County coastline. This tool will inform the strategic planning of coastal management along the cork coastline.
4.5.2.3.3	Conduct Beach Sediment Transportation Study to monitor select sites, document coastal change over time, develop and validate predictive models and inform funding and future interventions having due regard to environmental sensitivities such as European sites and biodiversity.
4.5.2.3.4	With stakeholders, identify climate adaptation measures for coastal infrastructure & associated defences, and utilize natural coastal management where feasible and financially viable, having due regard to environmental sensitivities such as European sites and biodiversity.

4.5.3 Goal: Manage and protect our heritage from the impacts of climate change, promote appreciation of natural heritage, and support practices, knowledge and skills that foster sustainable development, inclusion, and social cohesion.

4.5.3.1 Objective: Conserve and manage Ireland's unique heritage for the benefit of present and future generations.

NO.	ACTION
4.5.3.1.1	Implement Heritage plan for all aspects of conservation, awareness and recording of all aspects of heritage (built, natural, cultural) ensuring cognisance is taken of climate change and environmental protection considerations, including heritage conservation requirements.
4.5.3.1.2	Incorporate climate resilience through Built Heritage Investment scheme, Historic Structure Fund and any other relevant funds introduced, having due regard to environmental protection considerations, including heritage conservation requirements.
4.5.3.1.3	Work with partners to support the upskilling required for the delivery of energy renovation and retrofitting in historic buildings and pursue efforts to secure grant funding for same.

4.5.3.2 Objective: Promote appreciation of heritage and its contribution to the economy and society and support sustainable heritage practices.

NO.	ACTION
4.5.3.2.1	Work with stakeholders to foster an inclusive, shared narrative to bring communities on the journey of change in tackling climate action & biodiversity loss and promote celebration of the relationship between culture and natural environment.
4.5.3.2.2	Support artist organisations and stakeholders to adopt environmental best practice in their work structures.
4.5.3.2.3	Support cultural heritage knowledge and practices that contribute to sustainability.
4.5.3.2.4	Support Green Schools and Heritage in Schools programmes to promote biodiversity and climate issues to schools.
4.5.3.2.5	Promote and support annual National Hedgerow Week.
4.5.3.2.6	Support stakeholders in incorporating biodiversity in land use, and work to support the protection of high-nature-value farmland and associated grassland biodiversity through sustainable measures such as farming practices that support soil sequestration.
4.5.3.2.7	Work in partnership with stakeholder groups to assist communities dealing with challenges including decarbonisation and environmental challenges.
4.5.3.2.8	Work with stakeholders to promote awareness and engagement with sustainable fishing practices and raise awareness of marine pollutions.

4.5.4 Goal: To understand land use in Cork County and how to most effectively capture and store carbon and produce better, greener food and energy.

4.5.4.1 Objective: Consider the impact of land use, land use change and trees, shrubs and woodland on greenhouse gas sequestration and reduced emissions.

NO.	ACTION
4.5.4.1.1	Support sectoral and national afforestation targets in mitigating climate change and the promotion of sustainable forest management initiatives, having due regard to environmental sensitivities such as European sites, water quality and biodiversity.
4.5.4.1.2	Develop a Tree Strategy to support County Development Plan objectives and provide a framework for the planning, protection, planting and management of trees and woodlands on Council property; ensuring a focus on native trees and having due regard to environmental sensitivities such as European sites and biodiversity.
4.5.4.1.3	Work with stakeholders to establish a baseline and further develop targets for new tree cover pertaining to Cork County.
4.5.4.1.4	Support the implementation of the recommendations of the National Land Use Review.
4.5.4.1.5	Support the implementation of the National Peatlands Strategy, whilst promoting the need to consider environmental protection requirements during such projects.
4.5.4.1.6	Implementation of County Development Plan Policy which seeks to achieve a net gain in green infrastructure through the protection and enhancement of existing assets and the provision of new green infrastructure; having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, and local air quality.

4.5.5 Goal: Future Proofing LULUCF for climate change

4.5.5.1 Objective: Support climate change adaptation measures in land use, changing land-use, and forestry to sequester carbon and mitigate climate change.

NO.	ACTION
4.5.5.1.1	Encourage the promotion of sustainable land use practices and nature-based solutions to water resource management and flooding which can enhance community resilience by providing natural flood defences, promoting climate adaptation, having due regard to environmental sensitivities, including Biodiversity, European sites, water quality and sensitive human receptors.
4.5.5.1.2	Promote future proofing in the design and planning of new development to fully consider the potential impacts of climate change and the need for measures to increase the resilience of development to any such impacts, having due regard to environmental sensitivities, including Biodiversity, European sites, water quality and sensitive human receptors.
4.5.5.1.3	Support an integrated approach to the management of surface water catchments and the use and development of lands adjoining watercourses.

4.6 ECONOMY (AGRICULTURE, INDUSTRY, TOURISM AND BUSINESS)

Goal 4.6.1: Promote climate action in enterprise, industry, tourism and agriculture and support the transition to an inclusive, low carbon economy

This goal will ensure that Cork County Council will lead and work with stakeholders in the development of an inclusive, low-carbon and circular economy where local enterprises can benefit from playing an active role in decarbonising and adapting to the changing climate.

The goal recognises that while businesses and industry will take steps towards decarbonising and reducing their environmental impact, there is a real need to ensure that jobs and livelihoods are protected. Investing in a Just Transition means that Ireland is committed to making changes while ensuring that no member of our society gets left behind.

4.6.1   ROLE OF CORK COUNTY: ENTERPRISE AND TOURISM

Cork County Council plays an active role in promoting Cork County as an attractive location for business to locate, grow and expand, for people to invest, and for employers and employees to work and live. The Council works to support businesses and the creation of employment, in co-operation with enterprise support agencies, entrepreneurs, community groups, and other stakeholders. It does this with the following initiatives:

- Supporting the development of the industrial and commercial infrastructure of County Cork, including business parks, industrial sites, and incubator units.
- Working with international, national, regional, and local partners to promote Cork, and facilitate exports, trade, and sharing of best practice.
- Supporting our local ratepayers through a variety of capacity raising initiatives as available from the Local Enterprise Offices (LEOs). The LEO's act as a "First Stop Shop" for anyone seeking information and support on starting or growing a business in Cork County.
- Provision of financial support through Grant aid from the LEOs and the Economic Development Fund (EDF).
- The Council is currently responsible for the promotion and management of remote work hubs in Bantry, Fermoy, Youghal and Macroom. These hubs facilitate people to work remotely, thereby reducing travel and carbon emissions. Recent funding from the DRCD under the Connected Hubs initiative has allowed a number of the Hubs to be retro-fitted with air to water heating systems which promote sustainability.
- The tourism section of the Economic Development Directorate allocates approximately €500,000 annually towards various festivals which attract visitors to Cork County. In recent years, the team has worked on a "Greening your Festival" initiative which encourages the promoters to use recycled water, paper, prevent food waste, promote digital advertisement rather than through paper etc. These festivals are incentivised through additional funding being allocated for green initiatives.
- The Economic Development Directorate works with the Hotel Industry and Fáilte Ireland to encourage hotels to participate in a sustainable index initiative which recognises and rewards sustainable tourism practices. This is an effort to promote Cork as a champion of "Green Tourism" and the ultimate ambition is for industry to be recognised in the Global Sustainable Index for tourism.
- The LEO's (Local Enterprise Offices) have been promoting and supporting the sustainable agenda through a number of financial incentives such as grants for energy efficiency in business and 'Green for Business Funding'. Regular mentoring and training are also provided to the micro business sector in how to decarbonise.
- Cork County Council participates in EU projects which have the sustainable agenda as part of its core philosophy.

In terms of strategy, Cork County Council has two significant plans which are currently being developed / delivered through the Economic Development Directorate;

- The Local Economic and Community Plan (LECP) is a 6-year countywide strategy which requires consideration of the sustainable agenda as a core principle, throughout all of its Actions. Future exchequer funds such as the Rural / Urban Regeneration Development Funds (RRDF/URDF) will be secured only by Cork County Council demonstrating how its LECP promotes climate action in the delivery of its economic remit.
- The South-West Regional Enterprise Plan was adopted in 2021. This is a 3-year plan for the local authority regions of Cork City, Cork County and Kerry. The Regional Enterprise Plan is an initiative of the Department of Enterprise, Trade and Employment. The plan is developed by regional stakeholders and focuses on undertaking collaborative initiatives that can help deliver enterprise growth in each of the nine regions across Ireland. They are an important part of the 'Programme for Government's commitment to achieving more balanced regional enterprise development. The South-West Regional Enterprise Plan outlines 6 strategic objectives, one of which is "to embrace the opportunities of climate action in the marine, circular bio economy, tourism and energy sectors to allow the South-West transition to a low carbon economy.

Climate action will be embedded in the implementation of all local economic development strategies and Local Economic and Community Plans including providing incentives and support for local businesses to operate on a sustainable model, in collaboration with partners.

As our economy changes, the Council wishes to ensure that workers become resilient to shifting industry practices through appropriate up-skilling, re-skilling, and education. In this regard, the Local Enterprise Offices, in partnership with the Education and training boards and others, will aim to promote green skills in training and education.

Cork County Council will promote the development of a thriving green economy by encouraging and supporting businesses to take advantage of emerging new green business opportunities. Enterprises will be supported through LEO/LCDC offices to exploit these opportunities which will arise from meeting the challenges of Climate.

4.6.2   Actions: Enterprise and Tourism

Objective 4.6.1.1: We commit to supporting businesses and workers to become resilient to shifting industry practices due to climate change

NO.	ACTION
4.6.1.1.1	Promote and support the delivery of educational opportunities on green skills through collaboration with industry and academia.
4.6.1.1.2	Work with stakeholders to monitor the needs of businesses in terms of developing new programmes to assist businesses in their growth and how they will deliver lower carbon goods and services.
4.6.1.1.3	Liaise and collaborate with other agencies, stakeholders and education providers to assist businesses in their transition to a low carbon economy.
4.6.1.1.4	Support assessment of key risks and drivers for a Just Transition in Cork County that provides insights and recommendations to understand, plan and navigate the climate transition in a way that is fair and equitable.
4.6.1.1.5	Promote and support small enterprises with investment in energy efficient technologies and equipment through grants such as the Energy Efficiency Grant.
4.6.1.1.6	Support micro-SMEs with consultancy services and mentoring towards the development of sustainability management plans through programmes like Green for Micro and Greenstart.
4.6.1.1.7	Work with other stakeholders to promote and support Cork County as a sustainable tourism destination, whilst having due regard for sensitivities including biodiversity and European sites.
4.6.1.1.8	Continue to support clusters such as the Cork Energy cluster in their activities to mobilise stakeholders in the energy sector to collaborate and implement climate action measures.
4.6.1.1.9	Encourage the development of locally sustainable enterprises in the County as well as a culture for shopping locally, including shops and farmers markets.
4.6.1.1.10	Explore zero/low carbon models of transporting goods in Cork County e.g., the use of cargo-bike hire schemes, ensuring due regard is had to the sustainability and potential life-cycle impacts of other transport modes.

Objective 4.6.1.2: We commit to embed climate action into all economic plans

NO.	ACTION
4.6.1.2.1	Support climate action implementation as part of all local economic development policies, programmes and initiatives, including providing incentives and support for local enterprises to operate on a sustainable model, in collaboration with partners. Assist rural enterprises to transition to a low carbon model is core to this.
4.6.1.2.2	Support European and national programmes such as LEADER that enable enterprises to transition to low carbon / zero carbon models.

Objective 4.6.1.3: We commit to promoting Climate Action to enterprises in Cork County

NO.	ACTION
4.6.1.3.1	Support the development of countywide climate-related educational and awareness information events, communication campaigns and guidance documentation.
4.6.1.3.2	Liaise with relevant stakeholders e.g. clusters and business networks etc throughout the County to raise awareness, promote and explore initiatives to encourage the business community to reduce their carbon footprint and adapt to climate change.
4.6.1.3.3	Promote the greening of festivals and events in Cork County.
4.6.1.3.4	Promote the circular economy to businesses.
4.6.1.3.5	Provide information and raise awareness to Cork County enterprises and business groups to promote supports to undertake retrofits, energy efficiency and renewable energy installation on commercial buildings, whilst promoting the need to consider environmental protection requirements during such energy projects.

Objective 4.6.1.4: We commit to operating remote work hubs in the County and to develop new hubs

NO.	ACTION
4.6.1.4.1	Develop new Remote Working Hubs in Cobh, Mitchelstown and Newmarket and develop others where appropriate. This will reduce fuel use through a reduction in transport emissions and allow people to work where they live.
4.6.1.4.2	Continue to promote, maintain and support existing hubs including Fermoy, Bantry and Macroom.

4.6.3   ROLE OF CORK COUNTY COUNCIL: AGRICULTURE

Although Cork County Council does not have a direct economic development role in relation to agriculture, various activities undertaken by the Veterinary section of Cork County Council contribute to the overall Climate Action Plan of Cork County Council and the Environment directive. The Councils approach to agricultural best practice is to assist the agricultural community in attaining the emission standards that can protect the environment while at the same time allowing the enterprise to operate and develop. Through our role in meeting targets under the Water Framework Directive, we work with Government Departments, the Environmental Protection Agency and other Stakeholders to develop risk assessments for all water bodies and focus our activities in those areas where any emissions would be most likely to impact negatively on the water quality targets. Within these areas we prioritise 'Compliance Assistance' over prosecution to achieve results.

The Food Safety Function provides assurances that food production procedures in SME food producers are monitored to ensure that they are consistent with the requirements of the Food Safety Authority of Ireland. This assists these enterprises to supply their produce locally and consequently to reduce the food miles. Improved production standards and local consumption also reduce food waste and its climate impact. Reduced packaging of finished products is promoted as in the case of meat products supplied for retail sale loose in local butcher shops. The sustainability of SME food industries also assists in having local outlets for agricultural produce.

We are also working with the Department of Agriculture to resource additional Department funded farm inspections in areas where water bodies are under pressure from Agriculture and Forestry. By improving the practices in these areas, we will facilitate the plan for increased afforestation across the county under the national programme.

4.6.4   *Actions: Agriculture*

Objective 4.6.1.5: We commit to create awareness and provide information to protect biodiversity

NO.	ACTION
4.6.1.5.1	Participate in a national public awareness campaign to promote householders' knowledge of how their septic tank works and the effects of septic tank and agricultural runoff on bathing water. Provide information and advice on what routine maintenance should be carried out.
4.6.1.5.2	Run an awareness campaign, in partnership with stakeholders, to advise farmers and the public of the requirement not to spread slurry during the closed period and to encourage the public to report any such incidents to Cork County Council.
4.6.1.5.3	Run an awareness campaign to advise householders to minimise use of pesticides and to use pesticides responsibly.
4.6.1.5.4	Work with stakeholders to promote local food, thereby reducing food miles.
4.6.1.5.5	Work in partnership with farmers to improve practices and infrastructure, whilst promoting the need for farming enterprises to consider relevant planning and environmental protection requirements.

Objective 4.6.1.6: We commit to continue to work with stakeholders to agricultural investigations

NO.	ACTION
4.6.1.6.1	Meet annual inspection targets as per EPA National Agriculture Inspection Plan. This reduces emissions associated with farmyards and in turn protects biodiversity of receiving waters and public health.

Objective 4.6.1.7: We commit to collaborate in relation to water and biodiversity

NO.	ACTION
4.6.1.7.1	Maintain collaboration and partnership with other public bodies operating in the county working towards improving water quality.
4.6.1.7.2	Work with LAWPRO (Local Authority Water Programme) to identify the impacts of critical and vulnerable receptors in accordance with the River Basin Management Plan and Water Framework Directive.
4.6.1.7.3	Support and engage with locally and nationally led European Innovation Partnership (EIP) projects in County Cork with biodiversity, climate and community benefits.

Objective 4.6.1.8: We commit to protect public health in relation to water

NO.	ACTION
4.6.1.8.1	Assist in the improvement of water quality standards as set out in the Water Framework Directive through the agricultural inspection programmes.
4.6.1.8.2	Use weather forecasts to predict high rainfall events which could impact on bathing water quality at monitored bathing waters. Based on risk assessment, issue warning notices at beaches where it is predicted that water quality may be negatively impacted by weather event.

4.7 TRANSPORTATION

Transportation refers to the manner in which people or goods are moved from place to place. It includes motor cars and trucks, public buses, bicycles among other vehicles. As seen in Chapter 3, it is responsible for 20 percent of carbon emissions in County Cork.

Cork County Council sees the reduction of carbon emissions as a primary goal in its LACAP. It will be guided by the National Climate Action Plan, including key performance indictors and targets outlined for transport in addressing Transportation issues in its Plan. The Council also acknowledges its role in influencing, and advocating for, climate action with respect to sustainable transport policy.

The Council will use the Avoid - Shift – Improve approach, to tackling its transportation issues, as suggested in the National Climate Action Plan where relevant.

Avoid:	Policies addressing ways to avoid and reduce trips. Examples include: remote working / e-hubs, etc
Shift:	Encouraging a modal shift to more sustainable modes of transport. Examples include: Public Transport, Active travel, etc.
Improve:	Using new technologies and fuel types to power vehicles more sustainably. Examples include: Electric vehicles, biofuels, etc

In line with this, the actions in this plan fall under the following headings:

DEVELOP INTEGRATED TRANSPORTATION
The Climate Action Plan will complement the County Development Plan (CDP) 2022 – 2028 and work with existing transportation strategies / initiatives in developing integrated transportation within the county.

There are separate schemes prioritising the different needs of the county as follows:

1 Cork Metropolitan Area
The Cork Metropolitan Area Transport Strategy (CMATS) 2040 has been developed by the National Transport Authority (NTA) in collaboration with Transport Infrastructure Ireland (TII), Cork City Council and Cork County Council.

CMATS principles include reducing dependency on the private car and supporting the future growth of the area through the supply of an efficient transport network.

2 County Towns
Following on from the CDP, Local Transport Plans will be prepared for key towns and larger towns with a population at or approaching 10,000.

These Local Transport Plans will include an analysis of developing the 10-minute town concept, optimising the potential for climate change mitigation and adaptation, providing protection for biodiversity and enhancing the public realm.

3 Rural County Cork
Cork is a rural county with over 55% of its population living in rural areas in 2016.

Cork County Council will support the national Connecting Ireland Rural Mobility Plan. https://www.nationaltransport.ie/connecting-ireland/ .This NTA plan aims to improve mobility in rural areas, and it will do this by providing better connections between villages and towns by linking these areas with the city.

The Council will liaise with the NTA and other relevant organisations in the development of this plan in County Cork.

The National Sustainable Mobility Policy (2022) sets out a strategic framework to 2030 for active travel and public transport journeys to help Ireland meet its climate obligations. Programmes such as the Sustainable Mobility 'Pathfinder Programme' and the Smart and Sustainable Mobility Accelerator programme have been critical in enabling local authorities to support the implementation of national sustainable mobility policy goals.

ACTIVE TRAVEL

Active Travel is defined by the Department of Transport as 'travelling with a purpose, using your own energy'. Walking, cycling, wheeling and using a non-motorised scooter to make journeys to work, school or the shops, for example, are all considered forms of Active Travel .https://www.gov.ie/en/publication/8321f-active-travel/

It is universally accepted that being active is important for maintaining and improving physical and mental health. Cork County Council will promote Active Travel, improving the pedestrian and cycling infrastructure in the county. It will seek to work with other organisations such as TII National Cycle Network and NTA Cycleconnects as part of this process. The Council will also work with relevant authorities to develop "Safe routes to school" where feasible.

The Council will seek funding, from available sources, such as the NTA's Active Travel Programme for active travel projects.

ELECTRIC VEHICLES (EV)

The Department of Transport issued the Electric Vehicle Charging Infrastructure Strategy 2022-2025 in 2023. The strategy presents a pathway for the delivery of a national EV charging network and this Climate Action Plan recognises and supports the importance of relevant National and Local EV infrastructure targets and related policies in achieving transport emission targets.

Cork County Council will assist the development of the EV charging network in County Cork. It will accomplish this both through planning requirements placed on new developments and in working with other organisations to develop the county's EV charging network.

PROMOTE COUNTY GROWTH IN LINE WITH TRANSPORTATION OPPORTUNITIES

The Council will use the existing, as well as proposed, transportation capacity of the county in directing the development of County Cork.

REMOTE WORKING

Remote working is a feature of the approach to avoid the need to travel.
The Council will support the network of Community Enterprise Centres (Hubs), in partnership with stakeholders, to support remote workers, start-ups, etc.
Within the Council, opportunities to avoid staff travel, while maintaining the level of service are to be explored.

CLIMATE CHANGE ADAPTATION FOR TRANSPORT INFRASTRUCTURE

The Transport Sectoral Adaptation Plan (2019) outlines that consideration and implementation of climate change adaptation measures for transport infrastructure and networks are necessary to enable continued services and maintained infrastructure and to safeguard new assets from longer term impacts by ensuring that current design specifications will adequately address future infrastructure needs. This Climate Action Plan recognises the importance of the adaptation of critical transport infrastructure in the Local Authority area to climate change impacts (including extreme weather events) and the potential for transport adaptation considerations and infrastructure to contribute to wider environmental co-benefits at local and regional level, such as decarbonisation, biodiversity, including through nature-based adaptation solutions etc. The Council will consult with the Climate Adaptation Strategy for Regional & Local Roads (2023), for guidance and methodologies to assist in protecting regional and local roads against climate change into the future.

4.7.1   TRANSPORTATION GOAL AND OBJECTIVES:

Goal: Transition Cork County's transportation to a low carbon system

Objective 4.7.1.1: Collaborate with communities and stakeholders to develop integrated transportation throughout the county to reduce GHG emissions.

NO.	ACTION
4.7.1.1.1	Collaborate with communities and stakeholders in relation to the Cork Metropolitan Area Transport Strategy (CMATS).
4.7.1.1.2	Collaborate with communities and stakeholders in relation to the Local Transport Plans for towns as the plans are developed by the Council.
4.7.1.1.3	Collaborate with communities and stakeholders in developing County Cork Rural Transport in line with relevant strategies such as the Connecting Ireland Rural Mobility Plan.

Objective 4.7.1.2: Promote Active Travel

NO.	ACTION
4.7.1.2.1	Develop Active travel projects throughout the county which can deliver greatest behavioural change, having due to regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites and local air quality, and opportunities to promote nature based solutions.
4.7.1.2.2	Planned urban development road improvements to incorporate Active travel elements as appropriate, having due to regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites and local air quality, and opportunities to promote nature based solutions.
4.7.1.2.3	Continue the ongoing development of Greenways, such as Midleton - Youghal Greenway, having due to regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites and local air quality, and opportunities to promote nature-based solutions.
4.7.1.2.4	Work with Stakeholders to promote the wider benefits of active travel.
4.7.1.2.5	Work with relevant authorities in the development of "Safe route to schools", having due to regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites and local air quality, and opportunities to promote nature-based solutions.
4.7.1.2.6	Apply for funding for Active Travel projects

Objective 4.7.1.3: Promote Development to benefit from Transportation capacity

NO.	ACTION
4.7.1.3.1	Promote growth in locations benefitting from existing high-quality public transport capacity.
4.7.1.3.2	Align population and employment growth through integration of land use and transport planning, having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, and local air quality.

Objective 4.7.1.4: Promote the use of Electric Vehicles / low emission fuels

NO.	ACTION
4.7.1.4.1	Work with the relevant stakeholders in the development of the proposed National EV charging network within County Cork, whilst promoting the need to consider environmental protection requirements and disability access during such projects.
4.7.1.4.2	Engage with ESB to identify areas where the electricity network infrastructure can support EV charging, whilst promoting the need to consider environmental protection requirements during supported infrastructure projects.
4.7.1.4.3	Liaise with Communities to raise awareness of EV grants, such as those from SEAI.
4.7.1.4.4	Promote the use of e-vehicles through the provision of e-vehicle charge point requirements in planning applications, whilst promoting the need to consider environmental protection requirements and disability access during such projects.
4.7.1.4.5	Promote the use of sustainably sourced low emission fuels.

Objective 4.7.1.5: Promote remote working

NO.	ACTION
4.7.1.5.1	Support and develop the existing Community Enterprise Centres (Hubs) network.
4.7.1.5.2	Encourage Council staff to use online meeting options in place of in person meetings where feasible.

4.8 BUILT ENVIRONMENT (INFRASTRUCTURE, BUILDINGS, HOUSING & HERITAGE)

INTRODUCTION

The Built Environment covers infrastructure, buildings, and housing assets. Cork County Council has a key role in infrastructure provision, energy efficiency and reduction, social housing retrofits and flood alleviation measures.

In addition, Cork County Council has significant scope to:
- use its key strategic and regulatory powers and instruments to influence and facilitate the reduction of emissions from infrastructure, buildings, and social housing and to adapt and build resilience to the impacts of a changing climate.
- mainstream climate action into its broad range of functions such as spatial planning, infrastructure, and social housing provision.
- influence partner agencies with whom it works in the provision and operation of infrastructure to undertake climate action measures.

Cork County Council can also take on the broader role of influencing and facilitating the owners and operators of buildings to meet their own targets and to prompt and promote local responses. Cork County Council will continue its proactive engagement on flood risk management, source funding and investment, as well as coordinate and work in partnership with other stakeholders to facilitate and enable the delivery of appropriate climate initiatives and infrastructure.

Five key Climate Action goals have been identified for the Built Environment:
- Support the energy transition to a sustainable energy system [Goal 4.8.1].
- Support the use of low carbon material in infrastructure [Goal 4.8.2].
- Support the transition to low carbon/ net zero buildings [Goal 4.8.3].
- Transition Cork County Councils social housing stock to a low carbon operating model [Goal 4.8.4].
- Support the adaptation of the built environment to climate change [Goal 4.8.5].

Goal 4.8.1 Support the energy transition to a sustainable energy system.

Objective 4.8.1.1 Support the development of renewable energy infrastructure.

NO.	ACTION
4.8.1.1.1	Support sustainable offshore wind energy projects at appropriate locations and scales & the development of associated infrastructure at ports to facilitate these developments in accordance with the CDP, whilst promoting the need to consider environmental protection requirements at the outset of and during such projects.
4.8.1.1.2	Promote renewable energy generation, storage, and distribution infrastructure in accordance with the CDP within the county, whilst promoting the need to consider environmental protection requirements at the outset of and during such projects.

Objective 4.8.1.2 Support the development of district heating infrastructure.

NO.	ACTION
4.8.1.2.1	Explore opportunities for establishing district heating to serve council assets including social housing in the county, ensuring appropriate regard is had to planning and environmental protection considerations.
4.8.1.2.2	Support stakeholders who wish to develop district heating systems, whilst promoting the need to consider environmental protection requirements at the outset of and during such projects.

Objective 4.8.1.3 Support the development of public electric vehicle charging infrastructure.

NO.	ACTION
4.8.1.3.1	Support and implement national policy on EV charging at nondomestic locations, having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, and local air quality.
4.8.1.3.2	Engage with ESB to identify locations where electricity network infrastructure can support EV charging facilities, having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, and local air quality.
4.8.1.3.3	Develop and implement a policy for EV Charging as part of a wider Taking in Charge policy, having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, and local air quality.

Goal 4.8.2 Support the use of low carbon material in infrastructure.

Objective 4.8.2.1 Identify opportunities for the use of recycled material in council developed infrastructure.

NO.	ACTION
4.8.2.1.1	Investigate the use of alternative low carbon material in road construction.
4.8.2.1.2	Reduce embodied carbon emissions by using innovative road surfacing material.
4.8.2.1.3	Investigate other infrastructure where low carbon material could be used such as footpaths, bridges, roundabouts, amenity areas, recreational trails, public realm, and other construction projects.

Goal 4.8.3 Support the transition to low carbon/ net zero buildings.

Objective 4.8.3.1 Assist the retrofitting of building fabric for existing buildings.

NO.	ACTION
4.8.3.1.1	Promote the retention and reuse of existing building stock as a first preference, having due regard for environmental sensitivities such as local human receptors, European sites and biodiversity; protected species, and the need to appropriately protect and conserve protected structures, during any retrofitting works.
4.8.3.1.2	Support provision of information on grant aid for homes and businesses, whilst promoting the need to consider environmental protection requirements during such projects.
4.8.3.1.3	Encourage energy efficiency improvements for buildings. Advise and educate businesses, residents on energy efficiency, whilst promoting the need for projects to conform with relevant planning policy environmental protection criteria.

Objective 4.8.3.2 Ensure new buildings meet current building regulatory standards.

NO.	ACTION
4.8.3.2.1	Continue to ensure that new buildings meet the building regulations for energy efficiency.

Objective 4.8.3.3 Onsite renewable energy generation

NO.	ACTION
4.8.3.3.1	Support provision of information on grant aid for onsite renewable generation, whilst promoting the need to consider environmental protection requirements during such projects.
4.8.3.3.2	Encourage onsite renewable generation installation, whilst promoting the need to consider environmental protection requirements during such projects.

Goal 4.8.4 – Transition Cork County Councils social housing stock to a low carbon model

Objective 4.8.4.1 Support actions relating to retrofitting homes.

NO.	ACTION
4.8.4.1.1	Develop a design ethos that considers climate action in the development of new buildings by Cork County Council or on its behalf. This approach will consider a range of design options including, but not restricted to the use of low carbon materials, building fabric insulation, green roofs, solar photovoltaics, and rainwater harvesting, taking account of government policy, design standards and guidelines. Climate action co-benefits and environmental protection requirements shall be appropriately promoted be supported by the design ethos.
4.8.4.1.2	Prepare and implement an annual funding program for deep energy retrofitting of existing Council housing stock, having due regard for environmental sensitivities such as local human receptors, European sites and biodiversity; protected species, and the need to appropriately protect and conserve protected structures, during any retrofitting works.
4.8.4.1.3	Phase out all fossil fuel-based heating systems by 2030, having due regard to environmental sensitivities such as local human receptors, protected species associated with such buildings, European sites and biodiversity.
4.8.4.1.4	Refurbish all newly acquired and vacant houses to a minimum B2 energy rating, with all fossil fuel heating sources removed, having due regard to environmental sensitivities such as protected species associated with such buildings, European sites and biodiversity.
4.8.4.1.5	Work in partnership with our development partners, the Approved Housing Bodies (AHB) sector to ensure that the measures we propose in the delivery of new housing developments are also incorporated in development proposals from the AHB sector.
4.8.4.1.6	Run a pilot rainwater harvesting retrofit project in an existing Council housing estate in the Decarbonising Zone, while ensuring projects have appropriate regard to local environmental sensitivities such as the receiving water environment, biodiversity and European sites.

Objective 4.8.4.2 - EV charging - Future proofing of social housing estates

NO.	ACTION
4.8.4.2.1	Advance installation of underground infrastructure for EV Charging in new social housing estates, having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, and local air quality.
4.8.4.2.2	Assess bike parking facilities for new social housing estates.
4.8.4.2.3	Ensure main electrical connections to all new social houses are designed to be easily retrofitted with electrical car charging points.
4.8.4.2.4	Undertake a review of existing estates to identify potential locations for installation of communal EV charging points and bike parking, having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, and local air quality.

Objective 4.8.4.3 Tenant Awareness

NO.	ACTION
4.8.4.3.1	Develop a tenant awareness strategy around the benefits of behavioural change with respect to climate action in their homes.
4.8.4.3.2	Promote the benefits of wilding and biodiversity in existing housing estates.

Goal 4.8.5 - Support the adaptation of the built environment to climate change.

Objective 4.8.5.1 Reduce the impact of overheating, freezing and high wind within the public realm.

NO.	ACTION
4.8.5.1.1	Explore opportunities to undertake climate adaptation measures as part of public realm works.
4.8.5.1.2	Work with communities to adopt local adaptation measures that reduce local weather impacts considering intensity, duration, and frequency, having due regard to the need to promote nature based solutions and Sustainable Drainage Systems, and environmental sensitivities, including water quality, biodiversity, European sites, riparian corridors and aquatic ecology.

Objective 4.8.5.2 Reduce the impact of flooding within the public realm.

NO.	ACTION
4.8.5.2.1	Develop & implement SUDS & nature-based approaches to manage surface water and protect rivers from pollutants in road water run-off and slow the addition of water volume to mitigate flooding for development projects. Ensure due regard is given environmental sensitivities, including water quality, biodiversity, European sites, riparian corridors and aquatic ecology, during any supported development projects.
4.8.5.2.2	Undertake rainwater management planning for all main towns. Assist Planning Policy Unit to develop a rainwater management plan for Urban settlements, having due regard to the need to promote nature based solutions and Sustainable Drainage Systems, and environmental sensitivities, including water quality, biodiversity, European sites, riparian corridors and aquatic ecology.
4.8.5.2.3	Support the roll out of Flood Relief Schemes in the County, including those in partnership with the OPW, as identified through the Catchment Flood Risk Assessment and Management (CFRAMS) Programme and in the County Strategic Flood Risk Assessment, having due regard to the need to promote nature-based solutions and Sustainable Drainage Systems, and environmental sensitivities at these locations, including water quality, biodiversity, European sites, riparian corridors and aquatic ecology.
4.8.5.2.4	Develop a template for rainwater management plans in other urban areas.
4.8.5.2.5	Assist the Planning Department with assessment of planning applications to ensure that, all new developments/planning applications within the County have flood risk assessments in accordance with the County Development Plan, The Planning System and Flood Risk Management – Guidelines for Planning Authorities (2009), the requirements of DECLG Circular P12/2014 and the EU Floods Directive.
4.8.5.2.6	Develop a Scheme Climate Change Adaptation Plans (SCCAP) template for flood relief schemes.
4.8.5.2.7	During the operational lifetime of flood relief schemes, ensure that any upgrades and/or replacements use best available energy efficient technology and/or best practice, including innovative solutions where financially viable.
4.8.5.2.8	Ensure that procurement of all works/services follows the Department of Public Expenditure and Reform circular 20/2019: Promoting the use of Environmental and Social Considerations in Public Procurement, guidance from Cork County Council's Finance Department, and best practice; i.e. that designs are developed so as to reduce environmental impact, and that environmental criteria are included in the procurement process.

Objectives 4.8.5.3 Reduce the impact of climate change on road infrastructure.

NO.	ACTION
4.8.5.3.1	Assess bridge infrastructure in line with predicted climate impacts, having due regard to the need to appropriately protect, conserve and enhance important habitats and species and European sites, and the conservation status of protected bridges.
4.8.5.3.2	Carry out road maintenance and rehabilitation of regional and local roads in accordance with the guidance document on the climate adaptation of regional and local roads, having due regard to environmental sensitivities, including water quality, biodiversity, riparian corridors and air quality.
4.8.5.3.3	Continual assessment of road construction material to adapt to high and low temperature conditions.

4.9 SOLID WASTE

Reduce, reuse and recycle has been a central part in waste management and in recent years a number of national initiatives have been introduced. The introduction of A Waste Action Plan for a Circular Economy Irelands National Waste Policy 2020-2025 moves the attention away from waste disposal and instead looks at how consumption of resources can be reduced, and subsequently how they can be kept in use for longer by the creation of a circular economy. A circular economy is one where resources are used as efficiently as possible, changing what was traditionally a linear process – using things and then throwing them away - to a circular process where value is retained and recovered within the system.

The plan contains over 200 measures in waste areas such as plastics and packaging, construction and demolition, municipal and commercial waste and local authorities play a central role in their operation in partnership with the other stakeholders. Major areas for action are: -

PLASTIC AND PACKAGING WASTE
*   The introduction of a new National Deposit and Return Scheme for plastic bottles and aluminium cans was launched in November 2022 and will be operational by February 2024.
*   A Single Use Plastic Directive was transported into law in July 2021 where the main aim was to reduce the impact of plastic products and single use items such as cutlery and straws were banned. The target is to reduce single use plastics being placed on the market by 2026 and all packaging will be reusable or recyclable by 2030.
*   To date Extended Producer Responsibility (EPR) schemes under REPAK have been successful in meeting targets and diverting waste from landfill. The waste streams which have existing EPR schemes include Waste Electrical and Electronic Equipment (WEEE), Batteries, End of life vehicles (ELV's), packaging, tyres and farm plastics. A Waste Action Plan for a Circular Economy Irelands National Waste Policy 2020-2025 outlines that all packaging must be reusable and recyclable by 2030.

CONSTRUCTION AND DEMOLITION WASTE
*   The End of Waste process (Regulation 28) under Regulation 28 of the European Communities (Waste Directive) Regulations, 2011 is where material is recovered or recycled from waste and ceases to be a waste. Under the legislation conditions need to be met before an end of waste status will be granted.
*   The EPA are the Regulation 28 decision makers and issues with the existing system including the time for final decisions to be made were taken on board by the EPA. Hence, recently the EPA undertook public consultation on Draft National End of Waste Criteria for Recycled Aggregates and Draft National by-product Criteria for site-won asphalt destined for use as a raw material in a reclaimed asphalt pavement plant for the manufacture of bituminous mixtures. It is expected the National criteria will be finalised in September 2023.
*   By Product (Regulation 27) status can be achieved under certain circumstances and is governed by Regulation 27 of the European Communities (Waste Directive) Regulations 2011 (S.I. 126 of 2011). It is where material is surplus at a location and can be moved to a site that has a requirement for this material, e.g. where there is surplus topsoil at a construction site, and it is taken to a site that has planning permission requiring this material.
*   In November 2021, the EPA published revised Best Practice Guidelines for the preparation of resource and waste management plans (RWMP) for Construction and Demolition Projects. The main aim is waste prevention and keeping resources in use for longer. The Best Practice Guidelines supersede the Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition waste published in 2006.

MUNICIPAL (HOUSEHOLD AND COMMERCIAL) WASTE

- The challenge is recycling targets set for Municipal Solid waste (MSW) in the EU Waste Framework Directive. Recycling targets are to be 55% by 2025 and increased to 65% by 2035. Also, by 2023, no more than 10% of MSW goes to landfill.
- Enhanced Commercial Waste Regulations came into force on July 1st, 2023 which all waste collection companies will be required to have three standardised bins to their commercial customers consisting of a residual, mixed dry recyclable and bio-waste bin and the introduction of incentivised charging for waste collection in the commercial sector. The improvement of waste segregation in the commercial sector will contribute towards recycling targets.
- It is anticipated that a 20c levy on approximately 200 million disposable coffee cups annually will ultimately reduce the commercial waste being generated each year if the roll out will be as successful as the plastic bag levy.

Cork County Council has played a central role in waste management having regard to the waste hierarchy through the provision of civic amenity and bring bank site as well through our waste enforcement and regulation teams. Civic amenity sites and bring banks provide an alternative to kerbside collection to allow for the proper segregated disposal of household waste. The waste regulation and enforcement teams are critical to ensure standards are adhered to by waste operators and that non-compliant operators are removed and do not undermine compliant operators.

Littering and dumping results in green house gas emissions and contamination of ground waters. Enforcement action to prevent this practice is essential to identify those responsible for these practices and imposing sanctions to stop the practices.

Landfills historically were the means for waste disposal, these fell into two areas licenced landfills built and operated to predetermined standards and legacy landfills which in effect were unmanaged dumps. In relation to licences landfills there are five in the county and their continued management aims to ensure emissions are reduced as much as possible and are treated appropriately are the requirements. In relation to legacy landfills investigation and works to minimise their environmental impacts are the issues.

Goal 4.9.1 – Reduce solid waste disposal and resulting emissions

Objectives 4.9.1.1 - Promote and support the Circular economy.

NO.	ACTION
4.9.1.1.1	Work with stakeholders to promote and support a reduction in consumption of new resources.
4.9.1.1.2	Promote and support the plastic bottle and aluminium can deposit refund scheme.
4.9.1.1.3	Promote and support the single use plastic directive.
4.9.1.1.4	Promote and support the extended producer responsibility schemes.
4.9.1.1.5	Work with stakeholders to expand the use of Regulation 28 end of waste criteria, in compliance with the provisions of the Waste Management Act.
4.9.1.1.6	Promote and support the operation of Regulation 27 By product regulation to reduce waste disposal, in compliance with the provisions of the Waste Management Act.
4.9.1.1.7	Work with stakeholders to ensure segregated waste disposal availability and utilisation.

Objectives 4.9.1.2 - Work with communities and stakeholders to eliminate littering and dumping.

NO.	ACTION
4.9.1.2.1	Continue anti-litter challenge to raise awareness in communities.
4.9.1.2.2	Work with stakeholders on education and awareness in relation to proper disposal of waste.
4.9.1.2.3	Work with stakeholders on annual waste enforcement priorities.

Objectives 4.9.1.3 - Reduce emissions from Council landfills

NO.	ACTION
4.9.1.3.1	Manage Closed landfills to minimise emissions, whilst promoting compliance with environmental protection requirements associated with closed landfill sites.
4.9.1.3.2	Work with stakeholders to remediate and manage historic landfills, whilst promoting compliance with environmental protection requirements associated with closed landfill sites.
4.9.1.3.3	Work with stakeholders to reduce emissions from treatment of leachate, having due regard to planning and environmental protection considerations.

Objectives 4.9.1.4 - Work stakeholders to ensure options available for the segregated disposal of waste

NO.	ACTION
4.9.1.4.1	Promote civic amenity sites as alternative to kerbside collection for proper disposal of waste, having due regard to planning and environmental protection / nuisance considerations in relation to such sites.
4.9.1.4.2	Promote bring banks for disposal of glass containers and food cans, having due regard to planning and environmental protection / nuisance considerations in relation to such sites.
4.9.1.4.3	Support stakeholders in reduction to packaging.
4.9.1.4.4	Support roll out of 3 bin collection to commercial sector and all domestic customers.

Appendix 3 outlines a complete list of all actions by Theme area.

CHAPTER 5 DECARBON-ISING ZONE

Comhairle Contae Chorcaí
Cork County Council

INTRODUCTION

A Decarbonising Zone (DZ) is a spatial area in which a range of climate change mitigation, adaptation and biodiversity measures are identified to address local low carbon energy, greenhouse gas emissions and climate needs. The DZ can be a testbed of what is possible for decarbonisation and climate action at a local and community level, and of the items which can then be implemented elsewhere in the county.

Macroom Town is the Decarbonisation Zone for Cork County.
It has a population of 4,096 (2022 census), and is located approximately 38km from Cork City and 48km from Killarney beside the River Sullane.

The DZ is highlighted in the map below.

Fig 5.1 Map of Macroom Decarbonisation Zone

It should be noticed that the DZ contains the Macroom town itself including the green area south of the River Sullane, and the industrial area to the south east. The DZ does not include agricultural farmland.

VISION

Macroom Decarbonisation Zone will highlight and develop sustainable climate action opportunities, while promoting decarbonisation, and improving biodiversity within the town which will also be beneficial to the whole county.

OBJECTIVES

Cork County Council will use Macroom Decarbonisation Zone to explore the co-benefits of climate actions, and examine a range of local measures in areas such as, decarbonisation, green infrastructure and active travel, developing green areas and afforestation, raising citizen awareness and behavioural change.

CLIMATE MITIGATION – DZ BASELINE EMISSIONS INVENTORY

In order to measure the effects of reducing the carbon emissions in the DZ, first the actual carbon emissions for the area must be measured, i.e. the Baseline Emissions Inventory (BEI) of the DZ must be produced. This assessment was carried out contemporaneously with the county wide BEI assessment, outlined in Chapter 3.

The development of the BEI for the Macroom DZ was informed by the CARO guidance document Technical Annex C: Climate Mitigation Assessment and Technical Annex D Decarbonising Zones. The year used for the baseline emissions is 2018, chosen to align with Ireland's national targets which are set against a 2018 baseline.

The assessment of the DZ has been undertaken in two steps to inform understanding of the energy and carbon emissions within the DZ area.

1　'top-down' overview of carbon emissions within the DZ area
2　Tier 3 'Bottom-Up' assessment

A Tier 3 assessment means all data sources have a spatial element. This allows the data to be mapped. This approach requires additional skills in geographical information systems (GIS).

BEI RESULTS

The Total carbon emissions for the year 2018 in the DZ area equate to approximately 33,966 tCO2e.,

Carbon emissions within the DZ are almost evenly split between the residential, transport, and commercial and public sector, with the waste sector responsible for 2% of total carbon emissions.

Carbon Emissions Percentages

- Commercial and Public Sector
- Transport
- Waste
- Residential

34% 32% 2% 32%
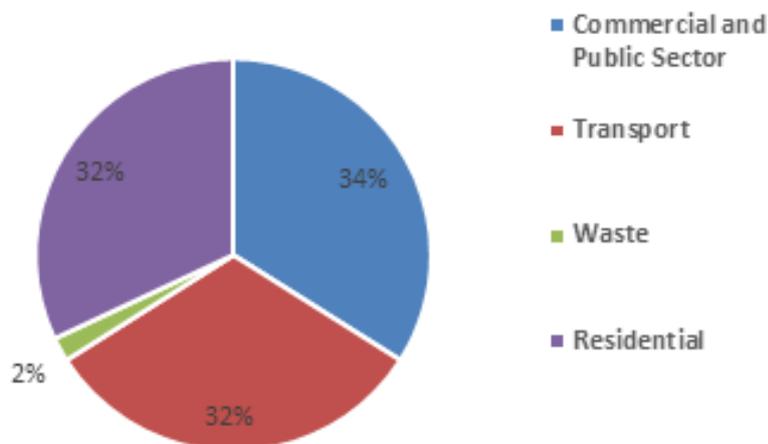
Fig 5.2　Macroom DZ's 2018 baseline carbon emissions by sector

Macroom had a population of 3,961 according to the 2016 census, giving a population density of 1,200 people per km2, which is significantly higher than the national average of 72 people per km2. This results in 8.58 tCO2e per capita.

RESIDENTIAL

The residential sector is accountable for 32% of carbon emissions within the Macroom DZ area, equating to approximately 10,869 tCO2e.

The Houses within the DZ area account for 95% of the sector's total carbon emissions, with Apartments within the DZ area, accounting for the remaining 5%.

FUEL TYPES

The breakdown in the fuel types used within the residential sector is laid out below.

SECTOR	PERCENTAGE
Oil	70%
LPG	1%
Natural Gas	3%
Renewables	1%
Electricity	8%
Wood	4%
Coal	13%
Peat	1%
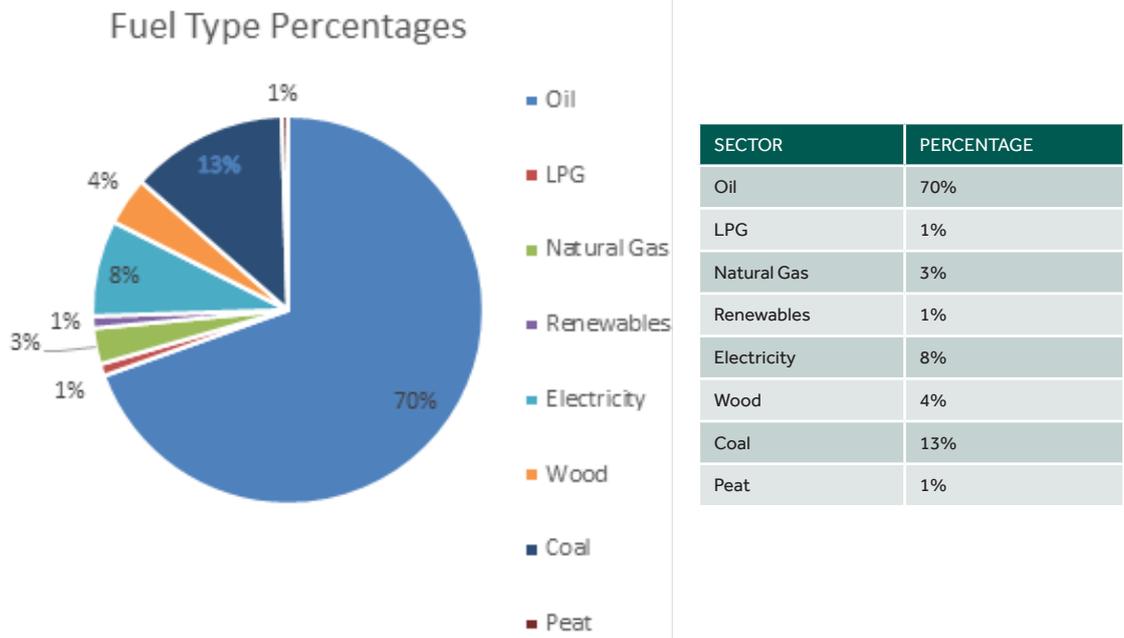
Fig 5.3   Residential Energy Consumption by Fuel Type

As can be seen, Oil is for the largest fuel used, at 70% of the total residential fuel.

TRANSPORT

The total carbon emissions of the transport sector within the DZ area equate to approximately 10,747 tCO2e.

The breakdown in the Transportation emissions by vehicle type is given below:

VEHICLE TYPE	PERCENTAGE
Private Car	65%
Public Transport	3%
Road Freight	21%
Light goods vehicles	11%
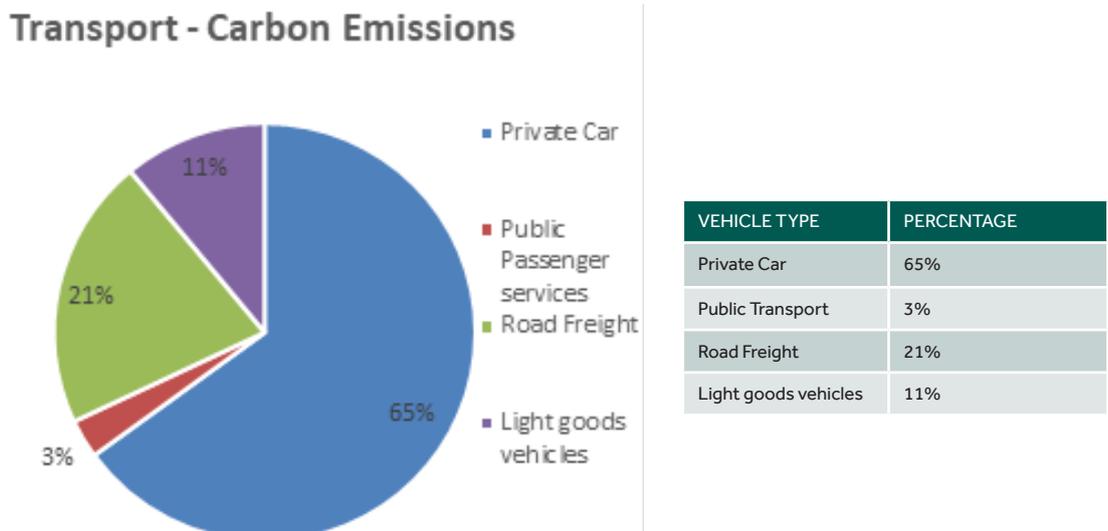
Fig 5.4 Transport Emissions broken down by Vehicle Type

COMMUTER TRAFFIC THROUGH THE DZ

Commuters leaving and entering the DZ area to attend work, college or school on a daily basis from within the DZ area and from surrounding areas has been explored. Using 2016 Census data, It was estimated that the commuter trips leaving and entering the DZ area, contribute to emissions of 2,926 tCO2e and 2,435 tCO2e, respectively.

For the purposes of this assessment, all commutes were assumed to start or end, as appropriate, in the DZ.

As these commuting patterns focus on commuters travelling in and out of the DZ area, consequently the impact is not entirely associated within the DZ area boundary itself, and the data is not included in the assessment of total transport emissions for the DZ.

COMMERCIAL AND PUBLIC SECTOR

The commercial & public sector accounts for 34% of the DZ's carbon emissions, equating to approximately 11,518 tCO2e.

This sector includes 65 Commercial buildings, 7 mixed use buildings and 582 "other" buildings. The results of the carbon emission assessment are presented by building type below.

- 'other' refers to building types including electricity stations, halls and outbuildings.
- 'mixed use' refers to building types including local government buildings and nursing homes.
- 'commercial' refers to building types such as fire stations, filling stations and garda stations.
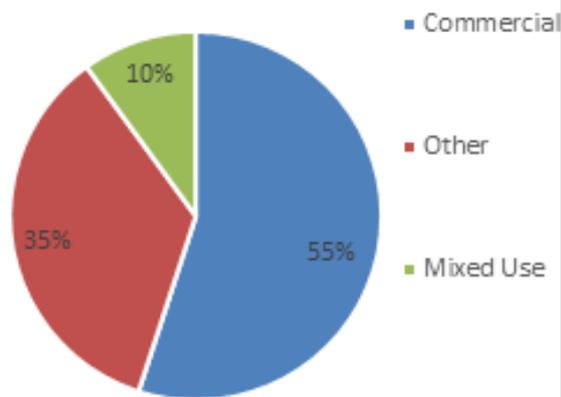
BUILDING TYPE	PERCENTAGE
Commercial	55%
Other	35%
Mixed Use	10%

Fig 5.5 carbon emissions associated with commercial & public sector by building type.

FUEL TYPE

Electricity is the primary fuel source used in the Commercial and Public Sector element of the DZ area, powering approximately 58% of commercial and public buildings in the DZ area. The fuel type breakdown is shown below:
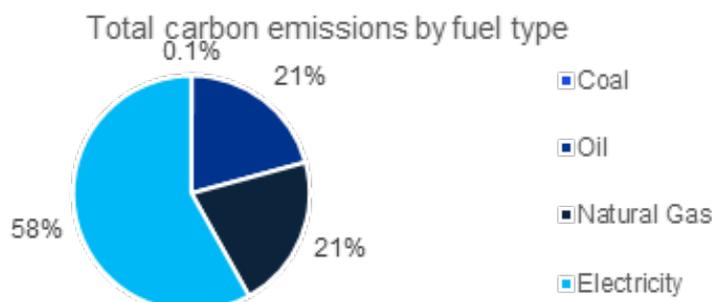
Fig 5.6 carbon emissions associated with commercial & public sector by fuel type.
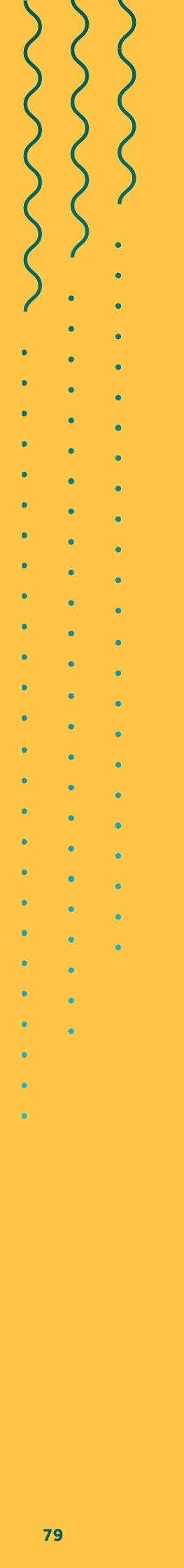
WASTE

The waste sector accounts for approximately 2% of the Macroom DZ's carbon emissions, approximately 832 tCO2e.

A waste facility (Macroom Civic Amenity Site) and an Urban Wastewater Treatment plant (Macroom WWTP) are located within the DZ area. However, these sites also manage waste from populations outside of the DZ boundary. Therefore, to calculate waste-related emissions from within the DZ boundary, a benchmark for waste related carbon emissions of 0.21 tCO2e/head of population was used.

This Benchmark is estimated using 2018 national waste sector emissions divided by national population (2016 CSO data). This benchmark is then multiplied by total population of the DZ area (3,961 2016 CSO Data).

CLIMATE ADAPTATION AND BIODIVERSITY MEASURES

Decarbonisation zones are intended to be the focus for a range of climate mitigation, adaptation and biodiversity measures in each local authority administrative area and will help to identify projects which will contribute to the delivery of the national climate objective.

Climate Adaptation refers to actions taken to reduce the negative effects of climate change or to take advantage of emerging opportunities. Macroom DZ can be used as a location to trial different adaptation actions, for assessment, before they are considered for implementation in other parts of the county.

Some of these adaptation measures, outlined below, will also include biodiversity actions.

ACTIVE TRAVEL PROJECTS

Macroom town layout is dominated by the MainStreet which runs as a continuous, two lane road meandering along the whole length of the DZ" There are footpaths on either side of the road most, but not all, of the way. Some sections of these footpaths are too narrow for pedestrians to comfortably walk side by side.

Consideration should be given to:

1. The provision of a network of designated walking and cycling routes to provide safe, convenient and pleasant connectivity between the town's main residential areas, schools and the town centre.

The feasibility and locations of these enhancements, and their impact on Macroom's parking provision, will need to be investigated due to the limited space available.

2. Developing "Safe Routes to Schools".

Macroom Town has a number of schools, both Secondary and Primary. The development of "Safe Routes to schools" to each of these schools should be investigated. This will require input from a number of relevant stakeholders.

Transport Infrastructure Ireland (TII) are due to carry out an Active Travel study of Macroom town. Once completed, this can be used to assist the progression of Active Travel Projects.

PUBLIC REALM DEVELOPMENT
Future projects for urban regeneration of Macroom Public realm should include elements to promote climate action, including active travel and biodiversity issues, where feasible.

Currently there are plans to progress to enhance the Middle square of Macroom town. This development is due to include improving the footpaths to the north and south of Castle Street/Middle Square.

GREEN SPACES ENHANCEMENT

Green areas can provide a space for the residents of towns to relax, exercise, and connect with nature. Macroom has a large green area, in the middle of the town, alongside the River Sullane, Tom Creedon Park / Castle Demesne. The green area contains parks, and sport facilities within, including the golf club.

This Green area can be enhanced to improve the benefits it brings the town. Improvements could include planting trees, planting mixed wildflowers, providing more facilities for people to relax etc. The trees provide shading from heat, and along with the flowers improve the biodiversity of the area.

Further Green Areas can be developed in the future in Macroom, where feasible to provide similar benefits.

URBAN TREE PLANTING
Separately to planting trees in green areas, consideration should be given to providing trees in the more built up areas of the DZ, such as the commercial or residential areas, where space allows.

Trees in town areas can have multiple benefits related to aesthetics, microclimate regulation as well as forming part of nature-based solutions to the management of rainwater and surface water runoff.

They are also important in terms of biodiversity and can contribute to reducing particulate air pollution. Trees also transpire, which dries the surrounding soil, thus providing greater capacity for rain water storage.

SUDS DRAINAGE PROJECTS AND NATURE BASED SOLUTIONS
The impact of extreme rainfall events is increasing with climate change and this is significantly increasing both the level of pollution from urban runoff and the flood risk arising from the greater volume of that runoff from the largely impermeable urban area, such as Macroom town.

Approaches to manage surface water that take account of water quantity (flooding), water quality (pollution), biodiversity (wildlife and plants,) and amenity are collectively referred to as Sustainable Drainage Systems (SuDS).

Nature Based Solutions for SuDS are environmentally friendly approaches to manage drainage issues. They make use of natural processes and the ecosystem to control water flow, and reduce flooding.

An assessment should be carried out in Macroom DZ to identify the areas where nature based SuDS initiatives will have the greatest benefit. This may involve profiling the green areas for water retention coupled with suitable planting is also a valuable approach to retention and filtration. Such an assessment may include some of the following considerations.

TREE PLANTING
As previously mentioned, Trees can play a role in the management of rainwater and surface water runoff. Trees also transpire, which dries the surrounding soil, thus providing greater capacity for rain water storage.

RAIN GARDENS
A rain garden is, at its core, a garden that collects rainwater, holds it for a limited amount of time, and filters it before slowly releasing the water into the ground. It collects rainwater from impervious surfaces like roofs, pavements, parking lots, allowing the water to slowly seep back into the ground, preventing runoff from reaching local waterways, green roofs.

A rain garden will provide food and shelter for pollinators, such as butterflies, and offer protection for songbirds and other wildlife.

RAINWATER PLANTERS
Rainwater Planters are boxes with plants that use rainwater from your roof, slowing the flow of rainfall to the drainage system. They are low-cost, and benefit the local environment by adding vegetation and colour to yards and gardens, providing space for pollinators, improving biodiversity.
The potential for developing rain gardens and using rainwater planters within the DZ should be investigated.

REMOTE WORKING AND MACROOM E-CENTRE
Macroom DZ is already the location of a remote working hub, the Macroom E-Centre.
This hub is a community enterprise centre dedicated to helping start-up & growing businesses. It is an initiative of Cork County Council, Local Enterprise Office South Cork, Lee Valley Enterprise Board & Enterprise Ireland.

The possibility of further developing the use of this hub, to enable remote working for the residents of Macroom DZ and surrounds should be investigated and recorded.

Opportunities to better support the Hub, through public transport connectivity, mobility management, improved facilities, car parking and EV charging points will be explored. This can then be used to help

develop the e-hubs in other towns in Cork.

ELECTRIC VEHICLES AND CHARGING POINTS
The development of the national EV charging grid can be prioritised in Macroom DZ.

The Council can work with other stakeholders, to identify locations suitable for charging points.

COMMUNITIES
Macroom's population is 4,096 (2022 census). Engaging the citizenry and communities of the town with the actions to be developed in the Decarbonisation zone will be key to their successful implementation.

Increasing awareness about climate action and encouraging behavioural change in the Decarbonising zone is crucial. It will involve encouraging the residents, communities and businesses, to make changes to lower their carbon footprint and decrease their carbon emissions.

The Council will work with local stakeholders in the DZ as well as other bodies as appropriate. Climate Action projects will be undertaken within the zone from which we will learn and be able to duplicate within the county.

ACTIONS

Action Implementation Plan
Cork County Council will develop an annual implementation plan of climate actions specific to Macroom Decarbonising zone. These actions will focus on the Climate Mitigation and Adaptation and biodiversity issues as identified in this chapter.

Mitigation Actions
The climate mitigation actions will focus on reducing the carbon emissions of the zone,
These will include addressing the emissions the Council is directly responsible for. In this case, the emissions resulting from the council buildings and its fleet.

The Council will also provide a leadership role for the reduction of emissions in both the residential and commercial areas of the town. For example, the Council will Work with the SEAI to provide information packs re heat pumps to the residents of the town.

The Council will carry out Active travel projects in Macroom, such as the improved footpaths in the proposed development of Market Square.

Adaptation and Biodiversity Actions
Active travel projects can also include climate adaptation elements, for example, improving the existing town infrastructure can be used as an opportunity to provide nature based SuDS.

Opportunities to improve the drainage of Macroom through nature based solutions will be investigated and fulfilled as feasible.

There will also be actions to improve the biodiversity of the town, including improvements in the town's green areas, such as improving shading and promoting pollination.

The themes and objectives of the actions of chapter 4 will guide the development of the annual implementation plans for the decarbonising zone.

The collaboration of the town's population, communities and businesses with the actions outlined in the implementation plans will be essential to making them a success.

CHAPTER 6 MONITORING & REPORTING

6.1 WHY/ INTRODUCTION

It is vital that the execution and impact of each of the actions identified in this plan is monitored and reported on an annual basis. CCCs commitment to delivering this climate action plan will be demonstrated through a structured process of implementation with ongoing monitoring and progress reporting. The implementation and reporting phase commences immediately upon adoption and formal publication of the final climate action plan in February 2024.

6.2 STRUCTURE, RESPONSIBILITIES & PLANNING FOR IMPLEMENTATION

The internal structure for the development of this plan will remain in place and will continue during the implementation, monitoring and reporting phase. This structure, as outlined in the Governance chapter, includes the following:

1) A high-level senior management Steering Group, chaired by the Chief Executive, the purpose of which is to set the overall targets for the delivery of the Climate Action Plan, including budgets and resources.
2) An Operational Group chaired by the Divisional Manager with responsibility for the Environment Directorate will ensure that the actions identified in the Climate Action Plan are undertaken by each directorate.
3) An Implementation Group, consisting of management representatives from each directorate and function, will be responsible for the day-to-day logistics and implementation of the plan. The Implementation Group will include:
   a. Climate Action Coordinator (chair)
   b. Representatives from each Directorate/ Function / responsible section
   c. Energy Performance Officer
   d. Biodiversity Officer
   e. (Directors of Service as appropriate)
4) Directorates, Functions, Section/ Climate Action team/ Energy team, etc.

The implementation will be directed from 1 to 4 and reporting will flow from 4 to 1. Accountability, oversight, and leadership will be provided by the Steering group in line with CCC's existing governance procedures.

6.3 IMPLEMENTATION PROGRAM AND TIMELINE

The climate action plan will be implemented over a 5-year timeframe. Annual Implementation Programmes will support the application of the plan. The Operational Group and Implementation Group will develop the first implementation program (Year 1) following the adoption of the climate action plan. Action timelines will have durations varying from yearly to multiyear, i.e., some actions will span multiple annual implementation programs.

6.4 MONITORING & REPORTING AND TIMELINE

It will be the responsibility of the Climate Action Team led by the Climate Action Coordinator to monitor the implementation of the climate action plan. This team will report progress at agreed intervals to the various interested parties.

6.5 INTERESTED PARTIES

There are several parties which will be updated at various intervals during the lifetime of the plan including: the Department of the Environment, Climate and Communications (DECC), the Council, Senior Management, the public and agencies such as Sustainable Energy Authority of Ireland (SEAI) and the National Oversight and Audit Commission (NOAC). Specifically, the progress of the climate action plan will be reported as follows:

- Within Cork County Council to elected members, strategic policy committees or other fora as appropriate.
- Department of the Environment, Climate and Communications (DECC), at sectoral level to aggregate towards the performance of the local government sector on climate action in line with the 2030 targets.
- At national level in line with and as part of the delivery of the national climate objective, to the existing reporting structures for the national climate action plan.

6.6 MONITORING AND REPORTING STRUCTURE

CCC has identified three key phases that will form the monitoring and reporting methodology:

Planning for Implementation:
The implementation of the actions identified in the climate action plan will be overseen by the Climate Action Coordinator who will lead the Implementation Group. This group will meet at regular intervals during each year of the plan. The committee will include representatives from each Directorate or responsible section. It will be structured to ensure maximum cooperation and buy-in from across the organisation and it will be guided by reporting requirements and timelines.

Tracking progress through Key Performance Indicators (KPI):
Each action will have a KPI agreed by the Climate Action Coordinator and the owner of the action to track, measure and report on progress. It is important that the measurement and monitoring process is consistent and standardised to ensure that progress against targets and previous annual results is accurate.

Reporting requirements and arrangements:
Transparency will be central to how progress is reported. This will uphold the integrity of the monitoring and reporting process, ensure that it is robust and not open to scrutiny. This approach will encourage support for implementation and will assist in the communication of the plan.

Planning for Implementation	Tracking progress through Key Performance Indicators	Reporting Requirements
• Outline commitment to implementation in climate action plan • Activate governance and co-ordinaion structure)s) to support implementation	• Devise plan level KPIs • Incorporate considerations around sectorial KPIs when available	• Internal reporting • M&R reporting • Local authority climate action plan reporting • Local government sectoral performance reporting

Figure 6.1: Core tasks during the implementation and reporting phase

6.7 MONITORING METHODOLOGY

Implementation actions will specific, action-focused, time-bound, and measurable. Examples of implementation actions are provided in Appendix 4. It provides the following information:

- Theme
- LACAP Action reference number
- Implementation Action
- Adaptation/ Mitigation or both
- Owner (Lead Directorate/ Section)
- KPI/metric
- Timeframe for delivery

The tracking and measurement of performance will be via the KPIs assigned to each action.

6.8 TRACKING PROGRESS THROUGH KEY PERFORMANCE INDICATORS (KPI)

The key performance indicators assigned to each action will be either external or internal to the Council. Internal KPIs will be agreed at by the Implementation Group. External KPIs will be directed by responsible agencies such as SEAI or NOAC.

Measuring the impact of the delivery of actions is important to help understand the nature of the impact, to ensure the impact is positive and to assess what further action is required over time. The measurement of performance through KPIs, it to provide for accountability at both operational (local authority) and sectoral (local government) levels. Table 6.1 shows the source and purpose of KPIs within the implementation phase:

LEVEL	OPERATIONAL (LOCAL AUTHORITY)	SECTORAL (LOCAL GOVERNMENT)
Purpose of KPIs	Measuring the performance of the local authority on delivering the climate actions of the local authority climate action plan.	Contributing to the measurement of the performance of the local government sector on climate action in line with the strategic goals and objectives of the local government strategy: Delivering Effective Climate Action 2030.
Developed By	Each local authority assigns a KPI to every action of the climate action plan to assist in measuring, tracking, and reporting on progress annually.	Developed by the County and City Management Association (CCMA) Climate Action KPI Working Group as supported by the Climate Action Regional Offices (CARO) and the Local Government Management Agency (LGMA) on behalf of the CCMA and in consultation with National Oversight and Audit Commission (NOAC).

Table 6.1: Source and purpose of Key Performance Indicators

Sectoral KPIs will be developed to align with the local governments 2030 Delivering Effective Climate Action (DECA) strategy and to measure and track the progress of the sector on climate action annually.

6.9 KEY DEPENDENCIES

The climate action plan is designed to be adaptable to changes in: climate policy (National and European), funding availability as well as technological development. Examples of technical change include the efficiency of national electricity grid infrastructure and developments in alternative transport fuels.

For Cork County Council to realise the ambition of the climate action plan the council will need to exert its influence more broadly to maximise and support the climate action efforts of others and will be dependent on external stakeholders and partners.

6.10 REPORTING REQUIREMENTS AND ARRANGEMENTS

Progress on the implementation of the climate action plan will be reported internally and externally through the following pathways and intervals:

- Internal reporting at intervals prescribed by CCCs climate action steering group/ senior management.
- Annual reporting of CCC's energy consumption via the SEAIs Monitoring and Reporting System (M&R)
- Annual Sectoral Performance as part of the local government's 2030 Delivering Effective Climate Action strategy.
- Annual reporting to the Department Environment, Climate Action & Energy as part of the delivery of the National Climate Action Plan.

APPENDIX

APPENDIX 1

CLIMATE ACTION CHARTER

For Local Authorities and Minister for Communications, Climate Action and Environment on behalf of Government.

(1) The signatories share the common understanding that:

(a) the evidence of global warming is unequivocal and the effects of climate change are clearly evident;

(b) it is important to take action and to work together to share best practices, to reduce Greenhouse Gas (GHG) emissions and address the impacts of climate change

(c) reducing GHG emissions and preparing for climate change impacts will generate environmental, social, economic and health benefits for individuals, families, and communities

(d) It is important to take action to adapt to the now inevitable consequences of climate change and to work collectively to ensure that the local authority sector is positioned to build resilience against negative impacts and avail of the positive effects that may occur.

(2) The signatories acknowledge that a whole of government approach is essential in addressing climate change and recognise that:

(a) Central Government has a lead role to play in developing policy and ensuring resources are made available to realise Ireland's commitment to achieving a net zero carbon energy system objective for Irish society and in the process, create a climate resilient, vibrant and sustainable country

(b) Local Authorities are ideally placed to provide robust leadership in advancing this objective at the local and regional level. Support and resources will continue to be provided through the National Development Plan allocations, in addition to their own resources, which will aid them in developing and implementing relevant activities under this charter

(c) Central and Local Government need to work in partnership and collaboration to ensure an effective response to the challenges presented by climate change

(3) This Charter acknowledges that local authorities will, with the support of Central Government:

(a) be advocates for Climate Action in our own policies and practices, and in our many various dealings with citizens and to underpin this role through the corporate planning process.

(b) adhere to the UN Sustainable Development Goals, in particular Goal 13 Climate Action;

(c) aim to measure the carbon impact of our various activities as accurately as possible and report as required so as to inform relevant local, regional and national policies,

(d) implement, in so far as is practicable, measures which reduce our carbon emissions in line with national objectives, and develop a method for planning and reporting on these actions

(e) deliver a 50% improvement in energy efficiency by 2030(on the 2009 baseline)

(f) ensure that policies and practices at local government level lead us towards low carbon pathways and put in place a process for carbon proofing major decisions, programmes and projects on a systematic basis, including investments in transport and energy infrastructure moving over time to a near zero carbon investment strategy

(g) Ask suppliers as part of the procurement process to provide information on their carbon footprint and on the sustainability practices and steps they plan to reduce its impact

(h) implement green public procurement strategy and procedures across all business areas

(i) support our employees to undertake changes in their lifestyles both at work and at home, to reduce carbon impact and encourage work-based employee-led groups to identify and implement ideas for improvement

(j) put in place, and resource, a long term training strategy (technical and behavioural) for LA staff to provide appropriate capacity for the sector to deliver on climate action

(k) encourage clients/customers/service users to undertake lifestyle changes to reduce their carbon impact, with a particular emphasis on supporting those clients/customers/service users who may face difficulties in funding such measures

(l) cultivate and actively participate in partnerships with enterprise, community and voluntary groups so as to, improve the use of resources and reduced climate impact

(m) play a key role in helping to build and implement a sustained localised citizen engagement model in supporting the various initiatives under the National Dialogue on Climate Action

(n) exercise our planning and regulatory roles to help improve climate outcomes in the wider community and beyond the public sector, by developing and implementing robust evidenced based policy and standards on climate action, through appropriate and relevant adaptation and mitigation measures

(o) continue to identify and develop specific actions to be taken to reduce the risks associated with negative climate change impacts and build resilience to these impacts through effective implementation of climate adaptation strategies/ Climate Change Action Plans

(p) support elected officials in ensuring all council led activities are climate proofed in terms of achieving effective low carbon and climate resilient outcomes

(q) Explore opportunities to partner or collaborate on climate action initiatives across the public, private and education sectors.

(r) Support Enterprise through LEO/LCDC offices to exploit opportunities which will arise from meeting the challenges of Climate Change

(s) work with relevant stakeholders to source funding for implementing climate action projects;

(t) liaise with 3rd level institutions & the research community both nationally and internationally with a view to developing centres of excellence where appropriate

(u) develop links with young citizens to give voice to their understanding and concerns on climate change and to enhance their awareness and the actions that they can take.

(v) continue to develop and strengthen links with both central government (relevant departments and agencies) and regional bodies to help ensure a coordinated and coherent approach to the delivery of the national climate action agenda

(w) Monitor, evaluate and report annually on the implementation of activities under this charter

Signed on behalf of the Government   Signed on behalf of Cork County Council

Richard Bruton T.D.   Tim Lucey
Minister for Communications,   Chief Executive
Climate Action and Environment

Seán Canney T.D.   Christopher O'Sullivan
Minister of State for Natural Resources,   Mayor
Community Affairs and Digital Development

APPENDIX 2

INITIATIVES
The Council recognises that it does not operate in a vacuum and that there are many existing initiatives which it will promote and build upon, in the delivery of this Climate Action Plan. Examples of these are as follows and is by no means an exhaustive list:

GREEN SCHOOLS
Green Schools is an environmental education programme that encourages long-term positive environmental action. The aim is to increase student and participant awareness of environmental issues and to transfer this knowledge into positive action in the school and also in the wider community. Many students bring home the lessons they have learned, spreading positive action through their homes and local areas.

Green Schools is an international initiative that is operated and coordinated in Ireland by the Environmental Education Unit of An Taisce, in partnership with local authorities throughout the country.

THE CITIZENS' ASSEMBLY
Climate change was one of five issues under examination by the Citizens' Assembly and the 13 recommendations agreed upon were significantly more radical than expected. The Citizens' Assembly identified a clear roadmap for climate action in Ireland and the follow-up Oireachtas report, adopted with cross-party consensus, has identified the policy tools and options which can be used to make progress. The All of Government Climate Action Plan will ensure that these recommendations are operationalised and supported.

The process employed by the Citizens' Assembly shows great potential for the National Dialogue on Climate Action to be developed as a new model of citizen engagement on climate change, with deliberation leading to action.

Drawing on inspiration from the Citizens' Assembly, the report of the Joint Oireachtas Committee and the National Dialogue, a new and improved model of engagement will become the place for engaging more citizens and building community clusters.

LOCAL CITIZEN ENGAGEMENT
Citizens can have an active and influential voice in instigating change in their community – through Local Community Development Committees (LCDCs) or via Public Participation Networks (PPNs) - a network that allows local authorities to connect with community groups around the country. The PPN is the 'go to' for all local authorities who wish to benefit from community and voluntary expertise in their area. Community groups can register to join the PPN in their local authority area. PPNs give citizens a greater say in local Government decisions which affect their own communities.

TIDY TOWNS
All over the County the efforts of numerous Tidy Towns committees and volunteers improve the environment in which we live and contribute to making our communities better places to live, work and to do business. The TidyTowns competition is an annual contest organised by the Department of Rural and Community Development, with the support of various sponsors. It has increased awareness of environmental damage, climate change, nature and biodiversity alongside traditional issues like litter, dumping and built environment.

NATIONAL SPRING CLEAN
National Spring Clean is one of Ireland's most successful anti-litter initiatives. The campaign encourages local groups to organise and participate in clean ups in their areas every April, removing litter and waste from communal spaces.

National Spring Clean is operated by An Taisce in partnership with local government and local authorities.

GREEN COMMUNITIES

An Taisce's Green Communities Low Carbon Community Plan works to enhance local biodiversity and sustainability, supporting community groups by providing information, training and guidance.

The training events are based on environmental management topics and skills that are relevant to people living in Ireland. The programme not only provides training to launch and sustain community projects, but also the support required to empower community groups working to enhance their local environment.

Green Communities Groups have worked on:
- developing community gardens to promote local food production and bring communities together
- developing wildlife areas
- regular clean ups and conservation work (example Marram Grass planting)
- sensitive clearance work (e.g. clearing a neglected area of land so that it provides a green space for people to enjoy and an enhanced habitat for wildlife)
- erection and maintenance of bird, bat, hedgehog, owl boxes
- management of invasive species such as Himalayan Balsam, Rhododendron and so on

The Green Communities Low Carbon Community Plan has also brought individual groups together to create larger environmental networks. Allotments, residents associations, schools, charities, Tidy Towns groups, community groups tackling addiction and community groups providing horticultural therapy can all avail of this collaboration and improve their knowledge and expertise.

SEE IT? SAY IT!

Communities working on the ground to enhance their environment and surroundings often notice and find evidence of illegal activity and environmental damage that can identify the cause and persons responsible. Local Authorities have the enforcement powers to take appropriate action but depend on having the evidence to prove the case.

The Environmental Protection Agency has developed an app called See it? Say It! to help people report environmental pollution in their local areas. The app allows users to submit photographs and details about pollution incidents which are then forwarded to the relevant local authority. See it? Say It! records the GPS location of the incident too so inspectors can find it easily and investigate. The app works alongside the existing National Environmental Complaints, Line (NECL), One can report issues such as backyard burning, fly tipping, water pollution, odours, littering, dumping, graffiti and noise pollution.

GREEN FESTIVALS

Green Your Festival is an initiative to improve the environmental performance of events, festivals and destinations. Local authorities participating in waste prevention initiatives are determined to make fun in Ireland more sustainable and have already helped many event organisers and destination managers to go green. While festivals provide great social, financial and cultural benefits, they can also have significant environmental impacts.

The experience and know-how provided on the Green Your Festival website is available for free and has been collected from event organisers that have successfully transitioned to a more sustainable way of having fun in partnership with the local authorities in their regions.

SUSTAINABLE ENERGY COMMUNITIES

The Sustainable Energy Authority of Ireland (SEAI) supports Sustainable Energy Community Partnerships throughout Ireland. Communities can sign up to a three year partnership where they will be supported and guided by the SEAI through planning for their energy future. A collaborative partnership approach is at the core of the programme, encouraging mutual understanding and development of services.

Throughout the duration of the partnership, the SEAI are on hand to provide a range of supports to help the SEC committee to achieve energy efficiency measures. Besides funding and access to services, a technical panel of experts and consultants will also provide continued guidance and mentoring while the committee builds up skills and competencies relating to energy efficiency.

The Sustainable Energy Communities Network provides access to a wider group of towns and villages who are also working towards a sustainable energy future. Over 200 communities are currently using the network to share knowledge, advice, case studies and development tools with other communities who need them. Driven by collaboration, an SEC is able to connect sustainable energy with local economic

development and public wellbeing.
The All of Government Climate Action Plan aims to expand the SEC Network.

RENEWABLE ELECTRICITY SUPPORT SCHEME (RESS)

The Renewable Electricity Support Scheme (RESS) will provide financial incentives to new renewable electricity projects across Ireland. The RESS is an auction based scheme where support will be provided to the most cost effective projects within a competitive framework.

The scheme will be funded by the Public Service Obligation (PSO) levy, and one of the key deliverables of RESS will be the development of a national enabling framework for citizen and community participation. The framework provides supports and opportunities for citizens and communities to own; to participate in; and to benefit from Renewable Electricity projects in their area.

CITIZEN SCIENCE

Citizen Science is research carried out by members of the public who volunteer to collect scientific data. This research often focuses on monitoring biodiversity, invasive species and our climate. Participating in citizen science can increase public engagement with and understanding of important environmental issues.

Although citizen science is a relatively new term, citizens have been participating in and contributing to scientific research for years. The widespread use of smartphones means that scientific data can now be very easily shared and mapped, resulting in a rapid increase in the number and type of citizen science research projects.

In Ireland the EPA includes citizen science in many of its initiatives and schemes such as the GLOBE Programme, the joint EPA/European Environment Agency Air Quality Project, the National Biodiversity Data Centre, the NUI Galway/EPA Air Quality Study (2017) and the Safecast Project.

Other citizen science initiatives include Bat Conservation Ireland, Birdwatch Ireland, Clean Coasts, Coastwatch, Geological Survey Ireland, Irish Whale and Dolphin Group, and the Irish Wildlife Trust.

The media plays a key role in promoting and developing citizen science and community engagement in the climate challenge. Content designed to educate and engage citizens in science is an essential outreach tool.   RTE has a growing slate of programmes, many supported by agencies such as the EPA and SEAI, which deal with various aspects of climate change and resilience, energy efficiency, biodiversity and environmental issues.

CLIMATE ACTION REGIONAL OFFICES

Under the National Adaptation Framework, the Department set up four Local Authority Climate Action Regional Offices (CAROs) in January 2018. The role of these offices is to support and to drive climate action (adaptation and mitigation) at local authority level.

OFFICE OF EMERGENCY PLANNING

To help communities prepare for extreme weather events caused by climate change, the government set up the Office of Emergency Planning to support the Minister of Defence in co-ordinating different departments. The Office of Emergency Planning website brings together all the current, up-to-date information on Ireland's planning, response and management with regard to a wide range of emergencies.

MET EIREANN

The Irish Meteorological Service has a dedicated climate section on their website, which is a useful tool for communities in relation to preparing for future weather events.

APPENDIX 3

COMPLETE LIST OF ALL LACAP ACTIONS BY THEME

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
4.2 - Governance	4.2.1.1.1	All Council plans shall align with the Climate Action Plan vision and mission.	Both	Each Department	No. of Plans issued with Climate Actions	Annual Review
	4.2.1.2.1	The existing internal structure for the development of this plan will remain in place initially and will be adapted throughout the lifetime of the plan to respond to new challenges as they occur. This structure will nurture interdepartmental co-operation to ensure that progress on the 'implementation monitoring' of the plans actions is being reported on to deliver this plan. This structure is as follows: **1.** A high-level senior management Steering Group, chaired by the Chief Executive, the purpose of which is to set the overall targets for the delivery of the Climate Action Plan, including budgets and resources. This group meets 1-2 times per annum. **2.** An Operational Group which is chaired by the Divisional Manager with responsibility for the Environment Directorate. This is also a senior management group and it reports to the Steering Group. The purpose of this group is to ensure that the individual and specific actions included in the Climate Action Plan are undertaken by the directorates, reducing conflicts and building on synergies. This group meets 2-4 times per annum. **3.** An Implementation Group, which will include a representative from all directorates and functions, which is made up of middle management who review the day-to-day logistics and implementation of individual actions. This group will be chaired by the Climate Action Co-ordinator and will meet as required and at a minimum of once a quarter.	Both	Corporate Services	No. of Meetings Held % of overall actions completed	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.2.1.2.2	Support the Climate coordination team in the monitoring and reporting of the Council's Climate Action Plan.	Both	Each Department	No. of Actions achieved.	Annual Review
	4.2.1.2.3	Ensure that relevant actions from this Climate Action Plan are incorporated into all Council plans, strategies and policies including departmental work plans, team plans and staff meeting agendas.	Both	Each Department	No. of Actions incorporated into council plans	Annual Review
	4.2.1.2.4	Incorporate Climate Action Plan into existing stakeholder engagement groups, networks, forums and platforms.	Both	Corporate Services	No. of Groups plan is incorporated into.	Annual Review
	4.2.1.2.5	Communication and collaboration with the CARO office will be continued and strengthened.	Both	Environment, Climate Change & Emergency Services	No. of agreed and completed actions arising from engagement with CARO.	Reviewed at implement -ation meetings
	4.2.1.2.6	A communications plan will be developed and implemented to report climate action progress and promote climate action in a coordinated manner across council communications processes and platforms.	Both	Environment, Climate Change & Emergency Services	Report to be issued annually.	Annual Review
	4.2.1.2.7	With the support of CARO, the Council will monitor European and national policy developments and incorporate as appropriate to the Council's approach to Climate Action.	Both	Environment, Climate Change & Emergency Services	No. of meetings held with CARO.	Reviewed at implement -ation meetings

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.2.1.3.1	To deliver this five-year plan, an annual implementation programme will be prepared for approval by the climate action steering group. This programme will be dependent on the availability of external funding (e.g., national, European, SEAI, etc.) and internal funding and resources.	Both	Environment, Climate Change & Emergency Services	Annual implementation programme to be issued including update on progress and projected plans.	Annual Review
	4.2.1.3.2	Support and administer the Community Climate Action Programme (CCAP) funded by the Department of the Environment, Climate and Communications, which will allow communities to apply for grants to enable climate projects at a local level.	Both	Environment, Climate Change & Emergency Services	No. and value of Grants successfully awarded under the CCAP as a proportion of available funding.	Annual Review
	4.2.1.3.3	Continue with the provision of existing grants for communities and make climate action a central component to these grants.	Both	Environment, Climate Change & Emergency Services	No. of Grants issued for projects with significant climate actions	Annual Review
	4.2.1.3.4	Participate in and maximise the benefits of EU-funded environmental and climate-related European Projects such as the HYBES project.	Both	Environment, Climate Change & Emergency Services	No. of EU funded Climate Action Projects Funded	Annual Review
	4.2.1.4.1	Increase climate action awareness and engagement among staff and promote positive behavioural change. Specifically, promote awareness and understanding of the role and implications of this Climate Action Plan and build capacity of public-facing council employees to "talk climate."	Both	Human Resource Management	No. of Promotions carried out and no. of attendees at events	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.2.1.4.2	Support the up-skilling and re-skilling of staff to enable the implementation of climate action in their roles.	Both	Human Resource Management	No. of Training courses offered.	Annual Review
	4.2.1.4.3	Work with CARO to ensure ongoing climate action training for staff.	Both	Environment, Climate Change & Emergency Services	Complete a training needs assessment for staff. No. of Training courses added to the CARO / ESTG training programme.	Annual Review
	4.2.1.4.4	Strengthen feedback systems with staff, for improved communication and ideas generation.	Both	Human Resource Management	No. of ideas submitted through the Idea Greenhouse	Annual Review
	4.2.1.4.5	Review remote working arrangements at suitable intervals to ensure optimum use of space is achieved, for example through desk sharing and a reduction in offices.	Adaptation	Human Resource Management	Assess the No. of staff per m2 using CCC Office space at a given time reviewed annually to maximise resource usage.	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.2.1.5.1	Continue to implement the national Green Public Procurement strategy to ensure that Green Procurement is mainstreamed through all sections of Cork County Council. Ensure that procurement of all works/services follows the Department of Public Expenditure and Reform circular 20/2019.	Both	Finance	Value of projects procured under the green procurement strategy as a percentage of overall project spends	Annual Review
	4.2.1.5.2	Ensure that greenhouse gas emissions are accounted for in financial decisions.	Both	Finance	No. of finance projects assessed using GHG as a metric	Annual Review
	4.2.1.5.3	Cork County Council's Finance Department, will facilitate monitoring and reporting of climate activity expenditure.	Both	Finance	Value of projects procured under the green procurement strategy as a percentage of overall project spends	Annual Review
	4.2.1.6.1	Existing assets owned by Cork County Council to be reviewed to assess if they can be reduced or re-organised in order to save carbon emissions.	Mitigation	Corporate Services	Completion of review and a register published	Annual Review
	4.2.1.6.2	Any additional or replacement of existing assets needs to take into account the need for sustainability and the 2030 and 2050 greenhouse gas emissions reduction targets.	Mitigation	Each Department	No. of assets replaced or purchased	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.2.1.7.1	Undertake stakeholder mapping for broadened engagement and for collaborating effectively on climate action across Cork County. Assess the role of strategic partners to deliver on certain projects.	Both	Economic Development, Enterprise & Tourism.	No. of collaborations completed with stakeholders on Climate Action; e.g., Utility providers, businesses public bodies.	Annual Review
	4.2.1.7.2	Collaborate and work with other sectors and agencies to deliver programmes that support climate action, build and mobilise community capacity.	Both	Each Department	No. of community programmes delivered.	Annual Review
	4.2.1.7.3	Use the Decarbonising Zone in Macroom to engage stakeholders in innovative actions, using pilot projects designed to reduce emissions.	Both	Municipal District Operations and Rural Development	No. of Pilot Projects in DZ area completed.	Annual Review
	4.2.1.7.4	Establish an open-source GIS tool to map community climate action across the County, including description of project, location and progress to inform the Council and its' stakeholders on projects in the County and clusters, gaps, linkages.	Both	Environment, Climate Change & Emergency Services	Creation of a GIS tool for tracking Community Climate Actions across the county	Reviewed Annually over the life-time of the plan
	4.2.1.8.1	Establish a reporting and monitoring system to track the progress of climate actions and report locally and nationally.	Both	Environment, Climate Change & Emergency Services	Issuing of Annual Report.	To be in place for reporting on year 1 of the plan.

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.2.1.8.2	Continue Cork County Council's regular liaison with the Climate Action Regional Office (CARO) Atlantic Seaboard South and provide appropriate progress reports.	Both	Environment, Climate Change & Emergency Services	Issuing of Annual Report.	Developed in Year 1.
	4.2.1.9.1	Implement an engagement programme to inform councillors on climate and environmental action in order to build knowledge, confidence and capacity to 'talk climate' at a local and a policy level.	Both	Corporate Services	Implement a Councillor communication plan	To be in place for reporting on year 1 of the plan.
	4.2.1.9.2	Support the training programme for councillors run by the Climate Action Regional Offices.	Both	Corporate Services	No. of Training Programmes held for Councillors	To be in place for reporting on year 1 of the plan.
4.3 - Direct Emissions	4.3.1.1.1	Assess electricity demand sources, e.g., buildings, equipment, etc, to identify opportunities to eliminate demands.	Both	Each Department	No. of Opportunities identified.	Annual Review
	4.3.1.1.2	Upgrade lighting to LED where financially viable, while ensuring the lumen levels and spectral range are maintained or reduced/controlled to avoid effects to biodiversity.	Mitigation	Each Department	No. of KW saved	Annual Review
	4.3.1.1.3	Investigate opportunities for renewable energy sources to identify projects for annual implementation programme, having due regard to planning and environmental protection considerations.	Mitigation	Environment, Climate Change & Emergency Services	No. of Projects identified	Annual Review
	4.3.1.1.4	Replace equipment with more efficient alternatives when available and financially viable whilst ensuring WEEE generated as a result of this action is appropriately managed.	Mitigation	Each Department	No. of KWs saved	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.3.1.1.5	Continue to monitor developments in technology and equipment which reduce electricity consumption to identify projects for annual implementation programme.	Both	Environment, Climate Change & Emergency Services	No. of projects included in annual implementation plan	Annual Review
	4.3.1.1.6	Collect data from all contracts to report contracted carbon.	Mitigation	Environment, Climate Change & Emergency Services	Kgs of CO_2 recorded	Annual Review
	4.3.1.2.1	Assess heating demand sources to identify opportunities to eliminate demands.	Mitigation	Environment, Climate Change & Emergency Services	No. of KGs of CO_2 saved	Annual Review
	4.3.1.2.2	Assess opportunities to replace oil/gas burners usage with renewable alternatives to identify projects for annual implementation programme, having due regard to planning and environmental protection considerations.	Mitigation	Each Department	No. of KGs of CO_2 saved	Annual Review
	4.3.1.2.3	Assess opportunities to upgrade building insulation to identify projects for annual implementation programme; having due regard to environmental sensitivities such as local human receptors, protected species, European sites and biodiversity, and the need to appropriately conserve protected structures.	Mitigation	Each Department	No. of Opportunities identified.	Annual Review
	4.3.1.2.4	Assess opportunities to upgrade building air tightness to identify projects for annual implementation programme; having due regard to environmental sensitivities such as local human receptors, protected species, European sites and biodiversity, and the need to appropriately conserve protected structures and features.	Mitigation	Each Department	No. of Opportunities identified.	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.3.1.2.5	Continue to monitor and utilise developments in technology and equipment which reduce, reduce/replace fossil fuels consumption to identify projects for annual implementation programme.	Both	Environment, Climate Change & Emergency Services	No. of projects included in annual implementation plan	Annual Review
	4.3.1.2.6	Collect contracted carbon data from all contracts.	Mitigation	Each department	No. of Kwh/litres of fuel saved	Annual Review
	4.3.1.3.1	Assess transport demand sources to identify opportunities to eliminate demands.	Mitigation	Each department	No. of Kwh/litres of fuel saved	Annual Review
	4.3.1.3.2	Assess opportunities to replace vehicles with EV where alternatives available and financially viable consumption to identify projects for annual implementation programme, whilst ensuring energy/fuel used to power electric vehicles is sustainably sourced, and appropriate end-of-life management practices are in place for Electric Vehicles.	Both	Each Department	No. of Alternatives procured	Annual Review
	4.3.1.3.3	Assess opportunities to utilise low emission fuels where available and financially viable to identify projects for annual implementation programme, whilst ensuring energy/fuel used to power low emission vehicles is sustainably sourced.	Mitigation	Each Department	No. of Kwh/litres of fuel saved	Annual Review
	4.3.1.3.4	Continue to monitor and utilise developments in technology and equipment which reduce fossil fuel consumption to identify projects for annual implementation programme.	Both	Environment, Climate Change & Emergency Services	No. of projects included in annual implementation plan	Annual Review
	4.3.1.3.5	Collect contracted carbon data from all contracts.	Mitigation	Environment, Climate Change & Emergency Services	No. of Kwh/litres of fuel saved	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.3.1.4.1	Monitor electric grid developments in relation to carbon reduction to calculate contribution.	Mitigation	Environment, Climate Change & Emergency Services	No. of Kwh saved	Annual Review
	4.3.1.4.2	Replace equipment with more efficient when available and financially viable, whilst ensuring WEEE generated as a result of this action is appropriately managed.	Mitigation	Each Department	No. of Kwh/litres of fuel saved	Annual Review
	4.3.1.4.3	Continue to monitor developments in technology and equipment which increases energy efficiency.	Mitigation	Environment, Climate Change & Emergency Services	No. of projects included in annual implementation plan	Annual Review
4.4 - Community, Information & Awareness	4.4.1.1.1	Support communities to co-create a vison for climate action by working with existing community models/mechanisms (e.g., the SEAI Sustainable Energy Communities, PPN etc.) and also supporting new models, where appropriate.	Both	Economic Development, Enterprise & Tourism.	No. of Information campaigns run	Annual Review
	4.4.1.1.2	Trial the EU funded HYBES project 'living lab' in the decarbonising zone; having appropriate regard to environmental sensitivities such as sensitive human receptors, European sites and biodiversity, and the need to appropriately conserve protected structures.	Both	Economic Development, Enterprise & Tourism.	No. of Projects completed	Annual Review
	4.4.1.2.1	Create awareness about, and promote understanding of, climate change in Cork County through communications and education. Communications strategies will be tailored to particular audiences and may include campaigns, talks, debates, online information, guidance documents, webinars, podcasts, video, radio and information disseminated through the Cork County libraries network (with 26 branches).	Both	Environment, Climate Change & Emergency Services	No. of Information campaigns run	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.4.1.2.2	Develop links with young citizens (e.g., the Comhairle Na nÓg) to give voice to their concerns about climate change and to enhance their awareness and the actions that they can take.	Both	Economic Development, Enterprise & Tourism.	No. of Information campaigns run	Annual Review
	4.4.1.2.3	Engage older people in climate action by working with the Age Friendly networks and the Older People's Council to ensure that awareness of climate action is raised and to promote and enhance the actions that they can take as a response to climate change.	Both	Economic Development, Enterprise & Tourism.	No. of Information campaigns run	Annual Review
	4.4.1.2.4	Promote public engagement with climate action through arts linking in with the climate change pillar of Creative Ireland.	Both	Municipal District Operations and Rural Development.	No. of Information campaigns run	Annual Review
	4.4.1.2.5	Liaise with other agencies to develop and promote Climate Community Leadership that will: • Build knowledge, confidence and capacity of community members to initiate climate action in their neighbourhoods • Build capacity of community leaders/change agents to "talk climate" in their networks • Identify and acknowledge existing community climate action 'champions/heroes' and acknowledge and amplify their campaigns.	Both	Each Department.	No. of Information campaigns run	Annual Review
	4.4.1.2.6	Build on Cork County Council's awareness month **"Make One Change: Cork County Cuts Carbon"** (initiated by the Council in 2022).	Both	Environment, Climate Change & Emergency Services and Municipal Districts	No. of Information campaigns run	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.4.1.2.7	Continue to promote schools' programmes such as Green Flags, School Gardens, Climate Literacy.	Both	Environment, Climate Change & Emergency Services and Municipal Districts	No. of Information campaigns run	Annual Review
	4.4.1.2.8	Develop partnerships with external agencies and community organisations to enable climate action projects at community level.	Both	Each Department	No. of Projects Enabled	Annual Review
	4.4.1.2.9	Support and work with LAWPRO to encourage a community response to encourage water conservation and greater water use efficiency in the community, in association with local community groups.	Both	Economic Development, Enterprise & Tourism.	No. of Information campaigns run	Annual Review
	4.4.1.3.1	Support the delivery of Local Climate Action projects funded through the new Community Climate Action Programme (CCAP). The CCAP will operate under the following themes. • Home(Community)/Energy • Travel • Food and Waste • Shopping and Recycling • Local Climate and Environmental Action.	Both	Environment, Climate Change & Emergency Services	No. of Projects completed	Annual Review
	4.4.1.3.2	Ensure that climate change is a consideration in other community grants administered by the Council.	Both	Each Department	No. of projects procured under green procurement	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.4.1.4.1	Research and collate data on community-based climate action in the County and map same with descriptions. Set up an easily accessible method for the public to access same. Disseminate information to Cork County communities to promote local action.	Both	Environment, Climate Change & Emergency Services	Data Portal put live on council websites	Within 3 years
	4.4.1.4.2	Capture insights from engagement activities to provide an evidence base to inform the implementation of the Climate Action Plan.	Both	Each Department	Create a data base of activities proposed by community groups	Annual Review
	4.4.1.4.3	Research and learn from best practice in Ireland and internationally.	Both	Each Department	No. of Information campaigns run	Annual Review
	4.4.1.5.1	Work with stakeholders to understand key risks and drivers for a just transition in Cork that will provide insights and recommendations to understand and navigate the climate transition in a way that is fair and equitable. Support and assist stakeholder action to help those who are most vulnerable to change. This action will ensure that Cork County Council are active in enabling a 'just transition' and protecting the health and wellbeing of communities across Cork County.	Both	Each Department	Just Transition Guidelines to be incorporated into each directorates annual plan	Annual Review
	4.4.1.6.1	Work with communities to ensure that community Rest Centres are prepared in the event of people being displaced e.g., by flood.	Adaptation	Municipal District Operations and Rural Development	Set up community Rest Centres	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.4.1.6.2	Develop a template for community emergency plans to assist communities to prepare their own location specific emergency community plans.	Adaptation	Municipal District Operations and Rural Development	Develop community Emergency Plan Template	Within 1 year
	4.4.1.7.1	Work with agencies, organisations and community groups to assess the barriers and obstacles to climate action by certain sectors of society and to develop new approaches to address these e.g., methods to assist with housing upgrades for the elderly or vulnerable.	Both	Municipal District Operations and Rural Development	Arrange regular consultations with local groups	Annual Review
	4.4.1.8.1	Participate in and support activities of the Transport and Mobility Forum.	Both	Roads & Transportation	No of Activities supported	Annual Review
	4.4.1.8.2	Continue the implementation of 'safe routes to school' and neighbourhood greenways to further enhance localised active-travel infrastructure; having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites and local air quality.	Mitigation	Roads & Transportation	No. of Projects completed	Annual Review
	4.4.1.8.3	Continue promotion and support for the Active Travel Green Flags; having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites and local air quality.	Mitigation	Economic Development, Enterprise & Tourism.	No. of Green flags awarded to schools in Cork County	Annual Review
	4.4.1.8.4	Support active travel promotional events of stakeholders e.g., Mix Your Mode, Bike Week etc.	Mitigation	Roads & Transportation	No. of Information campaigns run	Annual Review
	4.4.1.8.5	Continue to encourage the development of bottom-up sustainable transport initiatives and engage with communities on new initiatives, where appropriate; having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, local air quality etc.	Mitigation	Roads & Transportation	No. of Information campaigns run	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.4.1.9.1	Promote and support community growing projects, allotments and community gardens, where suitable land is available, as a way that communities can grow their own food, lower food miles and food waste.	Both	Economic Development, Enterprise & Tourism.	No. of Community allotments and community gardens started	Annual Review
	4.4.1.9.2	Promote the circular economy to communities including waste reduction, re-use and upcycling.	Both	Environment, Climate Change & Emergency Services	No. of Information campaigns run	Annual Review
	4.4.1.9.3	Encourage communities to buy local (to reduce food miles and to support the local economy) and work with stakeholders and communities to reduce food waste	Both	Economic Development, Enterprise & Tourism.	No. of Information campaigns run	Annual Review
	4.4.1.9.4	Initiate a 'think before you buy' campaign to encourage people to buy only what they need promoting conscious consumption.	Both	Environment, Climate Change & Emergency Services and Municipal Districts	No. of Information campaigns run	Annual Review
4.5 - Biodiversity, Natural Environment, Heritage & LULUCF	4.5.1.1.1	Continue to implement the County Biodiversity Action Plan.	Both	Each Department	No. of Actions from the plan completed annually	Annual Review
	4.5.1.1.2	Work with stakeholders and communities to identify suitable areas for Nature Recovery opportunities.	Both	Municipal District Operations and Rural Development	No. of Nature Recovery Projects identified	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.5.1.1.3	Continue to expand delivery of Pollinator Plans throughout towns in the county.	Both	Planning & Development	No. of Pollinator plans implemented and actions from the plans completed	Annual Review
	4.5.1.1.4	Work and support the Heritage Council's Biodiversity programme to take an inclusive, community-centric approach to biodiversity action and promote community responsibility for conservation.	Both	Municipal District Operations and Rural Development	No. of Information campaigns run	Annual Review
	4.5.1.1.5	Work with stakeholders to promote engagement and awareness of National Biodiversity Data Centre projects and initiatives.	Both	Planning & Development	No. of Information campaigns run	Annual Review
	4.5.1.1.6	Promote citizen science initiatives including targeting key sensitive species and empower communities to support local habitat restoration and protection.	Both	Municipal District Operations and Rural Development	No. of initiatives undertaken	Annual Review
	4.5.1.2.1	Work with stakeholders to create a Climate Risk Register of all natural heritage assets at a habitat level.	Both	Environment, Climate Change & Emergency Services	Creation of Climate Risk Register	Within 2 years
	4.5.1.2.2	Work with stakeholders to carry out a county wide survey to identify and map wetlands; protect and restore wetlands in Local Authority control; and to support landowners and others to protect and restore wetlands in accordance with relevant environmental protection requirements, including water quality, habitat and protected species related requirements.	Both	Planning & Development	No. of Programmes identified.	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.5.1.2.3	Work with stakeholders to support the establishment of Marine Protected Areas.	Both	Water Services & County Engineer	No of Meetings held.	Annual Review
	4.5.1.2.4	Work with stakeholders protect and enhance biodiversity of Cork Harbour.	Both	Water Services & County Engineer	No. of Projects completed	Annual Review
	4.5.1.2.5	Work with stakeholders to examine the feasibility of mapping of green and blue infrastructure assets in the County.	Both	Planning & Development	Create a map of Green & Blue Infrastructure	Within 2 years
	4.5.1.2.6	Identify opportunities to preserve, enhance and develop ecological connections between areas of high biodiversity value, having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites and local air quality.	Both	Planning & Development	No of opportunities identified.	Annual Review
	4.5.1.3.1	Promote biodiversity net gain in all new public and private developments: Require the submission of a green infrastructure statement for all development, ensuring environmental protection requirements are appropriately considered during the planning of green infrastructure. Continue to integrate ecological expertise within the development management process including at pre-planning and planning application stages.	Both	Planning & Development	Creation of Green infrastructure statement procedures	Annual Review
	4.5.1.3.2	Continue to integrate ecological expertise and biodiversity protections through placemaking measures in the development and management of public projects including housing, transport infrastructure and public realm projects etc, having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, and local air quality.	Both	Planning & Development	Inclusion of ecological and biodiversity measures in public projects.	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.5.1.3.3	Promote retention and protection of existing biodiversity as a key consideration in all works or developments.	Both	Planning & Development	No. of Information campaigns run	Annual Review
	4.5.1.3.4	Review and improve existing priority-based enforcement operations, procedures, and systems to better assess and advance enforcement files which have a potentially significant environmental and biodiversity impact.	Both	Planning & Development	No. of Enforcements brought	Annual Review
	4.5.1.4.1	Develop and integrate Biodiversity Best Practice Guidelines into the work practices of the authority and identifying staff training needs required for delivery.	Both	Planning & Development	Engagement with CARO to develop national training programmes for biodiversity.	Annual Review
	4.5.1.4.2	Undertake review of existing council-owned housing estates to supports residents in identifying areas suitable for community led biodiversity protective measures in accordance with best practice (e.g., native tree planting, wildflower meadows, pollinator zones etc.).	Both	Housing	No. of Submissions Received No. of projects completed	Annual Review
	4.5.1.4.3	Identify a range of potential pilots to demonstrate sustainable measures including nature-based SuDS; and pilot a biodiversity- and climate-led design for Council-led social housing developments with measures such as green roofs, green walls, wetland & pond SUDS, green carparking, nest boxes in facades, grasslands, and wildlife friendly native shrubs and trees in open space; having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, and local air quality.	Both	Housing	No. of Pilot projects identified	Within 2 years

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.5.1.4.4	Identify council-held assets for opportunities where biodiversity measures, e.g., wildflower/hay meadows, rewilding, hedgerows, and habitat integration methods (e.g., bat boxes, swift boxes / nest boxes) can be implemented in accordance with best practice guidelines, in partnership with appropriate bodies e.g., Birdwatch Ireland.	Both	Municipal District Operations and Rural Development	No. of Assets identified	Annual Review
	4.5.1.4.5	Recognise natural regeneration of woodland and Identify opportunities for native tree planting and native woodland creation within authority's landbank – and aim to avail of the Creation of Woodland in Public Lands Scheme and other grant aided schemes to extend native woodland cover in the county, particularly where co-benefits can be achieved.	Both	Planning & Development	No. of Opportunities identified.	Within 2 years
	4.5.1.4.6	Continue to promote actions taken to enhance ecological integrity taken in council-held assets and lands, to lead by example.	Both	Municipal District Operations and Rural Development	No. of Information campaigns run	Annual Review
	4.5.1.5.1	Develop an Invasive Alien Species Policy for the county and examine benefits of preparing response plans to specific invasive species.	Both	Planning & Development	Develop Policy on invasive species	Within 3 year
	4.5.1.5.2	Continue to manage and treat Invasive Alien Plant Species, in line with developed IAPS Management Plans, in the scheme areas for flood relief schemes and coastal projects.	Both	Municipal District Operations and Rural Development	Record no. of invasive species areas in the county and no. of sites tackled	Annual Review
	4.5.1.5.3	Work with partners to promote understanding of the role and impacts of Invasive species on local biodiversity, and promote best practice for citizens, businesses and vendors.	Both	Environment, Climate Change & Emergency Services	No. of Information campaigns run	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.5.2.1.1	Support the Water Framework Directive Regional Operational Committees' activities and assist in the improvement of water quality standards. and monitoring arrangements, so that they remain fit for purpose and data generated can be shared with other decision makers.	Both	Environment, Climate Change & Emergency Services	Water Quality levels on an annual review	Annual Review
	4.5.2.1.2	Support LAWPRO in their community climate programmes and projects.	Both	Environment, Climate Change & Emergency Services	No. of projects completed	Annual Review
	4.5.2.1.3	Work with partners LAWPRO, Uisce Eireann, etc. to identify the climate impacts on critical and vulnerable receptors in accordance with the River Basin Management Plan and Water Framework Directive and assist in the improvement of river water quality and restoration projects, whilst promoting the need to consider environmental protection requirements during such projects.	Both	Environment, Climate Change & Emergency Services	No. of Critical vulnerable receptors identified	Annual Review
	4.5.2.1.4	Utilise natural flood management where feasible and financially viable, having due regard to the need to protect environmental sensitivities at these locations, including water quality, biodiversity, European sites, riparian corridors and aquatic ecology.	Adaptation	Water Services & County Engineer	No. of areas identified	Annual Review
	4.5.2.1.5	Expand promotion of awareness of best practice to all users in reducing the impact of biocides on water bodies.	Both	Environment, Climate Change & Emergency Services	No. of Information campaigns run	Annual Review
	4.5.2.1.6	Promote citizen science initiatives including those focusing on water quality.	Both	Environment, Climate Change & Emergency Services	No. of Information campaigns run	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.5.2.1.7	Monitor and administer waste water discharges to waters and undertake inspections to ensure compliance with discharge licence requirements.	Mitigation	Environment, Climate Change & Emergency Services	No. of Licences in compliance as a %	Annual Review
	4.5.2.1.8	Meet annual targets for domestic waste-water treatment systems inspections per EPA National Inspection Plan.	Mitigation	Environment, Climate Change & Emergency Services	No. of inspections completed	Annual Review
	4.5.2.2.1	Implement the National Clean Air Strategy and with the support of central government and the EPA ensure monitoring arrangements remain fit for purpose, so that data generated can be shared with other decision makers.	Mitigation	Environment, Climate Change & Emergency Services	incorporate strategy into directorate plans	Annual Review
	4.5.2.2.2	Monitor and enforce Solid Fuels Regulations and Low Smoke zones, with inspections of fuel suppliers to address unauthorised sales of unapproved solid fuels.	Mitigation	Environment, Climate Change & Emergency Services	No. of Enforcements issued	Annual Review
	4.5.2.2.3	Promote awareness of the importance of clean air and the impacts of air quality.	Both	Environment, Climate Change & Emergency Services	No. of Information campaigns run	Annual Review
	4.5.2.3.1	With partners, undertake a Coastal Vulnerability Assessment of the Cork coastline to assess the impact of sea level rise to shoreline change of the Cork Coastline, to inform integrated coastal zone management and identify areas with particular requirements, and to address coastal erosion and implement coastal flooding prioritising ecosystem-based adaptation actions, having due regard to environmental sensitivities such as European sites and biodiversity.	Both	Water Services & County Engineer	Complete Assessment of Vulnerable areas	Within 3 years

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.5.2.3.2	Assist in the development of a Coastal Vulnerability Index and GIS tool. This is intended to illustrate the exposure risk along the entire Cork County coastline. This tool will inform the strategic planning of coastal management along the cork coastline.	Both	Water Services & County Engineer	Complete GIS tool	Within 3 years
	4.5.2.3.3	Conduct Beach Sediment Transportation study, to monitor select sites, document coastal change over time, develop and validate predictive models and inform funding and future interventions having due regard to environmental sensitivities such as European sites and biodiversity.	Both	Water Services & County Engineer	Complete Study	Within 2 years
	4.5.2.3.4	With stakeholders, identify climate adaptation measures for coastal infrastructure & associated defences, and utilize natural coastal management where feasible and financially viable, having due regard to environmental sensitivities such as European sites and biodiversity.	Both	Water Services & County Engineer	No. of Adaptation measures identified	Annual Review
	4.5.3.1.1	Implement Heritage plan for all aspects of conservation, awareness and recording of all aspects of heritage (built, natural, cultural) ensuring cognisance is taken of climate change and environmental protection considerations, including heritage conservation requirements.	Both	Corporate Affairs	Implement Heritage Plan	Within 2 years
	4.5.3.1.2	Incorporate climate resilience through Built Heritage Investment scheme, Historic Structure Fund and any other relevant funds introduced, having due regard to environmental protection considerations, including heritage conservation requirements.	Adaptation	Planning & Development	No of information campaigns run.	Annual Review
	4.5.3.1.3	Work with partners to support the upskilling required for the delivery of energy renovation and retrofitting in historic buildings and pursue efforts to secure grant funding for same.	Adaptation	Planning & Development	No. of Information campaigns run	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.5.3.2.1	Work with stakeholders to foster an inclusive, shared narrative to bring communities on the journey of change in tackling climate action & biodiversity loss and promote celebration of the relationship between culture and natural environment.	Both	Environment, Climate Change & Emergency Services	No. of Information campaigns run	Annual Review
	4.5.3.2.2	Support artist organisations and stakeholders to adopt environmental best practice in their work structures.	Both	Corporate Services	No. of Information campaigns run	Annual Review
	4.5.3.2.3	Support cultural heritage knowledge and practices that contribute to sustainability.	Both	Planning & Development	No. of Information campaigns run	Annual Review
	4.5.3.2.4	Support Green Schools and Heritage in Schools programmes to promote biodiversity and climate issues to schools.	Both	Planning & Development	No. of programmes supported	Annual Review
	4.5.3.2.5	Promote and support annual National Hedgerow Week.	Both	Planning & Development	Promotion campaign to be run	Run Annually
	4.5.3.2.6	Support stakeholders in incorporating biodiversity in land use, and work to support the protection of high-nature-value farmland and associated grassland biodiversity through sustainable measures such as farming practices that support soil sequestration.	Adaptation	Environment, Climate Change & Emergency Services	No. of Information campaigns run	Annual Review
	4.5.3.2.7	Work in partnership with stakeholder groups to assist communities dealing with challenges including decarbonisation and environmental challenges.	Adaptation	Environment, Climate Change & Emergency Services	No. of Information campaigns run	Annual Review
	4.5.3.2.8	Work with stakeholders to promote awareness and engagement with sustainable fishing practices and raise awareness of marine pollutions.	Adaptation	Water Services & County Engineer	No. of Information campaigns run	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.5.4.1.1	Support sectoral and national afforestation targets in mitigating climate change and the promotion of sustainable forest management initiatives, having due regard to environmental sensitivities such as European sites, water quality and biodiversity.	Mitigation	Environment, Climate Change & Emergency Services	No. of initiatives supported	Annual Review
	4.5.4.1.2	Develop a Tree Strategy to support County Development Plan objectives and provide a framework for the planning, protection, planting and management of trees and woodlands on Council property, ensuring a focus on native trees and having due regard to environmental sensitivities such as European sites and biodiversity.	Mitigation	Planning & Development	Development of a tree strategy	Within 2 years
	4.5.4.1.3	Work with stakeholders to establish a baseline and further develop targets for new tree cover pertaining to Cork County.	Both	Planning & Development	Finalise a baseline of trees	Within 2 years
	4.5.4.1.4	Support the implementation of the recommendations of the National Land Use Review.	Both	Planning & Development	No. of Policy approvals implemented.	Annual Review
	4.5.4.1.5	Support the implementation of the National Peatlands Strategy, whilst promoting the need to consider environmental protection requirements during such projects.	Both	Environment, Climate Change & Emergency Services	No. of Information campaigns run	Annual Review
	4.5.4.1.6	Implementation of County Development Plan Policy which seeks to achieve a net gain in green infrastructure through the protection and enhancement of existing assets and the provision of new green infrastructure; having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, and local air quality.	Both	Planning & Development	No. of Green Infrastructure projects completed.	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.5.5.1.1	Encourage the promotion of sustainable land use practices and nature-based solutions to water resource management and flooding which can enhance community resilience by providing natural flood defences, promoting climate adaptation, having due regard to environmental sensitivities, including Biodiversity, European sites, water quality and sensitive human receptors.	Both	Planning & Development	Creation and issuing of guidance notes and tracking pre-planning engagement on these issues.	Annual Review
	4.5.5.1.2	Promote future proofing in the design and planning of new development to fully consider the potential impacts of climate change and the need for measures to increase the resilience of development to any such impacts having due regard to environmental sensitivities, including Biodiversity, European sites, water quality and sensitive human receptors.	Both	Planning & Development	Development of Educational Toolkits related to climate action and future proofing new developments.	Annual Review
	4.5.5.1.3	Support an integrated approach to the management of surface water catchments and the use and development of lands adjoining watercourses.	Both	Water Services & County Engineer	No. of Information campaigns run	Annual Review
4.6 - Economy (Agriculture, Industry, Tourism & Business)	4.6.1.1.1	Promote and support the delivery of educational opportunities on green skills through collaboration with industry and academia.	Both	Economic Development, Enterprise & Tourism.	No. of Information campaigns run	Annual Review
	4.6.1.1.2	Work with stakeholders to monitor the needs of businesses in terms of developing new programmes to assist them in their growth and how they will deliver lower carbon goods and services.	Both	Economic Development, Enterprise & Tourism.	No. of Information campaigns run	Annual Review
	4.6.1.1.3	Liaise and collaborate with other agencies, stakeholders and education providers to assist businesses in their transition to a low carbon economy.	Mitigation	Economic Development, Enterprise & Tourism.	No. of Information campaigns run	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.6.1.1.4	Support assessment of key risks and drivers for a Just Transition in Cork County that provides insights and recommendations to understand, plan and navigate the climate transition in a way that is fair and equitable.	Adaptation	Economic Development, Enterprise & Tourism.	No. of Approvals provided	Annual Review
	4.6.1.1.5	Promote and support small enterprises with investment in energy efficient technologies and equipment through grants such as the Energy Efficiency Grant.	Mitigation	Economic Development, Enterprise & Tourism.	No. of Information campaigns run	Annual Review
	4.6.1.1.6	Support micro-SMEs with consultancy services and mentoring towards the development of sustainability management plans through programmes like Green for Micro and Greenstart.	Mitigation	Economic Development, Enterprise & Tourism.	No. of programmes completed	Annual Review
	4.6.1.1.7	Work with other stakeholders to promote and support Cork County as a sustainable tourism destination, whilst having due regard for sensitivities including biodiversity and European sites.	Both	Economic Development, Enterprise & Tourism.	No. of Information campaigns run	Annual Review
	4.6.1.1.8	Continue to support clusters such as the Cork Energy cluster in their activities to mobilise stakeholders in the energy sector to collaborate and implement climate action measures.	Mitigation	Economic Development, Enterprise & Tourism.	No. of Information campaigns run	Annual Review
	4.6.1.1.9	Encourage the development of locally sustainable enterprises in the County as well as a culture for shopping locally, including shops and farmers markets.	Mitigation	Economic Development, Enterprise & Tourism.	No. of Information campaigns run	Annual Review
	4.6.1.1.10	Explore zero/low carbon models of transporting goods in Cork County e.g., the use of cargo-bike hire schemes, ensuring due regard is had to the sustainability and potential life-cycle impacts of other transport modes.	Mitigation	Economic Development, Enterprise & Tourism.	No. of promotions of transportation options run	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.6.1.2.1	Support climate action implementation as part of all local economic development policies, programmes and initiatives, including providing incentives and support for local enterprises to operate on a sustainable model, in collaboration with partners. Assist rural enterprises to transition to a low carbon model is core to this.	Both	Economic Development, Enterprise & Tourism.	No. of Information campaigns run	Annual Review
	4.6.1.2.2	Support European and national programmes such as LEADER that enable enterprises to transition to low carbon / zero carbon models.	Mitigation	Economic Development, Enterprise & Tourism.	No. of programmes supported	Annual Review
	4.6.1.3.1	Support the development of countywide climate-related educational and awareness information events, communication campaigns and guidance documentation.	Both	Economic Development, Enterprise & Tourism.	No. of Information campaigns run	Annual Review
	4.6.1.3.2	Liaise with relevant stakeholders e.g., clusters and business networks etc throughout the County to raise awareness, promote and explore initiatives to encourage the business community to reduce their carbon footprint and adapt to climate change.	Both	Economic Development, Enterprise & Tourism.	No. of Information campaigns run	Annual Review
	4.6.1.3.3	Promote the greening of festivals and events in Cork County.	Mitigation	Economic Development, Enterprise & Tourism.	No. of festival and event organisers that feature green protocols in their programmes.	Annual Review
	4.6.1.3.4	Promote the circular economy to businesses.	Mitigation	Economic Development, Enterprise & Tourism.	No. of Information campaigns run	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.6.1.3.5	Provide information and raise awareness to Cork County enterprises and business groups to promote supports to undertake retrofits, energy efficiency and renewable energy installation on commercial buildings, whilst promoting the need to consider environmental protection requirements during such energy projects.	Mitigation	Economic Development, Enterprise & Tourism.	No. of Information campaigns run	Annual Review
	4.6.1.4.1	Develop new Remote Working Hubs in Cobh, Mitchelstown and Newmarket and develop others where appropriate. This will reduce fuel use through a reduction in transport emissions and allow people to work where they live.	Both	Economic Development, Enterprise & Tourism.	No. of Hubs opened	Annual Review
	4.6.1.4.2	Continue to promote, maintain and support existing hubs including Fermoy, Bantry and Macroom.	Both	Economic Development, Enterprise & Tourism.	No. of desk days used in Remote Working Hubs. No. of KM of driving saved per day by users.	Annual Review
Agriculture	4.6.1.5.1	Participate in a national public awareness campaign to promote householders' knowledge of how their septic tank works and the effects of septic tank and agricultural runoff on bathing water. Provide information and advice on what routine maintenance should be carried out.	Mitigation	Environment, Climate Change & Emergency Services	No. of Information campaigns run	Annual Review
	4.6.1.5.2	Run an awareness campaign, in partnership with stakeholders, to advise farmers and the public of the requirement not to spread slurry during the closed period and to encourage the public to report any such incidents to Cork County Council.	Both	Environment, Climate Change & Emergency Services	No. of Information campaigns run	Annual Review
	4.6.1.5.3	Run an awareness campaign to advise householders to minimise use of pesticides and to use pesticides responsibly.	Adaptation	Environment, Climate Change & Emergency Services	No. of Information campaigns run	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.6.1.5.4	Work with stakeholders to promote local food, thereby reducing food miles.	Both	Economic Development, Enterprise & Tourism.	No. of Information campaigns run	Annual Review
	4.6.1.5.5	Work in partnership with farmers to improve practices and infrastructure, whilst promoting the need for farming enterprises to consider relevant planning and environmental protection requirements.	Both	Environment, Climate Change & Emergency Services	No. of Information campaigns run	Annual Review
	4.6.1.6.1	Meet annual inspection targets as per EPA National Agriculture Inspection Plan. This reduces emissions associated with farmyards and in turn protects biodiversity of receiving waters and public health.	Both	Environment, Climate Change & Emergency Services	Meet Annual inspection targets	Annual Review
	4.6.1.7.1	Maintain collaboration and partnership with other public bodies operating in the county working towards improving water quality.	Both	Environment, Climate Change & Emergency Services	Water Quality levels on an annual review	Annual Review
	4.6.1.7.2	Work with LAWPRO (Local Authority Water Programme) to identify the impacts of critical and vulnerable receptors in accordance with the River Basin Management Plan and Water Framework Directive.	Both	Environment, Climate Change & Emergency Services	No of Areas identified	Annual Review
	4.6.1.7.3	Support and engage with locally and nationally led European Innovation Partnership (EIP) projects in County Cork with biodiversity, climate and community benefits.	Both	Environment, Climate Change & Emergency Services	No. of projects completed	Annual Review
	4.6.1.8.1	Assist in the improvement of water quality standards as set out in the Water Framework Directive through the agricultural inspection programmes.	Both	Environment, Climate Change & Emergency Services	Water Quality levels on an annual review	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.6.1.8.2	Use weather forecasts to predict high rainfall events which could impact on bathing water quality at monitored bathing waters. Based on risk assessment, issue warning notices at beaches where it is predicted that water quality may be negatively impacted by weather event.	Both	Environment, Climate Change & Emergency Services	No of Warnings issued	Annual Review
4.7 - Transportati on	4.7.1.1.1	Collaborate with communities and stakeholders in relation to the Cork Metropolitan Area Transport Strategy (CMATS).	Both What is the intended outcome of such action?	Roads & Transportation	No. of Information campaigns run	Annual Review
	4.7.1.1.2	Collaborate with communities and stakeholders in relation to the Local Transport Plans for towns as the plans are developed by the Council.	Both	Roads & Transportation	Completion of Local Transportation plans	Annual Review
	4.7.1.1.3	Collaborate with communities and stakeholders in developing County Cork Rural Transport in line with relevant strategies such as the *Connecting Ireland Rural Mobility Plan.*	Mitigation	Roads & Transportation	Completion of the County cork Rural Transport plan	Annual Review
	4.7.1.2.1	Develop Active travel projects throughout the county which can deliver greatest behavioural change, having due to regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites and local air quality, and opportunities to promote nature based solutions.	Mitigation	Roads & Transportation	No. of Active travel projects completed	Annual Review
	4.7.1.2.2	Planned urban development road improvements to incorporate Active travel elements as appropriate, having due to regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites and local air quality, and opportunities to promote nature based solutions.	Mitigation	Roads & Transportation	No. of active travel schemes included in plans	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.7.1.2.3	Continue the ongoing development of Greenways, such as Midleton - Youghal Greenway, having due to regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites and local air quality, and opportunities to promote nature-based solutions.	Mitigation	Roads & Transportation	No. of Greenway Kms completed	Annual Review
	4.7.1.2.4	Work with Stakeholders to promote the wider benefits of active travel.	Mitigation	Roads & Transportation	No. of Information campaigns run	Annual Review
	4.7.1.2.5	Work with relevant authorities in the development of "Safe route to schools", having due to regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites and local air quality, and opportunities to promote nature-based solutions.	Mitigation	Roads & Transportation	Number of Schools Completed.	Annual Review
	4.7.1.2.6	Apply for funding for Active Travel projects.	Mitigation	Roads & Transportation	Amount of Funding obtained	Annual Review
	4.7.1.3.1	Promote growth in locations benefitting from existing high quality public transport capacity.	Mitigation	Planning & Development	Review number of permitted units within proximity to public transport corridors.	Annual Review
	4.7.1.3.2	Align population and employment growth through integration of land use and transport planning, having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, and local air quality.	Mitigation	Planning & Development	No of Plans Completed.	Annual Review
	4.7.1.4.1	Work with the relevant stakeholders in the development of the proposed National EV charging network within County Cork, whilst promoting the need to consider environmental protection requirements and disability access during such projects.	Mitigation	Roads & Transportation	Completion of CCC EV Charging network plan	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.7.1.4.2	Engage with ESB to identify areas where the electricity network infrastructure can support EV charging, whilst promoting the need to consider environmental protection requirements during supported infrastructure projects.	Both	Environment, Climate Change & Emergency Services	Identify areas on the grid suitable for EV charging	Annual Review
	4.7.1.4.3	Liaise with Communities to raise awareness of EV grants, such as those from SEAI.	Mitigation	Environment, Climate Change & Emergency Services	No. of Information campaigns run	Annual Review
	4.7.1.4.4	Promote the use of e-vehicles through the provision of e-vehicle charge point requirements in planning applications, whilst promoting the need to consider environmental protection requirements and disability access during such projects.	Mitigation	Planning & Development	No. of charging points provided.	Annual Review
	4.7.1.4.5	Promote the use of sustainably sourced low emission fuels.	Mitigation	Environment, Climate Change & Emergency Services	No. of Information campaigns run	Annual Review
	4.7.1.5.1	Support and develop the existing Community Enterprise Centres (Hubs) network.	Both	Economic Development, Enterprise & Tourism.	No. of Hubs opened and retained. No. of work spaces used per year.	Annual Review
	4.7.1.5.2	Encourage Council staff to use online meeting options in place of in person meetings where feasible.	Mitigation	Corporate Services	No. of Information campaigns run	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
4.8 - Built Environment (Infrastructu re, Buildings & Housing)	4.8.1.1.1	Support sustainable offshore wind energy projects at appropriate locations and scales & the development of associated infrastructure at ports to facilitate these developments in accordance with the CDP, whilst promoting the need to consider environmental protection requirements at the outset of and during such projects.	Mitigation	Planning & Development	Permitted KWHs of offshore wind energy generation.	Annual Review
	4.8.1.1.2	Promote renewable energy generation, storage, and distribution infrastructure in accordance with the CDP within the county, whilst promoting the need to consider environmental protection requirements at the outset of and during such projects.	Mitigation	Planning & Development	No. of KWHs of generation and storage created	Annual Review
	4.8.1.2.1	Explore opportunities for establishing district heating to serve council assets including social housing in the county, ensuring appropriate regard is had to planning and environmental protection considerations.	Mitigation	Municipal District Operations and Rural Development	No. of Proposals put forward for district heating systems	Annual Review
	4.8.1.2.2	Support stakeholders who wish to develop district heating systems, whilst promoting the need to consider environmental protection requirements at the outset of and during such projects.	Mitigation	Municipal District Operations and Rural Development	No. of Information campaigns run	Annual Review
	4.8.1.3.1	Support and implement national policy on EV charging at nondomestic locations, having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, and local air quality.	Mitigation	Roads & Transportation	No. of Information campaigns run	Annual Review
	4.8.1.3.2	Engage with ESB to identify locations where electricity network infrastructure can support EV charging facilities, having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, and local air quality.	Mitigation	Roads & Transportation	Identify areas on the grid suitable for EV charging	Within 2 years

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.8.1.3.3	Develop and implement a policy for EV Charging as part of a wider Taking in Charge policy, having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, and local air quality.	Mitigation	Planning & Development	Implementation of EV charging Policy	Within 2 years
	4.8.2.1.1	Investigate the use of alternative low carbon material in road construction	Mitigation	Roads & Transportation	No. of roads completed using low carbon material	Annual Review
	4.8.2.1.2	Reduce embedded carbon emissions by using innovative road surfacing material	Mitigation	Roads & Transportation	No. of roads completed using low carbon material	Annual Review
	4.8.2.1.3	Investigate other infrastructure where low carbon material could be used such as footpaths, bridges, roundabouts, amenity areas, recreational trails, public realm, and other construction projects.	Mitigation	Roads & Transportation	No, of projects completed using low carbon material	Annual Review
	4.8.3.1.1	Promote the retention and reuse of existing building stock as a first preference, having due regard for environmental sensitivities such as local human receptors, European sites and biodiversity; protected species, and the need to appropriately protect and conserve protected structures, during any retrofitting works.	Both	Housing	No. of buildings reintroduced from existing council stock	Annual Review
	4.8.3.1.2	Support provision of information on grant aid for homes and businesses, whilst promoting the need to consider environmental protection requirements during such projects.	Both	Housing & Environment, Climate Change & Emergency Services	No. of Information campaigns run	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.8.3.1.3	Encourage energy efficiency improvements for buildings. Advise and educate businesses, residents on energy efficiency, whilst promoting the need for projects to conform with relevant planning policy environmental protection criteria.	Mitigation	Housing	No. of Information campaigns run	Annual Review
	4.8.3.2.1	Continue to ensure that new buildings meet the building regulations for energy efficiency.	Mitigation	Housing & Environment, Climate Change & Emergency Services	No. of building inspections completed	Annual Review
	4.8.3.3.1	Support provision of information on grant aid for onsite renewable generation, whilst promoting the need to consider environmental protection requirements during such projects.	Mitigation	Economic Development, Enterprise & Tourism.	No. of Information campaigns run	Annual Review
	4.8.3.3.2	Encourage onsite renewable generation installation, whilst promoting the need to consider environmental protection requirements during such projects.	Mitigation	Economic Development, Enterprise & Tourism.	No. of Information campaigns run	Annual Review
	4.8.4.1.1	Develop a design ethos that considers climate action in the development of new buildings by Cork County Council or on its behalf. This approach will consider a range of design options including, but not restricted to the use of low carbon materials, building fabric insulation, green roofs, solar photovoltaics, and rainwater harvesting, taking account of government policy, design standards and guidelines. Climate action co-benefits and environmental protection requirements shall be appropriately promoted be supported by the design ethos.	Both	Each Department	No. of Information campaigns run	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.8.4.1.2	Prepare and implement an annual funding program for deep energy retrofitting of existing Council housing stock, having due regard for environmental sensitivities such as local human receptors, European sites and biodiversity; protected species, and the need to appropriately protect and conserve protected structures, during any retrofitting works.	Both	Housing	Average no. of Kg of CO2 saved per household.	Annual Review
	4.8.4.1.3	Phase out all fossil fuel-based heating systems by 2030, having due regard to environmental sensitivities such as local human receptors, protected species associated with such buildings, European sites and biodiversity.	Mitigation	Each Department	No. of KGs of CO2 saved	Annual Review
	4.8.4.1.4	Refurbish all newly acquired and vacant houses to a minimum B2 energy rating, with all fossil fuel heating sources removed, having due regard to environmental sensitivities such as protected species associated with such buildings, European sites and biodiversity.	Mitigation	Housing	No. of B2 renovations completed	Annual Review
	4.8.4.1.5	Work in partnership with our development partners, the Approved Housing Bodies (AHB) sector to ensure that the measures we propose in the delivery of new housing developments are also incorporated in development proposals from the AHB sector.	Both	Housing	No. of Energy efficient houses developed.	Annual Review
	4.8.4.1.6	Run a pilot rainwater harvesting retrofit project in an existing Council housing estate in the Decarbonising Zone, while ensuring projects have appropriate regard to local environmental sensitivities such as the receiving water environment, biodiversity and European sites.	Mitigation	Housing	Completion of Pilot Rainwater harvesting project	Within 2 years

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.8.4.2.1	Advance installation of underground infrastructure for EV Charging in new social housing estates, having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, and local air quality.	Mitigation	Housing	Inclusion of EV charging infrastructure in new development plans	Annual Review
	4.8.4.2.2	Assess bike parking facilities for new social housing estates.	Mitigation	Housing	No. of new bike parking facilities installed serving social housing sites	Annual Review
	4.8.4.2.3	Ensure main electrical connections to all new social houses are designed to be easily retrofitted with electrical car charging points.	Mitigation	Housing	No. included for in planning applications.	Annual Review
	4.8.4.2.4	Undertake a review of existing estates to identify potential locations for installation of communal EV charging points and bike parking, having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, and local air quality.	Mitigation	Housing	no. of charging point identified and installed.	Within 2 years
	4.8.4.3.1	Develop a tenant awareness strategy around the benefits of behavioural change with respect to climate action in their homes.	Both	Housing	No. of Information campaigns run	Annual Review
	4.8.4.3.2	Promote the benefits of wilding and biodiversity in existing housing estates.	Both	Housing	No. of Information campaigns run	Annual Review
	4.8.5.1.1	Explore opportunities to undertake climate adaptation measures as part of public realm works.	Adaptation	Water Services & County Engineer	No. of Climate Adaptation measures included in Public Realm works	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.8.5.1.2	Work with communities to adopt local adaptation measures that reduce local weather impacts considering intensity, duration, and frequency, having due regard to the need to promote nature based solutions and Sustainable Drainage Systems, and environmental sensitivities, including water quality, biodiversity, European sites, riparian corridors and aquatic ecology.	Adaptation	Water Services & County Engineer	No. of Climate Adaptation measures completed in community projects	Annual Review
	4.8.5.2.1	Develop & implement SUDS & nature-based approaches to manage surface water and protect rivers from pollutants in road water run-off and slow the addition of water volume to mitigate flooding for development projects. Ensure due regard is given environmental sensitivities, including water quality, biodiversity, European sites, riparian corridors and aquatic ecology, during any supported development projects.	Both	Roads & Transportation	No. of SUDS solutions utilised by CCC	Annual Review
	4.8.5.2.2	Undertake rainwater management planning for all main towns. Assist Planning Policy Unit to develop a rainwater management plan for Urban settlements, having due regard to the need to promote nature based solutions and Sustainable Drainage Systems, and environmental sensitivities, including water quality, biodiversity, European sites, riparian corridors and aquatic ecology.	Both	Planning & Development	Number of Complete Rainwater Management Plans	Annual Review
	4.8.5.2.3	Support the roll out of Flood Relief Schemes in the County, including those in partnership with the OPW, as identified through the Catchment Flood Risk Assessment and Management (CFRAMS) Programme and in the County Strategic Flood Risk Assessment, having due regard to the need to promote nature-based solutions and Sustainable Drainage Systems, and environmental sensitivities at these locations, including water quality, biodiversity, European sites, riparian corridors and aquatic ecology.	Both	Water Services & County Engineer	No. of Flood Relief Schemes completed	Within the Lifetime of the plan

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.8.5.2.4	Develop a template for rainwater management plans in other urban areas.	Both	Planning & Development	Develop Template for rainwater management plan	Within 1 year
	4.8.5.2.5	Assist the Planning Department with assessment of planning applications to ensure that, all new developments/planning applications within the County have flood risk assessments in accordance with the County Development Plan, The Planning System and Flood Risk Management – Guidelines for Planning Authorities (2009), the requirements of DECLG Circular P12/2014 and the EU Floods Directive.	Both	Water Services & County Engineer	No. of Planning applications assisted with	Annual Review
	4.8.5.2.6	Develop a Scheme Climate Change Adaptation Plans (SCCAP) template for flood relief schemes.	Both	Water Services & County Engineer	Development of Template	Within 2 years
	4.8.5.2.7	During the operational lifetime of flood relief schemes, ensure that any upgrades and/or replacements use best available energy efficient technology and/or best practice, including innovative solutions where financially viable.	Both	Water Services & County Engineer	No. of Project upgrades taking place	Annual Review
	4.8.5.2.8	Ensure that procurement of all works/services follows the Department of Public Expenditure and Reform circular 20/2019: Promoting the use of Environmental and Social Considerations in Public Procurement, guidance from CCC Finance Department, and best practice; i.e., that designs are developed so as to reduce environmental impact, and that environmental criteria are included in the procurement process.	Both	Finance	No. of projects developed under the process	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.8.5.3.1	Assess bridge infrastructure in line with predicted climate impacts, having due regard to the need to appropriately protect, conserve and enhance important habitats and species and European sites, and the conservation status of protected bridges.	Adaptation	Roads & Transportation	No. of bridges assessed.	Annual Review
	4.8.5.3.2	Carry out road maintenance and rehabilitation of regional and local roads in accordance with the guidance document on the climate adaptation of regional and local roads, having due regard to environmental sensitivities, including water quality, biodiversity, riparian corridors and air quality.	Adaptation	Roads & Transportation	Km of road with maintenance and rehabilitation completed	Annual Review
	4.8.5.3.3	Continual assessment of road construction material to adapt to high and low temperature conditions.	Both	Roads & Transportation	% of low carbon materials used in road maintenance.	Annual Review
4.9 - Waste	4.9.1.1.1	Work with stakeholders to promote and support a reduction in consumption of new resources.	Both	Environment, Climate Change & Emergency Services	No. of Information campaigns run	Annual Review
	4.9.1.1.2	Promote and support the plastic bottle and aluminium can deposit refund scheme.	Both	Environment, Climate Change & Emergency Services	KGs of Cans and plastic bottles recycled through the scheme.	Annual Review
	4.9.1.1.3	Promote and support the single use plastic directive.	Both	Environment, Climate Change & Emergency Services	No. of Information campaigns run	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.9.1.1.4	Promote and support the extended producer responsibility schemes.	Both	Environment, Climate Change & Emergency Services	No. of Information campaigns run	Annual Review
	4.9.1.1.5	Work with stakeholders to expand the use of Regulation 28 end of waste criteria, in compliance with the provisions of the Waste Management Act.	Both	Environment, Climate Change & Emergency Services	No. of schemes implemented.	Annual Review
	4.9.1.1.6	Promote and support the operation of Regulation 27 By product regulation to reduce waste disposal, in compliance with the provisions of the Waste Management Act.	Both	Environment, Climate Change & Emergency Services	No. of Information campaigns run	Annual Review
	4.9.1.1.7	Work with stakeholders to ensure segregated waste disposal availability and utilisation.	Both	Environment, Climate Change & Emergency Services	% of waste collected in segregated containers	Annual Review
	4.9.1.2.1	Continue anti-litter challenge to raise awareness in communities.	Both	Environment, Climate Change & Emergency Services	No. of Information campaigns run	Annual Review
	4.9.1.2.2	Work with stakeholders on education and awareness in relation to proper disposal of waste.	Both	Environment, Climate Change & Emergency Services	No. of Information campaigns run	Annual Review
	4.9.1.2.3	Work with stakeholders on annual waste enforcement priorities.	Both	Environment, Climate Change & Emergency Services	No. of site audits and % compliance.	Annual Review

Theme	Action No.	Action Description	Adaptation /mitigation	Lead Dept.	KPI/metric	Time-frame
	4.9.1.3.1	Manage Closed landfills to minimise emissions, whilst promoting compliance with environmental protection requirements associated with closed landfill sites.	Mitigation	Environment, Climate Change & Emergency Services	Measurement of Emissions released per year	Annual Review
	4.9.1.3.2	Work with stakeholders to remediate and manage historic landfills, whilst promoting compliance with environmental protection requirements associated with closed landfill sites.	Mitigation	Environment, Climate Change & Emergency Services	Measurement of Emissions released per year	Annual Review
	4.9.1.3.3	Work with stakeholders to reduce emissions from treatment of leachate, having due regard to planning and environmental protection considerations.	Mitigation	Environment, Climate Change & Emergency Services	Measurement of Emissions released per year	Annual Review
	4.9.1.4.1	Promote civic amenity sites as alternative to kerbside collection for proper disposal of waste, having due regard to planning and environmental protection / nuisance considerations in relation to such sites.	Both	Environment, Climate Change & Emergency Services	Measurement of waste disposed at civic amenity sites	Annual Review
	4.9.1.4.2	Promote bring banks for disposal of glass containers and food cans, having due regard to planning and environmental protection / nuisance considerations in relation to such sites.	Both	Environment, Climate Change & Emergency Services	KGs of Cans and glass containers recycled through the scheme.	Annual Review
	4.9.1.4.3	Support stakeholders in reduction to packaging.	Both	Environment, Climate Change & Emergency Services	No. of Information campaigns run	Annual Review
	4.9.1.4.4	Support roll out of 3 bin collection to commercial sector.	Both	Environment, Climate Change & Emergency Services	% of commercial customers served by 3 bins	Annual Review

APPENDIX 4

LACAP SAMPLE IMPLEMENTATION ACTIONS

Theme	Action No.	Action Description	Steps	Lead Dept	KPI/metric	Time-frame
4.2 - Governance	4.2.1.2.1	The existing internal structure for the development of this plan will remain in place initially and will be adapted throughout the lifetime of the plan to respond to new challenges as they occur. This structure will nurture inter- departmental co-operation to ensure that progress on the 'implementation monitoring' of the plans actions is being reported on to deliver this plan. This structure is as follows: **1.** A high-level senior management Steering Group, chaired by the Chief Executive, the purpose of which is to set the overall targets for the delivery of the Climate Action Plan, including budgets and resources. This group meets 1-2 times per annum. **2.** An Operational Group which is chaired by the Divisional Manager with responsibility for the Environment Directorate. This is also a senior management group and it reports to the Steering Group. The purpose of this group is to ensure that the individual and specific actions included in the Climate Action Plan are undertaken by the directorates. This group meets 2-4 times per annum. **3.** An Implementation Group, which will include a representative from all directorates and functions, which is made up of middle management who review the day-to-day logistics and implementation of individual actions. This	A regular meeting schedule is to be issued to all groups outlining targets and date for meetings for the year. **1.** Steering Group to be appointed. First meeting scheduled within 12 weeks of passing of resolution on the Climate Action Plan. **2.** Operational Group meeting is to be held within 4 weeks to get agreement form the directorates on the annual commitments **3.** Implementation group meeting will be arranged within 4 weeks to review the targets and set out day to day actions and	CE/SEO Corporate Services Division Manager/SEO Climate Action co-ordinator	Has Steering Group been appointed. No. of Meetings Held. No. of Meetings eld. A list of Annual Commitments issued. No. of Meetings Held % of Implementation	Within year 1 of the LA CAP resolution

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		group will be chaired by the Climate Action Co-ordinator and will meet as required and at a minimum of once a quarter.	logistical challenges to be overcome to achieve the targets set.		actions completed.	

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4.3 - Direct Emissions	4.3.1.2.2	Assess opportunities to replace oil/gas burners usage with renewable alternatives to identify projects for annual implementation programme, having due regard to planning and environmental protection considerations.	Assess opportunities to replace oil/Gas Burners in selected council owned buildings.	SEO Environment Facilities	Asset Register of Oil/Gas Burners prepared	Within year 1 of the LA CAP resolution
4.4 - Community, Information & Awareness	4.4.1.3.1	Support the delivery of Local Climate Action projects funded through the new Community Climate Action Programme (CCAP). The CCAP will operate under the following themes. • Home(Community)/Energy • Travel • Food and Waste • Shopping and Recycling • Local Climate and Environmental Action.	Open call for Phase I applications on local climate action projects	Environment, Climate Change & Emergency Services	Applications received	Within year 1
			Evaluate applications and make recommendation to the Minister for the Environment, Climate and Communications on a proposed portfolio of projects	Environment, Climate Change & Emergency Services	Applications recommended for approval	Within year 1
			Finalise contracts and MOUs with approved projects	Environment, Climate Change & Emergency Services	Applications approved	By years 3
			Monitor the implementation of the CCAP Phase I portfolio of projects to ensure successful delivery.	Environment, Climate Change & Emergency Services	Projects delivered to completion	By years 3

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4.5 - Biodiversity, Natural Environment, Heritage & LULUCF	4.5.1.4.2	Undertake review of existing council-owned housing estates to supports residents in identifying areas suitable for biodiversity protective measures in accordance with best practice (e.g., tree planting, wildflower meadows, pollinator zones etc.).	Advertise to the residents associations within council owned estates in the DZ area for proposals on new biodiversity projects within their estates.	Biodiversity Officer	Completion of Advertising and information campaign No. of submissions received.	Within year 1 of the LA CAP resolution
			Provide guidance to the Resident Associations on items that can be achieved and how funding can be applied for within existing funds.	Biodiversity Officer	No of Resident Associations to make submissions and a measure of their participation.	Within 2 years of LACAP resolution
			Provide feedback on proposals received and support to assist communities complete projects.	Biodiversity Officer	No. of Projects Completed	Within 3 years of LACAP resolution
4.6 - Economy (Agriculture, Industry, Tourism & Business)	4.6.1.4.1	Develop new Remote Working Hubs in Cobh, Mitchelstown and Newmarket and develop others where appropriate. This will reduce fuel use through a reduction in transport emissions and allow people to work where they live.	Identify requirements for a hub in the Cobh, Mitchelstown and Newmarket.	SEO Economic Development	No. of work spaces required identified.	Within year 1 of the LA CAP resolution
			Assess properties and procure for installation of a new hub.	SEO Economic Development	No. of premises procured	Within 2 years of LACAP resolution

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			Fit out and appoint management team to operate.	SEO Economic Development	No. of hubs open for use.	Within 3 years of LACAP resolution
4.7 - Transportation	4.7.1.4.2	Engage with ESB to identify areas where the electricity network infrastructure can support EV charging, whilst promoting the need to consider environmental protection requirements during supported infrastructure projects.	Work with ESB/Eirgrid to identify areas of the grid which coalesce with the aims of the county development plan on parking in each area.	Climate Action Officer	Identify areas on the grid suitable for EV charging	Within year 1 of the LA CAP resolution
4.8 - Built Environment (Infrastructure, Buildings & Housing)	4.8.4.1.2	Prepare and implement an annual funding program for deep energy retrofitting of existing Council housing stock, having due regard for environmental sensitivities such as local human receptors, European sites and biodiversity; protected species, and the need to appropriately protect and conserve protected structures, during any retrofitting works.	Identify a council estate in the DZ area for retrofitting and complete procurement to complete the retrofit works.	SEO Housing	Average no. of Kg of CO2 saved per household.	Within 3 years of LACAP resolution
4.9 - Waste	4.9.1.1.5	Work with stakeholders to expand the use of Regulation 28 end of waste criteria, in compliance with the provisions of the Waste Management Act.	Implement a deposit and refund scheme at all civic amenity centres for aluminium cans and plastic bottles.	SEO Waste	KGs of Cans and plastic bottles recycled through the scheme.	Within 2 years of LACAP resolution

CORK COUNTY COUNCIL CLIMATE ACTION PLAN 2024-2029

Comhairle Contae Chorcaí

Cork County Council