CILL MHANTÁIN
WICKLOW
DEISEANNA SÍORA
ENDLESS OPPORTUNITIES

WICKLOW COUNTY COUNCIL
CLIMATE ACTION PLAN
2024-2029

JANUARY 2024

This Climate Change Action Plan has been prepared by the Wicklow County Council Climate Action Team, in partnership with the Eastern & Midlands CARO, our Climate & Biodiversity Action Strategic Policy Committee and the Elected Members of Wicklow County Council.

The Climate Action Plan was also prepared having regard to Local Authority Climate Action Plan Guidelines and having regard to Delivering Effective Climate Action 2030.

Strategic Environment Assessment (SEA) and Appropriate Assessment (AA):

The Climate Action Plan has been prepared in accordance with the requirements of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 and Article 6 of the Habitats Directive 92/43/EEC. The SEA and AA process, carried out in tandem with the preparation of the Climate Action Plan, have ensured full integration and consideration of environmental issues throughout the action plan preparation process.

The SEA Environmental Report and Screening Statement in support of the AA and Natura Impact Report are available as separate documents, to be read in conjunction with this Climate Change Action Plan.

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FOREWORD:

Message from Chief Executive

Emer O' Gorman

In 2019 Wicklow County Council was the first local authority to declare a climate and biodiversity emergency as a direct response to the increasing evidence of rapidly evolving change in our climate and biodiversity system. This declaration was also responding to a direct call from the youth of County Wicklow for more urgent action. Wicklow County Council was also the first local authority to establish a Climate and Biodiversity Action Strategic Policy Committee to coordinate its policy response on climate and biodiversity. Since 2019 Wicklow County Council has strengthened its response, providing leadership with a dedicated Climate Team and the establishment of the Mid East Energy Unit, an energy partnership with Kildare and Meath County Councils, with Wicklow as Lead Authority. In addition, the Council has empowered staff through the actions of the internal Green Team and the implementation of climate actions across the different Directorates of the Council.

Although Wicklow has been proactive in terms of implementing the actions of the adopted Climate Adaptation Strategy, this Climate Action Plan is its first plan covering both mitigation and adaptation. It is a plan specific for Wicklow, shaped by the national objective to deliver transformative climate action, making it real at local level in the process. Wicklow County Council's ambition is to lead by example in delivering climate action, while also mobilising engagement of the people of Wicklow. We will build on extensive work already done to date, accelerating its delivery and deepening its impact. The short term aim is to deliver on the 2030 targets in the National Climate Action Plan but with a focus on 2050 and a vision of creating a vibrant and decarbonised future.

Over the life time of this plan the ambition is to achieve a 51% reduction in greenhouse gas emissions from all local government buildings, assets and infrastructure. Wicklow County Council will undertake exemplar work to improve the energy efficiency and performance of its buildings and operations.
Our county, our people and our planet are at the heart of this plan. Through it we will deliver a more vibrant future for the youth and wider community of Wicklow, one with a strong decarbonized economy and resilient natural systems as the outcome.

FOREWORD:

Message from Cathaoirleach of Wicklow County Council

Cllr. Aoife Flynn Kennedy

Climate Change is one of the most important issues that will affect the County of Wicklow. As the Cathaoirleach of the County I welcome the publication of the Climate Change Action Plan 2024-2029. This action plan commits both the Elected Members and the Executive of the Council to achieving the national targets set for the public sector emission reduction. Climate and sustainability are now central to all policy development within the organisation. Climate action has been fully integrated as a core theme running through key policy documents including the Corporate Plan, the County Development Plan and the Local Economic and Community Plan. The elected members of Wicklow County Council will continue to act on the interests of the community, developing and reviewing relevant policies strengthening both the Climate Change and Biodiversity agenda.

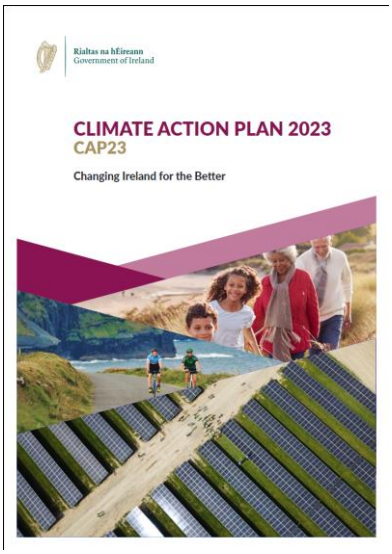
Wicklow's natural resources including its biodiversity, habitats, waters, soils and landscapes are what make the character of Wicklow unique. These precious resources require good stewardship. Working to restore their regenerative capacity can help to build their resilience to the impacts of Climate Change, creating a better future for communities as well.

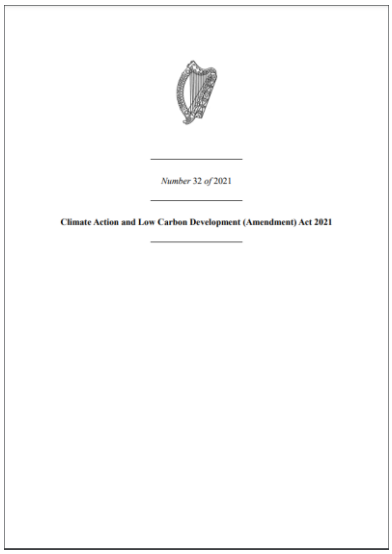
While meeting its own targets Wicklow County Council recognises that it plays a key role in both community and economic development. We are committed to working with stakeholders in the county to ensure that all sectors are mobilized and that, through a just transition and that no one gets left behind. Wicklow has an opportunity to be a leader in developing both green technology and renewables. Commuting is a key challenge for many in the county and this plan will focus on reducing car dependency through a modal shift of transport. The launch of the Community Climate Action Fund is an opportunity to further partner with communities on the delivery of key local projects that will make a difference in achieving a low carbon future.

This plan responds to the call for transformative action on climate change with Wicklow leading by example and working with all elements in our communities to progress local actions that deliver on our ambition to decarbonise the county by 2050.

1.0: EXECUTIVE SUMMARY:

The Wicklow Climate Action Plan sets out our commitment to address climate change in line with our statutory obligations, guided by the Climate Action and Low Carbon Development (Amendment) Act 2021 and the National Climate Action Plan 2023. Our overarching goal is to transition to a climate-resilient, biodiverse, sustainable, and carbon-neutral County by 2050. Our plan aligns with the national climate objective, which targets a climate-neutral economy by 2050.





The plan builds on Wicklow County Council's commitment to the Local Authority Climate Charter, pledging to achieve a 51% reduction in carbon emissions and a 50% improvement in energy efficiency by 2030. Using the UN Sustainable Development Goals (2030) as a guide, Wicklow County Council will ensure a just transition underpins the delivery of actions. We view this as a crucial step toward a net carbon-neutral future. The plan addresses both mitigation and adaptation measures across the services and functions delivered by Wicklow County Council.

Against the ambitious and evolving framework of national policy Wicklow County Council will mainstream climate action across its own assets, services and infrastructure whilst also pursuing leadership at local level. The plan will also demonstrate the wider role of Wicklow County Council using influence, facilitation and advocacy to mobilize other sectors in the county to take action. Building collaboration by bringing together the critical stakeholders at a national and regional level to create partnership with local communities, enterprise and sectoral interests in order to deliver an opportunity of a climate neutral future.

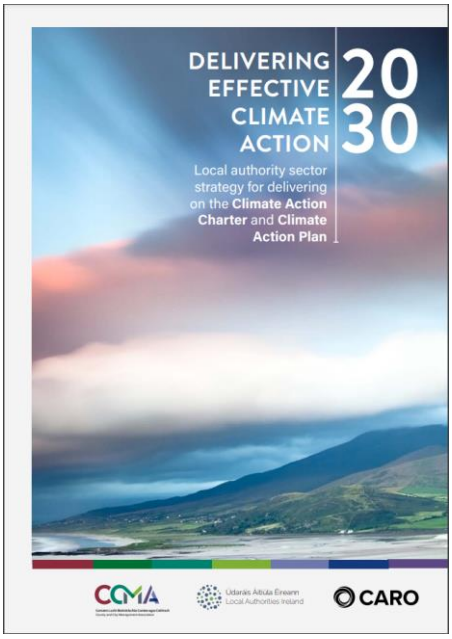
The foundation of this plan is rooted in Wicklow's unique characteristics, encompassing its diverse geography, protected areas, population growth and strategic transport infrastructure. We have identified the key sources of emissions, primarily stemming from residential and commercial heating, transport and agriculture. Our Climate Risk Assessment underlines the pressing need for adaptation measures as we witness temperature increases, sea-level rise and an increase in extreme weather events.

Our Vision: Leverage the capability, operations and resources of Wicklow County Council to effectively lead and coordinate climate mitigation and adaptation to develop a vibrant decarbonized future for communities with resilient and regenerative natural systems throughout County Wicklow.

Our Mission: Deliver transformative change and measurable climate action in the operation of our services for the people of Wicklow, through leadership and example. Mobilise action on mitigation and adaptation through partnership with communities, enterprise and other stakeholders at regional and local level. Create a low carbon, climate resilient future, for the county.

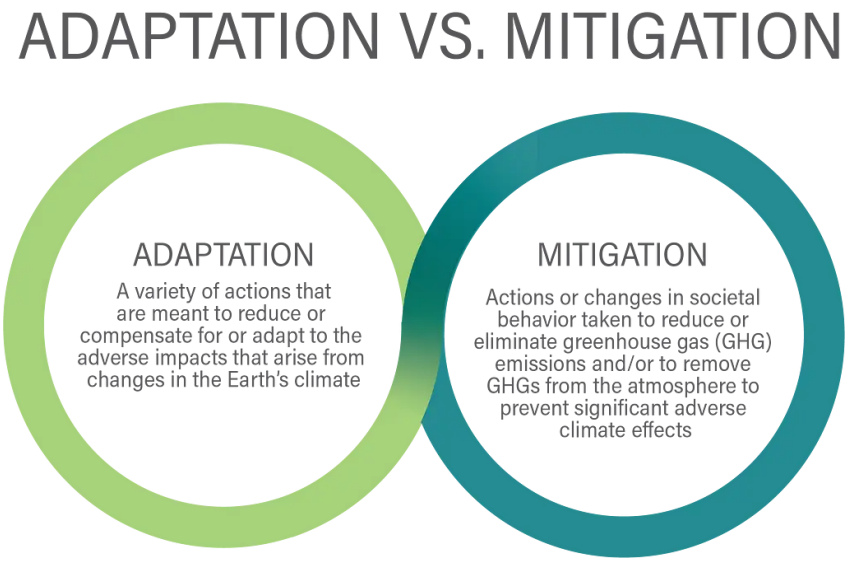
This plan has eight strategic goals which will ensure a coherent approach to transforming the organisations delivery of service, a focus on measurable reduction in emissions and engagement of key stakeholders in the delivery of climate action. The eight goals are based on the objectives of the Delivering Effective Climate Action 2030 and are listed as follows:

1. Adopt climate focused governance, provide leadership and build partnerships for climate action.
2. Achieve carbon emissions reduction of 51% and energy efficiency improvement of 50% in our operations by 2030, creating a pathway to net zero by 2050.
3. Deliver on climate adaptation, biodiversity resilience and enhanced capacity for our environment to adapt to changing conditions.
4. Mobilise and empower climate action in local communities.
5. Mobilise climate action in enterprise and agriculture, supporting the transition to an inclusive, net zero and circular economy.
6. Achieve a 'just transition' particularly for communities that may be economically disadvantaged by decarbonising projects or impacted by climate change.
7. Support decarbonisation of transport and modal shift from cars to active travel and public transport.
8. Test the scope and scale of decarbonisation in Arklow with the aim of creating a vibrant town which has low carbon living at its core.



These goals are categorized under the following five thematic areas which provide a structured framework for Wicklow 135 climate actions. These themes are shown as follows:

Arklow has been designated as our pilot decarbonisation zone, where we will test mitigation, adaptation, and biodiversity measures on a wider scale. Our vision is to develop a low-carbon, vibrant town with a strong focus on renewable resources and sustainable living. We will actively engage the business community, promote housing retrofits and advocate for a modal shift from cars towards smarter more sustainable transport. The utilisation of local biodiversity and marine resources will further enhance resilience.



Our Climate Action Plan incorporates robust structures and processes for ongoing monitoring and reporting. Each action will be accompanied by defined indicators to gauge progress accurately. We are committed to aligning the reporting of Wicklow County Council's climate actions with the National Climate Action Plan and the UN Sustainable Development Goals, ensuring transparency and accountability.

Recognizing the urgency of the climate crisis, Wicklow County Council remains steadfast in its commitment to taking effective climate action for the benefit of our community and the environment.

2.0 INTRODUCTION

2.1 Introduction to Climate Action

Wicklow County Council has prepared this Climate Action Plan 2024–2029 to create 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, 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 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 the 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 Adaptation** 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, extreme weather events etc).

This Plan sets a clear pathway for Wicklow County Council to:

- Actively translate national climate policy to local circumstances with the prioritisation and acceleration of evidence-based measures;
- Assist in the delivery of the climate neutrality objective at local and community levels; and
- Identify and deliver 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 will assist in the delivery of the National Climate Objective. The successful delivery of actions in the DZ may then be rolled out to other towns in the County.

Set against the backdrop of an evolving and ambitious framework of national climate policy, Wicklow 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. The Plan is subject to approval by the Elected Members of Wicklow County Council, following public consultation and engagement.

A range of other plans, including the Council's Corporate Plan 2019-2024 and the Wicklow County Development Plan 2022 - 2028, also support the plan. In addition, the development of this plan has had due regard to existing climate policy within the County including the Climate Action Charter and the Climate Change Adaption Strategy 2019.

The plan sets out how Wicklow County Council will be responsible for enhancing climate resilience, increasing energy efficiency and reducing greenhouse gas emissions, across its own assets, services and infrastructure, to 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 2.1 illustrates the scope of the Council's responsibility on climate action.

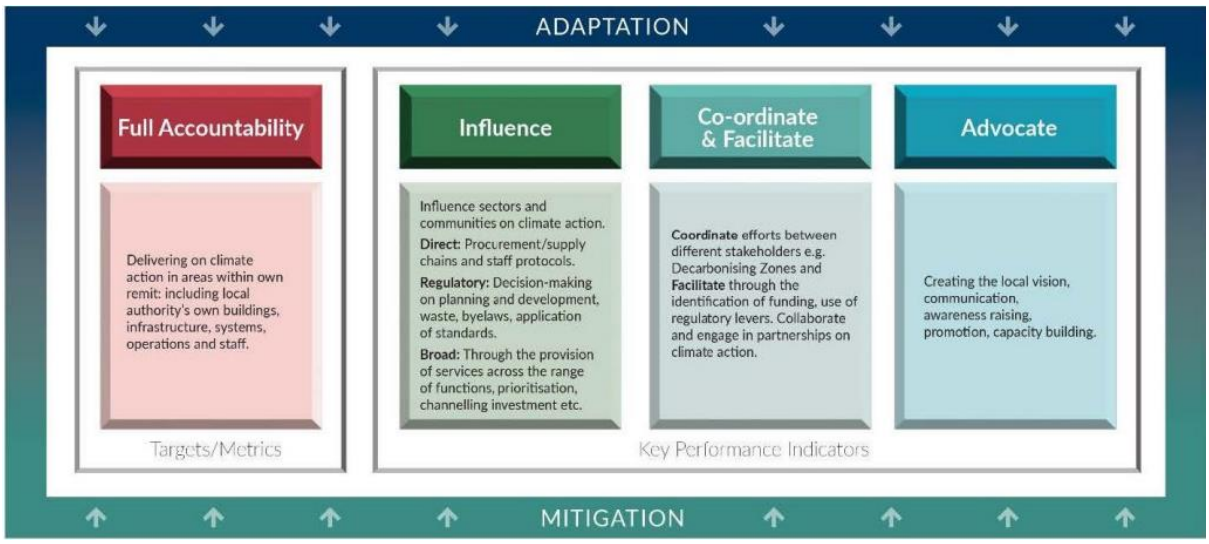


Figure 2.1 Council's Scope on Climate Action

(Source: Local Authority Climate Action Plan Guidelines, 2023)

The Council will continue its efforts in rolling out ambitious climate action projects, drawing down available sources of funding, pursuing citizen and stakeholder engagement, all supported by a progressive policy framework. The communities of the County will be supported by the Community Climate Action Fund to build low carbon communities in a considered and structured way. The Council itself has launched the Climate Innovation Fund 2021 and the aim of this fund is to foster innovative climate solutions in the County.

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.

2.2 Consultation on this Plan

To inform the development of this Plan, the Council has engaged in an extensive series of collaborations with all stakeholders to gather views on risks, barriers and opportunities to implement climate action. A summary of the groups engaged in this consultation are listed as follows:

- Climate & Biodiversity Action Strategic Policy Committee
- Wicklow Comhairle na nÓg
- Planning Development & Environment Strategic Policy Committee
- Various sections and staff of the Council;
- The Elected Members
- The public through stakeholder events within the County;
- Neighbouring local authorities
- Eastern & Midlands CARO
- Public Participation Network
- LAWPRO
- NPWS
- Children and Young Peoples' Assembly
- The IFA, Teagasc (Signpost) and ACRES
- Third Level Institutions
- Wicklow Naturally
- Arklow engagement with citizens, business groups and various groups on the implementation of the decarbonisation zone.

The views expressed in this consultation have been taken into account in the development of this Plan which will be subject to public consultation affording all citizens a further opportunity to formally comment before finalisation and adoption of the Plan.

2.3 Overview of Climate Change

Climate change is increasingly understood to be the most critical, long-term global challenge of our time, its impacts continue 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 2.2 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.

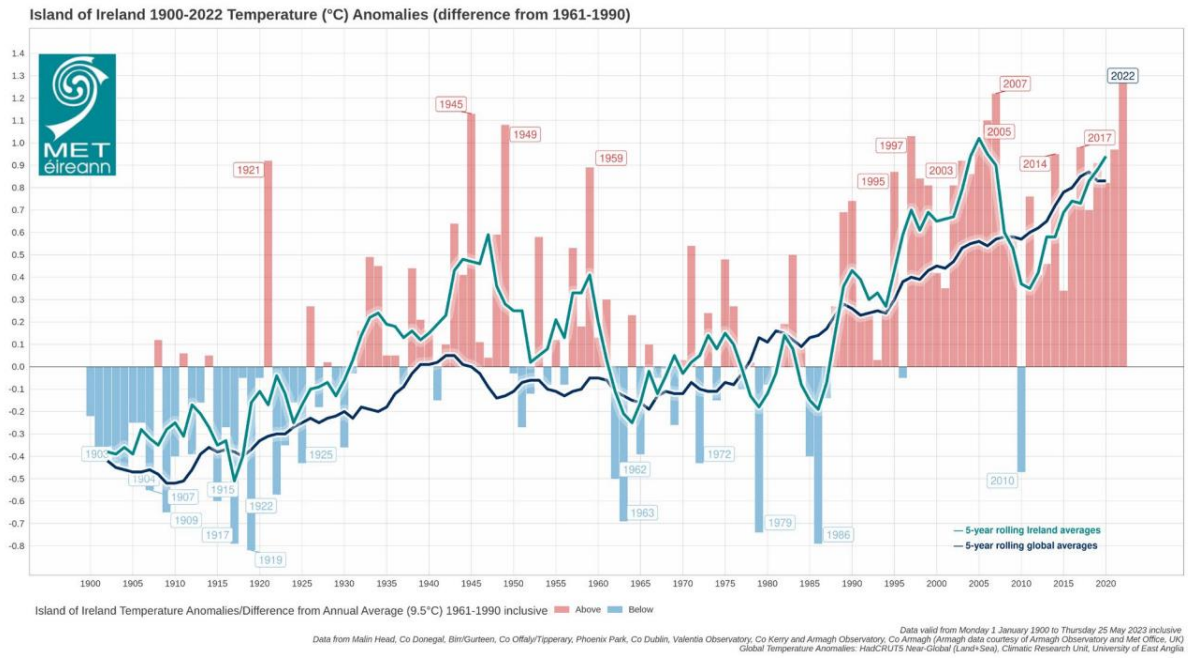


Figure 2.2 Island of Ireland 1900-2022 Temperature (°C) Anomalies (difference from 1961-1990)

(Source: Met Éireann)

This is reiterated in the precipitation observations from 2022, where rainfall was recorded at below the long-term average at most stations. There was variability in rainfall throughout 2022, with extremes being felt in each of the seasons, resulting in a drier summer and spring, and a wetter autumn and winter.

The rate of global sea level rise for 2006–2015 of 3.6 mm per year, is unprecedented over the last century, and about 2.5 times the rate for 1901–1990. Sea level is projected to continue to rise at this rate or greater. All major cities in Ireland are in coastal locations subject to tides, any significant rise in sea levels will have major economic, social and environmental impacts. Rising sea levels around Ireland would result in increased coastal erosion, flooding and damage to property and infrastructure (EPA Observed and Projected Climate Change).

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 (Climate Action Plan 2023). The adverse impacts of climate change can often compound wider reaching social, environmental and economic challenges.

Based on observed changes in climate and its impacts, Met Éireann, the Environmental Protection Agency (EPA) and other climate scientists, are able to 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 County Wicklow 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 and 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.
- Based on current trends, County Wicklow will see an increase in sea level rise, similar to what has been experienced to date. County Wicklow 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.

2.4 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 which is summarised in Figure 2.3 below:

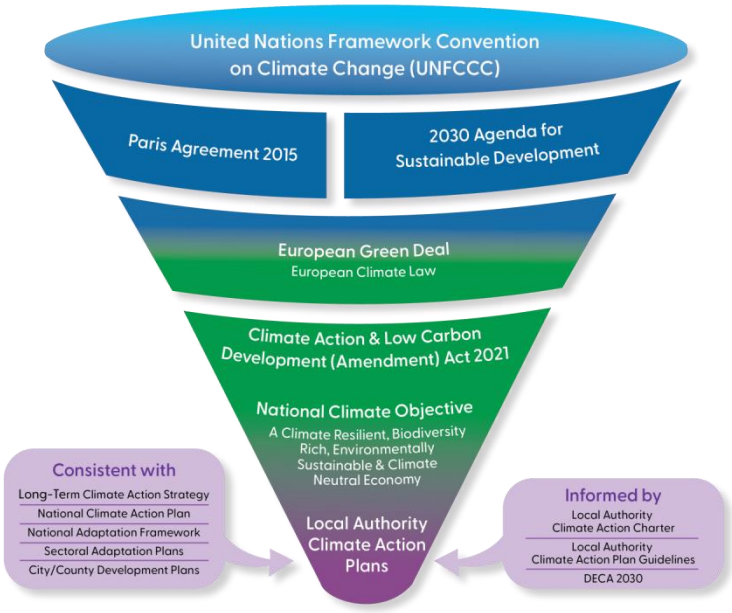


Figure 2.3: Legislation and Policy Context for the Climate Action Plan

(Source: Climate Action Regional Offices)

2.4.1 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 2^0C and pursuing efforts to limit the temperature increase to 1.5^0C 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 and in 2019, world leaders called for a 'decade of action' in order to achieve the Goals within this timeframe. All actions proposed in Chapter 4 (for the County) and Chapter 5 (for Arklow DZ) of this Plan are mapped against these SDG. The SDGs are further addressed in Section 6 of this Plan.

Figure 2.4: United Nations Sustainability Goals

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.

2.4.2 Climate Change Policy in Ireland

Climate change policy in Ireland now reflects the ambition of the EU and that 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.

Section 15 of the Climate Act 2015 defines the duties of certain bodies under the Act. This section was amended by Section 17 of the Climate (Amendment) Act 2021 which has replaced Section 15(1) of the 2015 Act to read as per the text box below:

> *15. (1) A relevant body shall, in so far as practicable, perform its functions in a manner consistent with—*
>
> *(a) the most recent approved climate action plan,*
>
> *(b) the most recent approved national long term climate action strategy,*
>
> *(c) the most recent approved national adaptation framework and approved sectoral adaptation plans,*
>
> *(d) the furtherance of the national climate objective, and*
>
> *(e) the objective of mitigating greenhouse gas emissions and adapting to the effects of climate change in the State.*

Wicklow County Council is a public body and therefore a relevant body under the Act of 2015. As such, these requirements apply to the Council and its functions and the Council is obliged to have due regard to this national policy and this Plan in carrying out all of its functions.

The Climate Action Plan 2023, launched on 21st December 2022, is the second annual update to the State's Climate Action Plan 2019 and the first to be prepared under the Climate Action and Low Carbon Development (Amendment) Act 2021, and following the introduction, in 2022, of economy-wide carbon budgets and sectoral emission ceilings. Climate Action Plan 2023 sets out a roadmap to 2025 towards taking decisive action to halve emissions by 2030 and reach net zero, no later than by the end of 2050, as committed to in the Programme for Government. An updated national Climate Action Plan is currently under preparation and is due for publication in 2024.

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 decarbonisation 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.

The Local Authority Climate Action Charter, signed by Wicklow County Council in October 2019, represents a commitment to scale up efforts and play a key role locally and nationally in delivering effective climate action. It tasks all local authorities with providing robust leadership in advancing climate action at regional and local levels, with adhering to the UN SDGs, in particular Goal 13 Climate Action, as well as reducing emissions from their own operations and 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 decarbonisation and adaptation responses to climate change.

2.4 Local Authority Climate Action Planning

The Wicklow 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 Delivering Effective Climate Action 2030. Over its preparation and implementation, the Council's climate action plan offers an opportunity to bring together critical stakeholders across communities and businesses to build a vision for a climate neutral future.

Wicklow County Council and other local authorities are already well positioned at the forefront of climate action in Ireland. Wicklow County Council plays a significant role in terms of delivering adaptation (the Council has already published a Climate Change Adaption Strategy 2019) 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.

The Wicklow 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.

This 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 this 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 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.

The council will consider amending this Climate Action Plan to align with any relevant updates to the National Climate Action Plan, National Planning Framework or alternative relevant high level plans and programmes.

The council may revise this Plan and will take account and of any relevant recommendations in the State of Environment Report, Ireland's Environment - An Integrated Assessment 2020 (SOER2020) when published by the EPA. The report identifies thirteen 'Key Messages for Ireland'. Delivering Ireland's long-term sustainable development and environmental objectives will involve many different stakeholders to address these key actions. The report recognises the need for full implementation of existing environmental legislation and review of governance/coordination on environmental protection across public bodies.

2.5 National Waste Management Plan for a Circular Economy

The National Waste Management Plan for a Circular Economy has been prepared by the Local Government Sector arising from its obligations under the Waste Management Act. The Plan sets out a framework for the management of waste for the period 2024 – 2030 and adopts the Ambition of 0% Waste Growth for every individual each year for the lifetime of the plan. The Plan sets out targets for the reduction of waste from households, businesses, and the construction sector and includes targets for improved compliance on the segregation of waste and the reuse and repair of materials.

Core Policy 2 of the Plan relates to Climate Action and supports the delivery of the measures and actions prescribed in the Climate Action Plan to contribute to achieving the national climate targets. Circularity is a key driver of the National Waste Management Plan and is a common denominator across all sixteen focus areas in the Plan with associated targeted policies and priority actions for implementation.

The National Waste Management Plan for a Circular Economy is where circularity meets climate action and where the benefits of improved practices on waste prevention and management will contribute to the achievement of Ireland's climate targets over the coming years. The Plan was developed in collaboration with key partners and stakeholders and contains a range of key deliverables to ensure that the collaborative approach continues throughout the implementation phase of the Plan. The achievement of the priority actions set out in the plan will make a significant contribution to climate action and the co-ownership of the actions emphasises the contribution that all stakeholders must make.

The implementation of the Plan will include continuous analysis of material flows and waste streams as key indicators for the achievement of the Plan ambition and targets and the Plan commits to an annual evaluation of the impact of the Plan on Circularity and Climate Action.

2.6 Structure of the Climate Action Plan

This 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 and its impacts and projections for the future. In showing the outcome of this process, this Climate Action Plan is set out in four parts.

- **Chapter 3**: the evidence base used to inform on climate action within the jurisdictional area of Wicklow County Council is presented, including climate change risks and emissions baseline profile;
- **Chapter 4**: the Plan outlines its framework for climate action including the Plan Vision, Mission, Strategic Goals, Objectives and Actions;
- **Chapter 5**: Presents the Arklow Decarbonisation Zone (DZ), including the Vision for the DZ, DZ Strategic Priority Areas and DZ Actions.
- **Chapter 6**: 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.

3.0 EVIDENCE BASED CLIMATE ACTION:

3.1 Creating an evidence base for Climate Action

Local authorities are statutory required to produce a Climate Acton Plan that must follow a place-based approach, taking account local circumstances, establishing a baseline for adaptation and mitigation.

The process supports a collaborative, bottom up understanding of the impacts and risks of climate change and key sectoral sources of emissions across the county. This baseline is used to build the framework for climate action within the wider policy context at national level through the National Climate Action Plan and the commitments made by Wicklow County Council through the Climate Charter. The baseline analysis allows Wicklow County Council to identify synergies and opportunities. Through it Wicklow County Council can then leverage mechanisms and actors in the delivery of effective climate action in County Wicklow.

3.2 Profile of County Wicklow

County Wicklow is characterised by a rich and diverse geography from the uplands, through rolling hills and its coastal landscapes with numerous environmentally sensitive sites.
There is a growing and ageing population across the County, with people employed in a range of industries and professions. Dublin provides a key region of employment for County Wicklow with a substantial commuting population.

Within the county there are two nationally important transport networks, the DART and the M11 and important regional connections including the east coast railway line and the N81 in West Wicklow. Climate action planning and implementation will therefore have to consider a wide range of local, regional and national factors.

County Wicklow is referred to as the 'Garden County' and is strategically located on the east coast of the country. It is part of the Greater Dublin region and consists of a varied mix of mountains, foothills, farmland, beaches, forests and lakes with 21 towns of which Bray, Greystones, Wicklow, Rathnew, Arklow, and Blessington are the largest. The county covers an area of 2,027 square kilometres.

The Wicklow Mountains are the largest mountain area and national park in Ireland and the county has over 60 km of coastline. As well as containing the country's largest national park, (Wicklow National Park protects 20,000 hectares of land) the county has seventeen SACs (Special Areas of Conservation),

thirty five pNHAs (proposed Natural Heritage Areas), four SPAs (Special Protection Areas) and six nature reserves.

County Wicklow is an important regional source for water. Key catchments within the county include: River Liffey, River Slaney, Avonmore River, Vartry River and River Dargle. Located in the west of the county, Poulaphouca Reservoir is the largest manmade lake in Ireland and is a major water source for Dublin. The Vartry reservoir supplies water for parts of Wicklow and South Dublin.

According to the 2022 Census, County Wicklow has a population of 155,485 people, which has increased by 9.2% since 2016. The population of County Wicklow is expected to continue to grow with 5000 to 9000 more people expected to be living in the county by 2031. The proportion of those aged 65 and over is also expected to increase on a national and county basis. On a national basis, the population of those aged 65 and over is projected to double by 2051.

Wicklow's population has become more urbanised in recent decades particular in the northern and eastern parts of the county. Wicklow has a commuting population of 65,759 (workers and students) with 68% of these travelling by car and more than half leaving the county for work. The Dublin-Rosslare Main Train Line and the Dublin Area Rapid Transit (DART) run along the Wicklow coast providing a key public transport mode while the M11 and N81 traverse the county north-south, with regional and local roads generally providing routes east-west.

The county's main industries of employment include Commerce and Trade (26%), Professional Services (23%), Other (18%), Manufacturing (10%), Transport and communications (9%) and Building and Construction (6%), with most firms in County Wicklow classed as SMEs. The county's tourism sector is an important component and driver of the economy, with 275,000 overseas tourists visiting the county in 2017, generating over €73 million for the local economy. A further 319,000 domestic visitors generating an estimated €49 million for the local economy.

The Local Government Act 2014 changed and expanded the role of for local government in the county making it the main vehicle for local governance and public service at local level, leading economic social and community development and supporting stronger inter-agency collaboration.

The County Development Plan 2022 – 2028 includes objectives for the promotion of sustainable settlement and transport strategies in urban and rural areas, including measures to reduce energy demand and greenhouse gas emissions and to adapt to climate change, having regard in particular to the location, layout and design of new development. This requirement pervades all aspects of the plan but is particularly addressed in chapter 2 of the County Development Plan.

The Climate Action and Low Carbon Development Act 2021 (as amended) requires Wicklow County Council to develop a plan that is place based, shapes the local authority role in delivering climate action, leading by example through a transformative change in the delivery of services and operations, while building collaboration with neighbouring local authorities and stakeholders on climate action. Challenges and Opportunities for Climate Action include:

- Transforming the impact of service delivery by Wicklow County Council, reducing carbon emissions 51% and improving energy efficiency by 50 % by 2030, creating a pathway to net zero for the organisation by 2050.
- Spatial planning that incorporates adaptation and mitigation into their management objectives will be essential to manage climate risk and sustainable development across Wicklow's diverse landscape.
- Compact development with access to services nearby will be essential to support the resilience of the County and to remain an attractive area for Foreign Direct Investment.
- Sustainable transport options will be essential to support County Wicklow's population in changing transport modes.
- For County Wicklow to become a great location for net zero economic activity and as a resilient sustainable destination for tourism and businesses.

3.3 Greenhouse gas emissions baseline

An assessment of County Wicklow's emission sources has been undertaken which, provides a basis where targeted actions and measures have being identified that can be measured and monitored with the aim of reducing our climate impact through the reduction in the production of greenhouse gases. More details on County Wicklow's baseline energy emissions and the methodology for calculating them is included within Annex A, the Baseline Emissions Inventory Report. A summary of the findings is given below.

The baseline emissions inventory is a key instrument which represents an evidence based approach to inform appropriate emissions reduction and also measure progress over time. Tier 1 analysis was

carried out predominantly using the EPA Map Eire data set. Tier 2 analyses allowed for a more detailed look using data from the EPA, CSO, Transport Omnibus and Teagasc.

In 2018, the baseline year, Ireland's national Greenhouse Gas (GHG) emissions were approximately 70,235 ktonnes CO2eq according to the EPA's Ireland's Provisional Greenhouse Gas Emissions, July 2022. GHG emissions within the Wicklow County Council area are estimated to have been 1,101 ktonnes CO_2eq in 2018. Figure 3.1 shows the main sources of emissions within County Wicklow. The agriculture sector accounts for 40% of total GHG emissions, with the residential sector contributing 25%. The transport sector is responsible for 24%, while Waste, Municipal, Commercial and the Public Sector accounts for the remaining 11%.

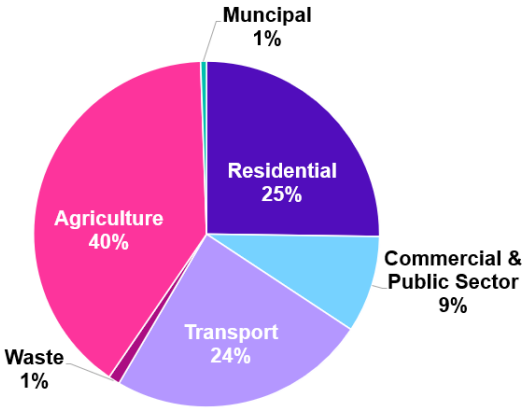


Figure 3.1: The main sources of emissions within County Wicklow.

For the transport sector 299,115 tonnes CO2e were produced. It has been identified that 65% of GHG emissions originate from private car use, with 32% coming from road freight and light goods vehicles and only 3% coming from public transport (Figure 3.2). These emissions are strongly associated with the M11, a key transport route for the County with the heaviest emissions occurring in the north east of the county as shown in figure 3.2.

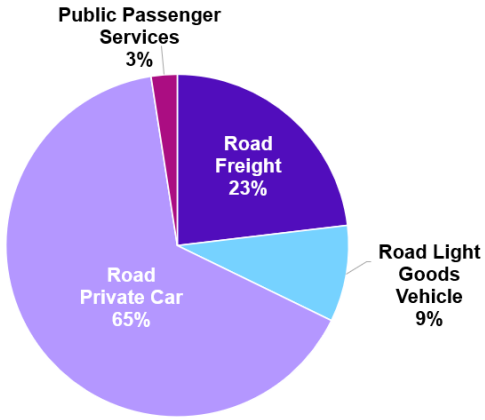


Figure 3.2: Greenhouse gas emissions by transport mode within County Wicklow.

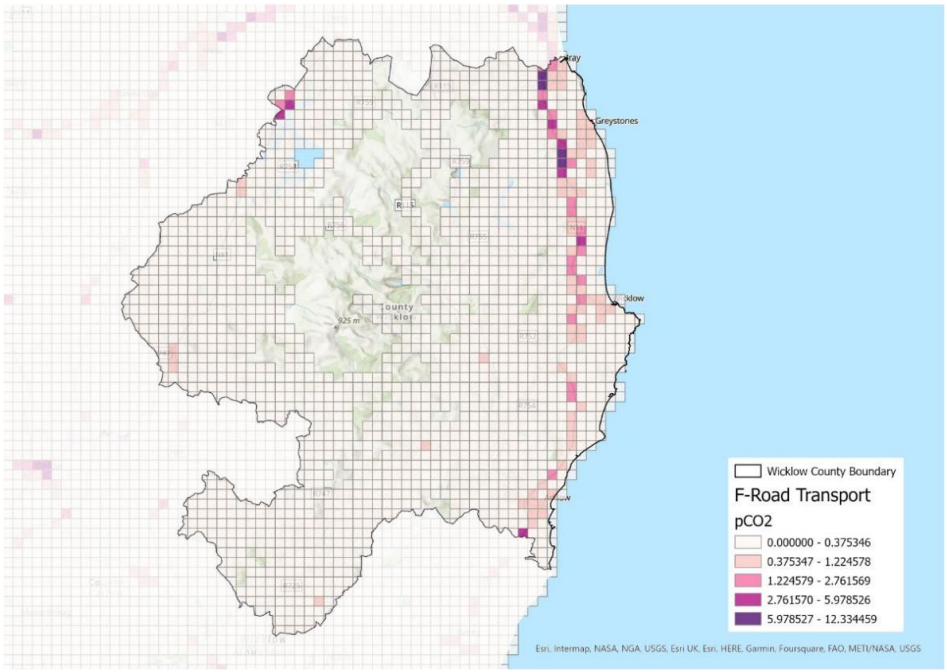


Figure 3.3 Map showing distribution for vehicle related CO^2 emissions in County Wicklow

Baseline emissions for household, commercial, industrial and public buildings account for the energy use in the heating of buildings. There are 112,246 tonnes of CO_2eq produced by commercial; industrial and public service buildings with retail the largest contributor accounting for over half of the total, followed by the hospitality sector and office space. Housing consumes 312,231 tonnes CO_2eq with 22,955 tonnes CO_2eq coming from the social housing stock. Within County Wicklow, the central heating of residential properties with different fuel types. Oil and natural gas are the primary fuels used by 81% of households. Coal, peat, and wood are used by 10% of households, whereas only 1% use renewable sources (Figure 3.4). Of various types of residential properties, Detached houses are the highest energy consumers and GHG emitters with oil being the primary fuel consumed.

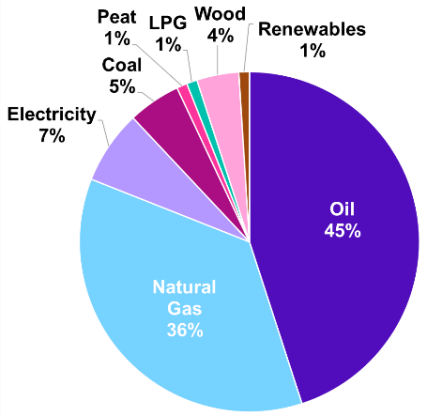


Figure 3.4: Main central heating energy source of private households within County Wicklow.

Methane emissions produced by livestock is one of the main contributors to agricultural sector emissions. Methane emissions account for 97% of agriculture emissions with the remaining 3% produced from energy usage. For energy related GHG emissions arising from the agriculture sector it has been estimated that 24% of these emissions originate from electricity use, with 76% coming from mobile machinery and <1% from heating. In County Wicklow, dairy and beef cattle produce the majority of methane emissions shown in Figure 3.5 and mapped in Figure 3.6.

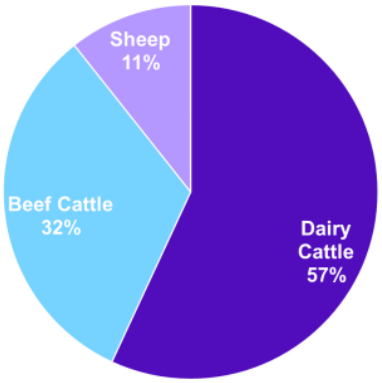


Figure 3.5: The proportion of emissions associated with livestock type within the county.

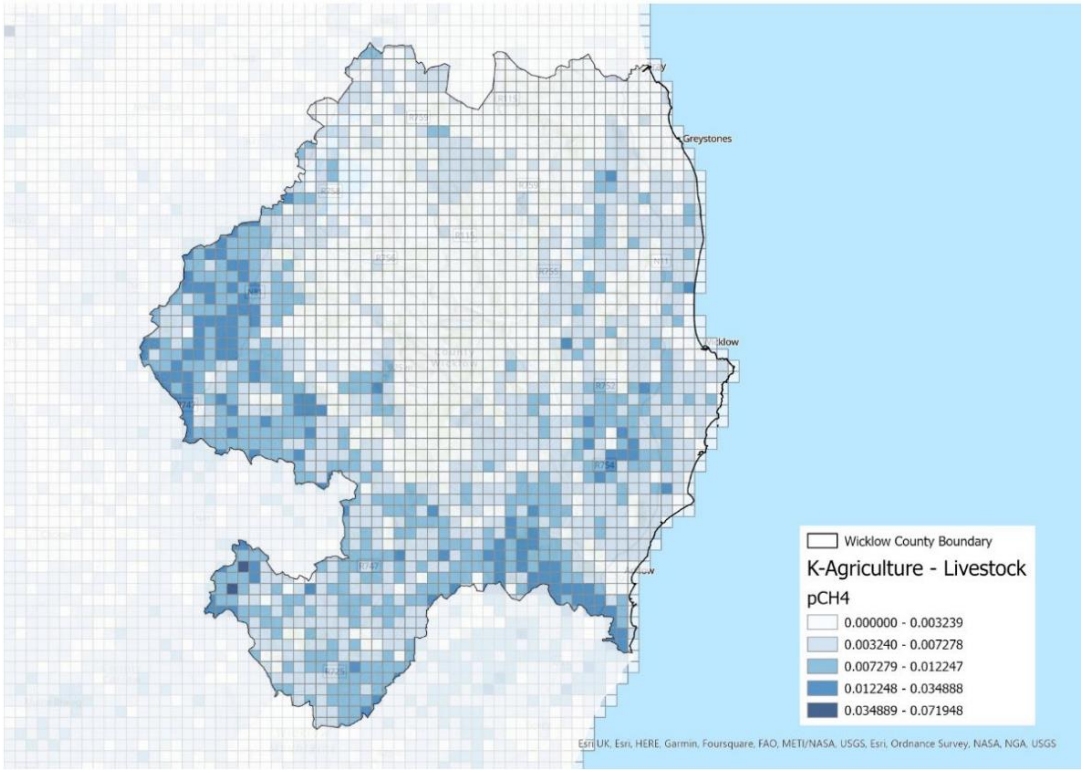


Figure 3.6 Map showing agricultural methane emissions in County Wicklow.

Municipal operations account for 1% of emissions in the county producing 6,822 tonnes of CO2eq. The four swimming pools are the largest energy user with 32% of the total followed by the public lighting programme which uses 31%. Transport and machinery use 19% of energy consumed. County Buildings is the largest user of the remaining building stock at 4% while the other buildings including district offices, depots, libraries, fire stations and recycling centres use 14% of the total. Figure 3.6 shows the source of emissions from municipal operations.

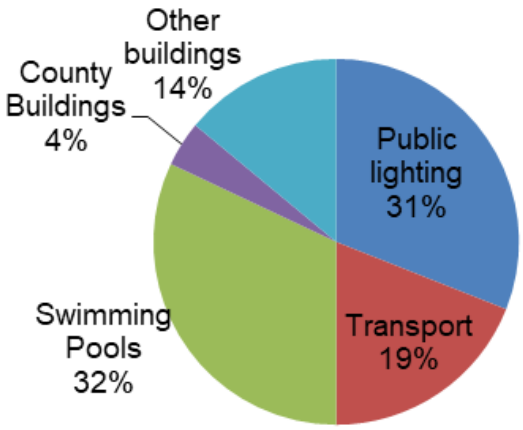


Figure 3.6: The breakdown for energy use within municipal services identifying the Significant Energy Users (SEUs).

There are three landfills in County Wicklow that have a production of methane gas. Two of which are owned by Wicklow County Council namely Ballymurtagh and Rampere, both are no longer operational though they still producing gases that have to be managed on site. The third landfill is privately owned and operated in Ballynagran. Methane gas production in the landfills contributes 1% to the production of greenhouse gases in the county.

Land Use, Land Use Change and Forestry (LULUCF) must also be considered in assessing emissions for the County with each land use having various capacities for both carbon storage and carbon sequestration. The map shown in figure 3.7 highlights the LULUCF classification for the County. Ecosystems that can sequester CO^2 are termed carbon sinks. Those that emit are termed carbon sources. Forestry is good example for sequestering carbon and agricultural lands can be both a carbon sink and a source.

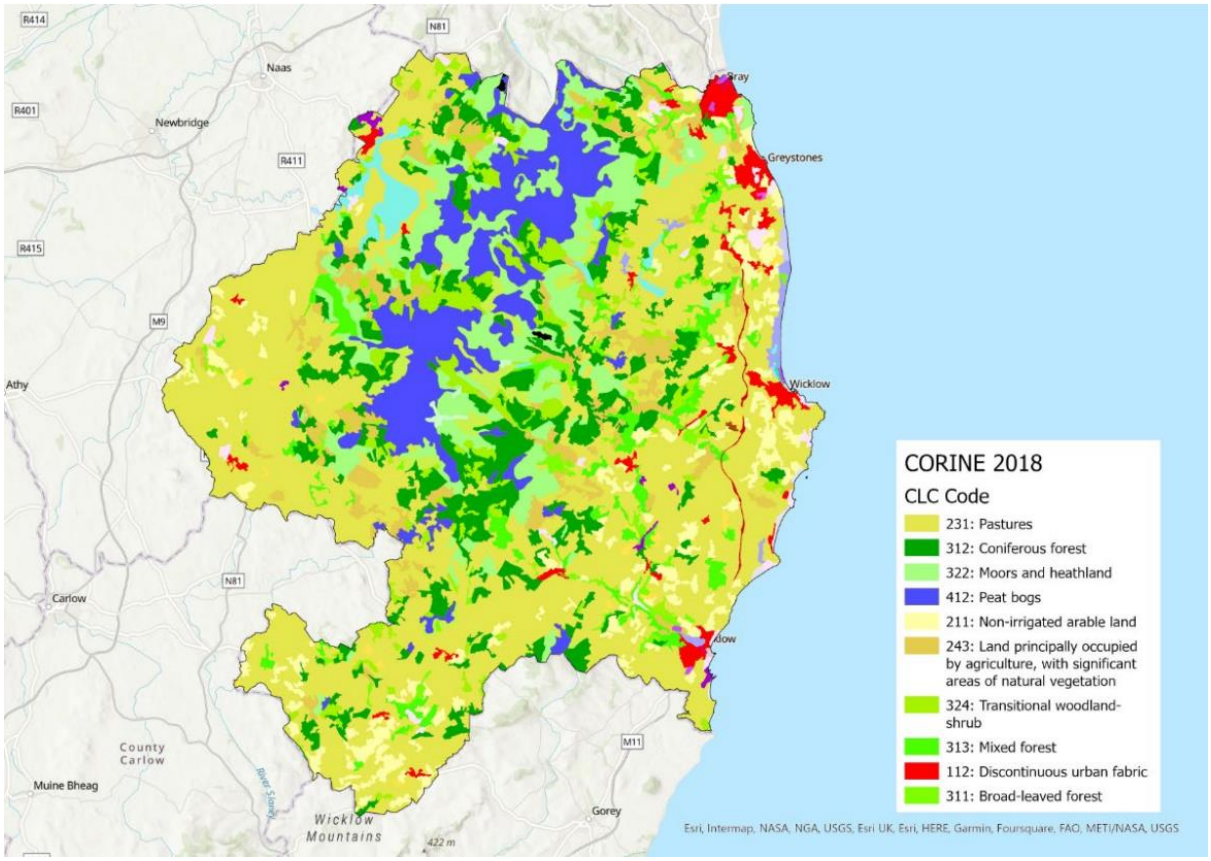


Figure 3.7: LULUCF classification for County Wicklow.

Type of Land Use (as per Corine 2018)	Area (hectares (ha))	% of Wicklow County Council area
Pastures	86,768	43%
Coniferous forest	22,177	11%
Moors and heathland	19,128	9%
Peat bogs	18,087	9%
Non-irrigated arable land	11,109	6%
Land principally occupied by agriculture, with significant areas of natural vegetation	10,737	5%
Transitional woodland-shrub	9,593	5%
Mixed forest	6,202	3%
Discontinuous urban fabric	3,958	2%
Broad-leaved forest	3,622	2%
Total	191,381	95%

Table 3.8: Top land use types emission sources

LULUCF management can increase sequestration. In County Wicklow, Pastures are the largest land use with 43% of the land. Wicklow contains 9% Peat Bogs, 9% Moorlands and Heathlands located mostly in the uplands which have a high capacity to store carbon as well as 16% under tree cover which also captures carbon.

The assessment of the emission sources provides valuable information on which to create relevant and targeted actions for Wicklow County Council to reduce emissions within the region. Possible action areas include:

Action Type	Action
Full Accountability	➢ Ensuring green energy sources for council buildings ➢ Ensuring energy efficiency measures for all council buildings and services, prioritising Significant Energy Users, SEUs ➢ Management of the Council fleet to maximize use of greener fleet ➢ Increasing the use of renewables across the council estate
Influence	➢ Integrating climate action into the planning system in support of mitigation and adaptation objectives. ➢ Promoting the use of active travel (e.g., walking and cycling) by providing infrastructure ➢ Facilitate sustainable and climate resilient economic development through green procurement ➢ Provide grants towards funding and supporting communities to identify, develop and implement projects to improve quality of life in the county.
Co-ordinate	➢ Support and connect local sustainable community networks. (e.g. Sustainable Energy Communities, Tidy Towns) ➢ Support sustainable and climate resilient economic development and sustainable resource consumption. ➢ Encourage best practice sustainable management of Wicklow's uplands, natural heritage, habitats, and landscapes ➢ Support the development of agriculture that is compatible with the sustainable development of the county and farming community
Advocate	➢ Leveraging the council's leadership role within the community to influence residents to switch to lower greenhouse gas emitting energy sources within their homes ➢ Raising awareness amongst the community of greener energy sources, transport options, circular economy and sustainable consumption initiatives.

Table 3.9: Emission Reduction Actions

3.4 Case Studies Mitigation

Wicklow County Council is planning for further action to reduce emissions; however, a range of actions have already been taken to decrease emissions and towards achieving its 2020 energy reduction obligations - a 33% reduction in energy usage relative to 2009. In 2020, Wicklow County Council used 13.8 % less energy in comparison to 2019.

Figure 3.10: The solar panel covered car park facility in Wicklow that provides 300kW of renewable energy.

1. Solar PVs

Wicklow County Council has installed solar panels on 15 of its buildings including swimming pools, libraries, offices and the most high profile example to date which is the solar car park canopy. The 300KW solar instalment covers an area of c.1600 m^2 or 140 parking bays. The canopy provides approximately 285,000 kWhs per year. The amount of renewable energy is equivalent to 40% of County Buildings' requirement and saves an estimated €40,000 in energy costs each year. EV charging points were installed alongside the solar array providing charging for electric vehicles by staff and the public. The canopy is equipped with guttering to reduce the risk of surface water flooding during heavy rainfall events.

Figure 3.11: Retrofitting of housing with improved insulation, doors, windows, and heat pumps to improve energy efficiency in Carrig Glen, Blessington.

2. National Retrofitting Programme

Wicklow County Council is retrofitting its social housing stock with an annual programme under the National Retrofitting Programme which aims to upgrade 36,500 social housing units to a minimum of a B2 BER rating or cost optimum performance by 2030. In Carrig Glen, Blessington, Wicklow County Council housing stock has been retrofitted with attic insulation, external wall insulation, new windows, new doors and air to water heat pumps. This has resulted in an increase in the Building Energy Rating (BER) from an E1 to a B1. Wicklow County Council aims to continue retrofitting a minimum of 700 of its units over the lifetime of the Plan.

Figure 3.12: Bolt E-bike statistics on use May 2023 – July 2023

3. Bolt E-Bike Scheme:

In 2023 Wicklow County Council partnered with a company called Bolt to deliver an e-bike rental scheme for the town of Bray. Bikes are available to rent for short journeys in the town. They provide a convenient service for local commuting and to build connectivity with local transport services from residential areas in the town including connection with the DART and Dublin Bus services. Users use an app to access and unlock bikes for use, paying a unit price per minute to use the bikes. Bray Municipal District as a partner facilitated the rollout of the bike scheme by identifying and marking out 40 parking locations were bikes are made available to the public. In the first six week of operation the bikes achieved the follow stats for their usage:

:

No. of unique users	2,289
No. of bikes deployed	90
No. of bike rides	9,236,
No. of kilometres cycled	20,184

Figure 3.13: Example of Relove Fashion entry piece.

4. Relove Fashion

Wicklow County Council developed the Relove Fashion Competition in partnership with the Rediscovery Centre, Ballymun and local authorities in the Eastern Midlands region in order to engage with the youth to encourage Climate Action whilst embracing the Circular Economy. The competition allows students at secondary level to explore their creativity with the objective of reusing textiles and clothing as a new fashion piece. The skill of working with textiles is assessed alongside students' design and innovation skills in the process of developing something new. Participants are also asked to express through fashion their views on sustainability within their pieces. The competition has run since 2018 and students from twelve local authorities have participated in the competition.

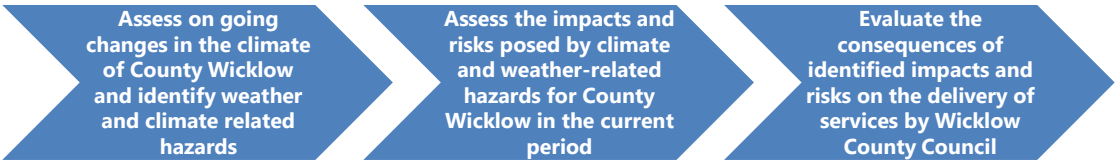
3.5 Climate Risk Assessment

For Wicklow County Council to develop effective and efficient adaptation actions in response to current and projected climate change impacts and risks, developing an understanding of the risks posed by climate is an essential first step. This is fundamental for informing the prioritisation of climate action and investment in climate action. Further details on the **Climate Risk Assessment** are available in **Annex B** to this plan, the Wicklow County Climate Risk Assessment.

The aim of adaptation is to reduce the risks posed by climate change for County Wicklow and increase resilience. However, before adaptation can take place it is important to develop an understanding of the risks posed by climate change for the region and the implications of these for the delivery of services by Wicklow County Council. To do this, a Climate Change Risk Assessment (CCRA) has been undertaken, in accordance with the Technical Annex B: Climate Change Risk Assessment of the Guidelines for Local Authority Climate Action Plans, providing a qualitative CCRA. A qualitative CCRA supports the identification and prioritisation of potential future climate risks for more detailed analysis and provides a broad understanding of where adaptation actions could be required. The approach is built of two phases, where both current and future risks and impacts were assessed.

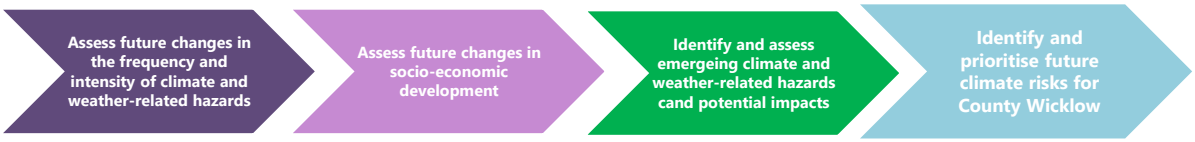
Phase 1: Assessment of Current Climate Risks and Impacts

Understanding the current impacts of climate and weather-related hazards is an essential first step in developing an understanding of future climate risk. Phase 1 involves identifying the range of climate and weather-related hazards currently impacting County Wicklow and the implications of these for the delivery of services by Wicklow County Council.



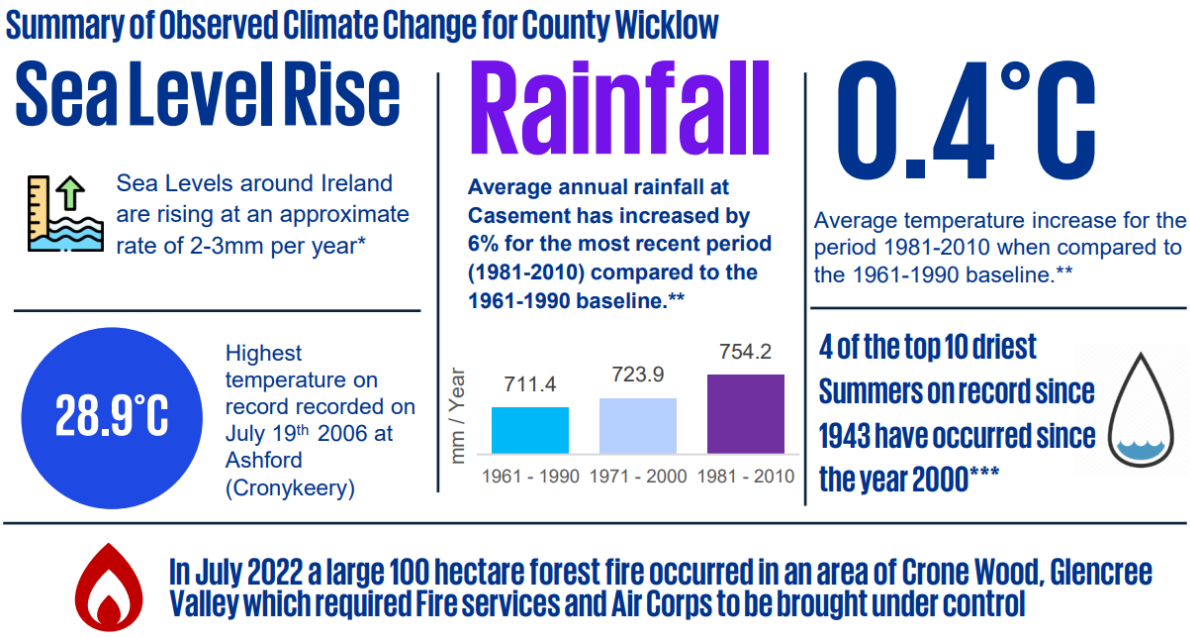
Phase 2: Assessment of Future Climate Risks and Impacts

Building on the Phase 1 assessment, Phase 2 considers how climate and weather-related hazards currently experienced are projected to change into the future accounting for projected climate changes and projected change in socio-economic development (e.g., projected increases in population). In addition, Phase 2 is identifying any new or emerging climate and weather-related risk for County Wicklow. For example, projections indicated that heatwaves will become more frequent and intense in the future meaning that heat-related risk will increase in the future.



3.6 County Wicklow's Changing Climate

In line with global trends, the climate of Ireland and Wicklow is changing, temperatures are increasing, sea levels are rising, and the rate of extreme weather events is increasing. These changes are projected to continue and intensify with a wide range of impacts for County Wicklow. A summary of key climate and weather-related changes already observed for Wicklow County are detailed below:



Extreme Heat: High temperatures and dry conditions, often compounded by high levels of ignitions activity, resulted in uncontrolled fires. In June 2018 it is estimated that fires cost Wicklow County Council an additional €170,000.	**Surface Water Flooding: Extreme precipitation on Christmas Day 2021 caused disruption for many road users in Wicklow. The M11 at Junction 23/24, the R747 (Woodenbridge to Aughrim) and the Avoca Road in Rathdrum were closed due to road flooding.**
Snow and Ice: Heavy snowfall associated with Storm Emma in 2018 left the N81 and roads around County Wicklow areas impassable with several metres of snow accumulating in some areas.	
Windstorms: Severe windstorm are continuing to cause dame and leaving homes with power. Winds of over 50 km/h have proven to cause damage to the energy grid.	**Coastal Flooding (Storm Ellen) There was traffic disruption by the South Beach in Greystones after extreme precipitation overnight led to flash flooding in the area in October 2022**
Coastal erosion: In March 2018, Storm Emma resulted in the erosion of large swathes of the Murrough. Storm Betty in August 2023 was the most recent event to cause erosion	

3.7 Climate Hazards

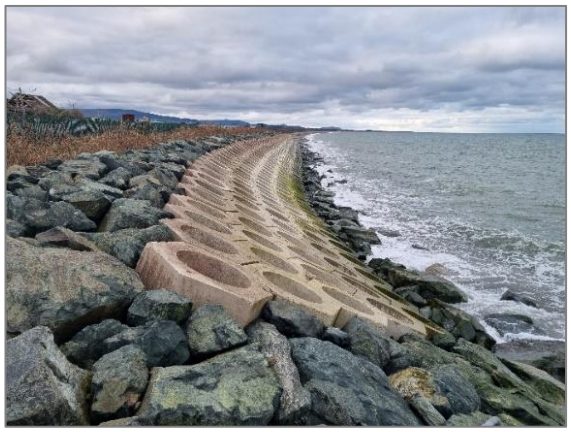
Extreme weather events and hazards have had significant impacts on the citizens, communities, businesses and assets of County Wicklow. Below are some examples of how these hazards have affected Wicklow in the recent past.

Severe Windstorm

Windstorm storms cause damage across Wicklow including loss of power, accidents due to falling trees and flying debris, and coastal flooding. Storm Barney blew a large section of the Coral Leisure Centre roof off in November 2015. This resulted in the closure of the leisure centre for ten weeks while repairs were undertaken at a cost of €190,000.

River Flooding

Due to heavy rainfall and river flooding, there was significant damage to roads and bridge collapses in west Wicklow in 2011. The equivalent of one month's rainfall 95 mm fell in 24 hours with 65 mm falling in a four-hour period. The resulting flooding washed away sections of road alongside a river and badly damaged 12 km of road in total including one collapsed bridge.



Coastal Erosion

County Wicklow has a coastline which is subject to coastal erosion which impacts upon coastal habitats and the coastal railway. Consequently, there has been repeated closure of the cliff coastal walk, most recently in 2022 and on into 2023 due to rock falls near Bray and a land slide at the Greystones end of the walk. Coastal erosion is also occurring in The Murrough, Wicklow Town which has led to the loss of coastal meadow. This threatens the eastern railway corridor which required urgent works in 2016 and again in 2023, resulting in the development of coastal defences to reduce the coastal erosion risk.

Extreme Weather Events in County Wicklow:

To understand the range of extreme weather events currently impacting on County Wicklow, recent experiences of extreme weather for County Wicklow have been examined. The table below shows a summary of key extreme weather events, identifying the type of event, the date of its occurrence and a brief description of the event and its impacts.

Event	Date	Description
Heatwave	October 2022	An Garda Siochana advised the public to avoid the Bray to Greystones following a rock slide.
Coastal Flooding	September 2022	In 2018, Storm Emma removed some rock armour in the coastal defence of the railway line.
River Flooding	December 2021	Damage to the road network during Storm Emma due to freeze thaw was the largest cost following the cold spell. The total cost estimate across the county was approx. €6 million.
River Flooding	December 2021	A number of premises were flooded in Baltinglass following the river Slaney bursting its banks.
Coastal Erosion	February 2021	Two cliff collapses occurred along the popular Bray to Greystones cliff walk.
Storm Francis	August 2020	Due to Storm Francis, homes were without power across Wicklow with Arklow, Rathdrum, Greystones, Kilcoole and Baltinglass all experiencing outages.
Surface Water Flooding	October 2019	Houses were flooded in Wicklow Town in September 2019 following flooding caused by heavy rainfall.
Drought	August 2018	A drought in 2018, impacted fodder production, with farmers having to graze livestock on lands intended for silage production.
Surface Water Flooding	March 2018	A number of houses were flooded in the Rathdrum and Kilmacanogue areas following heavy rainfall
Heavy Snowfall	March 2018	In March 2018, more than 800 homes were without power around Wicklow town, Rathnew and Ashford due to heavy snow.
Cold Spell	March 2018	In Arklow, Kilcarra Rd (R747) from Arklow to Kilcarra was impassable due to very icy conditions.
Storm Emma	March 2018	Approximately 5 metres of the Turlough Wetlands (a Special Area of Conservation) were washed away due to Storm Emma.
Heavy Snowfall	March 2018	Public transport services were impacted by adverse weather conditions (heavy snow showers) in a number of areas, particularly in the east. A status orange snow-ice warning covered Wicklow.
Extreme Temperature	Summer 2018	Seven significant fires were reported. Some of the fires, namely in Liffey Head and Lough Bray, lasted for weeks and were fought by hand, with water tankers, and by helicopters
Drought	Summer 2018	Low levels were reported in the Vartry Reservoir during the Summer of 2018.

Table 3.14: Summary of key extreme weather events in County Wicklow 2018-2022.

3.8 Projected Climate Changes

Changes have occurred to the current climate of County Wicklow, however, the climate is projected to continue to change in the future. These changes are expected to exacerbate climate hazards, such as increasing the frequency of heatwaves, droughts and flooding, but potentially decrease the frequency of cold spells and heavy snow.

As a result of climate change, the frequency of extreme weather events is projected to change. For County Wicklow, this means that some hazards may occur more often while others may reduce. Below is an overview of projected changes in the frequency of climate hazards for County Wicklow by 2050.

Hazard	Projected Change in Frequency	Climate Projections
Heatwaves	Increase ↑	➢ Projections indicate an overall increase in average temperature of between 1.2 and 1.6°C for County Wicklow. ➢ Under a high emission scenario, projections indicate that heatwaves will become more frequent by mid-century and on an almost annual basis for some parts of County Wicklow.
Droughts	Increase ↑	➢ Summer rainfall is expected to reduce in the future when compared with the baseline period of 1981 to 2000, contributing to a potential increase in frequency of drought conditions.
Cold Spell	Decrease ↓	➢ As a consequence of the increasing temperatures, a decrease in the number of frost days, ice days, and snowfall is projected for the period 2041-2060 when compared with the baseline period of 1981 to 2000. ➢ The annual snowfall in the region is projected to decrease substantially by the middle of the century.
Heavy Snowfall	Decrease ↓	
Severe Windstorms	No Change –	➢ 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. However, some projections indicate an increase in the frequency of the most intense storms which are currently rare events.
Coastal Flooding	Increase ↑	➢ Rising sea levels projections under a high emissions scenario indicate an increase of up to 0.24 m by 2050 which will increase the frequency of coastal flooding for County Wicklow.
Coastal Erosion	Increase ↑	➢ Rising sea level is strongly linked with increases in rates and extents of coastal erosion.
River Flooding	Increase ↑	➢ Projections indicate an increase in the frequency of heavy rainfall days (days with precipitation >30mm) for County Wicklow with some areas projected to see increase of up to 90%. This will likely result in an increased frequency of associated river and surface water flooding.
Surface Water Flooding	Increase ↑	
Groundwater Flooding	No Change –	➢ 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 in the future.

Table 3.16: Overview of projected changes in the frequency of climate hazards for County Wicklow by 2050

3.9 Future Climate Risks

The potential impacts of future risks from climate hazards will be increased by the socioeconomic and demographic growth that County Wicklow is expected to undergo in the future. The increasing risk from hazards will have an impact on County Wicklow in terms of people and communities affected and damage and disruption to assets and the economy.

As a result of both the projected changes in Wicklow's climate and in Wicklow's population and development, levels of climate risk are projected to change in the future. Figure 1 shows the change in climate risks for each of the hazards experienced with key risks for County Wicklow highlighted.

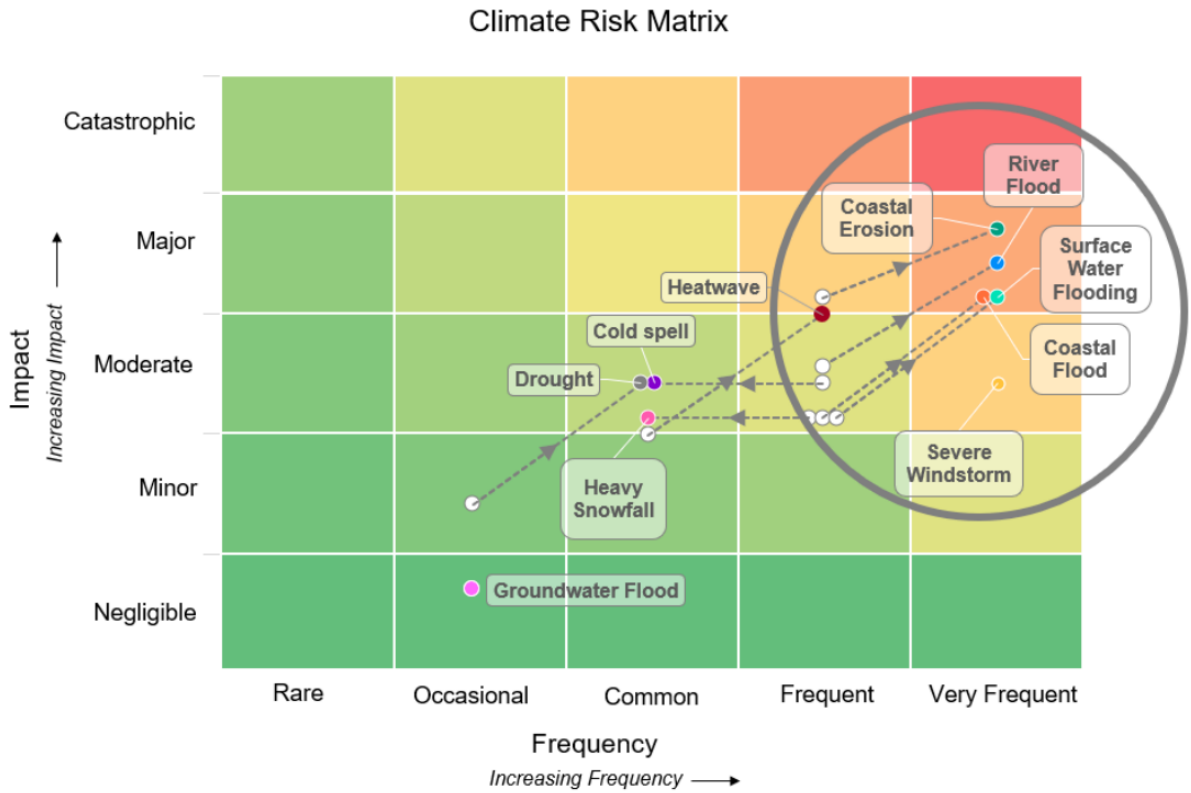


Figure 3.17: The future changes in risk for the identified hazards within County Wicklow with the key risks circled. For each hazard there is a solid marker, which identifies the future risk and a white marker showing the current risk. The dotted line in between these markers shows the change between the current and future risk.

The **risk** of existing hazards such as **river, surface water, and coastal flooding and coastal erosion** is projected to **increase** in the future. This could impact upon people and cause damage and disruption to key transport infrastructure and an increase in the financial costs associated with managing these hazards and impacts.

Heatwaves and droughts are expected to occur more frequently resulting in an **increased** risk due to impacts on health and wellbeing, damage to transport infrastructure, and harm to the environment, such as reduced water quality.

Although the frequency and impact of **severe windstorms** is thought to be **unchanged in the future**, these events will remain a risk for County Wicklow, with the potential to result in asset damage, transport disruption, and increased pressure on emergency response services. The risk of **groundwater flooding** is also unchanged in the future, however, there is uncertainty associated with how climate change will impact the occurrence of this hazard.

The impact of **heavy snowfall and cold spells** on County Wicklow remains similar to those experienced today with impacts such as asset damage, transport disruption, social isolation, and increased pressure on emergency response services. However, due to the potential decrease in hazard frequency, the overall risk of these hazards is likely to **reduce** in the future, resulting in a lower level of risk.

The assessment of climate risk provides valuable information on which to create relevant and targeted actions for Wicklow County Council to reduce climate risks within the region. Possible areas for action include:

Action Type	Action
Full Accountability	➢ Account for climate change in the development and maintenance of surface drainage ➢ Incorporate nature based solutions into the development of SUDS schemes ➢ Alterations to road and infrastructure maintenance approaches due to climate change ➢ Increased emergency response to weather events
Influence	➢ Harness the County Development Plan and the Regional Spatial and Economic Strategy to deliver compact development and sustainable development for communities and enterprise. ➢ Ensure compliance with the building regulations ➢ Leverage better sustainability practice in the awarding of community grants
Co-ordinate	➢ In collaboration/partnership with LAWPRO deliver river basin management actions which deliver cross cutting benefit on water quality, biodiversity, and flood prevention. ➢ Work with stakeholders on the planning and development of flood defence works and use of nature-based solutions to reduce risk. ➢ Work with stakeholders on the development of coastal protection measures.
Advocate	➢ Focus on climate awareness and action in education and awareness activities across all community sectors. ➢ Protect the county's heritage from the impact of climate. ➢ Harness the potential of biodiversity to build resilience to a changing climate and ensure that the LACAP works with the Biodiversity Plan to protect and restore biodiversity.

Figure 3.18: Table showing possible areas to address climate risk action.

3.10 Case Studies in Climate Adaptation

Bray Scheme

Arklow Scheme

1. Flood Relief Works.

The Bray River Dargle Defence scheme delivered in 2017 by Wicklow County Council and the OPW was a key capital investment with a cost €46 million. The scheme comprised a variety of flood defences; including the construction of earth embankments, rebuilding of river walls with extensive stone facing, channel excavation, regrading and riverbank strengthening. A range of landscape treatments were used to mitigate the impacts of the scheme on the local environment along the river corridor. New and improved landscaping included walkways at the Peoples Park, Ravenswell Road, Lower Dargle Road and the Boardwalk. The flood defences aim to provide protection against a 1-in-100 year fluvial flood and 1-in-200 year tidal flood. Arklow will be the next town to benefit from flood relief works. The project will include embankments, flood defence walls, dredging and lowering the floor of Arklow bridge. The project will include public realm enhancement works. Planning for the Arklow scheme has been approved by An Bord Pleanála.

2. Nature based Sustainable Urban Drainage

The Greystones Municipal District has incorporated nature based SUDS into several projects in recent years. One project completed was a traffic calming scheme on Kimberley Road, concerning an existing 400m one way street with two different schools on each side of the street. The road was car dominated with narrow footpaths, on street parking and illegal parking on footpaths at pickup time. Ponding was also an issue during heavy rainfall. The revised design widened the footpaths from 1.2 metres to 1.8 metres with narrowing the traffic lane in order to reduce speed. Street trees were incorporated into the traffic calming structures with tree pits designed to cater for excess rainfall. The trees and tree pit reduce surface water flooding, absorb CO^2 while also improving the aesthetic of the area.

3. Brittas Bay Conservation Plan.

Wicklow County Council initiated a Brittas Bay Biodiversity Project in 2019. The project seeks to roll out a programme of actions to enhance biodiversity and raise awareness on the council owned site between the North Beach and the South Beach car parks. Actions taken to date include the drafting of conservation management reports, trialling of mowing regimes, grazing trials, monitoring, botanical surveys, community workshops and removal of sea buckthorn with volunteers. The work aims to restore the biodiversity of this SAC and build its resilience to the impacts of climate. In the lifetime of this plan further actions will be taken to develop nature based solutions that will assist the formation of embryonic dunes helping to retain sand and reduce erosion.

4.0 WICKLOW FRAMEWORK OF CLIMATE ACTIONS:

4.1 Introduction

Local authorities have already undertaken extensive work in the area of climate action and have ambitious plans to capitalise on their unique position to advance climate action across their own organisations and counties. The Plan will specify actions that the local authority will take across its own services to meet national emissions targets and to increase resilience against climate change impacts. The Plan will also specify how the local authority will work with its communities to advocate for change and with national government and state agencies to deliver climate action.

The most effective way of reaching our goals is to make sure 'everyone rows in the same direction', and this destination is summarised in a unified vision of the future, which supports ambitious climate action. Given the wide role that Wicklow County Council has it is important to have a unifying vision reflects a desired and shared perspective of the future in a climate resilient and climate neutral society, that will unite all key stakeholders and inspire action.

4.2 Climate Action Plan Vision and Mission

The Plan Vision for Wicklow County Council is:

Leverage the capability, operations and resources of Wicklow County Council to effectively lead and coordinate climate mitigation and adaptation to develop a vibrant decarbonized future for communities with resilient and regenerative natural systems throughout County Wicklow.

While Wicklow 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. This action-oriented mission statement helps guide representatives and stakeholders of Wicklow County Council in coordinating their work towards the defined Vision.

The Plan Mission for Wicklow County Council is:

Our Mission: Deliver transformative change and measurable climate action in the operation of our services for the people of Wicklow, through leadership and example. Mobilise action on mitigation and adaptation through partnership with communities, enterprise and other stakeholders at regional and local level. Create a low carbon, climate resilient future, for the county.

4.3 Plan Themes, Goals and Objectives

CARO have developed five themes for the framing of climate actions across all Council Plans within the region. This approach allows for a consistent approach across all local authority plans. The five key themes that have been identified and adopted in this Plan are shown in Figure 4-1:

Figure 4.1: Thematic Areas for Actions

The five themes address strategic commitments made by local government through the Climate Charter and on which we are committed as key stakeholders through the National Climate Action Plan. The Climate Action Plan guidelines advise that it is a critical consideration in drafting the framework of climate actions from plan vision through to the strategic goals, objectives and actions, is that local authorities must ensure that they are consistent with the principles, six strategic goals, objectives and actions of the local government strategy. Wicklow County Council achieve this by aligning the 5 themes to the six strategic goals developed within the Delivering Effective Climate Action 2030.

Wicklow County Council has also added two additional goals in order to account for transportation and the Arklow decarbonisation zone (Chapter 5). The eight Strategic goals set the context for mitigation and adaptation actions in service of Wicklow County Council's climate vision and mission. The identification and development of such goals establishes a structured approach to the arrangement of climate actions to be addressed. These goals are informed by the key themes that emerged from the issues collated as part of the evidence base, stakeholder engagement as well as work ongoing within the local authority on climate action. The indicative eight strategic goals are:

1. **Adopt climate focused governance, provide leadership, and build partnerships for climate action.**
2. **Achieve carbon emissions reduction of 51% and energy efficiency improvement of 50% in our operations by 2030, creating a pathway to net zero by 2050.**
3. **Support decarbonisation of transport and modal shift from cars to active travel and public transport.**

4. **Deliver on climate adaptation, biodiversity resilience and enhanced capacity for our environment to adapt to changing conditions.**
5. **Mobilise and empower climate action in local communities.**
6. **Achieve a 'just transition' particularly for communities that may be economically disadvantaged by decarbonising projects or impacted by climate change.**
7. **Mobilise climate action in enterprise and agriculture supporting the transition to an inclusive, net zero and circular economy.**
8. **Test the scope and scale of decarbonisation in Arklow with the aim of creating a vibrant town which has low carbon living at its core**

Through the five thematic areas and the eight high level goals the local authority Climate Change Action Plan is designed to guide a planned and coherent response to the effects of climate change. Four guiding principles thread through and underpin these goals. They are mainstreaming climate action, informed decision making, building resilience and capitalising on opportunities.

Mainstream Climate Action: That climate change adaptation is a core consideration and is mainstreamed in all functions and activities across the local authority. In addition, ensure that local authority provides leadership by example and through collaboration focused on delivering transformative climate action and community resilience.

Informed decision making: That effective and informed decision making is based on reliable and robust evidence base of the key impacts, risks and vulnerabilities of the area; the baseline emissions for the county using data from 2018; and an emissions inventory for municipal emissions. This will support long term financial planning, effective management and help to prioritise actions.

Building Resilience: That the needs of vulnerable communities, natural resources and infrastructure are prioritised and addressed, encourage awareness of anticipated impacts of climate change, the measure which will have most effect in reducing emissions and promote a sustainable and robust action response.

Capitalising on Opportunities: As the level of government closest to communities there is an opportunity to build bridges between national stakeholders and local stakeholders to maximize benefits and opportunity for local areas in taking action and mobilize greater engagement in taking action.

Figure 4.2: Four Guiding Principals

Objectives:

The strategic goals are supported by high level objectives as component elements. The objectives are not intended to be measurable but rather they serve to define generally key areas that climate actions, which are measurable, are seeking to deliver upon. The following table provides guidance on the Theme, Goal and Objectives alignments.

Theme 1: Governance and Leadership

Goal:

Adopt climate focused governance, provide leadership, and build partnerships for climate action.

Objectives:

1.1 Integrate Climate Action into all policy and programme development
1.2 Ensure planned development considers long term outcomes and pathways for a net zero economy by 2050
1.3 Ensure adaption to climate is considered in decision making, policy and planning
1.4 Build capacity of staff and elected representatives to embed climate action across all functions of the organisation.
1.5 Demonstrate leadership on decarbonizing our buildings and operations.
1.6 Develop partnerships to strengthen delivery of climate action

Theme 2: Built Environment and Transport

Goal:

Achieve carbon emissions reduction of 51% and energy efficiency improvement of 50% in our operations by 2030, creating a pathway to net zero by 2050.

Objectives:

2.1 Reduce carbon emissions from buildings, fleet and operations by 51%
2.2 Implement energy efficiency measure to achieve target of 50% improvement in energy efficiency
2.3 Measure performance on reducing carbon emissions.
2.4 Ensure emissions from new buildings are minimized and offset by further reductions in energy use elsewhere to achieve targets.
2.5 Retrofit our housing stock to a minimum of B2 BER and build to a minimum of A2 BER.

Goal:

Support decarbonisation of transport and modal shift from cars to active travel and public transport.

Objectives:

3.1 Support a shift in modal transport from cars to active travel for shorter journeys
3.2 Support the development of public transport in County Wicklow working with service provider to increase access.
3.3 Enable the roll out of EV charging infrastructure ensuring local needs are met.
3.4 Raise awareness on the benefits of a change in modal transport options.

Theme 3: Natural Environment and Green Infrastructure

Goal:

Deliver on climate adaptation, biodiversity resilience and enhanced capacity for our environment to adapt to changing conditions.

Objectives:

4.1 Ensure business continuity in the face of changing climate and preparedness for extreme weather events.
4.2 Maintain roads and infrastructure in good state
4.3 Protect communities and infrastructure from the risk of flooding
4.4 Protect communities from the risk of coastal erosion
4.5 Harness the capacity of nature to assist in building resilience, protecting and restoring natural systems including biodiversity, water, soils and air.
4.6 Raise awareness on the risk from climate change
4.7 Build collaboration with stakeholders to increase participation in measures to protect resources and communities from the impact of climate change.

Theme 4: Community Resilience & Transition

Goal:

Mobilise and empower climate action in local communities.

Objectives:

5.1 Ensure that funding to communities considers climate impact and prioritises projects delivering climate action
5.2 Support community projects through the Climate Action Fund, seeking projects that deliver a measurable benefit which can be replicated elsewhere
5.3 Develop awareness and active citizen participation in climate action harnessing the participation of key stakeholders
5.4 Support youth participation in climate action
5.5 Build capacity for collaboration on climate action

Achieve a 'just transition' particularly for communities that may be economically disadvantaged by decarbonising projects or impacted by climate change.

Objectives:

6.1 Support sectors and communities vulnerable to the regressive effects of climate change and/or the impacts of climate policy.
6.2 Identify and implement measures to support impacted sectors and communities
6.3 Ensure that actions for decarbonisation, adaptation and climate resilience are designed to improve the health and wellbeing of all.
6.4 Address fuel poverty in social housing.

Theme 5: Sustainable Resource Management

Goal:

Mobilise climate action in enterprise and agriculture supporting the transition to an inclusive, net zero and circular economy.

Objectives:

7.1 Promote engagement in resource efficiency programme.
7.2 Develop collaboration and sharing of experience, promoting economic opportunities that arise from climate action
7.3 Promote climate action and green skills in training and education in partnership with Education and Training Boards (ETBs) and Local Enterprise Offices (LEOs).
7.4 Develop local strategy and raise awareness for the Circular Economy.

The actions have also been aligned with delivery under the UN Sustainable Development Goals for 2030. The 2022-2024 Sustainable Development Goals (SDGs) National Implementation Plan acknowledged that local government "has a crucial role to play in translating national policies into tangible practical actions that can help to concretise the SDG objectives into our individual and communities' behaviours and goals."

Figure 4.2: Sustainable Development Goals

This second National Implementation Plan for SDGs has 5 Strategic Objectives. And Strategic Objective 2 is as follows: **To integrate the SDGs into Local Authority work to better support the localisation of the SDGs**. Wicklow County Council Libraries are also leading the way with Greystones Library running a Sustainable Development Goals students Reading Goals Book Club since 2021. The children were made Ambassadors and presented with a special certificate, United Nations SDG bags and pins at a ceremony presented by Cllr Mark Barry, Cathaoirleach of Greystones Municipal District; Cllr Lourda Scott and Director of Services, Michael Nicholson.

Figure 4.3: Greystones Library Reading Goals Book Club

Governance & Leadership

Theme1: **Governance & Leadership.**

Strategic Goal 1: Adopt climate focused governance, provide leadership, and build partnerships for climate action.
Strategic Goal 2: Achieve carbon emissions reduction of 51% and energy efficiency improvement of 50% in our operations by 2030, creating a pathway to net zero by 2050.

Actions

No.	Action	Objective	Adaptation / Mitigation	Tracking Measure	Lead Department	Partners	Timeframe	Dependencies	DECA SGs
1 GL	Place Climate Action as a standing item on the agenda for Senior Management Team meetings with an annual Climate Action Summary Report produced.	1.1 1.2 1.3	*Combined*	Number of annual review reports produced.	Management Team	Environment (Climate Action Team) and all directorates	2024 - 2029	None	DECA 1, SDG 16 SDG 13
2 GL	Maintain a Climate and Biodiversity Action Strategic Policy Committee (SPC) to ensure development of policy. All other SPCs to ensure climate resilience are incorporated into policy development. Place Climate Action Policy as a Standing Item on Corporate Policy Group meetings.	1.1 1.2 1.3	*Combined*	CABA SPC Meetings held. Number of Policy Documents adopted with Climate Action Policy Considered.	Management Team	Elected representatives, PPN and sectoral representatives Environment (Climate Action Team)	2024 - 2029		DECA 1, SDG 16, SDG 17
3 GL	Establish a Climate Action Committee with representation at Senior Executive level (Grade 8's or equivalent) from each service to manage deliver and budgeting of Climate Action Plan including green procurement where relevant.	1.1 1.2 1.3 1.6	*Combined*	Committee established	Management Team	Environment (Climate Action), All directorates	2024	Participation of all directorates	DECA 1, SDG 16

4 GL	Provide training and policy guidance for staff and elected representatives on Climate Action ensuring that all are aware of policy and its implications for delivery of services across the organisation. Include guidance for induction of new staff.	1.5	*Combined*	Percentage of 1) elected members 2) local authority staff to avail of climate action training.	ECS (Training Officer)	Environment (Climate Action Team), CARO	2024 - 2029	Course availability	DECA 1, SDG 13, SDG16
5 GL	Maintain a Climate Action Team, to support delivery of climate and biodiversity action, which will include the minimum of a Climate Action Co-Ordinator, Climate Action Officer, Community Climate Action Officer, Environmental Awareness Officer, Assistant Environmental Awareness Officer, Biodiversity Officer, Heritage Officer and Energy Officer with administrative support	1.1 1.2 1.3 1.4 1.5 1.6	*Combined*	Number of staff in team	Planned Development and Environment Directorate	Human Resources	2024-2029	Staff availability	DECA 1, SDG 13, SDG 16
6 GL	Maintain a cross departmental Green Team to deliver climate actions, improved resource efficiency, engagement of staff on energy efficiency and active travel	1.1 1.4 1.6	*Combined*	Number of meetings, Number of projects and campaigns delivered	Green Team, Environment (Climate Action Team)	All Directorates	2024 - 2029	Allocation of staff from services	DECA 1, 5 SDG16, SDG 12

7 GL	Liaise, collaborate and work in partnership with the Eastern & Midlands CARO and members of the Mid-East sub-region in the delivery of climate actions.	1.2 1.6	*Combined*	Number of meetings & projects undertaken in collaboration with CARO.	Environment (Climate Action Team)	CARO, sub-regional Local Authorities (Kildare, Meath and Louth)	2024 - 2029	Support from CARO	DECA 1, SDG 16, SDG 17
8 GL	Meet with the Municipal Districts to support delivery of climate action at local level, meeting staff three times a year and elected representatives once a year.	1.1 1.3 1.4 1.5	*Combined*	No. of meetings; No. of local projects delivered	Environment (Climate Action Team)	Municipal Districts	2024 - 2029	Time for meetings	DECA 1, SDG 13, SDG 7, SDG 16
9 GL	Communicate the local impacts of climate change and communicate the opportunities for Climate Action through media platforms.	1.4 1.6	*Combined*	No. of media articles, posts and interviews	Environment (Climate Action, EAO)	All Directorates	2024 - 2029	Engagement media outlets	DECA 1, 4 SDG 13, SDG 17
10 GL	Screen Local Area Plans and future Development Plans for climate resilience ensuring they consider compact development, biodiversity resilience, active travel, sustainable economic development, consider associated climate action co-benefits and environmental protection requirements.	1.3	*Combined*	No. of plans reviewed	Planning	Environment	2024 - 2029	Resources	DECA 1, 2, 3, 4 SDG 11

11 GL	Lead the energy unit for the region including Wicklow, Kildare, and Meath Local Authorities to: • share experience on energy management • develop *Pathfinder* and other projects to improve the energy performance of local authority buildings , having appropriate regard to protected structure conservation requirements.	1.1 1.5 2.1	*Mitigation*	Staff numbers in Energy Unit; Number of *Pathfinder* projects; energy savings in kWh achieved per annum; carbon reduction	Mid-East Energy Unit, Wicklow County Council	Meath County Council, Kildare County Council, CODEMA	2024 - 2029	Availability of funding for unit and energy improvement projects	DECA 1, 2 SDG 7
12 GL	Accreditation to the International Standard for Energy Management ISO 50001 by 2024 to deliver: • annual plan • register of opportunities • 3-year cycle • energy review Including monitoring and reporting to SEAI.	1.5 2.1 2.2 2.3	*Mitigation*	Certification and continuous improvement from relative baseline; Number of actions completed M&R Reporting	Environment (Energy Officer)	Mid-East Energy Unit Climate Action	2024-2029	Availability of funding for unit and energy improvement projects	DECA 1, 2 SDG 7
13 GL	Display Energy Certificates for WCC's public buildings including the Swimming Pools, Municipal District Offices, Libraries and County Buildings.	1.5 2.1	*Mitigation*	Number of buildings displaying DEC's	Environment (Energy Officer)	Building owners	2024-2029	Resources	DECA 1,2 SDG 7

14 GL	Promote the development and uptake of remote/ blended working policies in line with the National Remote Work Strategy through Climate Action and other communication strategies, wherever these can reduce car journeys.	1.3	*Mitigation*	Number of staff availing of blended work opportunities.	ECS (Corporate Services)	All Directorates	2024-2029	Suitability of roles for blended work and availability of hot desking space	DECA 1, 2 SDG 11

Theme 2: **Built Environment & Transport**

Strategic Goal 2: Achieve carbon emissions reduction of 51% and energy efficiency improvement of 50% in our operations by 2030, creating a pathway to net zero by 2050.
Strategic Goal 3: Support decarbonisation of transport and modal shift from cars active travel and public transport.

Actions:

No.	Action	Objective	Adaptation / Mitigation	Tracking Measure	Lead Department	Partners	Timeframe	Dependencies	DECA SGs
1 BET	Prioritise decarbonisation of significant energy usage buildings within the Local Authority whilst advocating and exerting influence to ensure due regard is had to environmental sensitivities such as protected species associated with such buildings, European sites and biodiversity. • Four Leisure Centres • County Buildings • Bray Fire Station	2.1 2.2 2.3	*Mitigation*	kWh saved, Carbon emission reduction	Mid-East Energy Unit, Environment (Energy Officer)	SEAI, CCSD, Corporate Services, Bray Fire Service, Housing	2024 to 2029	Funding, *Pathfinder* programme, contractors	DECA 2, SDG 7
2 BET	Investigate and undertake a pilot to incorporate reuse of material or systems into a housing development, lowering life-cycle carbon emissions.	2.3 2.4	*Mitigation*	Pilot completed	Housing and / or Municipal Districts	Environment and Climate Action Team	2024-2029	Suitable development opportunity and funding	DECA 2, SDG 12, SDG 11

3 BET	Use low carbon construction methods, materials and low carbon cement as far as practicable for construction projects. Whole life-cycle analysis should be considered in all projects.	2.3 2.4	*Mitigation*	Number of projects implemented	Housing and / or Muncipal Districts	Environment and Climate Action Team	2024-2029	Resources and funding	DECA 2, SDG 11, SDG 12
4 BET	Phase out installation of heating systems that use fossil fuels in any new dwellings or buildings constructed or major renovation retrofit projects by 2025, having due regard to environmental sensitivities such as local human receptors, European sites and biodiversity; and the need to appropriately protect and conserve protected structures, during any retrofitting works.	2.1 2.5	*Mitigation*	Number of households refurbished or built with renewable heating systems	Housing	Environment and Climate Action Team	2025	Funding	DECA 2, SDG 7

5 BET	Implement and promote the National Retrofitting Housing Programme for Wicklow housing stock, achieving a BER of B2 or cost optimal level equivalent. A minimum of 700 housing units to be refurbished. Provide a minimum of 750 newly constructed housing units to a Building Energy Rating (BER) of A2 or in compliance with relevant guidelines within the lifetime of the Climate Action Plan Having due regard to environmental sensitivities such as local human receptors, European sites and biodiversity; and the need to appropriately protect and conserve protected structures, during any retrofitting works.	2.3 2.4 2.5	*Mitigation*	Number of local authority social housing stock completed with a Building Energy Rating (BER) B2 Number of dwellings provided by housing with Building Energy Rating (BER) of A2 or higher	Housing	DHLGH, Housing Bodies, Contractors	2024-2029	Funding Programme; Staffing	DECA 2, SDG 7 SDG 11
6 BET	Develop a pilot to promote adaptive reuse of historic structures - using exemplar retrofitting projects, having due regard to the need to appropriately protect and conserve in accordance with relevant protected structures regulations, and the need to not negatively impinge on any protected species that may be present in such buildings and European sites.	2.2	*Mitigation*	kWh saved; carbon emissions reduced; case study	Environment (Energy Officer)	Heritage Officer, Library Service	2025 - 2028	Availability of funding	DECA 2, SDG 11

7 BET	Complete the Public Lighting Energy Efficiency Programme following guidance in the Public Lighting Retrofitting Guidance Document and reviewing the existing public lighting levels including the use of lower colour temperature in National Park areas and areas with recorded bat populations. Having due regard for the impact the spectrum of light used will have on protected nocturnal species such as bats.	2.1 2.2 2.3	*Mitigation*	Percentage of public lighting converted to LED; PLEEP review completed; Number of existing lights converted to lower colour temperature lighting	TWES and Public Lighting	National Public Lighting Energy Efficiency Project; Kilkenny County Council	2024- 2028	Regional roll-out of programme; availability of contractors	DECA 2, SDG 7
8 BET	Develop and implement an EV charging strategy that ensures geographic spread and access in areas without opportunity for homeowners to charge on their own properties, having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, and local air quality.	3.3	*Mitigation*	Strategy completed; Number of charging points available for public use Revise and update EV Strategy in 3 years.	TWES & Municipal Districts	Environment (Climate Action), ZEVI	2024 strategy delivered, 2028 review	Funding and operators	DECA 2, 4 SDG 7, SDG 11

9 BET	Install EV charge points within local authority housing developments, in compliance with the Development Plan, having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, and local air quality.	3.3	*Mitigation*	Number of developments with EV charge points	Housing	Environment and Climate Action Team	2024-2029		DECA 2, 4 SDG 7, SDG 11
10 BET	Deliver the development of a high quality cycling and pedestrian network through Active Travel measures in urban areas and connecting communities. Ensure supported active travel development is carried out in a manner that has due regard to environmental sensitivities such as biodiversity, European sites, water quality and hydrology.	3.1	*Mitigation*	Number of projects completed and kilometres delivered	TWES (Active Travel)	Municipal Districts, NTA	2024-2029	Funding	DECA 2, 4 SDG 11
11 BET	Promote and support participation of schools in *Safer Routes to School,* ensuring any ancillary development has due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites and local air quality.	3.1 3.4	*Mitigation*	Number of schemes implemented and participation	TWES, Active Travel	Schools and An Taisce, EAO, Municipal Districts	2024-2029	Participation of schools, Funding	DECA 2, 4 SDG 11

12 BET	Strengthen towns and villages through enhancement of green infrastructure measures and/or sustainable transport linkages, having due regards for environmental sensitivities such as biodiversity, European sites, water quality and hydrology.	3.1 3.2	*Combined*	Number of village Improvement schemes such as URDF and town regeneration schemes	ECS (TRO)	TWES, Municipal Districts, CCSD	2024-2029		DECA 2, 4 SDG 11, SDG 15
13 BET	Complete Local Area Transport Studies for Greystones and Arklow and progress plans for other communities whilst ensuring such plans have due regard to opportunities for promoting climate action co-benefits and planning and environmental protection considerations.	3.1 3.2	*Combined*	No. of Local Transport Studies completed	TWES (Active Travel)	Planning, Municipal Districts	2024-2029	Funding	DECA 2, 4 SDG 11,
14 BET	Facilitate the planning and delivery of the Bus Connects and Bus Service Corridors to facilitate modal transfer to bus services on the N11 including the N11 Bus Corridor and the Park and Ride Infrastructure Strategy for facilities at the following locations: • Fassaroe, • Ashford / Rathnew • Kilpedder	3.2	*Mitigation*	Project delivered; Number of new or extended routes; Number of car park spaces provided	TWES	NTA, Park and Ride Development Office, Planning, Environment (Climate Action Team) and Municipal Districts	2025	Collaboration by service providers and funding for service provision	DECA 2, 4 SDG 11, SDG 7

15 BET	Facilitate the planning and delivery of the Dart Plus Scheme, whilst advocating and exerting influence to ensure the scheme and any associated development and activities promote climate action co-benefits and do not contravene relevant environmental protection criteria or cause significant negative environmental effects.	3.2	*Mitigation*	Project delivered and number of miscellaneous schemes conducted to implement Dart Plus Scheme	TWES	Dart +, Planning, Environment (Climate Action Team) and Municipal Districts	2027	Funding	DECA 2, 4 SDG 11, SDG 7
16 BET	Facilitate the planning and delivery of the LUAS Bray Scheme, whilst advocating and exerting influence to ensure the scheme and any associated development and activities promote climate action co-benefits and do not contravene relevant environmental protection criteria or cause significant negative environmental effects.	3.2	*Mitigation*	Project commencement and number of miscellaneous schemes conducted to implement the Scheme	TWES	TII, Planning, Environment (Climate Action Team) and Municipal Districts	2030	Funding	DECA 2, 4 SDG 11, SDG 7
17 BET	Assist the development of shared mobility services by increasing the number of bike facilities, e-bike schemes and shared mobility parking areas.	3.1 3.2	*Mitigation*	Number of kilometres travelled; Number of new users; Number of towns with schemes	TWES and Municipal Districts	Environment (Climate Change Team), Private service providers	2024-2029	Funding, private sector interest and level of public use	DECA 2, 4 SDG 11, SDG 7

18 BET	Implement measures to increase modal shift from private cars by visitors to the county to using public transport; looped tourism bus services; E-mobility infrastructure; regulation of parking; Glendalough Master Plan. Ensure supported development is carried out in a manner that has due regard to environmental sensitivities such as Biodiversity, European sites, water quality and hydrology.	3.1 3.2 3.4	*Mitigation*	Number of initiatives developed	TWES	Wicklow Tourism, Climate Action, Municipal Districts, CCSD, Service providers	2024-2029	Funding and service providers to provide new travel options	DECA 2, 4 SDG 11, SDG 8
19 BET	Complete an inventory of the existing council fleet and develop a fleet management policy achieving a target of 51% reduction in emissions, which includes the procurement of the fleet and an objective for decarbonising existing fleet. Whilst ensuring energy/fuel used to power local authority alternative vehicles is sustainably sourced, and appropriate end-of-life management practices are in place for Electric Vehicles.	3.1 3.3	*Mitigation*	Fleet Management Policy and inventory completed	TWES and Machinery Yard	All Directorates including the Climate Change and Energy Team	2024		DECA 2, SDG 7

20 BET	Fleet Management: Implement a transport energy management system including a fuel management system into the council fleet. Procure only zero emission veh., unless the vehicle is exempt under EC Regs SI381 of 2021, whilst ensuring appropriate end-of-life management practices are in place for zero emission vehicles. Investigate options to convert the existing council fleet to a low carbon fuel source where feasible such as Hydro-treated Vegetable Oil (HVO), whilst ensuring energy/fuel used to power local authority alternative vehicles is sustainably sourced	2.1 3.1 3.3	*Mitigation*	Fuel usage by fleet and GPS monitoring. Number of EV vehicles added to council fleet. Number of fleet vehicles converted	TWES and Machinery Yard	All Directorates	2024-2029	Access to charging infrastructure, Funding Availability of fuel and other technologies	DECA 2, 3 SDG 7 SDG 12
21 BET	Incorporate the use of more sustainable methods of delivering road improvements, cycle paths and footpaths (e.g. the use of RAP, road recycling methods, mico-surfacing into the annual roads programme).	2.1 2.3	*Mitigation*	Number of kilometres of total kilometres completed; amount of carbon saved	TWES and Municipal Districts	Environment and Climate Action Team	2024-2029	Availability and cost of materials	DECA 2, 5 SDG 12

22 BET	Standardise the management of drainage systems within the council including: • the regular maintenance of regional and local road drainage systems, 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. • the recording and mapping of areas impacted by weather events (Climate Change events) including the implementation of technology such as the Weather Impact Register (WIRE) App to capture impacts, response and costs (including ecosystem services/natural capital costs) • mapping the location of attenuation tanks and drainage systems on Arc GIS	2.1 3.1	*Adaptation*	Reduction in the number of complaints of flooding or blocked gullies	TWES and Municipal Districts	Information Systems, GIS, Planning, Environment	2024-2029	Staff engagement and availability of training	DECA 2, SDG 11, SDG 6

23 BET	Deliver climate adaptation works on infrastructure through the Climate Change Adaption & Resilience Works and drainage funding programmes, 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.	2.1 3.2	*Adaptation*	Projects delivered annually	Municipal Districts and TWES	Environment section and Climate Action Team	2024-2029	Funding and Resources	DECA 2, SDG 11
24 BET	Develop a mobility plan to reduce emissions from travel by staff including promoting the Cycle to Work Scheme; shared mobility options including a Smart Mobility Hub at the county buildings including E-bikes, an EV pool car, and training for staff on the operation of same.	2.1 3.1 3.2 3.4	*Mitigation*	Number of bike parking facilities; Number of promotions of shared mobility; Number of staff availing of scheme; Number of staff trained	TWES, Environment, Housing and Corporate Services (Training Officer)	All Directorates	2024-2029	Staff engagement and availability of training	DECA 1, 2 SDG 7

Natural Environment & Green Infrastructure

Theme 3: **Natural Environment & Green Infrastructure**

Strategic Goal 4: Deliver on climate adaptation, biodiversity resilience, harnessing the power of nature based solutions, resulting in enhanced capacity for our environment to adapt to changing conditions

Actions

No.	Action	Objective	Adaptation / Mitigation	Tracking Measure	Lead Department	Partners	Timeframe	Dependencies	DECA SGs
1 NEGI	Engage with neighbouring local authorities and other relevant organisations (including Irish Rail) on coastal erosion, whilst advocating and exerting influence to ensure supported coastal erosion works and development promote climate action co-benefits and do not contravene relevant environmental protection criteria or cause significant negative environmental effects.	4.4 4.7	*Adaptation*	Quarterly meetings with neighbouring local authorities	Environment and Climate Action Team	Irish Rail; DLR; DCC and Wexford CC	2024 - 2029	Funding; DLR and Wexford CC	DECA 3 SDG 9 SDG 11 SDG 13 SDG 15 SDG 17
2 NEGI	Update flood event emergency response plans including supporting the development of a flood forecasting and warning system. Ensure to incorporate Climate resilience.	4.1 4.7	*Adaptation*	Plans reviewed annually and systems developed	TWES	Major Emergency Management Committee; SWAT; MET Eireann and All Districts	2024 - 2029	Resources; Senior Management; funding and training	DECA 2, 3 SDG 11

3 NEGI	Ensure all relevant legislation and regulation on climate change and flood management is integrated into council policies and guidelines, including the promoting of natural flood measures. Undertake Strategic Flood Risk Assessment of all Local Area Plans and Development Plans. Implement the OPW Flood Risk Management Guidelines and best practices to ensure that all developments consider climate resilience and demonstrate that they integrate Nature-Based SuDS and Nature-Based Solutions to address surface water management. Ensure due regard is given to environmental sensitivities, including water quality, biodiversity, European sites, riparian corridors and aquatic ecology.	4.1 4.3 4.5 4.7	*Adaptation*	Policies and guidelines produced. Assessment completed for Development Plan and Local Area Plan Number of developments permitted which specify use of Nature-Based SuDS or Nature-Based Solutions	Planning & Environment	Environment (Climate Action Team), Municipal Districts and OPW	2024 - 2029	National planning guidelines; Development Plan; WCC SuDS policy and resources	DECA 2, 3 SDG 6, SDG 11, SDG 15,
4 NEGI	Seek a buffer of generally 25-metre along watercourses as riparian zones for urban areas in line with the Inland Fisheries Ireland publication 'Planning for Watercourses in the Urban Environment' and the Wicklow County Development Plan.	4.3 4.5 4.6	*Combined*	Number of projects beside urban riparian zone	Planning, Housing	Environment, Municipal Districts	2024 - 2029	County Development Plan and SuDS policy	DECA 1, 3 SDG 6, SDG 14, SDG 15

5 NEGI	Develop and implement an integrated SuDS policy to guide planning, installation, monitoring and maintenance to improve storm-water management. Provide training on SuDS implementation to key staff, having due regard to environmental sensitivities such as biodiversity, European sites and water quality.	4.3 4.5	*Combined*	SuDS Policy provided; Number of projects implemented by Districts; No. of workshops.	Environment	Planning, Environment (Climate Action), Municipal Districts	2024-2029	Senior management and staff implementation funding for SuDS measures	DECA 2, 3 SDG 11, SDG 15, SDG 6
6 NEGI	Develop demonstration sites highlighting Nature-Based SuDS providing flood attenuation systems within existing urban areas, having due regard to environmental sensitivities such as biodiversity, European sites and water quality.	4.3 4.5	*Adaptation*	Number of demonstration sites	TWES (Municipal Districts)	Environment	2024 - 2029	Training; Funding and Resources	DECA 2, 3, SDG 11, SDG 15, SDG 6
7 NEGI	Support and facilitate LAWPRO projects improving water quality within the county catchments. Example scheme: Avonmore *Waters of Life Project,* having due regard to the maintenance and improvement of water quality in line with the aims of the Water Framework Directive.	4.3 4.5 4.6	*Combined*	No. of meetings with the project team	Environment (Pollution Control)	LAWPRO; third level institution; Climate Action	2024-2027	Community participation and cross-sectoral collaboration	DECA 3 SDG 6, SDG 14, SDG 15

8 NEGI	Prioritise the use of nature-based SuDS on local authority schemes within the following areas: 1. Roads - ensure drainage works are considered at the preliminary design stage of project development for all road and infrastructure projects 2. Housing - integrate nature-based SuDS techniques from the initial preliminary design stage to project completion. Additionally utilise water demand technologies into all housing capital projects. Having due regard to environmental sensitivities such as biodiversity, European sites and water quality.	4.3 4.5	*Adaptation*	Number of road projects that use nature-based SuDS methods; Number of housing schemes incorporating nature-based SuDS methods; Number of water demand technologies installed.	TWES Housing	Environment (Climate Action), Municipal Districts	2024-2029	National standards for incorporation of nature-based SuDS in design standards and funding needs to be reprioritised	DECA 1, 3 SDG 6, SDG 11, SDG 15
9 NEGI	Deliver the following Flood Relief Schemes: • Arklow Flood Relief Scheme • Avoca Flood Relief Scheme • Baltinglass Flood Relief Scheme 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, visual amenity and recreation and amenity value.	4.3 4.7	*Adaptation*	Project completed; change in number of properties at flood risk due to construction of defences, including soft and hard defensive measures	Environment	OPW	2028	OPW funding	DECA 2, 3 SDG 9, SDG 11

10 NEGI	Work with the OPW in order to review and progress more detailed studies on schemes including: • Blessington Flood Relief Scheme • Greystones & Environs Flood Relief Scheme • Wicklow & Ashford Flood Relief Scheme • facilitate the hydraulic modelling of the Bray Flood Relief Scheme • facilitate the OPW to conduct a review of the PFRA with regard to flood risk arising from floods on surface water infrastructure such as culverts. 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, visual amenity and recreation and amenity value.	4.3 4.7	*Adaptation*	Scheme designs further progressed; flood mapping completed; PFRA flood risk completed	Environment	OPW	2024 - 2029	OPW; funding and resources	DECA 2, 3 SDG 9, SDG 11

11 NEGI	Incorporate Nature-Based measures for coastal erosion in order to support the conservation and management of sand dunes at Brittas Bay, having due regard to environmental sensitivities associated with coastal areas such as the receiving marine environment, biodiversity, European sites, recreation and amenity value.	4.4 4.5	*Adaptation*	Projects completed; Nature-based Solutions implemented	Environment and Planning (Heritage Officer)	Wicklow Municipal District; TWES and Climate Action	2024 - 2029	Funding	DECA 3, 4 SDG 11, SDG 15, SDG 14
12 NEGI	Undertake an audit of council owned land for suitability for micro-woodlands/biodiversity by end-2025 and to set targets for planting/management with suitable vegetation. Incorporate three pilot woodlands on public lands schemes in Bray, Wicklow & Grangecon.	4.5	*Combined*	Number of hectares of land identified for planting; Number of projects delivered; Number of hectares designated	Environment (Biodiversity Officer), Corporate Estate and Housing	All Directorates	2024-2025	Funding through Woodlands on Public Lands Scheme	DECA 3 SDG 11, SDG 15
13 NEGI	Promote the implementation of best practice pollinator friendly and Green Infrastructure guidance for managing greenspace by Municipal Districts to include: mowing regimes, hedgerow, tree care weed & riparian zones management. These standards shall be developed by a competent ecology team, and shall have due regard of the need to appropriately manage these habitats.	4.5	*Combined*	No. of standards created	Environment (Climate Action Team)	Municipal Districts	2025-2027	Resources and Finance	DECA 3 SDG 11, SDG 15

14 NEGI	Implement the Glyphosate policy within the MD's, developing an integrated approach, working with other Las to establish best practice, identifying and trialling best alternative practices.	4.5 4.6	*Mitigation*	Glyphosate usage in litres annually; Number of trials for vegetation control.	Environment	Municipal Districts; Environment (Biodiversity Officer, EAO & Climate Action)	2024-2029	Viable alternatives that are effective	DECA 3 SDG 11, SDG 15, SDG 14
15 NEGI	Review and update the Wicklow Heritage Plan to record, conserve, and raise awareness of all aspects of the built, natural and cultural heritage, having due regard to the need to appropriately protect, conserve and enhance important habitats and species and European sites, and support the maintenance and improvement of water quality in line with the aims of the Water Framework Directive.	4.5 4.6 4.7	*Combined*	Plan adopted	Planning (Heritage Office)	Climate Team; Planning; Heritage Council	2024	None	DECA 3 SDG 11, SDG 15
16 NEGI	Undertake a climate risk assessment of LA owned heritage assets (natural and built), following guidance to come from DHLGH for LAs on methodology, identifying priority areas for action, having due regard to the need to appropriately protect, conserve and enhance important habitats and species and European sites, and support the maintenance and improvement of water quality in line with the aims of the Water Framework Directive.	4.1 4.5	*Combined*	Risk assessment completed; No. of vulnerable sites identified	Planning (Heritage Office) Environment (Climate Action)	All Directorates	2025-2029	Methodology from DHLGH	DECA 3 SDG 11, SDG 15

17 NEGI	Review and update the Wicklow Biodiversity Action Plan to protect and enhance local biodiversity, including climate-relevant measures having due regard to the need to appropriately protect, conserve and enhance important habitats and species and European sites, and support the maintenance and improvement of water quality in line with the aims of the Water Framework Directive. This plan shall be developed by a competent ecology team, and shall have due regard to the need to appropriately manage these habitats.	4.5 4.6 4.7	*Combined*	Plan adopted	Planning & Environment	Climate Action Team, Biodiversity Officer	2025-2029	None	DECA 3 SDG 14, SDG 15
18 NEGI	Implement pollinator conservation initiatives on public realm sites, creating and maintaining pollinator-friendly habitats based on most up-to-date scientific advice from All Ireland Pollinator Plan, ensuring sites and actions are mapped with the All Ireland Pollinator Plan.	4.5 4.6	*Combined*	No. of sites with actions mapped	Environment (Climate Action Team)	Municipal Districts, Biodiversity Officer	2024-2029	achieve recording of actions	DECA 3 SDG 11, SDG 15
19 NEGI	Review the Tree Management Policy and support its implementation.	4.5	*Combined*	Review completed	Environment (Climate Action Team)	Municipal Districts	2025	Funding and allocation of staff resources	DECA 3, SDG 15

20 NEGI	Develop a hedgerow plan for the county with actions to map, protect and develop hedgerows, having due regard to hedgerow area conservation requirements and the need to avoid habitat fragmentation.	4.5	*Combined*	Plan developed; Number of actions	Environment (Biodiversity Officer)	Environment (Climate Action Team)	2025-2026	Funding	DECA 3, SDG 3
21 NEGI	Develop an integrated programme to address invasive alien species through education and with recording and eradication programmes in the public realm. This programme shall be developed by a competent ecology team, and shall have due regard to the need to appropriately manage and prevent the spread of invasive species.	4.5 4.6	*Combined*	Number of sites with invasive species identified; guidance on monitoring and control issued	TWES	Municipal Districts, Environment (Biodiversity Officer) and Tidy Towns	2025-2029	Resources to eradicate	DECA 3 SDG 14, SDG 15
22 NEGI	Liaise with CCMA and ETBs to devise and deliver accredited biodiversity training for local authority staff on biodiversity, with a module on climate links. Material created at regional / national level, delivered locally in each LA.	4.6	*Combined*	No of staff trained	ECS (Training Officer)	Environment (Climate Team, ETB) and CARO	2025 -2029	Development of information at regional or national level	DECA 1, 3 SDG 14, SDG 15, SDG 17

23 NEGI	Pilot a biodiversity-inclusive design for a social housing estate considering the following elements within the design: green roofs, green walls, wetland, pond, Nature-Based SuDS, green car parking, nest boxes in facades, grasslands, wildlife friendly shrubs and trees in open space, ensuring developments have due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, local air quality and cultural heritage.	4.5 4.6	*Combined*	Pilot implemented, case study prepared	Housing	Environment and Climate Action Team	2028	Funding	DECA 2, 3 SDG 11, SDG 15
24 NEGI	Assist local community stakeholders engaging in peatland rewetting, woodland creation and nature restoration to access funding to undertake projects in upland areas, whilst advocating and exerting influence to ensure such projects are designed and implemented in a manner that accords with relevant environmental protection requirements.	4.5 4.6 4.7	*Combined*	Amount of funding secured; Number of initiatives	Environment (Climate Action Team)	PPN; NPWS; landowners and community organisations	2024-2029	Engagement by landowners and CAF	DECA 3 SDG 6, SDG 15, SDG 13, SDG 17

25 NEGI	Host an annual uplands forum to develop an integrated partnership with key stakeholders to develop carbon sequestration, catchment management and tackle recreational pressures on upland sites delivering protection of habitat.	4.5 4.6 4.7	*Combined*	Number of meetings held; Number of initiatives developed from the forum	Environment (Climate Action Team)	Biodiversity Officer; Heritage Officer; NPWS; Coillte; Wicklow Uplands Council; LAWPRO; Environment; Economic Development	2024-2029	None	DECA 3, SDG 6, SDG 15, SDG 13, SDG 17
26 NEGI	Develop a hill and forest fire management response and prevention strategy, including protocols for responding to fires, enforcement, awareness campaigns of the impact of fires and systems to measure the extent and economic costs of fires having appropriate regard to the need to support the achievement of conservation objectives and protect and enhance important habitats or the qualifying interests of any protected sites.	4.1 4.5 4.6 4.7	*Combined*	Response strategy adopted; strategy for mitigation adopted	TWES	Environment (Climate Action Team); Fire Service; NPWS; Coillte; Wicklow Uplands Council; EAO	2026 -2027	Agency collaboration and resources	DECA 3, SDG 15, SDG 17
27 NEGI	Work with stakeholders to delineate and establish a Dark Sky Reserve for County Wicklow. Undertaking a light assessment of Laragh and Roundwood to explore opportunities to reduce light pollution.	4.5 4.6 4.7	*Combined*	Reserve established; assessment report for two towns; Number of actions identified	Environment (Climate Action), TWES	NPWS; Trinity College Dublin	2027	Light levels can meet the criteria	DECA 3, SDG 7, SDG 15

28 NEGI	Map green infrastructure for the five largest towns to develop an integrated approach, implementing objectives in the County Development Plan and Local Area Plans.	4.5 4.6	*Combined*	Maps produced	Planning, Environment (Climate Action Team)	Environment (Biodiversity Officer); Municipal Districts	2024-2029	None	DECA 3, SDG 11, SDG 15
29 NEGI	Build climate resilience of architectural and archaeological heritage in public and private ownership through schemes such as the BHIS, HSF, HTI, IWTN and the Community Monument Fund, having due regard to environmental sensitivities such as local human receptors, protected species associated with such buildings, European sites and biodiversity, and the need to appropriately protect and conserve protected structures in accordance with relevant protected structures regulations.	4.6	*Combined*	Number of sites per year funded	Planning (Heritage Office)	Environment (Climate Action)	2024-2029	Funding streams available	DECA 2, 3 SDG 11
30 NEGI	Support engagement of stakeholders on initiatives that assist in the control and management of deer.	4.7	*Combined*	Number of initiatives per year	Environment (Biodiversity Officer)	Environment (Climate Action)	2024-2029	Engagement by landowners and relevant stakeholders	DECA 3 SDG 1 SDG 2 SDG 15

Communities: Resilience & Transition

Theme 4: **Communities Resilience & Transition**

Strategic Goal 5: Mobilise and empower climate action in local communities.
Strategic Goal 6: Achieve a just transition particularly for communities that may be economically disadvantaged by decarbonising projects or most impacted by climate change.

Actions

No.	Action	Objective	Adaptation / Mitigation	Tracking Measure	Lead Department	Partners	Timeframe	Dependencies	DECA SGs
1 CRT	Administer the funding to local community groups for climate action through the Community Climate Action Fund ensuring a diversity of themes covered. Include sustainability and climate change scoring on relevant grant assessments to ensure that community groups/stakeholders consider climate action in all their grant funded activities.	5.1 5.2 5.3	*Combined*	Number of projects funded; amount of grant aid provided annually	Environment (Community Climate Action Officer)	PPN; Environment (Climate Action Team)	2024-2029	Funding made available from CAF Criteria from funding body	DECA 2, 3, 4 SDG 7, SDG, 11, SDG 12, SDG 15, SDG 17

2 CRT	Liaise with renewable energy developers on the Community Benefit Fund to ensure a climate focus in funding to communities. Learnings from the Ballinagran community fund.	5.1 5.2 5.3	*Combined*	Number of meetings and relevant projects funded.	Environment (Climate Team)	PPN; CCSD; Ballinagran Community Liaison Committee	2024-2029	Community funds activated	DECA 2, 3, 4, SDG 7, SDG 11, SDG12, SDG 14, SDG 15, SDG17
3 CRT	Deliver capacity building and training for local communities to develop leadership on climate action and biodiversity action annually.	5.3 5.5	*Combined*	Number of participants or community groups at events	Environment (Climate Team)	County Wicklow Partnership; PPN	2024-2029	Relevant expertise and community engagement	DECA 4, SDG 11, SDG 12, SDG 13, SDG 14, SDG 15, SDG 17
4 CRT	Quarterly communications to PPN on climate action to be disseminated through their newsletter. And communications through social media and the council website.	5.3	*Combined*	Number of updates	(Environment) Climate Action Team	All Directorates	2024-2029	Staff Resources	DECA 4 SDG 17
5 CRT	Develop a '*Green Events Policy*' for events and filming on location to ensure best practice on site.	5.3 5.5	*Combined*	Policy adopted	Environment (Climate Action Team)	Planning; Municipal Districts; Environment (EAO); CCSD	2025	Adoption of Green Events Policy	DECA 4, SDG 12

6 CRT	Develop an annual '*Climate Action Week'* with a range of educational events throughout the county delivered by a range of participants.	5.3 5.5	*Combined*	Number of events	Environment (Climate Action Team)	CCSD (libraries); Planning (Heritage Officer); Environment (Biodiversity Officer, EAO); PPN	2024-2029	Resources to develop events and participation stakeholders	DECA 4, SDG 4, SDG 13, SDG 17
7 CRT	Recognise the work being done in the county by all sectors in the community on local climate action initiatives and delivery of the Sustainable Development Goals targets through the annual 'Sustainable Development Awards'.	5.3 5.5	*Combined*	Number of awards	Environment (EAO)	Climate Team; CCSD; Economic Development	2024-2029		DECA 4, SDG 4, SDG 7, SDG 11, SDG 12, SDG 13, SDG 14, SDG 15, SDG 17
8 CRT	Support citizen science projects and third level research to target climate sensitive species through collaboration, training and provision of equipment through libraries.	5.3 5.5	*Combined*	Number of workshops, number of projects	Environment (Biodiversity Officer)	Environment (Climate Action Team, EAO); CCSD (libraries); NPWS	2025-2029	Third level participation	DECA 3, 4 SDG 4, SDG 14, SDG 15, SDG 17

9 CRT	Promote Green Schools and Heritage in schools. Programmes to encourage active engagement on climate and biodiversity with a focus on TY students.	5.4 5.5	*Combined*	Number of Green Flags	Environment (EAO)	Environment (Heritage Officer; Biodiversity Officer), Green Schools and Secondary Schools	2024-2029	Schools participating within scheme	DECA 4, SDG 4, SDG 6, SDG 7, SDG 11, SDG 12, SDG 13, SDG 14, SDG 15, SDG 17
10 CRT	Support the work of SEAI Sustainable Energy Communities (SECs) in County Wicklow, assisting them to network, access funding and promote their events and projects.	5.2 5.3 5.5	*Mitigation*	Number of active SECs	Environment (EAO)	Environment (Climate Action); SEAI; Mid-East Energy Unit	2024-2029	SEC engagement and funding	DECA 2, 4 SDG 7, SDG 11
11 CRT	Support community groups in their efforts to develop communal gardens and allotments.	5.5	*Combined*	Number of community groups supported	CCSD; Municipal Districts	Environment (EAO, Climate Team)	2024-2026	Strategy adopted	DECA 4, SDG 2, SDG 12
12 CRT	Promote tree planting by providing: • an annual tree planting grant for communities and schools • trees to communities during National Tree Week	5.3 5.4 5.5	*Combined*	Number of grants annually; Number of groups receiving trees for National Tree Week	Environment (EAO)		2024-2029	Community and schools engagement	DECA 3, 4 SDG 15

13 CRT	Incorporate climate action into all plans under the following: • Rural Development Fund • Urban Regeneration and Development Fund • Town and Village Renewal Scheme • CLÁR Scheme Having due regard to environmental sensitivities such as European Sites and biodiversity related sensitivities, sensitive human receptors and the need appropriately protected and conserve cultural heritage features.	5.1 5.5	*Combined*	Number of Climate initiatives	CCSD (Town Regeneration Officer – Town Centre First)	Environment (Climate Action); Blessington Town Team	2024-2025	Community engagement	DECA 4, SDG 8, SDG 9, SDG 10, SDG 11
14 CRT	Develop sustainability in the arts with *Creative Climate Action* funding.	5.6 5.3 5.5	*Combined*	Number of climate themed arts events; funding received.	CCSD (Arts Office)	Environment (Climate Team)	2024-2029	Availability of Creative Climate Action funding; artist engagement.	DECA 4, SDG 4, SDG 13, SDG 17
15 CRT	Promote the awareness of the Sustainable Development Goals through innovation projects within the public realm, e.g. landscaping designs, roundabouts and murals.	4.6 5.3 5.5	*Combined*	Number of projects completed	Environment (Climate Team)	Municipal Districts; TWES	2024-2029		DECA 4, SDGs'

16 CRT	Guided by the memorandum of Understanding signed by the GAA and CCMA, Engage with the Green Club Programme working with the CARO and GAA, in the promotion and support of projects.	5.4 5.5	*Combined*	LA contact in place; collection of case study examples of projects	Environment (EAO)	Climate Team; GAA; CARO	2024-2029	Participating clubs in the programme	DECA 4, SDG 9, SDG 11, SDG 12, SDG 15, SDG 17
17 CRT	Promote the *Home Energy Savings Kit* scheme in WCC libraries, including training for staff.	5.3	*Mitigation*	Number of kits in branches; borrowing rates in libraries	Environment (EAO/Energy Officer)	Environment (Climate Action Team); Libraries	2024-2029	Appropriate number of kits available	DECA 4, SDG 7
18 CRT	Engage with the Age Friendly Team on events for active retirement and associated groups to provide information on best approaches to maintaining warmer homes and energy efficiency in the home.	6.1 6.3	*Mitigation*	Number of talks and events	CCSD	Environment (EAO); active retirement groups; PPN	2024-2029	Engagement of active retirement groups	DECA 4, SDG 7
19 CRT	Provide energy awareness talks and waste prevention workshops for local authority estates and new tenant induction courses.	6.1 6.3 6.4	*Mitigation*	Number of events	Environment (EAO)	Housing	2024-2029	Engagement of residents' associations	DECA 4, SDG 7
20 CRT	Assess town regeneration plans for impact on mobility ensuring an approach that is age friendly and appropriate for all with mobility impairment.	6.1 6.2 6.3	*Mitigation*	Number of plans assessed	CCSD (Town Regeneration Officer)	TWES (with Active Travel); Municipal Districts	2024-2029	Resources	DECA 4, SDG 11
21 CRT	Provide accessible bus stops on new and existing routes.	6.1 6.2	*Mitigation*	Number of bus stops upgraded	TWES	Municipal Districts; NTA	2024- 2029	Funding	DECA 4, SDG 11

22 CRT	Assess five existing large local authority housing schemes for public transport links and active travel access, whilst having due regard to environmental sensitivities such as European sites, biodiversity and water and air quality.	6.1 6.2 6.4	*Mitigation*	Reports completed	TWES and Housing	TWES (Active Travel) and Environment Climate Action Team	2027	Funding and public acceptance	DECA 4, SDG 11
23 CRT	Work with the *Healthy Food Made Easy Programme* and *Community Food Initiative.*	6.1 6.2 6.3	*Combined*	Number of workshops	Environment (EAO)	Healthy Foods Committee	2024-2029	Funding of the programme	DECA 4, 5 SDG 2, SDG 12
24 CRT	Provide workshops for children and young people to facilitate their input on climate change and biodiversity.	5.4	*Combined*	Number of workshops provided annually	Environment (Climate Action Team)	Green Schools, Libraries; Children and Young People's Assembly; DCU, Wicklow Comhairle na nÓg and Secondary Schools	2024-2029	Community engagement	DECA 4, SDG 4, SDG 11, SDG 13, SDG 17

Sustainability & Resource Management

Theme 5: **Sustainability & Resource Management**

Strategic Goal 7: Mobilise climate action in enterprise and agriculture supporting the transition to an inclusive net zero and circular economy.

Actions

No.	Action	Objective	Adaptation / Mitigation	Tracking Measure	Lead Department	Partners	Timeframe	Dependencies	DECA SGs
1 SRM	Conduct a review of the civic amenity sites including: energy use, water demand, current layout, drainage and services.	7.1 7.4	*Mitigation*	Number of: • sites reviewed: • water demand measures implemented • new services	Environment (Waste Management)	Environment (Climate Action Team and Energy Team)	2024 - 2029	Funding and resources	DECA 5, SDG 12
2 SRM	An awareness campaign in civic amenity sites on the life cycles of waste, exploring different options on the waste hierarchy.	7.1 7.4	*Combined*	Campaign produced and rolled out in recycling centres	Environment (EAO)	Waste Management; Climate Action	2025-2027	Public engagement	DECA 5, SDG 12
3 SRM	Implement a wider roll out of segregated brown bin collection systems and support the implementation of the National Waste Management Plan, whilst ensuring all supported initiatives accord with provision Waste Management Act and do not lead to adverse environmental impacts or nuisance.	7.1 7.5	*Mitigation*	No. of initiatives focused on food waste, commercial waste, C&D waste or packaging reduction	Environment (EAO)	LEO; EMWMRO, EPA, My Waste	2024-2029	Engagement business community	DECA 5, SDG 8, SDG 11, SDG 12

4 SRM	Support SME's through the: • Green for Micro programme • Climate Toolkit for businesses • Green Start programme with Enterprise Ireland • Climate Ready Training with Skillnet Ireland • Energy Efficiency grant.	7.1 7.2 7.3 7.5	*Mitigation*	Number of businesses supported through the LEO initiatives annually	ECS (LEO)	Environment (Climate Team); Corporate, Enterprise Services and Fáilte Ireland	2024-2029	Continuation of programmes	DECA 5, SDG 7, SDG 8 , SDG 9, SDG 11, SDG 12
5 SRM	Promote uptake of energy performance measures in business and agricultural sectors through the promotion of: • SEAI programmes and Energy Audits • support scheme for renewable heat • micro and small-scale renewable energy generation • anaerobic digestion • energy efficient and heating control technology. Whilst advocating and exerting influence to ensure supported renewable energy development does not contravene relevant environmental protection criteria or cause significant negative environmental effects.	7.1 7.3	*Mitigation*	Number of initiatives	ECS (LEO); Environment (EAO)	SEAI; SEC's; IFA; Chambers of Commerce	2024-2029	Opportunities to liaise with the sector	DECA 5, SDG 7, SDG 8 , SDG 9, SDG 11, SDG 12

6 SRM	Develop a skills strategy for the county which includes training for emerging skill shortages such as renewables, energy efficiency, green technologies and also review the role of the Wicklow County Campus.	7.3	*Mitigation*	Strategy developed	ECS (LEO)	CCSD; SETU; KWETB	2024-2025	Relevant engagement	DECA 5, SDG 4, SDG, 7, SDG 8, SDG 9, SDG 11, SDG 17
7 SRM	Develop a renewables hub at the Wicklow Campus in Clermont to support development of the sector in County Wicklow, while ensuring that the businesses and projects supported accord with relevant planning and environmental protection criteria.	7.3	*Mitigation*	Hub developed; Number of businesses supported	ECS (LEO)	CCSD; LEO; SETU, KWETB, ECS (Economic Development Unit), Energy Officer	2024-2029	Funding	DECA 5, SDG 4, SDG, 7, SDG 8, SDG 9, SDG 17
8 SRM	Develop remote working hubs in existing enterprise centres and support the development of working hubs in other strategic locations where space permits.	7.4	*Mitigation*	Number of remote working hubs	ECS (Economic Development Unit)	LEO	2024-2029	Space and funding	DECA 5, SDG 8, SDG 11

9 SRM	Identify and implement Rural Development Fund initiatives that deliver on a transition towards a climate-neutral rural economy to include: • rural transport, • working hubs, • town and village regeneration • nature-based solutions • digital initiatives • green economy • bio-economy Having appropriate regard to planning and environmental protection requirements, environmental sensitivities such as European Sites, biodiversity and opportunities for promoting climate action co-benefits and interconnectivity.	7.4 7.5	*Combined*	Number of initiatives	ECS (Town Regeneration Officer)	Environment (Climate Action); Municipal Districts	2024-2029	Community participation	DECA 4, 5, SDG 8, SDG 9, SDG 10, SDG 11, SDG 12, SDG 15
10 SRM	Promote sustainability in the tourism, food and the hospitality sector.	7.1 7.2 7.4 7.5	*Mitigation*	Number of best practice case studies identified; Number of events	ECS (Wicklow Tourism)	Wicklow Naturally; LEO; Environment (Climate Action), Economic Development Unit	2024-2029	Funding and engagement of tourist industry	DECA 5, SDG 8, SDG 11, SDG 12, SDG 17

11 SRM	Facilitate development of local markets for food producers in the county encouraging sustainable practice in the sector.	7.2 7.4 7.5	*Mitigation*	Number of members of Wicklow Naturally	ECS (LEO), Environment (EAO)	DAFM; Corporate and Enterprise; EAO; Climate Action, Wicklow Naturally, Econ Dev Unit	2024-2029	Community buy in, funding	DECA 5, SDG 8, SDG 11, SDG 12, SDG 17
12 SRM	Liaise with Signpost, ACRES, TAMS and Farming for Nature Schemes to support climate action in the agricultural sector. Help to promote farms to become demonstration farms and highlight the work being done in Wicklow to decarbonize agriculture and manage land using best practice for sustainability, development planning and environmental protection and enhancement.	7.1 7.2 7.5	*Combined*	Number of shared initiatives	Environment (Climate Action)	Teagasc; ACRES; EAO; IFA; Wicklow Uplands Council	2024-2029	Engagement of agricultural sector	DECA 5, SDG 6, SDG 7, SDG 8, SDG 11, SDG 12, SDG 17
13 SRM	Promote the use of Green Public Procurement within the council.	7.5	*Mitigation*	Number of workshops or training courses provided to staff	FIS (Procurement) Environment (Climate Change)	TWES; Housing; Municipal District and all sections	2024 - 2029		DECA 5, SDG 12
14 SRM	Examine the potential of the former landfill sites of Ballymurtagh (Avoca) and Rampere (Baltinglass) for the development of green energy. Having due regard to planning and environmental protection considerations.	7.1 7.5	*Mitigation*	Number of initiatives; carbon savings	Environment and Waste Management	Environment (Climate Action and Energy Management Team)	2029	Engagement of energy sector	DECA 5, SDG 7

15 SRM	Monitor and enforce relevant environmental protection laws including applying the 'polluter pays' principal (particularly in relation to C&D and commercial waste).	7.5	*Mitigation*	Environment Performance Assessment from EPA	Environment	Environmental Enforcement Officers and Inspectors	2024 - 2029		DECA 5 SDG 12
16 SRM	Implement and further utilise Local Government Management Association shared services such as the following: • National Environment Management Information System (NEMIS) in recording statistics on environmental activity • Road Management Office systems • E-Planning • Building Control Management System • National Library Management System • Fix Your Street, etc.	7.1	*Mitigation*	Number of shared service projects implemented	ECS (Information Systems)	All Directorates; LGMA	2024 - 2029	Funding	DECA 5, SDG 12
17 SRM	Incorporate Climate Action in the Library Development Plan 2025 - 2029	7.1	*Combined*	Plan Published	Library Service	Environment (Climate Action Team)	2026		DECA 5 SDG 13
18 SRM	Review existing work practices and offices in order to promote climate change measures. Review the existing IT systems in order to reduce paper usage.	7.1	*Mitigation*	Number of reviews conducted and number of trial solutions	ECS (Information Systems), Environment (Climate Change Team)	All Directorates; LGMA	2024-2029	Staff Engagement Funding; Training; appropriate IT systems	DECA 5, SDG 12 SDG 13

19 SRM	Develop and implement waste prevention fund initiatives.	7.4 7.5	*Mitigation*	Number of programs implemented	Environment (EAO)	Environment (Climate Action Team and Environmental Awareness)	2024 - 2029	Funding	DECA 5, SDG 12
20 SRM	Upgrading of council-owned buildings to include for Nature-Based SuDS and water demand. Ensure all SuDS related construction works are designed and implemented in a manner that does not result in the occurrence of significant adverse environmental effects.	7.4 7.5	*Mitigation*	Number of buildings where project works have been completed; reviews completed	Housing, Municipal Districts	Environment and Climate Action Team	2024-2029	Funding	DECA 5, SDG 6, SDG 15

5.0: ARKLOW DECARBONISATION ZONE

5.1 General:

A Decarbonisation Zone (DZ) is a spatial area identified by the local authority, in which a range of climate mitigation, adaptation and biodiversity measures and action owners are identified to address local low carbon energy, greenhouse gas emissions and climate needs to contribute to national climate action targets.

5.2 Introduction to Decarbonisation Zone

Under the **National Climate Action Plan 2021** each local authority was to develop a pilot decarbonisation zone and incorporate it as a chapter of the Climate Action Plan. The aim is to provide a demonstration area where the scale and scope of decarbonisation can be tested working closely with local stakeholders in the community, local businesses and householders. The implementation plan should identify opportunity for innovation in developing the community reducing energy demand and driving a transition to renewable energy, support modal transport from cars to active smart travel or public transport, decoupling economic growth from energy use or resource consumption to restoring natural capacity and carbon sequestration.

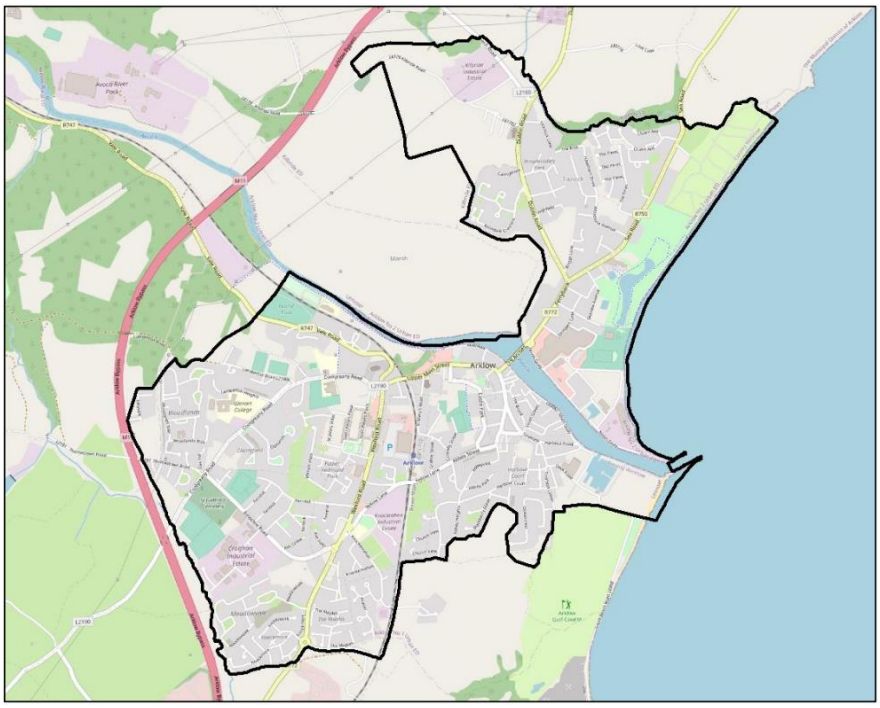
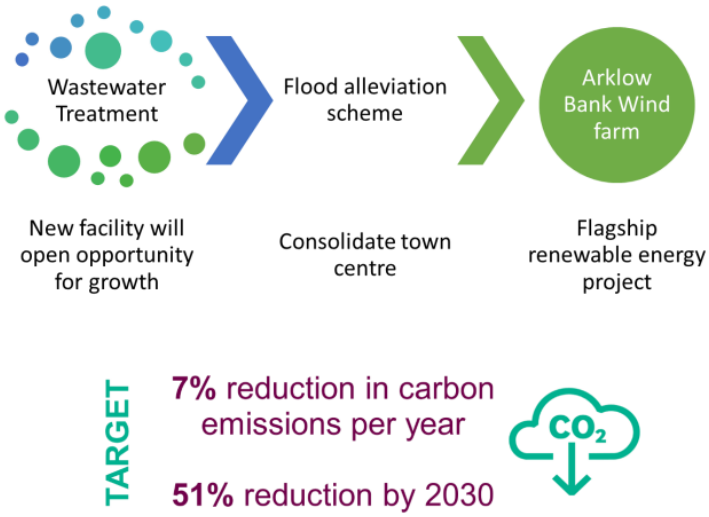


Figure 5.1: Arklow Decarbonisation Zone Boundary.

The town of Arklow has been selected as the 'Decarbonisation Zone' for County Wicklow. The vision is for Arklow to become **'a vibrant coastal town, rich in renewable resources, and with low-carbon living at its core'**. The Arklow Decarbonisation Zone will be one of a small number of communities leading the way in achieving a 51% reduction in GHG emissions by 2030 through a **7% annual reduction** in emissions. Arklow is poised for regeneration and improvement, with three major infrastructure projects underway or planned in the immediate future. These are the development of a Waste Water Treatment Plant, the Arklow Flood Relief Scheme and the development of the Arklow Bank Wind Park adjacent to the pilot zone. The impetus from these projects can be captured to create momentum for decarbonisation.



5.3 Decarbonisation Zone emissions profile

Total GHG emissions for the town equate to approximately 75,266 tCO2e. This translates to 5.7 tCO2e per capita based on 2016 census population data. In 2018, Ireland's national GHG emissions equated to approximately 12.6 tCO2e per capita. Ireland's average is significantly higher than the EU28 average of 8.2 tCO2e per capita. Whilst the Decarbonisation Zone emissions per capita are lower than the national equivalent this is due in large part to an absence of emissions relating to agriculture.

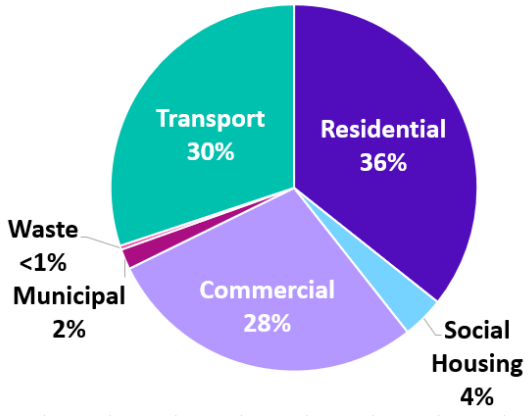


Figure 5.1: Arklow Baseline Carbon Emissions 2018 (tCO_2eq).

These results illustrate the sectors that need to be targeted as a priority for the largest benefits to take place over the shortest amount of time. The top three categories are:

1. **Residential**: Emissions from use of energy in the home such as space heating, hot water, and electricity use (lighting, appliances etc).
   Residential buildings emit the highest proportion of emissions in the town. Arklow has a diverse range of residential building stock dating back to pre-1920 with 6% of the units and a total of approximately 70% dating pre-2001. It is accepted among the industry that units built pre 2006 would benefit greatly from modern retrofit works. The energy costs for heating residential units can significantly increase with the age of the building. Fossil fuels such as oil and gas are the two primary fuels for home heating in Arklow though there is also significant use of open fires and stoves as a secondary heat source.

2. **Commercial**: Energy used to heat businesses, operating machinery and equipment and other electricity use (lighting, appliances etc).
   Arklow's commercial and industrial buildings account for 28% of emissions. Like residential buildings the electrical use and heating account for much of their energy consumption, although in some workspaces the use of energy for equipment and machinery is very significant. Arklow has a diverse range of workspaces with some old buildings being utilised within the town centre to more recently developed commercial buildings used for retail and industry towards the outskirts of the town. Arklow has a significant amount of buildings which have a significantly large floor area and roof space.

3. **Transportation**: the baseline includes all trips made by various types of vehicles (cars, commercial vehicles, buses etc) and is dominated by emissions from either petrol or diesel engines.

   Transport accounts for the second largest source of carbon emissions in Arklow with 30% of emissions. Most of the emissions come from either private car or commercial vehicle usage. Research undertaken by Arklow SEC has highlighted that commuting is dominated by either car or commercial van usage, this is slightly ahead of the national average. While public transport (such as bus or train) and smarter travel options (such as bicycle use) are all below the national average. Arklow has 45% of people commuting less than 15 minutes for work school or college which is more than the national average. Additionally Arklow is above average for those commuting between one to one and a half hours per day.

5.4 Arklow Decarbonisation Zone Vision, Mission and Goals

There are eight key goals that Wicklow County Council set out when selecting Arklow as the community that would lead the way as a piolet for decarbonisation. These goals capture the opportunity for Arklow to be revitalised through a focus on sustainable compact development, opportunities to develop the renewables sector, with the town leading by example in meeting the wider issue in decarbonising the county.

1. **To build on Arklow ld status as leader in offshore renewables as a centre of innovation for decarbonisation**

2. **To work with the industrial and business sector on developing a resource efficient economy**

3. **To work on retrofitting buildings in the town, decarbonising our homes, workplaces and community facilities**

4. **To develop active travel for getting around town and between services along with better public transport options**

5. **To create a strong, dynamic town centre resilient for the future**

6. **To harness the potential of biodiversity in building a more resilient environment**

7. **To raise citizen awareness and achieve behaviour change across the community**

8. **To create a network of towns and communities in County Wicklow implementing decarbonisation opportunities**

The vision for Arklow is for **'a vibrant town, rich in renewable resources, and with low-carbon living at its core'**. Arklow is poised for regeneration through new industrial opportunity, the development of wastewater treatment and flood relief works, both providing opportunity for development, particularly town centre compact development.

Arklow has a long history of industrial development and today enjoys a diverse range of commercial activity. Its housing stock varies in age dating from current construction back to the nineteenth century.

The large numbers commuting locally within the town and connection with the wider region offer opportunity for the development of both active travel and public transport for the town.
The town centre can benefit from key regeneration projects on the main street, along the water front and in the nearby harbour area.

Arklow has faced significant risk from coastal erosion, coastal flooding and both fluvial and pluvial flooding. The coastal protection works and flood relief works have and will help to alleviate, these issues but there is also great potential to build resilience by harnessing the restorative potential of nature-based solutions to help the town adapt to changing conditions.

Arklow is well organised through active engagement at community and business levels which can play a key role in developing a more sustainable future for the town.

As the county's first decarbonisation zone, Arklow will work with other towns and communities to share learnings from its work and the work of other communities in the county.

5.5 Opportunities for Arklow

Residential Emissions

Arklows baseline of the carbon footprint for private residential dwellings amounted to 26,410 t/CO2eq in 2018. These emissions are primarily from the use of fossil fuels such as natural gas, oil and solid fuel for heating and electricity requirements.

There are 5,063 private residential homes in Arklow with an estimated 56% of homes having a BER of C1 or lower as illustrated in table 5.2.

BER Rating Range	%
A1-A3	13%
B1-B3	11%
C1-C3	34%
D1-D2	21%
E-G	21%

Table 5.2: Arklow BER Profile 2018.

Carbon savings from deep retrofitting all private residential houses in Arklow	
	• Draft proofing, new ventilation systems • Low energy lighting • Upgrade energy control and monitoring
Carbon Reduction in 2030	Reduction of 17,990 tonnes CO_2eq/year compared to 2018 levels (approximately 64% reduction across all houses).
Co-Benefits	Health benefits from improved air quality due to burning fewer fossil fuels. Improved standard of living from increased comfort levels (warmer, less damp, and better ventilation). Reduced energy bills.
Responsible	DECC, SEAI, Department of Housing, Local Government and Heritage, WCC
Cost	€140.2 million – estimated average retrofit cost is €27,700 per house (ranges from €75,000 for 'G' rated to €10,000 for 'B3' rated).
Funding	SEAI / DECC – for houses currently at a C2 rating or lower (50%) Private funding models

Figure 5.3: Residential Deep Retrofit (Source SEAI).

BER Rating Range	%
A1-A3	0%
B1-B3	2%
C1-C3	59%
D1-D2	29%
E-G	10%

Table 5.4: Arklow Social Housing BER Profile 2018.

Social Housing

The baseline carbon footprint associated with Social Housing in Arklow was 2,737 t/CO2eq in 2018. The social housing stock in Arklow includes 508 homes, the majority of which are BER rated C1-C3 at 59%.

Compared with private residential stock it can be seen that some of the social housing stock in Arklow has already been improved and the average energy efficiency surpasses private housing. As the social housing stock is under the control of Wicklow County Council, this is a sector that could be prioritised for a retrofitting programme.

Carbon savings from deep retrofitting all social houses in Arklow	
Goal	Improve BER grade of all social housing in Arklow to at least B2, to reduce carbon emissions.
Scope/ Description	Combination of: • Fabric Upgrades (insulation, windows, doors) • New heating systems (typically electric Heat Pump) • Draft proofing, new ventilation systems • Low energy lighting • Upgrade energy control and monitoring
Carbon Reduction in 2030	-1,443 tonnes CO_2eq/year compared to 2018 levels.

Table 5.5: Carbon Savings from Social Housing Deep Retrofit A.

Carbon savings from deep retrofitting all social houses in Arklow	
Co-Benefits	Health benefits from improved air quality. Improved standard of living from increased comfort levels, due to improved home heating. Reduced energy bills.
Responsible	WCC, SEAI / DECC, Department of Housing, Local Government and Heritage
Cost	€14.1 million – assuming average cost of €27,700 per house
Funding	SEAI co-ordinate several programmes for retrofitting. Potential for other creative funding mechanisms.

Table 5.6: Carbon Savings from Social Housing Deep Retrofit B.

Commercial

As with the residential sector, the first opportunity for reducing the commercial sector footprint is through energy efficiency. Commercial buildings range from very small shops in older parts of the town to modern warehouses and offices built to modern standards. The approach to efficiency should follow a process of:

- Audit (understanding the energy consumption)

- Changing practices – zero or low-investment investment initiative

- Fabric First – upgrading the thermal efficiency to reduce heat loss and improve comfort levels

- Energy systems upgrade – upgrading heating/ cooling systems and other equipment (replace gas/oil-fired boilers with heat pumps or biomass boilers).

- Renewable energy sources – look at on-site generation

The Arklow SEC can potentially play a role in delivering this programme in line with the objectives of the SEC Energy Master Plan.

Renewable Energy: Solar

There is potential for a solar PV programme for all commercial properties. This could be done in parallel with, or independently of, other energy efficiency programmes (although it is good practice to reduce consumption before focussing on renewable generation).

Solar PV Potential Commercial Properties	
Average Annual Electrical Energy Production (MWh)	21,597
Cost of Installation (Million €)	40
Payback Period based on electricity produced (years)	10
CO_2 Savings (tonnes/yr.)	4,017

Table 5.7: Estimated total commercial Solar Potential for Arklow.

Two industrial areas, (Croghan and Kilbride) were assessed. Based on available satellite imagery of the area, the total facility roof area was estimated, and some basic assumptions of potential available roof area and solar energy yield were applied, enabling an estimate of the potential renewable energy generation. A more detailed feasibility would be required for each building in order to take account of roof orientation, profile, materials, slope etc. These two estates alone have the potential to install 2.8 MW of solar PV generation capacity (or an estimated 2.8 GWh of electricity per annum).

Title	Installation of rooftop solar PV modules on commercial properties (500+ buildings) in Arklow
Goal	Install solar PV modules to all commercial premises in Arklow to reduce reliance on grid electricity, to reduce carbon emission associated with electricity use.
Scope/ Description	Combination of: • Installing solar PV modules on the rooftops of commercial premises. • Powering the commercial properties with maximum amount of solar energy available. • Selling excess electricity to electrical grid, if there is an excess amount generated, to ensure all electricity generated is used.
Carbon Reduction in 2030	- 4,017 tonnes CO_2eq/year (based on estimated carbon emissions of electricity generated in 2030 (conservative approach).)
Co-Benefits	Reduced use of grid electricity which contains fossil fuels. Health benefits due to improved air quality from reduced burning of fossil fuels. Cheaper electricity cost over lifespan of PV modules.
Responsible	Commercial Businesses, WCC, DECC, SEAI
Cost	€40.14 Million
Funding	SEAI DECC Private funding sources (Energy Supply Company model, or other).

Table 5.8: Commercial Rooftop Solar Potential for Arklow.

District Heating

A Spatial Energy Demand Analysis was carried out as part of the DZ Implementation Plan. This includes mapping of published heat demand density in the town, municipal heat demand data, and knowledge of proposed significant projects.

Potential energy sources for district heating include: two separately proposed data centres to the edge of the town; a geothermal heat source beneath the town; and a proposed anaerobic digestion facility. District Heating (DH) networks will often combine more than one source of heat.

Initial mapping suggests that relevant heat sources and clusters of existing or new heat users can be identified in the town. The map shown in figure 5.9 represents an initial appraisal focusing on demand from the commercial and industrial zones and the proposed new development (or redevelopment sites).

It can be ascertained that a potential cluster of existing heat demand to the north of the Avoca River (two swimming pools, and the Bridgewater shopping centre) appear as a potential demand cluster. Other attractive opportunities can be seen in the proposed regeneration areas (waterside area) and in greenfield residential lands on the southern fringe of the town.

A District Heating Feasibility Study for Arklow will enable closer examination of the potential of low-carbon heat sources and the potential of anchor customers for a district heating system in the town. As well as technical analysis a report could address investment and operational costs for a operational business model that would suit the town of Arklow. A number of funding opportunities exist for such a study on District Heating.

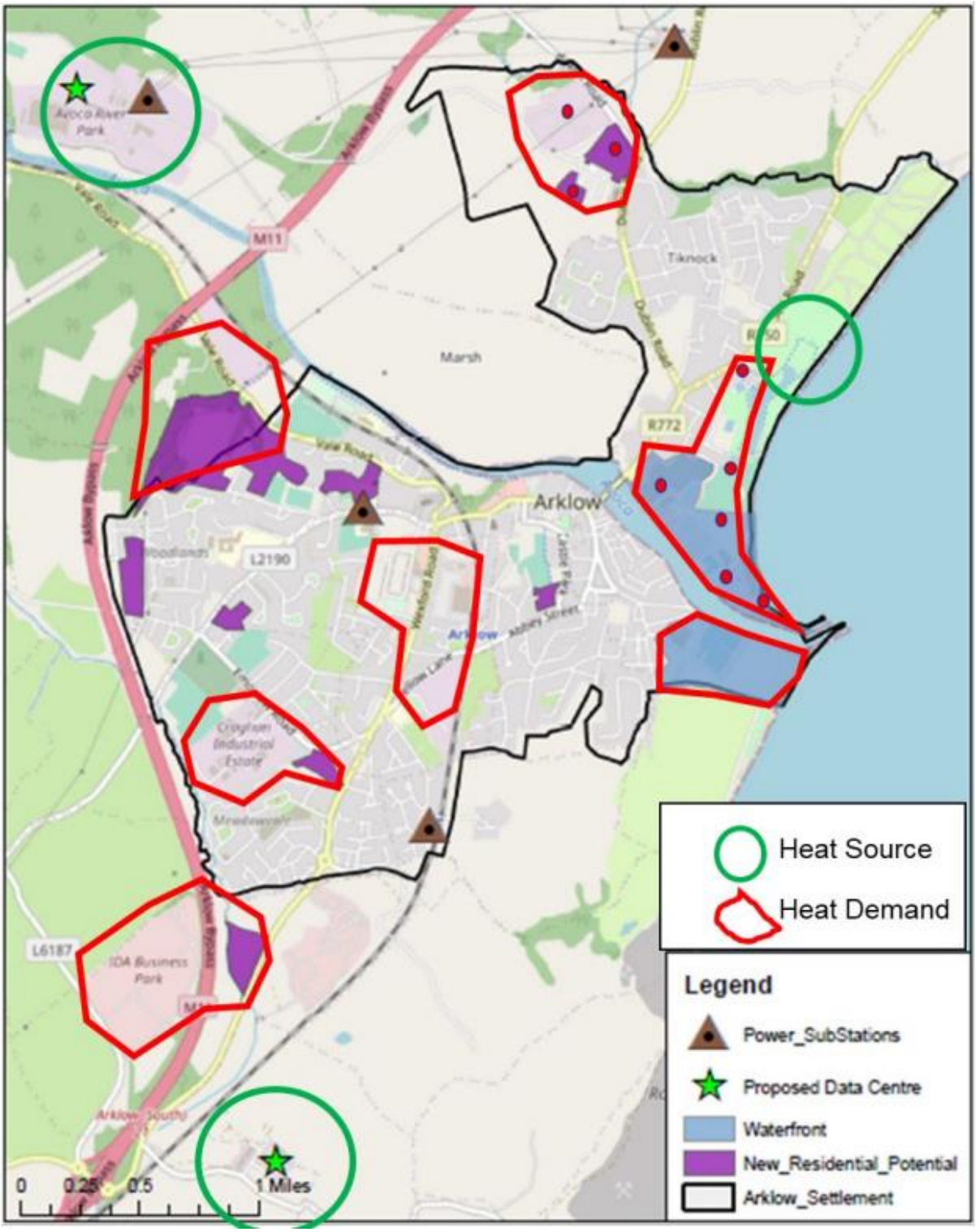


Figure 5.9: Indicative clusters of potential high heat demand and low carbon heat sources.

Goal	**Install District Heating network using low-carbon renewable heat sources (e.g., Data Centre waste heat) to provide heat to homes and businesses in Arklow.**
Scope/ Description	Combination of: • Using low carbon heat source (e.g., Data Centre, Geothermal, Biomass Combustion) in Arklow to provide heating to local homes and businesses. • Laying new DH pipework • Creating energy supply company to manage and operate the system. • Reduce use of fossil fuels (gas, kerosene, coal) for heating.
Carbon Reduction in 2030	TBD CO_2eq per year
Co-Benefits	Health benefit Improved air quality (less combustion of fossil fuels) Lower heating costs; as carbon tax increase heat from district heating may become cheaper option for customers. Reduce the use of immersion tanks – people will have hot water on demand. More space available in buildings due to removal of boilers. Lower maintenance cost for customers.
Responsible	WCC, SEAI, DECC – Eventually Energy Sector Partners
Cost	Not Available
Funding	DECC/ SEAI / European Interreg funding Private Investment

Table 5.10: District Heating Potential

Transport

The Sustainable Accessibility and Mobility (SAM) Framework as shown in figure 5.11 is an approach that calls for measures that first focus on the role of place in reducing trips, before considering how to increase the proportion of the remaining trips that are taken by active, public, and shared forms of transport.

The next step in addressing the transport carbon footprint is to reduce reliance on motorised vehicles, by achieving a switch to active travel (walking, cycling). Following that, using public transport can result in much more carbon-efficient journeys, and at the same time reduce congestion in the town.

Then transport emissions for the remaining cars and freight vehicles can be reduced by switching away from fossil fuels towards low-emission vehicles such as Electric Vehicles and other technologies such as biofuels and hydrogen.

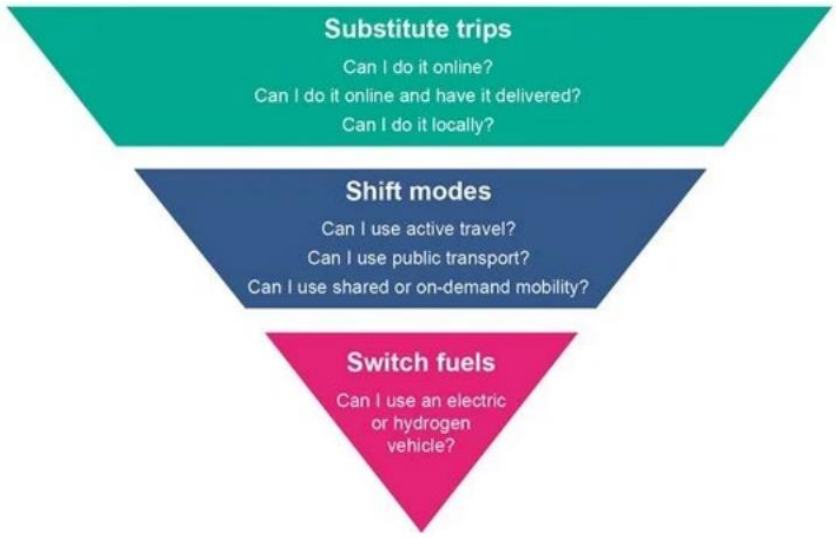


Figure 5.11: Sustainable Accessibility and Mobility (SAM) Framework

Active travel

The morphology and size of Arklow is such that the town centre and most of the facilities are located within a 15-minute cycle from all parts of the town. A significant portion of the population lives within a 15-minute walk of the town centre.

The active travel proposals include an enhanced, connected network of cycling infrastructure throughout Arklow to aid the shift to cycling.

Safe Route to School is an important feature of this proposal to enable the schools' communities to increase the share of trips made by cycling.

Other actions include the provision of additional bicycle parking facilities, improvement of directional signage and the provision of public bicycle repair / maintenance stations.

Additionally, walking infrastructure is an important feature of the active plan, with improved pedestrian experience prioritised, as well as an improvement in pedestrian connections through some of the main streets and surrounding areas. The adjacent map shows 12 to 15 minute journeys from Arklow town centre.

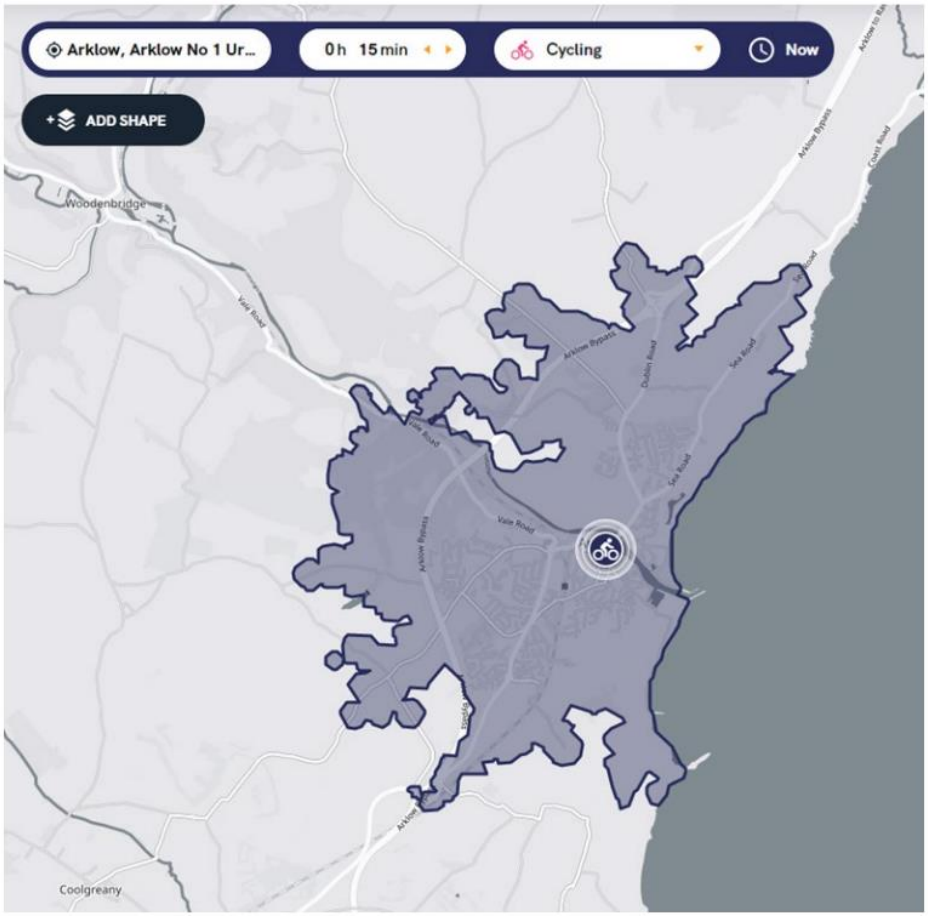


Figure 5.12: 15-minute cycling isochrones Arklow

Title	Modal Shift to Active Travel and Public Transport
Goal	Targets: reduce overall transport emissions by 10% from 2018 baseline through Active travel and public transport. Adopting an Arklow 15-minute town concept.
Scope/ Description	• Schools' morning and evening drop off (switch to active travel modes). A specific Active Travel Targets of 30% to school by active travel by 2025 in proposed. • Workplace commuting in Arklow – a switch to walking, cycling and E-bikes, and car-pooling for workers in the town's businesses. This can be driven by Workplace travel plans and programmes. • Co-working spaces to be made available in the town • Day-to-day trips in the town – with enhanced amenities and pedestrian and cyclist facilities, more journeys for shopping and other short trips can be done by active travel. • Innovation such as a bike, e-bike and e-scooter share scheme to stimulate active travel growth. • Behavioural Change…Substitute trips for those able to work from home encourage local digital hubs to act as a central point for those working from home… (expand as per above) • Public realm streetscape re-allocation (including bicycle parking etc.) • Micro-consolidation for council services and low-carbon logistics
Carbon Reduction in 2030	2,229 tonnes
	Safer healthier town with greater shared public spaces. Cleaner air, less congestion, and a more commercially vibrant town centre.
Responsible	WCC, NTA, Schools, DHLGH, Arklow businesses.
Cost	€ Not available (will combine Active Travel facilities with behavioural change programmes)
Funding	NTA, DHLGH (URDF), WCC, Private/ Corporate funding.

Table 5.13: Model Shift to Active Travel and Public Transport

Public Transport

Arklow has a railway station with five services each day on the Rosslare to Dublin line, which limits service for rail users. There are a number of bus services shown in the below table which operate in Arklow. There are currently no local public services operating solely within the town itself.

Route No.	Bus Route	Frequency	Provider
800	Carlow to Arklow	4 Daily	Local Link
1394	Tinahely to Arklow	1 Friday	Local Link
1379A	Laragh to Arklow	1 Friday	Local Link
1406	Redcross to Arklow	1 Thursday	Local Link
4975	Coolkenna to Arklow	1 Friday	Local Link
740	Wexford to Dublin City / Dublin Airport	18 Daily	Wexford Bus
133	Arklow to Dublin	1 Daily	Bus Eireann
2	Arklow to Dublin	14 Daily	Bus Eireann

Transport opportunities include:

- Increasing the frequency of rail services;
- Increase range and frequency of local services;
- On demand/responsive public transport or taxi services within the town; and
- Enhanced linkages with Wexford Bus services.

Electrical Vehicle Transition

National policy in the Climate Action Plan 2021 is to rapidly transform the national private car fleet from fossil fuels (petrol, diesel) to electric vehicles (EVs). By 2030, it is intended that there will be 1 million electric vehicles on the road.

This changeover is in the hands of individual car owners. As well as purchasing an EV, installation of charging points is required at household level. This might be combined with other 'energy retrofit' measures (for example solar PV panels, and battery storage) in the 'residential' sector.

Figure 5.14 shows the dramatic effect that EVs can play in reducing Arklow's carbon footprint. This graph shows a successful embrace of national policy in Arklow, where 90% of cars being EV's by 2030 (80% EV and 10% Hybrid). Most EV charging is expected to be done at the place of residence, but public EV charging points will be needed to support the transition.

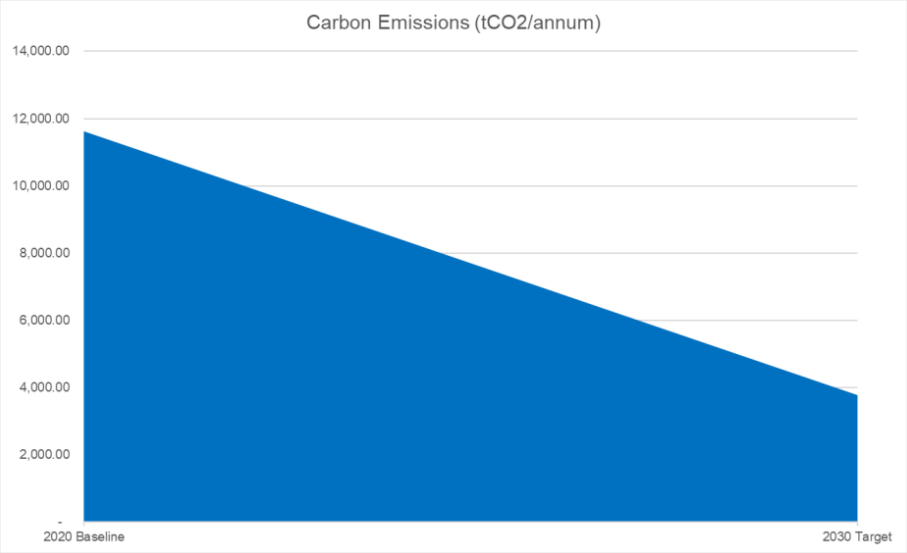


Figure 5.14: E-Vehicle Transition

Title	Transformation of private car fleet in Arklow to EVs
Goal	90% EV fleet by 2030
Scope/ Description	• 4,900 EVs • 3,400 EV charging point installations (households)
Carbon Reduction in 2030	- 7,856.17 t/CO_2eq
Co-Benefits	Reduction in air pollution associated with tailpipe emissions in cars. Reduction in noise pollution
	Reduced risk of refuelling leaks and spills (improved water quality).
Responsible	Householders, WCC, SEAI, DECC
Cost	€127 million (based on estimated EV price of €37,500 based (ref. Kia Soul) incl. SEAI grant and VRT reduction)
Funding	Private funding (householders), DECC/SEAI

Table 5.15: E-Vehicle Transition – Arklow Potential Private Fleet

Municipal

An assessment of the energy consumption for municipal buildings taken from the data of the SEAI M&R system demonstrated that the Coral Leisure centre swimming pool and gym is among the largest consumers of energy in the town. Additionally, the Civic Offices and the Croghan recycling centre are also significant consumers of electricity. An overview of energy consumption from council facilities in 2018 is shown in table 5.16.

	Unit	2018
Electricity		
Coral Sports Swimming Pool Arklow	kWh	165,735
Civic Offices & Library, Main Street, Arklow	kWh	56,300
Croghan Industrial Estate Emoclew Arklow Recycling Centre	kWh	51,560
Coral Leisure Sports Centre Arklow	kWh	30,959
Harbour Office South Quay Arklow	kWh	22,710
Fire Station Arklow	kWh	18,150
Gas		
Coral Sports Centre Arklow	kWh (Gross)	170,172
Coral Leisure Swimming Pool Arklow	kWh (Gross)	834,589

Table 5.16: Overview of energy consumption in council facilities within Arklow.

There have been upgrades on the municipal buildings in Arklow as shown in figure 5.17 however there is still an opportunity for additional gains to be made under the public sector energy efficiency programme.

Figure 5.17: Arklow fire Service and Civic Buildings.

Wicklow County Council's Arklow municipal district is operated from the town. A fleet of operational vehicles including 3 vans, 6 pick-up trucks, and 8 other utility vehicles which are used to operate and maintain municipal services. There is an opportunity to transition a suitable fleet to E-vehicles to reduce associated emissions.

There are approximately 1000 street lights in the town of Arklow which can save in the region of 110 tonnes of CO^2 per annum through conversion to LED lighting. Additionally there is scope to explore dimming of lights in some locations and the trialling of smart controls to further reduce energy consumption.

Wicklow County Council will prioritise upgrading its public lighting, buildings and fleet in order to achieve a targeted 51% reduction in carbon emissions and 50% improvement in energy efficiency by 2030.

Arklow Schools

A focus on decarbonising school buildings has potential to raise awareness as well as reduce emissions. There may be potential for an early implementation of solar PV rooftop renewable energy, with all of Arklow's schools grouped together. The potential to group the schools and avail of an economy of scale should be explored.

The Department of Education and SEAI have collaborated on a 'Pathfinder' project whereby a number of extensive retrofitting programme to improve energy performance. Replicating this in Arklow will be a encouraged by the Council.

Schools	**Installation of rooftop solar PV modules on school buildings (10 buildings) in Arklow to reduce use of grid electricity.**
Goal	Install solar PV modules to all schools in Arklow to reduce reliance on grid electricity, which contains fossil fuels, to reduce carbon emission associated with electricity use.
Scope/ Description	Combination of: • Installing solar PV modules on the rooftops of school buildings. • Powering the schools with maximum amount of solar energy available, that is generated by the modules. • Selling excess electricity to electrical grid, if there is an excess amount generated, to ensure all electricity generated is used.
Carbon Reduction in 2030	- 336.15 tonnes CO_2eq/year based on estimated carbon emissions of electricity generated in 2030.
Co-Benefits	Reduced use of grid electricity which contains fossil fuels. Health benefits due to improved air quality from reduced burning of fossil fuels. Reduced pressure on electrical grid demand. Cheaper electricity cost over lifespan of PV modules.
	Awareness and participation bonus for the town.
Responsible	DECC, SEAI, Department of Education
Cost	€1.4 Million
Funding	SEAI, DECC, Department of Education, Wicklow County Council. Potential for private (corporate) sponsorship. Potential for energy Supply Company model.

Circular Economy

There are significant opportunities for circular economy principles to be mainstreamed within Arklow. This can be achieved by incorporating reuse, repair and recycle principles across the community and commercial space, and offers opportunities for businesses and community groups to get involved with local initiatives.

Wicklow County Council have delivered waste prevention initiatives through the Arklow Recycling Centre and can partner with local charity shops to implement behaviour change campaigns and support the promotion of the circular economy in Arklow to reduce the quantities of waste going to landfill and incineration.

Campaigns have been delivered around Reuse, Repair, Food Waste and Textiles.

Circular Economy Programme	Planning and developing awareness measures, initiatives, projects and facilities to support a transition to more circular solutions for the resources used in Arklow
Goal	Reduce reliance on 'take-make-waste' processes for households, communities and businesses. Reduce waste generation and treatment (and associated carbon emissions)
Scope/ Description	Combination of: • Public awareness programmes • Engagement and promotion events for community and business • Development of reuse and repair hub • Special programmes and initiatives in sectors such as textiles and food • Allotments and Grow it Yourself initiatives.
Carbon Reduction in 2030	-64 tonnes tonnes CO_2eq/year (target 25% reduction in waste carbon footprint 2018)
Co-Benefits	Employment creation by means of circular economy solutions. Reduced use of natural resources (raw materials, transport, etc.) Reduced food waste. Awareness and participation bonus for the town.
Responsible	WCC, DECC, Community and Business, Social economy sector (charity shops, etc.)
Cost	€*** TBD
Funding	DECC (Circular Economy Fund), EPA, Potential for private (corporate) sponsorship.

Table 5.18: Circular Economy Programme for Arklow DZ.

Carbon sequestration and adaptation through nature based solutions

As well as finding ways to reduce emissions, climate action can also find ways to remove carbon dioxide from the atmosphere. This can be achieved by natural methods such as growing trees, creating (or restoring) active wetlands, and regenerative land practices, all of which can sequester carbon from the atmosphere and lock it away naturally.

A number of options to contribute to carbon sequestration in Arklow have been examined, including tree planting, coastal action, and exploring wider scale opportunities in the catchment of the Avoca River.

One way to bring together opportunities for more carbon sequestration, more biodiversity and improvement of natural amenities in the town is to develop a **Green Infrastructure Plan** for the town. This will involve a closer look at the strengths and weaknesses of the current distribution of parks, green corridors, woodlands, their connectivity and recognising opportunities to build resilience and connection within this network.

A further way to develop more carbon sequestration is to promote biodiversity enhancement in new developments in the town. The Local Area Plan and the Development Management System (planning permissions) can set a requirement for a 'net gain' in biodiversity for all new developments.

Arklow's maritime location offers potential to explore the role the marine environment can play in sequestering carbon. A pilot with the Native Oyster Reef Restoration Ireland (NORRI) project would be timely. It can also provide a strong connection to the unique maritime heritage of Arklow.

As water quality in Arklow improves following completion of the new wastewater treatment plant, the regeneration of natural coastal ecosystems – and potentially the native oyster - can be a strong symbol for the town in the future.

Native Oyster Reef Restoration Ireland (NORRI)

The first restoration goal is to identify suitable site for oyster reef restoration, along the Wicklow's coastal marine area, and establish it as a no-take Biomimicry LivingLabs® that can be replicated throughout Ireland and Europe.

Our solution for oyster habitat restoration uses six biomimicry principles: evolve to survive, adapt to changing conditions, be locally attuned and responsive, resource efficient, use life-friendly chemistry, and integrate development with growth.

The environment sets the limits for sustainable and resilient development and restoration, so our premise is to work with nature to help establish conditions conducive to life and help restore native oyster reef habitats, while improving water quality, marine biodiversity and help heal our environment.

Source www.norri.ie

In recent decades the main socio-economic barriers to Arklow's development has been: the lack of a municipal wastewater treatment and flooding concerns. Both of these problems are on the cusp of being addressed by major capital investment programmes.

An additional, underlying, environmental problem for the town has been the poor water quality of the Avoca River as a result of historical mining operations. The Decarbonisation Zone project can potentially connect with the overall Avoca River catchment improvement.

One element of the comprehensive remediation of the mining area will be re-profiling, capping and re-vegetating a number of extensive mining spoil areas. If developed with permanent vegetation cover these areas have the potential to serve as carbon sinks. This could contribute to the overall decarbonisation effort for Arklow.

Planning and Place making

Arklow is expected to grow in population and employment in the coming year, particularly with the availability of the new waste-water treatment plant and the economic activity associated with major investment in offshore wind energy and potential Data Centres.

New development areas, and regeneration sites such as the waterfront area, should be planned and developed as low-carbon or even **Net Zero Carbon** zones. This will include:

- Planning for compact, walkable, and interconnected areas, where active travel is the primary mode of transport
- Encouraging low-impact communities, that favour circular economy and sharing of resources rather than consumerism

- Achieving buildings and infrastructure with a very low embodied carbon – for example reusing buildings or components, using low carbon building materials such as timber, using low emissions construction plant and techniques
- Nearly Zero Energy Buildings (NZEB) – ensuring very high energy efficiency, low energy consumption, and incorporation of on-site renewable energy

A truly Net Zero Carbon District will also calculate its residual carbon footprint and develop ways (either directly or through purchasing carbon offsets) to balance emissions so that the overall activities are considered net zero.

The **Arklow Local Area Plan** will be the statutory tool to give expression to the DZ objectives, and to make compliance mandatory for new developments. The LAP can also identify opportunities for Net Zero Carbon developments and districts.

Policies specific to Arklow should support new attitudes and practices in the town.
Examples of measures to be considered include:

- Requiring District Heating compatibility or adoption in relevant locations and development types
- Setting development standards that encourage active travel as opposed to private car ownership and ensuring connectivity for walking and cycling connections for new developments
- Requiring Biodiversity Net Gain in new developments

Figure 5.19: Public realm proposal for a River Walkway under the Arklow Flood Scheme.

A focus on town centre regeneration with compact development will help to anchor sustainable practice in the town.

The flood relief scheme will play a role in enhancing town centre public realm as well as protecting homes and businesses in the town.

Arklow Decarbonisation Zone Actions									
Theme 1: Governance & Leadership.									
Strategic Goal 1: Adopt climate focused governance, provide leadership, and build partnerships for climate action. Strategic Goal 2: Achieve carbon emissions reduction of 51% and energy efficiency improvement of 50% in our operations by 2030, creating a pathway to net zero by 2050.									
Actions									
No.	**Action**	**Objective**	**Adaptation / Mitigation**	**Tracking Measure**	**Lead Department**	**Partners**	**Timeframe**	**Dependencies**	**DECA SGs**
1 ADZ G&L	The Local Area Plan will take account the Arklow Decarbonising Zone implementation plan and actions of the Climate Action Plan.	1.1 1.2 1.4 8.1 8.5	*Combined*	Arklow Local Area Plan aligns with DZ Plan	Planning	Environment (Climate Action Team); Arklow Municipal District	2029	Resources	DECA 1, 2, 3, SDG 7, SDG8, SDG 9, SDG 11, SDG 15
2 ADZ G&L	Create an Arklow Decarbonisation Forum to engage key stakeholders in development and delivery of decarbonisation.	1.1 1.2 1.5 8.1 8.2	*Combined*	Forum established	Environment (Climate Action) and Arklow Municipal District	Town Team; Arklow SEC; Arklow Chamber of Commerce; Schools; Active Travel Team; Sports clubs	2024-2029	Engagement stakeholders	DECA 1, 2, 4, SDG 7, SDG 8, SDG 9, SDG 11, SDG 14, SDG 15

Theme 2: **Built Environment & Transport**									
Strategic Goal 2: Achieve carbon emissions reduction of 51% and energy efficiency improvement of 50% in our operations by 2030, creating a pathway to net zero by 2050. Strategic Goal 3: Support decarbonisation of transport and modal shift from cars to active travel and public transport.									
Actions									
No.	**Action**	**Objective**	**Adaptation / Mitigation**	**Tracking Measure**	**Lead Department**	**Partners**	**Timeframe**	**Dependencies**	**DECA SGs**
3 ADZ BE&T	Complete a Local Transport Study taking the following into account: • the '10 Minute Town' concept • active travel • permeability • public transport requirements • shared services • mobility hub • active travel bridges Ensure any required development is planned in a manner that has due regard to environmental sensitivities such as the receiving water environment, local air quality, biodiversity, European sites and cultural heritage.	3.1 3.2 3.4 8.4	*Mitigation*	Plan completed	TWES (Active Travel Team)	Environment (Climate Action Team); Planning; Arklow Municipal District	2026	Availability of expertise and funding of plan	DECA 2, 4 SDG 7, SDG 11

4 ADZ BE&T	Investigate opportunities for a shared travel scheme.	3.1 3.4 8.4	*Mitigation*	Number of • kilometres travelled; • new users; • towns with schemes	TWES; Climate Action Team	Arklow Municipal District; Active Travel	2024-2029	Shared service provider	DECA 2, 4 SDG 7, SDG 11
5 ADZ BE&T	Implement the Retrofitting Housing Programme for existing housing stock achieving a BER of B2 or cost optimal level equivalent. Provide newly constructed housing units to an A2 BER rating or in compliance with relevant guidelines within the lifetime of the Climate Action Plan. Having due regard to environmental sensitivities such as local human receptors, European sites and biodiversity. Create awareness of works undertaken and their benefits to encourage retrofitting in private housing stock.	2.1 2.5 8.3	*Mitigation*	Number of social houses with BER B2. Information on retrofits shared in public forums in Arklow Number of dwellings provided with BER of A2 or higher	Housing	Environment (Climate Action Team); Arklow Municipal District DHLGH; housing bodies; contractors; Building Control	2024-2029	Department funding; householder engagement; staff resources	DECA 2 SDG 7

6 ADZ BE&T	Undertake a retrofit of the Coral Leisure Centre pool and sports hall investigating the feasibility for renewable water heating, having due regard to environmental sensitivities such as local human receptors, European sites and biodiversity.	2.1 2.2 2.3 8.3	*Mitigation*	Buildings retrofitted; kWh saving	Mid-East Energy Unit	Coral Leisure Centre; Environment (Energy Officer)	2026-2029	Funding	DECA 2, SDG 7
7 ADZ BE&T	Undertake a retrofit of the civic amenity site and install solar PV panels under the small scale generation scheme, having due regard to environmental sensitivities such as local human receptors, European sites, biodiversity, the need to control and mitigate potential glint and glare impacts.	2.1 2.3 8.3	*Mitigation*	Number of measures implemented; kWh saving; renewable generation kWh	Mid-East Energy Unit	Environment (Waste Management) private partnership	2025-2029	Funding; roof capacity	DECA 2, SDG 7
8 ADZ BE&T	Investigate district heating opportunities from the planned data centre; ensuring appropriate regard is had to planning and environmental protection considerations.	2.1 8.3	*Mitigation*	Study completed	Environment (Climate Action)	Planning; Echelon	2024-2029	Suitable development adjacent to data centre	DECA 2, SDG 7

9 ADZ BE&T	Within the Arklow Municipal District increase the number of EVs and convert the existing fleet to a low carbon fuel source, whilst ensuring energy/fuel used to power local authority alternative vehicles is sustainably sourced, and appropriate end-of-life management practices are in place for Electric Vehicles and ensuring any ancillary development have due regard to environmental sensitivities such as local human receptors, European sites and biodiversity.	2.1 2.3 8.4	*Mitigation*	Number of electric vehicles; Number of vehicles converted	Arklow Municipal District	TWES (Fleet Management)	2024-2029	Funding; education	DECA 2, SDG 7
10 ADZ BE&T	Support the work of Arklow SEC to engage owners of buildings in retrofitting projects.	5.5 8.2 8.3 8.7 8.8	*Mitigation*	Number of SEC projects and events delivered; Number of SEC projects funded under the Climate Action Fund	Environment (EAO)	Environment (Climate Action); SEAI; Arklow SEC	2024-2029	SEAI support for SECs; Arklow SEC engagement	DEAC 2, SDG 7, SDG 11, SDG 17

11 ADZ BE&T	Develop a pilot to promote adaptive reuse of historic structures, having due regard to the need to appropriately protect and conserve protected structures in accordance with relevant protected structures regulations, and the need to not negatively impinge on any protected species that may be present in such buildings and European sites.	2.1 8.3 8.5	*Mitigation*	kWh saved; carbon emissions reduced; case study	Environment (Energy Officer)	Planning (Heritage Officer); Library Service	2024-2029	Availability of funding	DECA 2, 4 SDG 7, SDG 11
12 ADZ BE&T	Increase the number of schools involved in *Safer Routes to Schools,* ensuring any ancillary development have due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites and local air quality.	3.1 3.4 8.4 8.7	*Mitigation*	Number of schemes implemented and participation	TWES; Active Travel	Schools and An Taisce; EAO; Arklow Municipal District	2024-2029	Participation of schools; funding	DECA 2, 4, SDG 11

Theme 3: **Natural Environment & Green Infrastructure**									
Strategic Goal 4: Deliver on climate adaptation, biodiversity resilience, harnessing the power of nature based solutions, resulting in enhanced capacity for our environment to adapt to changing conditions									
Actions									
No.	**Action**	**Objective**	**Adaptation / Mitigation**	**Tracking Measure**	**Lead Department**	**Partners**	**Timeframe**	**Dependencies**	**DECA SGs**
13 ADZ NE&GI	Implement the Wicklow SuDS Policy, Tree Management Policy and Landscaping Development Guidelines to promote biodiversity gain.	4.3 4.5 8.6	*Combined*	No. of developments assessed; projects implemented	Planning; Arklow Municipal District	Environment	2024-2029	Policies and guidelines being adopted	DECA 3, 4 SDG 11, SDG 15
14 ADZ NE&GI	Conduct a tree survey in the public realm.	4.5 8.6	*Combined*	Survey Complete	Arklow Municipal District	Environment (Climate Action Team)	2026	Funding	DECA 3, 4 SDG 11, SDG 15
15 ADZ NE&GI	Map and identify green infrastructure opportunities in the town to support the development of NB-SuDS improving climate resilience, while ensuring projects have due regard to environmental sensitivities, including water quality, biodiversity, European sites, riparian corridors and aquatic ecology.	4.3 4.5 8.5 8.6	*Combined*	Number of projects	Arklow Municipal District	Environment (Climate Action Team)	2024-2029	Number of opportunities and funding	DECA 3, 4 SDG 11, SDG 15

16 ADZ NE&GI	Promote rainwater harvesting, green roofs, green walls and water demand reducing projects, while ensuring projects have appropriate regard to local environmental sensitivities such as the receiving water environment, biodiversity European sites and cultural heritage considerations.	4.3 4.5 8.6	*Combined*	Number of projects	Environment	Arklow Municipal District; Planning	2024-2029	Project provision	DECA 3, 4 SDG 11, SDG 15
17 ADZ NE&GI	Undertake a pilot with the *Native Oyster Reef Restoration Ireland* project to test the re-establishment of oyster beds and kelp restoration on a demonstration scale.	4.4 4.5 8.6 8.7	*Combined*	Pilot implemented	Environment (Climate Action)	NORRI	2025-2029	Funding and feasibility	DECA 3 SDG 13, SDG 14

Theme 4: **Communities Resilience & Transition**									
Strategic Goal 5: Mobilise and empower climate action in local communities. Strategic Goal 6: Achieve a just transition particularly for communities that may be economically disadvantaged by decarbonising projects or most impacted by climate change.									
Actions									
No.	**Action**	**Objective**	**Adaptation / Mitigation**	**Tracking Measure**	**Lead Department**	**Partners**	**Timeframe**	**Dependencies**	**DECA SGs**
18 ADZ CR&T	Develop annual communication plans with targeted campaigns to engage the community in climate action.	5.3 8.7	*Combined*	Number of campaigns	Environment (EAO)	Environment (Climate Action); Arklow Municipal District; Local Community Groups	2025-2029	Community engagement	DECA 4, SDG 4, SDG 17
19 ADZ CR&T	Engage with community groups to identify projects that can be funded under the Community Climate Action Fund.	5.4 8.7	*Combined*	Number of CCAF funded projects in Arklow	Environment (Community Climate Action Officer)	Community groups	2024-2029	Expressions of interest from local groups	DECA 4, SDG 4, SDG 9, SDG 17

20 ADZ CR&T	Promote greater uptake of solar PV in the town through promoting the micro-generation and the small scale generation scheme, where it is confirmed through a glint and glare assessment that any solar development will not have any potential glint and glare impact on sensitive receptors, or otherwise, where it is confirmed that any solar development constitutes exempted development under the Planning and Development Regulations by virtue of its size or location outside a Solar Safeguarding Zone.	5.3 5.5 8.2 8.3	*Mitigation*	Number of households, businesses, schools and sports clubs engaged	Environment (Climate Action)	Arklow SEC; SEAI; Arklow Chambers of Commerce; sports clubs	2024-2029	Engagement stakeholders	DECA 4, SDG 7

Theme 5: **Sustainability & Resource Management**									
Strategic Goal 7: Mobilise climate action in enterprise and agriculture supporting the transition to an inclusive, net zero and circular economy									
Actions									
No.	**Action**	**Objective**	**Adaptation / Mitigation**	**Tracking Measure**	**Lead Department**	**Partners**	**Timeframe**	**Dependencies**	**DECA SGs**
21 ADZ S&RM	Promote development of the circular economy including waste minimisation, repair, reuse, upcycling and sharing through the Arklow amenity site and the Arklow Library, highlighting the role of social enterprises locally, ensuring supported development and activities accord with the Waste Management Act, as necessary, and do not cause negative environmental effects or nuisance.	7.4 7.5 8.2 8.7	*Mitigation*	No. of events or workshops	Environment (EAO)	Arklow Library; Arklow Civic Amenity Centre; charity shops; social partners	2024-2029	Participation by stakeholders	DECA 4, 5 SDG 12
22 ADZ S&RM	Investigate opportunity for carbon storage or hydrogen production from renewable electricity generated, having appropriate regard to planning and environmental constraints and considerations, having appropriate regard to planning and environmental constraints and considerations.	7.1 7.5 8.1 8.2	*Mitigation*	Feasibility assessed	Environment (Energy Officer, Climate Action)	SSE Renewables; Planning	2024-2029	Development of renewable energy in the area	DECA 5, SDG 7

23 ADZ S&RM	Investigate opportunity to develop a micro/small scale pilot anaerobic digestion in Arklow, identifying potential feed stock whilst ensuring: 1. Appropriate regard is given to planning and environmental protection constraints and considerations during any future the development planning process; 2. Such potential development does not cause unintended, significant, negative environmental effects in the area; and, 3. Such a potential facility operates in accordance with the provisions of the Waste Management Act.	7.1 7.5 8.1 8.2	*Mitigation*	Feasibility assessed	Environment (Energy Officer, Climate Action)	SSE Renewables; Echelon	2024-2029	Feed stock and industry support	DECA 5, SDG 7, SDG 12

6.0 IMPLEMENTATION AND REPORTING:

6.1 Introduction

Wicklow Climate Action Plan will be delivered through a structured process of implementation with ongoing monitoring and progress reporting. The implementation and reporting phase commences immediately upon adoption and publication of the final climate Plan. There are three key activities that the Council will utilise for the implementation and reporting as shown in figure 6.1 which are summarised within this chapter.

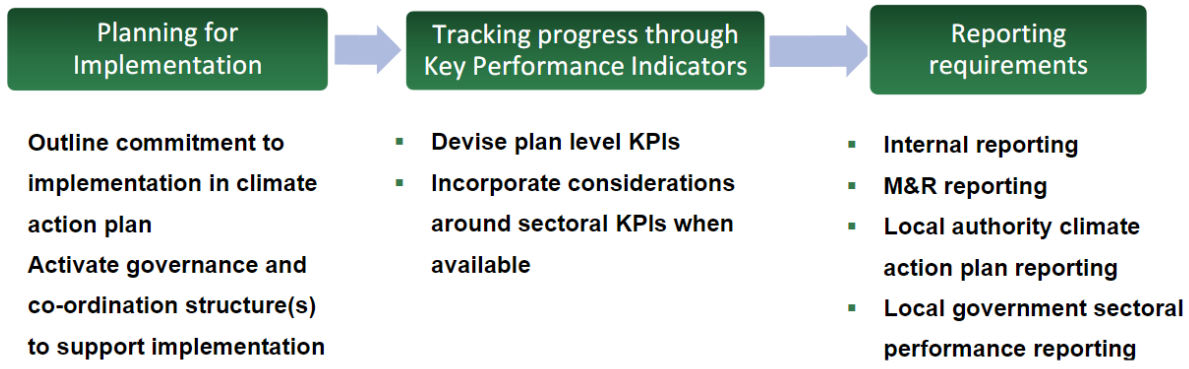


Figure 6.1: Core Tasks Implementation and Reporting Process

6.1 Planning for Implementation:

This Climate Action Plan will be implemented by Wicklow County Council. Whilst the plan requires a whole-of-Council approach, the ownership of the Plan is held within the Planning Development and Environment Directorate.

A Climate Action Team has being established in Wicklow County Council County since 2019. This team has recently expanded and now includes a Climate Action Coordinator, Climate Action Officer, Community Climate Action Officer, Biodiversity Officer, Heritage Officer, Environmental Awareness Officer, Assistant Environmental Awareness Officer and an Energy Officer. The Climate Action Team is supported by an administrative assistant and lead by a Director of Services.

The role of this team is to mainstream climate action into the activities of Wicklow County Council, monitor the implementation of the actions of this Plan and to coordinate the reporting and evaluation of the Plan, following approval by the Elected Members.

The core work of the Climate Action Team is supported by the wider Climate Action subgroups and subcommittees across the organisation that has ownership of particular actions in the Plan. These include the senior management team, a Climate and Biodiversity Action Strategic Policy Committee and a Green Team representing staff from all services across the organisation. Each directorate will

have ownership of particular actions in the Plan and a new Climate Action committee will be set up to ensure a focus on monitoring action delivery, programme development and budgeting across all services. . These include the following Directorates:

- Planning, Development and Environment
- Enterprise, HR and Corporate Services
- Transportation, Water and Emergency Services
- Housing and Corporate Estate
- Finance and Information Systems

These directorates operate a number of relevant service areas including Library Services, Active Travel, Fleet Management, Local Community Development Committee, Housing, Facilities Management, Environment, Planning, Finance, Heritage and Biodiversity.

The Climate Action Team will also be the point of contact for the public to learn about climate action in the County.

Wicklow County Council will work collaboratively and in partnership with a range of key stakeholders to support the delivery of this Plan. These stakeholders include but are not limited to the following:

- Eastern and Midlands Climate Action Regional Office
- Kildare, Meath and Louth County Councils with which we share a sub region team.
- Dun Laoghaire-Rathdown, South Dublin, Wexford and Carlow County Councils
- Local Authority Services National Training Group
- Local Government Management Agency
- City and County Management Agency
- The SEAI
- The Eastern and Midlands Regional Assembly
- Public Participation Network
- Smart Dublin
- Age Friendly Ireland
- Comhairle na nOg
- Children and Young People's Assembly on Biodiversity Loss

Local stakeholders including: NPWS, Coillte, Chambers of Commerce and Industry, KWETB, SETU, the Wicklow Uplands Council, Teagasc, Tidy Towns Groups, Community Groups, SEC's, Social Inclusion Partners, Community Development Groups and Sports Clubs.

These partnerships can provide opportunities for collaboration on projects, shared learnings, technical support and leveraging of funding opportunities during the implementation of actions in the Plan.

It is also clear that climate change is a transboundary challenge; it does not stop at political and geographical borders. As such, a regional approach has been agreed by the local authorities in the Eastern Midlands CARO including the creation of a mid-east sub-region consisting of Wicklow, Kildare, Meath and Louth County Councils, whereby they can collaborate closely on the implementation of actions in the Plan.

Following approval of the Plan, an Implementation Summary will be developed for each action, which will set out in detail how the action will be delivered, including noting the responsible department and timescales. Wicklow County Council will align the timing of internal implementation reporting intervals with that of sectoral progress reporting requirements.

6.2 Funding and Partnerships

To lead by example and drive the transition to a climate neutral society, Wicklow County Council will need access to adequate funding for climate action projects towards achieving its 2030 and 2050 targets.

Local authorities access various types of funding such as government grants, European funds, private sector investment and community co-financing. It is recognised that while new climate action targeted funding calls may become available in the future, already established funding bodies will introduce or increase the level of funding streams to climate action focused categories. Wicklow County Council will continue to actively pursue new and existing funding opportunities from both European and national bodies that are aligned with its climate action objectives.

Partnerships are also a key ingredient towards realising low carbon solutions for the sector. The private sector is already playing a role towards achieving the National Climate Objective and this type of collaboration can enhance the capabilities of the sector even further in achieving reductions in Ireland's greenhouse gases by 51% by 2030 and becoming climate neutral by no later than 2050.

There are also benefits for the local government sector in partnering with the third level sector. The third level sector can provide research and development expertise to help local authorities and implement innovative solutions to reduce greenhouse gas emissions and adapt to climate change. These partnerships can assist local authorities' access funding opportunities for climate action projects and initiatives.

Wicklow County Council will encourage and facilitate collaboration with the private sector and third level sector where possible.

6.3 Tracking Progress through Key Performance Indicators (KPIs)

Performance by Wicklow County Council on the delivery of energy efficiency and emission reductions relating to the Council's infrastructure and assets, as prescribed by national climate obligations, will continue to be tracked through the established Monitoring and Reporting (M&R) system managed by the Sustainable Energy Authority of Ireland (SEAI).

For actions outside of this, one of the reporting avenues that Wicklow County Council engages with to communicate progress on the delivery of actions is through sectoral Key Performance Indicators (KPIs). This informs the performance of the local government sector on climate action.

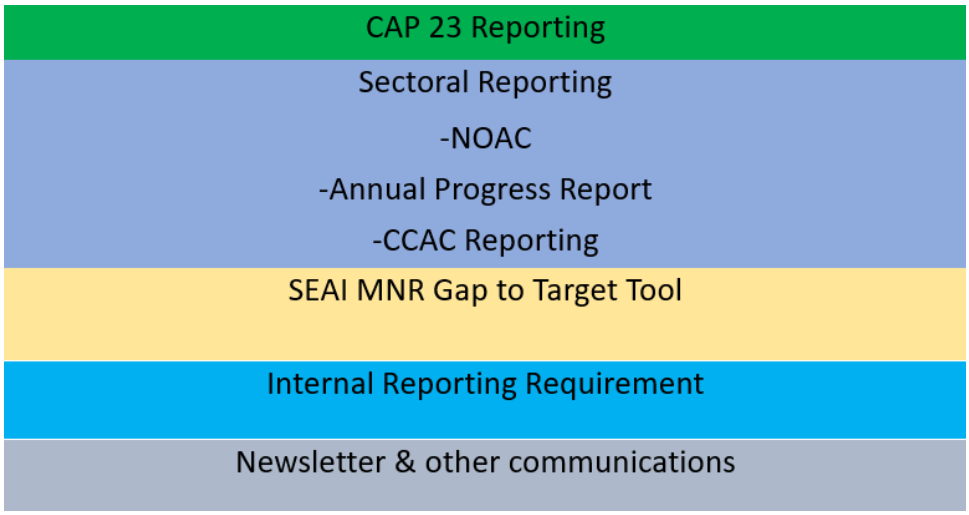
Strengthened climate action policy at national level inspired a determined response and commitment by local government, as a sector. This commitment is set out in the Country and City Management Association (CCMA) published strategy on behalf of local government entitled Delivering Effective Climate Action 2030.

The Climate Action Regional Offices (CAROs), along with the Local Government Management Agency (LGMA) collect data on an annual basis relating to a range of themes including:

- Climate action resources
- Climate action training for local authority staff and elected members
- Actions delivered
- Enterprise support in are of climate action
- Energy efficiency
- Emission reductions
- Active travel measures
- Severe weather response

KPIs will continue to be added as necessary by each sector and Wicklow County Council will contribute relevant information as required, to assist in highlighting the progress of the local government sector on climate action.

6.4 Reporting Requirements and Arrangements



6.4.1 Internal Reporting

To ensure that delivery is timely, the implementation of the Plan will be monitored via an in-house tracking system, collating information from across the services on implementation of actions and measurement of progress.

The local authority will also facilitate reporting to elected members on an annual basis through an annual report. Elected members will receive an annual update and opportunity to discuss progress through an annual meeting with representatives in each of the five districts.

A monthly update on progress will be provided through the Chief Executive's report. The Climate and Biodiversity Strategic Policy Committee will receive quarterly updates on progress in their scheduled committee meetings.

6.4.2 Monitoring and Reporting System (M&R)

Wicklow County Council will continue to report on their energy performance and emission targets annually to the SEAI. It will also report annually on the implementation of ISO50001.

6.4.3 Sectoral Performance

Wicklow County Council will report annually on their performance on climate action by way of KPIs (as outlined in **Section 6.2**) to inform the performance of the local government sector on climate action, as part of the Local Government Delivering Effective Climate Action 2030 Strategy.

6.4.4 National Climate Action Plan

Wicklow County Council will, in accordance with part 3(w) of the Local Authority Climate Action Charter, report quarterly/annually to the Department of the Environment, Climate and Environment on the ongoing progress on climate action at local level as part of the delivery of the National Climate Objective. Progress on all actions will be reported via a reporting tool developed by CARO.

6.4.5 Sustainable Development Goals

The 2018-2020 Sustainable Development Goals (SDGs) National Implementation Plan acknowledged that local government "has a crucial role to play in translating national policies into tangible practical actions that can help to concretise the SDG objectives into our individual and communities' behaviours and goals." Ireland's Second National Implementation Plan for the Sustainable Development Goals 2022-2024, intends to build on the role of local government in Ireland and incorporates specific actions to do so which include:

- Showcasing, sharing and building on existing initiatives;
- Capacity building and awareness raising;
- Embedding the SDGs in governance and reporting frameworks;
- Incorporating the SDGs within local planning frameworks; and
- Community engagement.

Furthermore, local authorities are recognised as one of Agenda 2030's nine "Major Groups", which play a crucial role in sustainable development. Additionally, Agenda 2030 highlights the particular role of local authorities and communities in sustainable urban development.

Wicklow County Council is working to advance the SDGs, including through:

- The incorporation of the SDGs into the Corporate Plan, County Development Plan, Local Area Plans and all relevant Strategies and Policies;
- The development of a mapping tool to map SDG-related actions in the Council area;
- The provision of training; and
- The hosting of information events with external groups including the County Wicklow PPN, Tidy Towns and Creative Ireland.

Each of the actions listed in this Plan for the County or for the Decarbonisation Zone are mapped against the relevant goals and targets in the SDG.

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Appendix A: Baseline Emissions Inventory Report

Appendix B: Wicklow County Council Climate Change Risk Assessment

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Appendix C: Arklow Decarbonisation Zone Implementation Plan

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Appendix D: Arklow Decarbonisation Zone Register of Opportunities Report

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Appendix E: Arklow Decarbonisation Plan Placemaking and Draft Active Travel Plan

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Appendix F: Environmental Report: