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CARLOW COUNTY COUNCIL



CARLOW
CLIMATE
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CARLOW LOCAL AUTHORITY CLIMATE ACTION PLAN 2024-2029

CARLOW COUNTY COUNCIL WILL BE A CLIMATE RESILIENT AND LOW CARBON ORGANISATION THAT INSPIRES, LEADS, AND FACILITATES AMBITIOUS AND JUST CLIMATE ACTION THROUGHOUT THE COUNTY.

Foreword

Addressing climate change has become a global priority, with efforts focused on reducing greenhouse gas emissions, transitioning to renewable energy sources, improving energy efficiency, promoting sustainable practices, and adapting to the changes already underway.

The National Climate Action Plan 2023 mandates the public sector to play a leadership role in driving far-reaching climate action across its buildings, transport, waste, and energy usage, as well as influencing wider society. Public Sector targets include reducing Carlow County Council's own emissions by 51% by 2030 and increasing energy efficiency in the public sector from the 33% target in 2020 to 50% by 2030. These targets are to be achieved while increasing climate literacy in the public sector, implementing green public procurement, and retrofitting public sector buildings.

The vision for Carlow Local Authority Council Climate Action Plan - 2024-2029 is that

Carlow County Council will be a climate resilient and low carbon organisation that inspires, leads, and facilitates ambitious and just climate action throughout the county.

The implementation of actions set out in Carlow County Council's Climate Adaptation Strategy 2019-2024 will assist Carlow County Council in embedding climate action measures across all local authority services, setting realistic and achievable targets and timelines for delivery. It is important to acknowledge the interactive relationship between biodiversity and climate action. Conserving and restoring biodiversity is not only crucial for its own sake but also for achieving our climate goals. Similarly, addressing climate change is vital for safeguarding biodiversity and the ecosystems that support life on Earth.

Collaborative efforts between Carlow County Council and the Local, Regional and National Stakeholders will help bring together diverse perspectives and expertise and will foster innovation and solutions to achieving the shared goals of reducing emissions and conserving biodiversity across the County.

The Elected Members and the Executive of Carlow County Council have committed to achieving the national targets for public sector emissions reduction. As Carlow Town and County continues to experience growth and ongoing development, Carlow County Council commits to supporting local stakeholders and communities to understand and implement adaptation and mitigation measures necessary to ensure that County Carlow can work towards realising a more sustainable and climate-resilient future.



Coilín O'Reilly

Chief Executive



Cllr Andrea Dalton

Cathaoirleach

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1 INTRODUCTION

1.1 Need for a Climate Action Plan

Carlow County Council has prepared this Climate Action Plan 2024-2029 to facilitate the transition of Carlow Town Decarbonising Zone and County Carlow to a low carbon and climate resilient County. This will be achieved by delivering and promoting best practice in climate action at local level. This aim 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.

The Climate Action and Low Carbon Development (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.

This is set out in the [Climate Action and Low Carbon Development \(Amendment\) Act 2021](#), which also frames Ireland's legally binding climate ambition, to delivering a reduction in greenhouse gas emissions of 51% by 2030. This will place the country on a trajectory to achieving climate neutrality by the end of 2050. In preparing this Local Authority Climate Action Plan, Carlow County Council has considered all relevant climate legislation and policy. A climate change risk assessment and Tier 2 baseline emissions inventory were carried out for Carlow County Council, County Carlow and the Decarbonisation Zone.

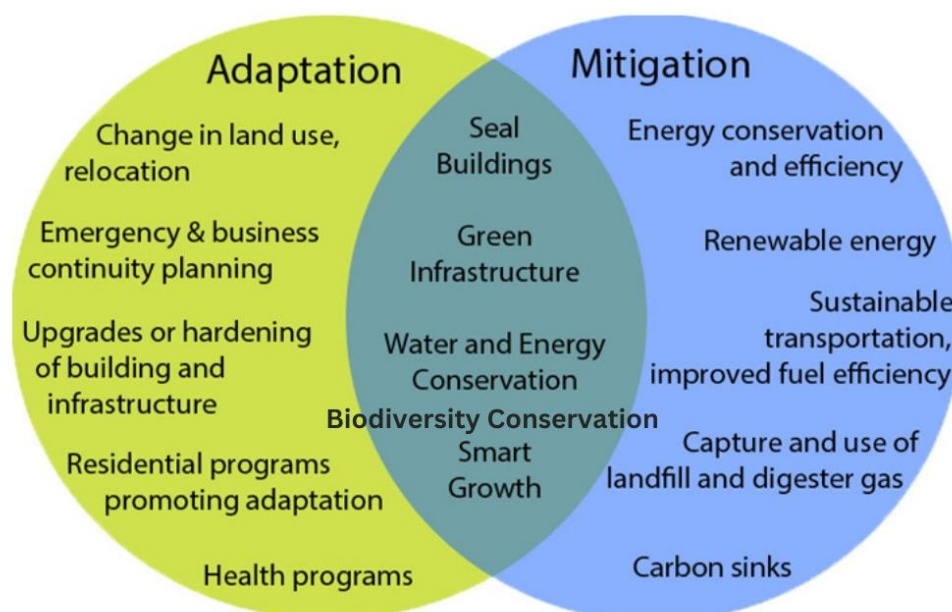


Figure 1.1 Climate Change and Climate Mitigation

- **Climate Change Mitigation** refers 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.
- **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, sea level rise, etc)

The National Climate Action Plan sets a clear pathway for Carlow 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.

1.2 Scope of the Local Authority Climate Action Plan

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

Set against the backdrop of an evolving and ambitious framework of national climate policies, Carlow 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. The Plan demonstrates a coherent approach to climate action across the administrative and political structures of the local authority. The Plan requires approval by the Elected Members of the Local Authority, following public consultation and engagement. A range of other plans, including the Council's Corporate Plan 2020-2024 and Carlow County Development Plan 2022-2028, also support the Climate Action Plan.

This Local Authority Climate Action Plan sets out how Carlow 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 inspiring, leading 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 1.2 illustrates the scope of the local authority's responsibility on climate action.

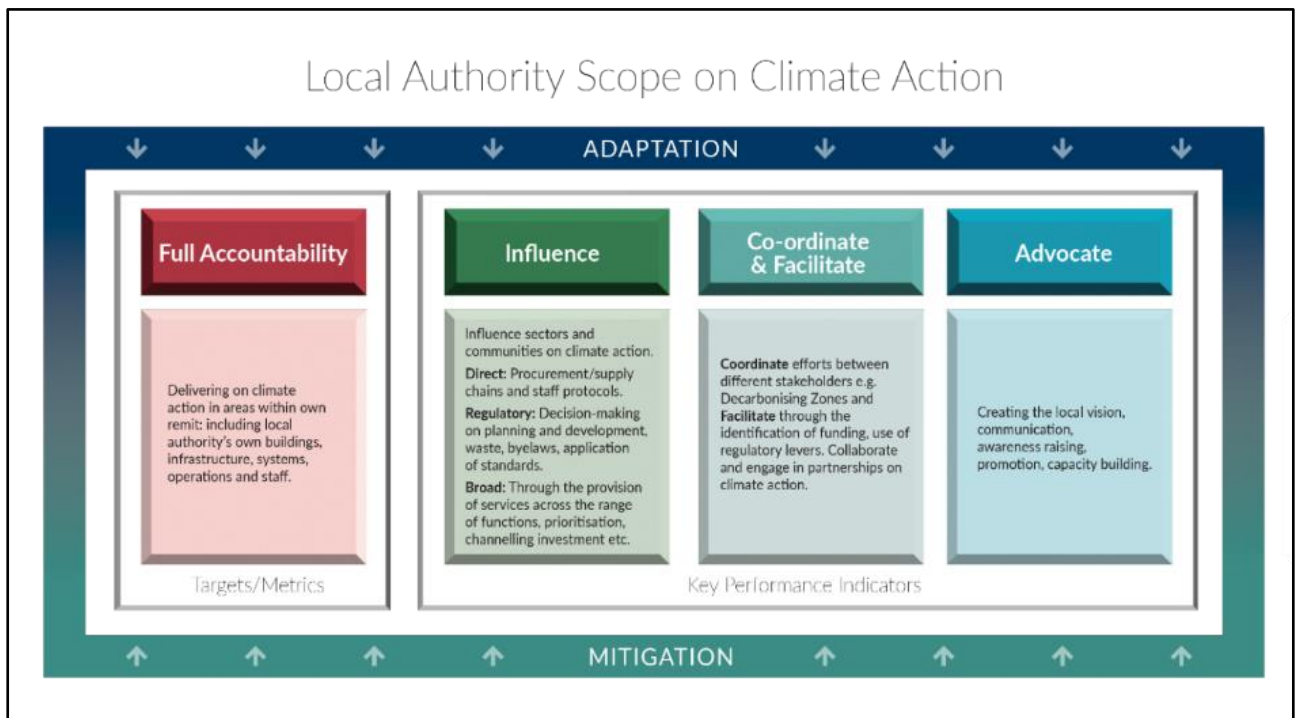


Figure 1.2 Scope of Local Authority on Climate Action (Source: Local Authority Climate Action Plan Guidelines, 2023)

Carlow County Council will also 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. Carlow County Council launched the Climate Action Fund Strand 1 - Building Low Carbon Communities on December 6th, 2023. This is a fund for local authorities across the country, to support and build low carbon communities in their 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.

1.3 Local Authority Climate Action Planning

The Carlow Local Authority 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. An overview of the Climate policy context is provided in Section 2. The intrinsic value of the Local Authority 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 (DECA). Throughout the preparation and implementation phases, Carlow's Local Authority Climate Action Plan 2024-2029 offers an opportunity to bring together critical stakeholders across communities and businesses to build a vision for a climate neutral future.

Carlow County Council and other local authorities across Ireland, are already well positioned at the forefront of climate action in Ireland. Carlow County Council plays a significant role in terms of delivering adaptation and mitigation measures at local and community levels. Carlow County Council is entrusted to work through its 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 Carlow Local Authority 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 Local Authority 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 within the Plan, arranges the grouping of climate actions in a defined arrangement that ensures alignment between on the ground actions and the high-level vision that the Plan aspires to deliver.

1.4 Plan Making Process

Carlow County Council, in preparing and implementing this Local Authority Climate Action Plan, has considered best practice, adherence to national climate policy, compliance with the provisions of relevant statutory instruments, inclusive engagement and consultation with relevant stakeholders and alignment with the local government sectoral requirements and commitments on climate action. The potential for achieving effective climate action at local and community levels through this plan has been guided by the principles of the Local Authority Climate Action Plan Guidelines.



Figure 1.3 Guiding Principles of the Local Authority Climate Action Plan

The process of preparing and implementing the Carlow Local Authority Climate Action Plan has been broken down into three distinct plan-making phases from early planning and preparation (Advance Planning) through to the iterative process of formulating the climate action plan (Statutory Plan Making) and onwards to the requirements around implementation which includes monitoring and reporting on progress (Implementation and Reporting).

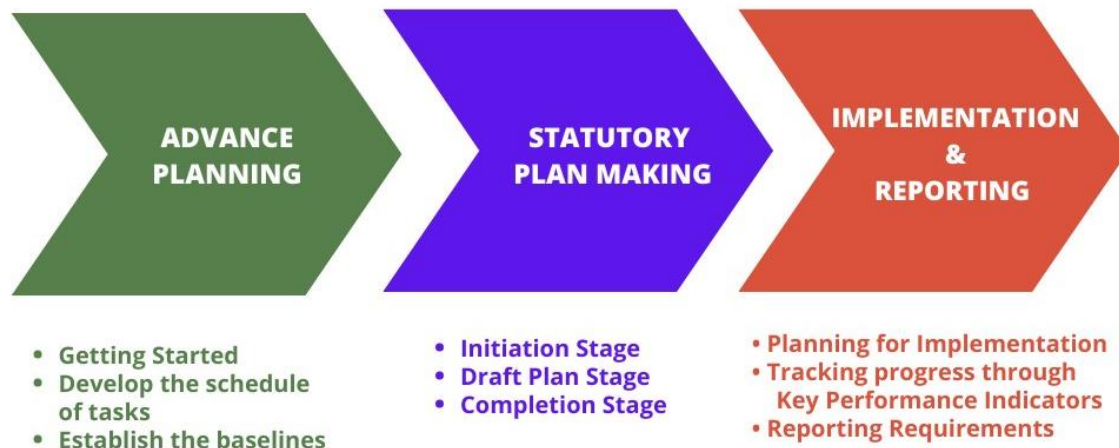


Figure 1.4 Carlow Local Authority Climate Action Plan Development & Implementation Phases

1.4.1 Advance Planning Phase

Ahead of the statutory plan-making phase, the Carlow Local Authority Climate Action Co-Ordinator mobilised the capabilities within the local authority to support and enable the preparation of the Local Authority Climate Action Plan and its implementation as an organisational priority. This included the mobilisation of the Climate Action Team to ensure representation from across the local authority functions,

Service Areas/Functions
Corporate, Community Development, Economic Development, Information Technology, Environment and Environmental Awareness, Water Services, Planning, Housing, Finance, Area Offices (Municipal Districts), Roads/Transportation, Parks/Recreation, Heritage, Energy Efficiency, Biodiversity, Facilities, Libraries, Arts and Culture, Fire Services, Civil Defence, Building Control, Climate Action.
Range of Disciplines
Administrative, Architectural, Engineering, Environmental, Financial, Planning, Scientific.

Table 1.5 Service areas/functions and range of disciplines supporting the Carlow County Council Climate Action Team.

The development of a schedule of tasks was undertaken, mapping the various steps and activities to be undertaken within each stage of the Plan and marking process against the timeframes for delivery. The statutory provisions and timeframes prescribed by the Climate Acts 2015- 2021 for making and adopting the Carlow Local Authority Climate Action Plan were a key consideration in the mapping of the schedule of tasks.

The Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA) processes are important mechanisms to ensure environmental protection and nature conservation considerations are integrated into the development of the Carlow Local Authority Climate Action Plan. Carlow County Council have engaged environmental consultants with the appropriate expertise and competencies to advise and guide Carlow County Council through the requirements of the SEA and AA processes in making this Climate Action Plan. The consultants were engaged prior to the commencement of the statutory plan-making phase.

Building the evidence base is a key step in the initial planning phase to gain a better understanding of the challenges, identify synergies and opportunities, and leverage mechanisms and actors in the delivery of effective climate action in County Carlow. Carlow County Council sought the assistance of its energy partners South East Energy Agency in preparation of the Baseline Emissions Inventory for the County Carlow, County Council, and the Carlow Town Decarbonisation Zone (DZ), (Appendix 1 & 2 respectively). RPS Consulting Consultants were engaged by the local authority to assist in the delivery of the assessment of the Climate Risks, (Appendix 3) and to examine proposed locations for the selection of the Decarbonising Zone(Appendix 4).

As part of the process of preparing the Local Authority Climate Action Plan, each Local Authority must plan and make appropriate provisions for stakeholder engagement. Due consideration of the outcomes of stakeholder engagement must be undertaken. Stakeholder engagement was carried out in accordance with the Department of Public Expenditure and Reform [DPER] (2016): Consultation Principles and Guidance. [Consultation Guidelines 2016 \(assets.gov.ie\)](https://assets.gov.ie/11222/0000/2016/06/consultation-guidelines-2016.pdf)

The Climate Action Regional Offices (CAROs) facilitated engagement between the Local Authority network and national level entities and sectoral interests, including the Department of the Environment, Climate and Communications and other relevant Government departments to which sectoral adaptation plans and the national Climate Action Plan relate, to support Local Authorities and streamline the engagement processes.

Theme	Date
Heritage & Biodiversity (in conjunction with Heritage Council)	25th April 2023
Transportation	22nd May 2023
Built Environment and Land use Planning	23rd May 2023
Community Development and Enterprise	30th May 2023
Land use Change (incl. Agriculture and Water)	31st May 2023

Table 1.6 Stakeholder Sectoral Engagement Workshops facilitated by CARO.

The CAROs carried out five facilitated sectoral engagement workshops as follows:

Stakeholders included:

- Department of the Environment, Climate and Communications (DECC)
- Department of Rural and Community Development (DRCD)
- Department of Transport (DoT)
- Department of Housing, Local Government and Heritage (DHLGH)
- Department of Tourism, Culture, Arts, Gaeltacht, Sports, and Media (DTCAGSM)
- Department of Agriculture, Food, and the Marine (DAFM)
- Office of the Planning Regulator (OPR)
- National Parks and Wildlife Services (NPWS)
- National Transport Authority (NTA)
- Zero Emission Vehicles Ireland (ZEVI)
- Transport Infrastructure Ireland (TII)
- Arts Council of Ireland
- Sustainable Energy Authority of Ireland (SEAI)
- Office of Public Works (OPW)
- Local Government Management Agency (LGMA)
- Geological Survey of Ireland (GSI)
- Environmental Protection Agency (EPA)
- Inland Fisheries (IF)
- Mét Éireann (ME)
- Uisce Eireann
- Regional Assemblies, represented by Southern Regional Assembly (SRA)
- Climate Action Regional Offices (CARO)
- Local Enterprise Office Network (LEO)
- Local Authority Waters Programme (LAWPRO)
- Local Authority Services National Training Group (LASNTG)
- Electric Ireland Superhomes
- The Heritage Council
- Office of the Planning Regulator
- Accelerating Change Together (ACT)

1.5 Public Consultation process

Carlow County Council undertook the following non statutory and statutory consultations to assist in the formulation of the Carlow Local Authority Climate Action Plan:

Pre-Draft Consultation 1 - Establishing awareness and engagement (non-statutory)

In January 2023 at the monthly meeting of Carlow County Council, Elected Members were informed of the legislative requirement under the Climate Action and Low Carbon Development (Amendment) Act 2021 to prepare and adopt a Local Authority Climate Action Plan for Carlow County Council. Members were advised of the Local Authority Climate Action Plan statutory process, scope and inclusion of a Decarbonising Zone as set out in the aforementioned act, and in guidelines issued by the Department of the Environment, Climate and Communications.

In order to ensure that local information and opinions were submitted and included, Carlow County Council invited observations and recommendations for consideration in the Carlow Local Authority Climate Action Plan. Members of the public were invited to “Have your say” on Carlow County Council’s Consult Carlow portal, Consultcarlow.ie.



This online portal is a specifically designed website where members of the public can participate in Carlow County Council’s public consultations by viewing relevant documents and making submissions/ observations.

Submissions were accepted from the 16th January 2023 - 6th February 2023.

There were two online submissions received.

Figure 1.7 Notification of Non-Statutory pre-draft public consultation process

Pre-Draft Consultation 2 - Preparation of the Draft Local Authority Climate Action Plan – “Have your say” (non-statutory)

In keeping with ensuring that local views and concerns were considered and increase understanding of the scope of the Local Authority Climate Action Plan Carlow County Council commenced a non-statutory consultation process on 1st May 2023 with submissions invited until 16th June 2023.

A range of in-person and online public meetings were facilitated at different times and in different locations where the public could meet members of the Climate Action Team, receive an informative briefing presentation, and examine existing policy documents and discuss their climate concerns.

Public meetings took place as follows:



Area	Date	Attendance
Carlow Town	02/05/2023	24
Bagenalstown	04/05/2023	13
Online	09/05/2023	4
Borris	11/05/2023	6
Carlow Town	16/05/2023	7
Tullow	18/05/2023	9
Hacketstown	23/05/2023	3
Rathvilly	25/05/2023	1
Online	30/05/2023	3
Carlow County Council Staff & PPN	01/06/2023	47
Carlow Chamber of Commerce	08/06/2023	15

Figure 1.8 Notification of ‘Have Your Say’ non-Statutory pre-draft public consultation process and meeting attendance.

At each meeting a presentation was made outlining the following:

- Legislative requirements under the Climate Action and Low Carbon Development (Amendment) Act 2021 to prepare and adopt a Local Authority Climate Action Plan for Carlow County Council.
- The role of the Public Sector
- The policy framework of the Local Authority Climate Action Plan
- Statutory timelines for delivery of the Local Authority Climate Action Plan
- Scope of the Local Authority Climate Action
- Green House Gas (GHG) reduction targets for Carlow County Council
- Carlow County Council Decarbonising Zone (Carlow Town)

Members of the Planning, Environment, Climate & Bio-Diversity Action, Energy & Agriculture Strategic Policy Committee (SPC) were advised and updated at their meeting in May 2023.

Elected Members of Carlow County Council received a presentation and were briefed at the Carlow County Council monthly meeting in May 2023.

Four submissions were received.

All submissions received were considered in the making of the Local Authority Climate Action Plan

Statutory Public Consultation on the Local Authority Climate Action Plan 2024-2029

The image shows a public notice document from Carlow County Council. It features the council's logo and the 'Carlow Climate Action' logo. The title is 'DRAFT LOCAL AUTHORITY CLIMATE ACTION PLAN 2024 – 2029' and 'SECTION 5 OF THE CLIMATE ACTION AND LOW CARBON DEVELOPMENT (AMENDMENT) ACT 2021'. The notice provides details on how to access the draft plan, public opening hours at various locations, and instructions for making submissions or observations. It includes a table of public information drop-in events and contact information for the council offices.

COMHAIRLE CONTAE CHEATHARLACH
CARLOW COUNTY COUNCIL

CARLOW CLIMATE ACTION
Investing in our future

DRAFT LOCAL AUTHORITY CLIMATE ACTION PLAN 2024 – 2029
SECTION 5 OF THE CLIMATE ACTION AND LOW CARBON DEVELOPMENT (AMENDMENT) ACT 2021

Carlow County Council has made a Draft Local Authority Climate Action Plan (LACAP) for the period 2024 - 2029. The Draft LACAP sets out how the local authority can promote a range of mitigation, adaptation and other climate action measures, to help deliver the Government's National Climate Objective to achieve, by no later than the end of 2050, a transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy.

The Draft LACAP is accompanied by an Environmental Report, prepared in accordance with the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. 435 of 2004 as amended by S.I. 200 of 2011) for Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA) Natura Impact Report, pursuant to Article 6 of the Habitats Directive 92/43/EEC.

A copy of the Draft LACAP and associated documents is available to view online at <https://consult.carlow.ie/en/browse>

The Draft LACAP may be inspected during public opening hours from **Wednesday 13th September 2023 until Wednesday 25th October 2023** inclusive, at the following locations:

- County Buildings, Athy Road Carlow, R93 E7R7
- Tullow Civic Offices, Link Road, Tullow, R93 WP96
- Bagenalstown Civic Offices, McGrath Hill, Bagenalstown, R21 WR66

At the following Public Libraries during normal opening hours:

- Carlow Central Library, Tullow Street, Carlow, R93 K126
- Tullow Library, Civic Offices, Tullow, R93 WP96
- Bagenalstown Library, Main Street, Bagenalstown R21 X592
- Borris Library, Lower Main Street, Borris, R95 HF25

Making a Submission or Observation
Written submissions or observations regarding the Draft LACAP, SEA Environmental Report and AA Natura Impact Report, are invited from members of the public and other interested parties. Submissions or observations may be made in one of three ways:

- Online via the Councils Public Consultation Portal at <https://consult.carlow.ie/en/browse>
- Via Email with "Draft Local Authority Climate Action Plan" in the subject line to climate@carlowccoco.ie
- In writing emailed "Draft Local Authority Climate Action Plan" to:

Climate Action Co-ordinator, Environment and Climate Action Department, Carlow County Council, The Assembly Rooms, 40 Dublin Street, Carlow R93 X3T5

Submissions or observations must be made in writing no later than **4.00 p.m. on Wednesday 25th October 2023**. Late submissions will not be accepted.

Please consider the following in making your submission:

- Submissions should be made using ONE method only i.e. online or in hard copy.
- Submissions or observations should include your name and address and, where relevant, details of any organisation, community group or company etc. you represent.
- Written submissions or observations with respect to the Draft LACAP, made within the period stated, will be taken into consideration before the making of the LACAP.
- Please ensure that no vexatious, libelous or confidential information, including confidential information relating to a third party (in respect of which the third party has not, expressly, or impliedly in the circumstances, consented to its disclosure) is included.
- All submissions/observations will be subject to the Data Protection Act 1988-2018 and the Freedom of Information Act 2014.

Public Information Drop-in Events
Council staff will be available during the hours 5.00pm -7.00pm to provide guidance on the Draft LACAP and on the consultation process, you are welcome to come along to:

Location	Date	Time
Bagenalstown Library	Tuesday 19th September	5-7pm
Tullow Library	Wednesday 20th September	5-7pm
Carlow Central Library	Thursday 21st September	5-7pm

If you require more details, please contact the Environment and Climate Action Section at 059-9136231 or email: climate@carlowccoco.ie

Signed: **Padraig O Gorman**
Director of Services Transportation, Environment, Water Services, Building Control & Emergency Services.

Date: 11/09/2023

Carlow County Council Offices, Athy Road, Carlow
www.carlow.ie

Figure 1.9 Public notice of Statutory draft public consultation process.

The Statutory Public consultation on the draft Local Authority Climate Action Plan 2024-2029 commenced on 13th September 2023, with submissions invited until 4pm on 25th October.

The Carlow Local Authority Climate Action Plan 2024-2029 public consultation process involved the following key elements:

- The publication of the draft Carlow Local Authority Climate Action Plan 2024-2029 and commencement of the statutory consultation period was noted at the September 5th 2023 meeting of the Planning, Environment, Climate and Bio-Diversity Action, Energy and Agriculture Strategic Policy Committee (SPC). A presentation was made to members outlining the statutory plan making process and timeline for delivery.
- The publication of the draft Carlow Local Authority Climate Action and commencement of the statutory consultation period was approved at the September meeting of Carlow County Council.
- Elected Members and members of the Planning, Environment, Climate and Bio-Diversity Action, Energy and Agriculture Strategic Policy Committee were invited to attend an online Q&A session on 14th September 2023. There were no issues of concern raised or clarification sought at this meeting.
- A public notice was placed in the Carlow Nationalist on 12th September 2023.

- Extensive use of the Council’s social media networks was undertaken throughout the consultation process.
- A total of 6 radio interviews were completed by the Climate Action Coordinator with KCLR and BEAT FM at the commencement of, and during the public consultation process to encourage participation by the public in the plan making process.
- Direct communication was made with prescribed bodies and key Local Stakeholders.

Statutory Public Consultation - Public Information Events

Members of the Climate Action Team invited members of the public to obtain clarification on issues relating to the Plan and offered support in understanding the procedures in making submissions or observations at a number of public information clinics.

Copies of relevant Carlow County Council policy documents were available on site including:

- Carlow County Development Plan 2022-2028
- County Carlow Biodiversity Action Plan 2023-2025
- County Carlow Green Infrastructure Strategy

A number of in person Public Information Events took place as follows:

Location	Date	Attendance
Bagenalstown Library	Tuesday 19 th September	6
Tullow Library	Wednesday 20 th September	2
Carlow Town Library	Thursday 21 st September	8

A presentation was made to the members of the Carlow Town Forum on 26th September outlining the following:

- Legislative requirements under the Climate Action and Low Carbon Development (Amendment) Act 2021 to prepare and adopt a Local Authority Climate Action Plan for Carlow County Council.
- The role of the Public Sector
- The framework of the Carlow Local Authority Climate Action Plan
- Statutory timelines for delivery of the Carlow Local Authority Climate Action
- Scope of the Carlow Local Authority Climate Action Plan

- GHG reduction targets for Carlow County Council
- Carlow County Council Decarbonising Zone

Members of Carlow Town Forum were invited to make submissions on the Local Authority Climate Action Plan.

1.5 Statutory Plan-Making Phase

On receipt of the request from the Minister Eamon Ryan on the 24th February 2023 Carlow County Council moved into the statutory plan making phase adhering to the prescribed tasks in the provisions of Section 16 of the Climate Action and Low Carbon Development (Amendment) Act 2021. Carlow County Council Climate Action Office in conjunction with its Climate Action Team began to collate and analyse key data and information from a variety of relevant sources to inform and support the development of the Local Authority Climate Action Plan following on from the key outputs of the advance planning phase.

A clear and concise summary report produced from the collation and analysis of the evidence base reports produced by engagement with consultants and tailored to the context-specific conditions of Carlow County Council, County Carlow, Carlow Town Decarbonising Zone was developed, and is presented as this Carlow Local Authority Climate Action Plan. The Carlow Local Authority Climate Action Plan has identified:

- The primary focus areas for the reduction of Carlow County Council's own emissions.
- The primary focus areas for adaptation and mitigation measures across Carlow County Council administrative area.
- Key challenges for Carlow County Council in terms of adaptation and mitigation of established baselines.
- The primary focus areas for mitigation, adaptation, and biodiversity measures to be deployed within the Carlow Town Decarbonising Zone area.
- Strategic priority areas and opportunities or policy areas that can be capitalised upon.
- Where gaps exist and generally what to prioritise to address these.
- Potential collaborations or partnerships on delivering adaptation/mitigation measures or where the local authority, through its functions, is critical to enabling or facilitating the reduction of emissions from other sectors.

In helping to inform the framework of climate actions, this Carlow Local Authority Climate Action Plan has also:

- Established a Vision Statement,
- Established a Mission Statement, and
- Identified key thematic areas based on analysis of the established evidence base from which the strategic goals will evolve.



Figure 1.10 Steps in Local Authority Climate Action Plan in Plan-Making Phase

Carlow County Council has completed its Draft Carlow Local Authority Climate Action Plan 2024-2029. Following noting by the Strategic Policy Committee and the Elected Members of Carlow County Council, the Draft Carlow Local Authority Climate Action Plan was published for a period of public consultation. The draft Plan was placed on public display from the 13th September 2023 to the 25th October 2023.

In accordance with the requirements of the [Climate Action and Low Carbon Development \(Amendment\) Act 2021](#) following closure of the consultation period a Chief Executive’s report on submissions received was prepared.

A total of 13 valid submissions and observations were received, the breakdown of which is as follows:

Submission Type	Number
Online Portal Submissions	4
Posted / Handed Submissions	0
Email Submissions	9
Total Submissions	13

The Chief Executive's Report summarised and detailed the outcome of the Public Consultation process on the Carlow Local Authority Climate Action Plan as follows:

- lists the persons, organisations or bodies who made submissions or observations on the Carlow Local Authority Climate Action Plan.
- summarises the issues raised by the persons, organisations or bodies in the submissions or observations.
- gives the response and recommendation of the Chief Executive to the issues raised; and
- outlines any proposed modifications to the Draft Plan, on foot of the Public Consultation process.

The Chief Executive's Report on Submissions Received was submitted to members of the SPC for noting at their meeting on 4th December 2023 and to the Elected Members of the Local Authority on 18th December 2023 for their consideration.

Elected Members have a maximum of 6 weeks to consider this Chief Executive's report and to adopt the Carlow Local Authority Climate Action Plan 2024-2029, in accordance with the requirements of the Climate (Amendment) Act 2021.

1.6 Structure of the Local Authority Climate Action Plan

This Carlow Local Authority Climate Action Plan has taken into full consideration international and national climate change policy and legislation as well as the latest knowledge on current levels of climate change as well as its impacts and projections for the future. A summary of policy and context is provided in Section 2. In showing the outcome of this process, this Carlow Local Authority Climate Action Plan is set out in four parts as detailed in Figure 1.11.



Figure 1.11 Structure of the Carlow Local Authority Climate Action Plan

Evidenced-based Climate Action. (Section 3). The evidence base used to inform on climate action within the jurisdictional area of Carlow County Council is presented, including climate change risks and an emissions baseline profile.

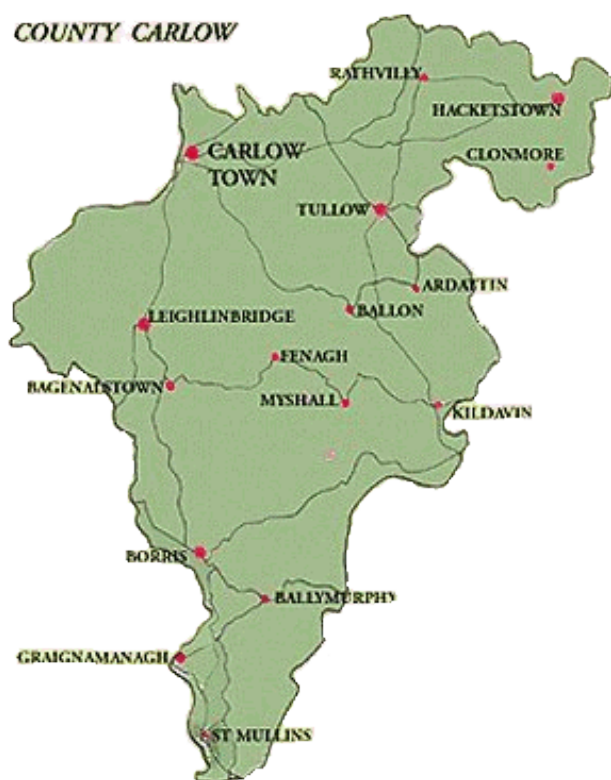
Framework of Climate Actions (Section 4). outlines its framework for climate action including the Plan, Vision, Mission, Strategic Goals, Objectives, and Actions.

Carlow Town Decarbonising Zone (Section 5) focuses on Carlow Town as the Decarbonising Zone (DZ) including the Vision for the spatial area, Strategic Priority Areas and Actions.

Implementation and Reporting (Section 6). sets out the Council's approach to implementing actions, measuring progress, the use of metrics as well as how the Council will report on progress of the actions over the lifetime of the Plan.

2 POLICY AND CONTEXT

2.1 Profile of County Carlow



Carlow is strategically located in the north of the south eastern region with strong links to the Midlands and the Greater Dublin Area. It extends to 897km² and borders Counties Kildare, Laois, Kilkenny, Wexford, and Wicklow.

Census 2022 shows that the population of Carlow grew by 9% to 61,968, which means the number of people in the County rose by 5,036 between April 2016 and April 2022. www.cso.ie

There is approximately 23km of motorway crossing through the northwest of the County and approximately 50km of national roads traversing North Carlow.

Figure 2.1. County Map

Carlow town is the County's largest urban centre and seventh (including Graiguecullen) largest town in the Country. It accounts for over 44% of the County population and is the predominant driver of employment with a very significant employment base. It is strategically positioned on the M9 and N80 road network and on the Dublin to Waterford rail line. Carlow Town as its County town is a critical element within the settlement structure of the County.

In addition to Carlow town, Graiguecullen is located on the western side of the River Barrow which forms part of a wider urban area. This urban area is known as the Greater Carlow Graiguecullen Urban Area. Both Carlow town and Graiguecullen are two areas where according to Census 2022 a total of 27,351 people reside.

Tullow with a population of 5,138, and Muinebheag, with a population of 2,945, are classified as District Towns and comprise well developed serviced settlements with jobs supporting services and community facilities. These are important towns at a district level and have capacity for continued commensurate growth to become more self-sustaining.

SMALL AREA POPULATION STATISTICS FOR CARLOW

Census 2022 Thursday, September 21st 2023

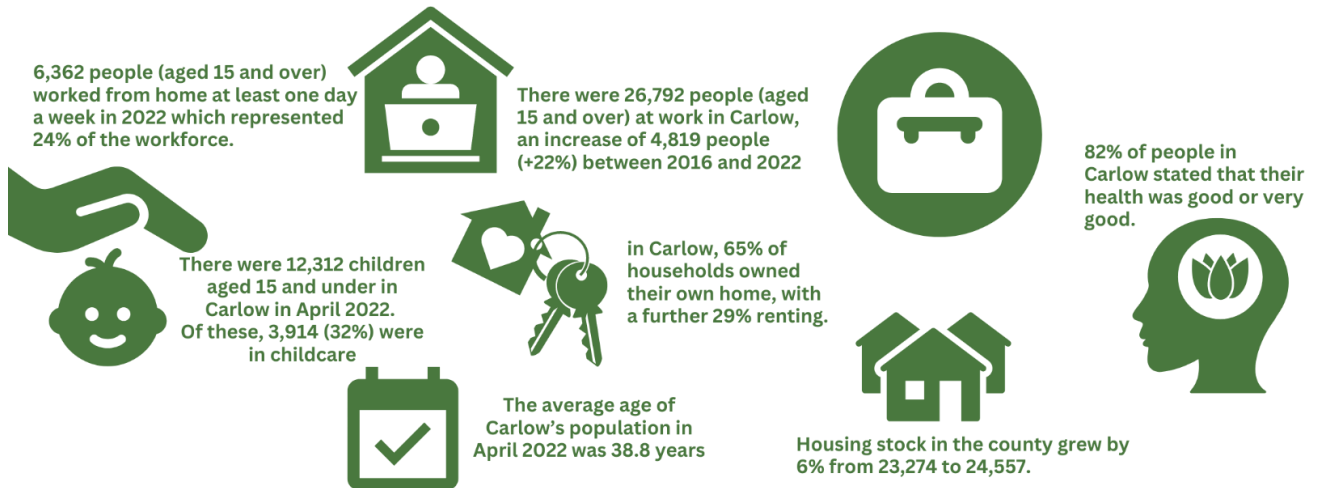


Figure 2.2 Statistical Snapshot of County Carlow

County Carlow also possesses a network of attractive towns and villages, with varied landscapes and a high-quality natural environment. The County has a rich and varied natural and built heritage which contributes to the County's character, identity, and sense of place.



Figure 2.3 Clashganney Lock, Borris , Co. Carlow.

The main waterbodies present within the County Carlow are the River Barrow, River Burrin, and River Slaney. The River Barrow is the second largest river in Ireland measuring approx. 192km in length. The river Burren, a tributary of the River Barrow begins at the North side of Mt. Leinster and flows northwards towards Rathoe where it then turns westwards towards the N80 and enters south of Carlow town where it drains into the River Barrow.



Figure 2.4 The River Barrow in Carlow Town.

The river Slaney, measures approximately 117km in length and passes through Carlow where it flows through Tullow town. Rivers Derry and Derreen are both tributaries of the river Slaney. The river Derry rises in Hackettstown and flows under the Clonegal bridge where it becomes a border and establishes the divergent point of Co. Carlow to the West and Co. Wexford to the East. The river Derreen rises in the Wicklow Mountains and flows Southwards passing through the towns of Hackettstown and Tullow. The Mountain and Dinin Rivers are also two prominent water bodies which flow close by to the town of Borris in Co. Carlow.

Carlow County Council is located within the Eastern and Midlands Climate Action Region (CARO) and is one of 17 Local Authorities in the region. The Eastern & Midland CARO is one of four regional climate action offices set up in 2018 in response to Action 8 of the 2018 National Adaptation Framework (NAF) – Planning for a Climate Resilient Ireland. The role of the CARO Office is to coordinate and support local government to lead transformative change and measurable climate action across our cities and counties. They provide guidance, advice, and support to Local Authorities to leverage the capability, reach and resources of the sector to effectively address climate change across Ireland.



Figure 2.5 Eastern & Midlands Climate Action Region (CARO)

2.2 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 2.6 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.

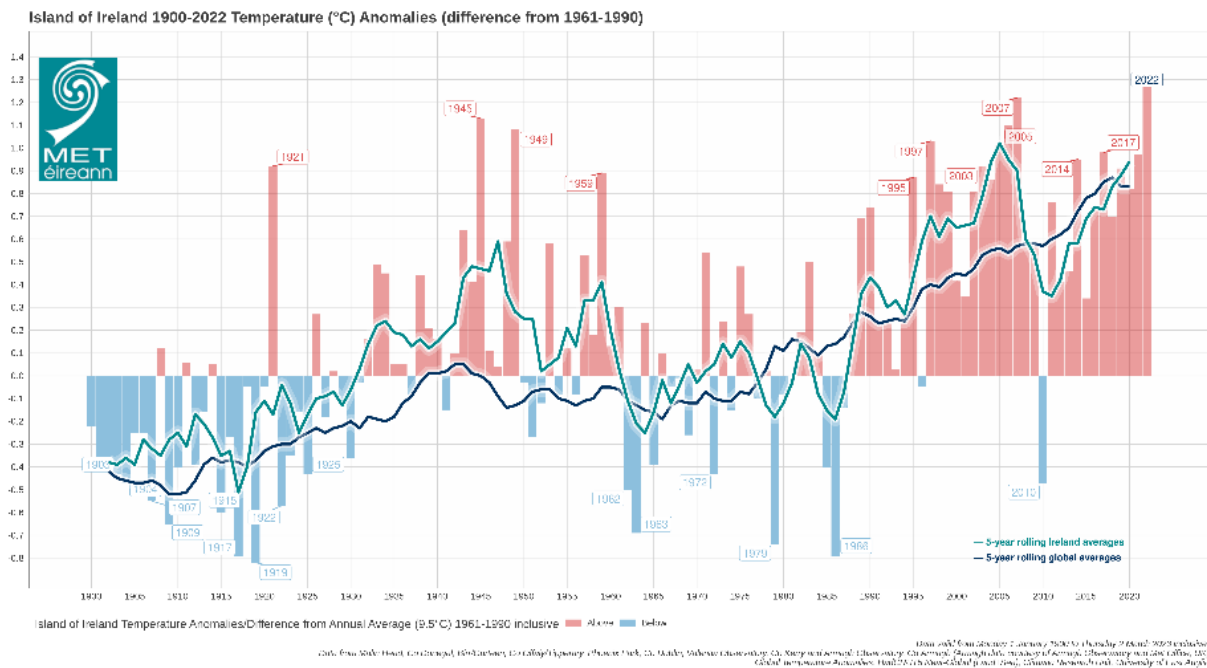


Figure 2.6: Island of Ireland 1900-2022 Temperature (°C) Anomalies (difference from 1961-1990)
 (Source: Met Éireann)

Conversely 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.

Global mean sea level increased by 20 cm between 1901 and 2018. The trend in global mean sea level rise has been consistently rising since 1901. Ireland has so far seen a similar rise in sea level with an average of 2-3 mm per year. A warming climate has caused a rise in sea level, through the loss of sea ice and thermal expansion (the increase in the volume of water due to heating) resulting from the warming ocean.

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

environmental, and economic challenges. This can increase vulnerability and sensitivity to a changing climate and climate extremes.

Based on observed changes in climate and its impacts, Met Éireann, the Environmental Protection Agency (EPA) and other climate scientists, 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 Carlow 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. The frequency of extreme wind conditions are expected to increase, particularly during Winter.
- Increases in the frequency of fluvial (river) and pluvial (surface water) flooding.
- 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).



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.

Figure 2.7: Living Roof Bus Shelter at the Carlow Town Bus Park

2.3 Climate Policy Context

Climate action is given impetus by the scientific evidence that supports the findings of human influence on climate change and the most recent legally binding international treaty on climate change, which sets the framework for ambitious and strengthened policy responses, the Paris Agreement 2015. Consequently, this Climate Action Plan is set within a broader context of international, EU, national and sectoral climate policy. This is represented in Figure 2.8.

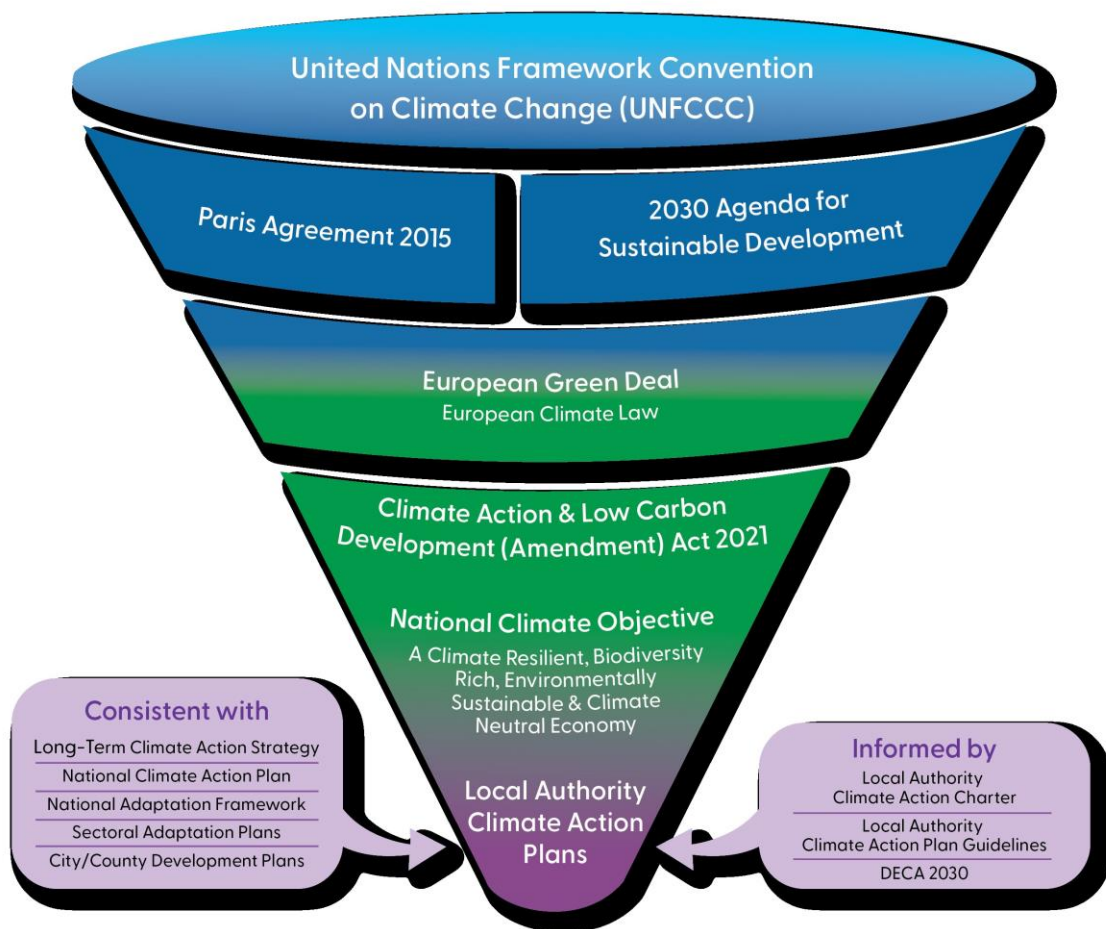


Figure 2.8: Legislation and Policy Context for the Climate Action Plan
(Source: Climate Action Regional Offices)

2.3.1 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 2⁰C and pursuing efforts to limit the temperature increase to 1.5⁰C above pre-industrial levels; and
- ii. Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience.

Another International agreement closely linked with the Paris Agreement is the [2030 Agenda for Sustainable Development](#) which was adopted by UN Member States in September 2015. At the Agenda's core are 17 [Sustainable Development Goals \(SDGs\)](#). These goals aim to “end poverty, protect the planet and improve the lives and prospects of everyone, everywhere.” The 17 SDGs contain 169 targets to be achieved by 2030. In 2019, World leaders called for a ‘decade of action’ to achieve the Goals within this timeframe. The SDGs are also addressed in Section 6 of this Plan.

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.

2.3.2 Climate Change Policy in Ireland

Climate change policy in Ireland now reflects the ambition of the EU who require us to meet 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 targets are balanced or exceeded by the removal of greenhouse gases. Through progressive economy-wide carbon budgets, sectoral ceilings, a suite of strategies devised to promote a combination of adaptation and mitigation measures, as well as robust oversight and reporting arrangements, climate policy is working to scale up efforts across all of society and deliver a step change on ambitious and transformative climate action to 2030 and beyond to 2050.

The National [Climate Action Plan 2023](#), launched on 21st December 2022, is the second annual update to the Country'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.

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 Carlow 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 Citizen and Stakeholder Engagement

Local authorities have significant experience in engaging citizens and stakeholders, through their existing functions, including land-use planning, housing, enterprise, transport, and environmental awareness. Local authorities are also engaged in existing public participation structures and approaches that are bottom-up, community centred and are outcome focused. These include Public Participation Networks (PPN), Local Community Development Committees (LCDC), Tidy Towns, Age Friendly Ireland, Sports partnerships, Sustainable Energy Communities (SECs) and a range of other programmes and initiatives.

The urgency in addressing the issue of climate change has permeated throughout these organisations who are now making significant progress in incorporating climate action into their goals and plans.

The Local Economic Community Plan (LECP) 2023-2028 identifies Climate Action as a high-level goal.

“Carlow is a carbon neutral and climate resilient society with affirmative climate and biodiversity actions and environmental sustainability at the heart of all decision making.”

Methodology used by Carlow County Council for consultation with key stakeholders include:.

- Carlow County Council Consultation Portal
- Local Newspaper notices & editorial – Carlow Nationalist
- Local Radio Advertisement - KCLR
- Radio interviews
- Social Media Advertisement
- Local Authority Website

- Parish Newsletters
- Local Notes local Newspaper – Carlow Nationalist
- Carlow PPN
- Communications with Statutory Stakeholders
- Public Display in County Buildings of Carlow County Council
- Public Display in Library branches
- Presentation to Staff members of Carlow County Council
- Presentation to Elected members of Carlow County Council
- Presentation to Members of Planning, Environment, Climate and Bio-Diversity Action, Energy and Agriculture Strategic Policy Committee.
- Notification of adjoining Local Authorities
- The Climate Action Regional Office engaged with the Departments responsible for the development of sectoral adaptation plans inviting them to review the local authority adaptation strategies and to make submissions.
- The Climate Action Regional Office also identified key high-level stakeholders according to their importance and relevance to the subject matter of Local Authority Adaptation Strategies and invited them to review the local authority adaptation strategies and to make submissions.

The challenges of climate change which are far reaching across society, are not defined by spatial boundaries and therefore require holistic and collective responses. Engagement and participation by citizens and stakeholders in climate decisions and measures that involve them is considered very important. This ensures climate actions positively and equitably influence the choices they make.

Delivering on our climate ambition requires the Government and citizens of Ireland to come together in a strengthened ‘social contract’ for climate action and the co-creation of real solutions to climate change, that are meaningful, inclusive, fair, and accessible for all, thereby prioritising a just transition (Climate Action Plan 2023).

2.5 Climate Action Training

In partnership with the CAROs and the Local Authority Services National Training Group (LASTNG), climate action training continues to be rolled out for the entire local authority sector including elected members, to empower and upskill staff to act as leaders on climate action. To date over 50% of staff in Carlow County Council have been trained in various pillars of climate action training, with future training requirements being assessed on a continuous basis. The Association of Irish Local

Government (AILG) has also organised training events and an accredited training course for elected members.

Carlow County Council has also organised workshops for local community groups through the PPN. In partnership with the CAROs, 'Let's talk Climate Action' workshops have also been organised across the country, through the network of Age Friendly Ireland coordinators in local authorities.

Carlow County Council's Environmental Awareness Officer & Green Schools coordinators work closely with the An Taisce Green Schools programme, to continue awareness activities and Green Flag awards in both primary and post-primary schools. An Taisce has also developed new resources for teachers on climate action, to overlap with teaching curriculums.

2.6 National Dialogue on Climate Action

In 2022, the Council continued to support citizen and stakeholder engagement initiatives, including the Government's National Dialogue on Climate Action (NDCA), local 'Climate Conversations' led by the Public Participation Network (PPN). The Climate Acts 2015-2021 recognise the Public Participation Networks as a key network to consult regarding climate action and the Council has engaged with Carlow PPN in the public consultation of the National Climate Action Plan.

Cumulatively, evidence from the 2022 NDCA programme suggests that there is a high level of awareness of climate change among the Irish people, and they want to get involved in climate action. The findings of the 2022 engagement programme have also shown that there is a willingness to engage in climate action, but people may not know which actions are most effective or where to start acting. Further enabling citizen and stakeholder engagement can make it possible to realise the opportunities that a transition to a carbon-neutral society and economy presents, such as new sustainable careers, warmer more energy-efficient homes, better travel options, more sustainable consumer choice, integrated spatial planning, cleaner air and water and a better environment for future generations.

Figure 2.9 summarises some of the needs of participants in online 'Climate Conversations', as part of the National Climate Dialogue. It clearly shows that the Local Authority has an important role in enabling citizens to engage in climate action, through the services it provides.

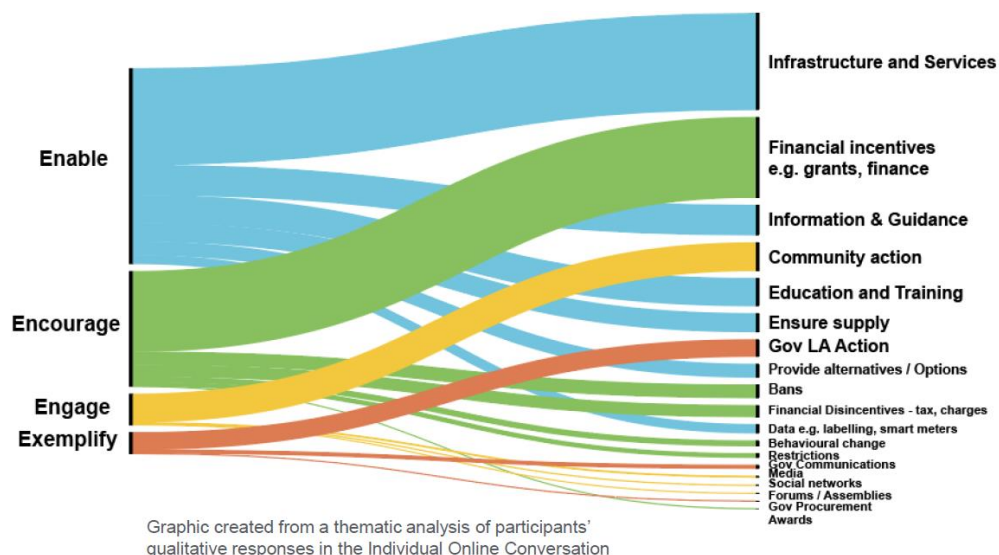


Figure 2.9: Summary of findings of the 'Climate Conversations' online responses

(Source: Department of the Environment, Climate & Communications/MCo)

2.7 Community Climate Action Fund

On February 3rd 2023, the Minister of the Environment, Climate and Communications, launched the Climate Action Fund Strand 1 - Building Low Carbon Communities. This is a fund of €24 million for local authorities across the country, to support and build low carbon communities. A further €3 million is being provided to support cross-border and all-island community climate action initiatives. This funding is part of the Community Climate Action Programme, which supports projects and initiatives that facilitate community climate action through education, capacity building and learning by doing.

Strand 1 requires the appointment of dedicated Community Climate Action Officers (CCAO) in all local authorities to guide and support communities from the very start. Carlow County Council has recruited a Community Climate Action Officer and launched the Community Climate Action Fund on 6th December 2023. The allocation of this fund for Carlow County Council in Strand 1 is €378,000.

Community projects eligible for this guidance and potential funding will address the following five themes:

- Community & energy
- Travel
- Food and waste
- Shopping and recycling
- Local climate and environmental action

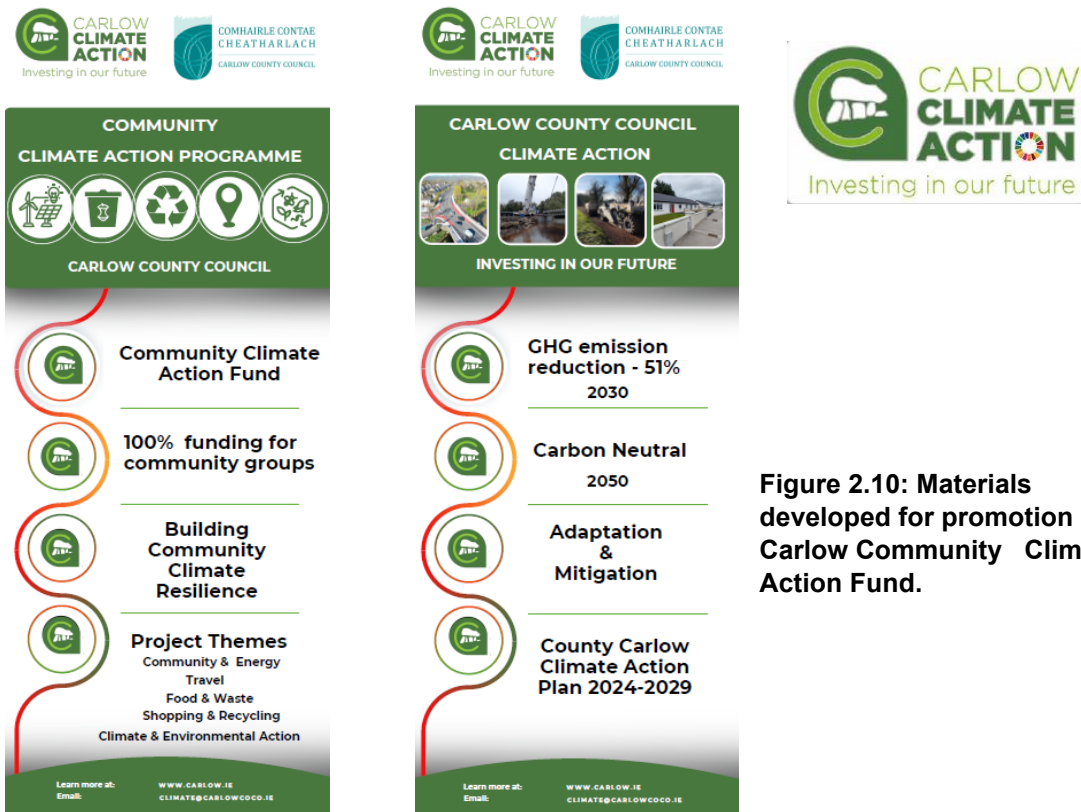


Figure 2.10: Materials developed for promotion of Carlow Community Climate Action Fund.

The actions included in this Local Authority Climate Action Plan, aim to equip all citizens and other stakeholders, with the right information to make informed decisions, thereby assisting and empowering them to play their part in the County’s transition to a low carbon and climate resilient region, together with the adjoining local authorities in the Eastern Midlands CARO region. By communicating effectively with citizens, businesses and other sectors about climate action, there is real opportunity to create long-term, positive behavioural change which will have a significant impact on reducing both greenhouse gas emissions and the impacts of climate change to 2030, 2050 and beyond.

In implementing and updating the Local Authority Climate Action Plan into the future, strengthening existing networks and creating new climate action partnerships will progressively inform and encourage all citizens, communities, and other stakeholders to have increased access to climate action information and advice. Interest areas could include the identification and implementation of relevant energy efficiency measures, renewable energy actions, climate adaptation and resilience measures, access to funding sources such as Sustainable Energy Authority of Ireland grant schemes, the Climate Action Fund, European Commission funding and others. Local authority efforts in citizen and stakeholder engagement will continue to be supported by the CAROs, the Environmental Protection Agency, the National Dialogue on Climate Action, and other partners.

2.8 Climate Action Research Activities

Carlow County Council participates in a range of research projects across different business areas to help inform our response to key work areas such as climate action. Collaborating on research also maintains good working relationships with 3rd level universities and technological institutes, as well as other research stakeholders such as representative bodies like the Local Government Management Agency.



Figure 2.11 Award winning Age Friendly ‘Access for All’ recycling facility at Powerstown Civic Amenity Site.



Figure 2.12 Road Recycling in Staplestown, County Carlow

3 THE BASELINE

3.1 Importance of evidence-based climate action planning

Evidence-based climate action planning is crucial for addressing the urgent and complex challenges of climate change and is essential for informed decision-making, efficient resource allocation, effective mitigation and adaptation measures, public engagement, international collaboration, and ongoing evaluation. By relying on scientific evidence and data, policymakers can develop robust and effective strategies to address the urgent challenges of climate change.

This involves developing strategies and policies based on scientific evidence, data, and analysis to effectively mitigate greenhouse gas emissions, adapt to climate impacts, and foster sustainable development.

Accurate understanding of the problem: Climate change is a multifaceted issue with far-reaching consequences. Evidence-based planning ensures decision-makers have access to the most up-to-date scientific research and data, allowing them to comprehend the causes, impacts, and potential solutions associated with climate change. It helps to avoid misinformation, scepticism, and uninformed decision-making.

Efficient resource allocation: Climate action planning often involves significant investments in infrastructure, technologies, and policies. Evidence-based approaches enable the prioritisation and efficient allocation of limited resources. By considering data and evidence, policymakers can identify the most effective and cost-efficient actions, leading to optimal use of resources and maximizing the impact of climate initiatives.

Identifying effective mitigation measures: Evidence-based planning enables the identification of the most effective and feasible mitigation measures to reduce greenhouse gas emissions. It involves evaluating the potential benefits and drawbacks of different strategies, technologies, and policy interventions, allowing decision-makers to select the options that offer the greatest emission reductions while considering local contexts and constraints.

Informing adaptation strategies: Climate change adaptation is essential to minimize the impacts of climate-related hazards and safeguard vulnerable communities, ecosystems, and economic sectors. Evidence-based planning helps identify the

specific risks and vulnerabilities associated with climate change, guiding the development of appropriate adaptation measures. It ensures that adaptation actions are tailored to local conditions, based on robust scientific assessments.

Building public trust and engagement: Evidence-based climate action planning enhances transparency, accountability, and public trust. By relying on sound scientific evidence, policymakers can demonstrate that their decisions are based on rigorous analysis rather than personal or political preferences. This fosters public support and engagement, facilitating the implementation of climate policies and initiatives.

Facilitating Local, Regional, National, and international cooperation: Climate change is a global issue requiring collective action. Evidence-based planning provides a common language and foundation for international cooperation. It enables countries to share data, research, and best practices, facilitating collaboration and the development of coordinated approaches to tackle climate change at all scales.

Monitoring and evaluation: Evidence-based planning supports ongoing monitoring and evaluation of climate actions. By setting measurable targets, collecting data, and regularly assessing progress, decision-makers can gauge the effectiveness of their strategies and policies. This feedback loop allows for adjustments and improvements, ensuring that actions remain aligned with the evolving understanding of climate change.

3.2 Carlow County Council Climate Change Risk Assessment

RPS Consulting Ltd were engaged to prepare a Tier 1 Qualitative Local Authority Climate Change Risk Assessment to support the development of the Local Authority Climate Action Plan 2024-2029. In accordance with the methodology provided in Annex B of the Carlow Local Authority Climate Action guidelines, the report provides an assessment of the current and future climate risks and impacts on the operations and delivery of services by Carlow County Council.

The assessment of these risks will raise awareness of the consequences of climate change, help to prioritise risks, and help to monitor and track changes in climate risks. This Climate Change Risk Assessment informs the adaptation section of the Carlow Local Authority Climate Action Plan 2024-2029 which will constitute part of the National Adaptation Framework.

3.2.1 Climate Hazard types identified for County Carlow

In collaboration and consultation with Carlow County Council, and with the collective input by the Eastern & Midlands CARO and the County Councils of Wexford, Waterford, Kilkenny, and Tipperary, a timeline of climate hazards historically affecting the local authority area were identified and developed. The climate hazard types identified as providing existing risk to County Carlow are shown in Figure 3.1.











Type	Climate Hazards	
Heat and Cold		Above Average Surface Temperature
		Heatwave
		Drought
		Cold Spell
Wet and Dry		Above Average Precipitation
		Extreme Precipitation
		River Flood
		Pluvial Flood
Wind		Severe Windstorms
Snow and Ice		Heavy Snowfall

Figure 3.1 Climate hazard types identified as providing existing risk to County Carlow

Understanding the nature and frequency of the identified climate hazards helps to produce a deeper appreciation of the scale of risk presented by each hazard type. The climate hazards profile for Carlow is presented in two 15-year periods, as seen in Figure 3.3 and Figure 3.4, which provides a review of the extreme weather events in County Carlow over the past 30 years.











	Climate Hazards	Occurrences	Frequency
	Severe Windstorm	39	Very Frequent
	Extreme Precipitation	21	Very Frequent
	River Flooding	15	Frequent
	Pluvial Flooding	9	Common
	Heatwave	4	Common
	Drought	4	Common
	Above Average Surface Temperature	4	Common
	Above Average Precipitation	4	Common
	Cold Spell	3	Common
	Heavy Snowfall	3	Common

Figure 3.2 Frequency of Current Climate Hazards in County Carlow

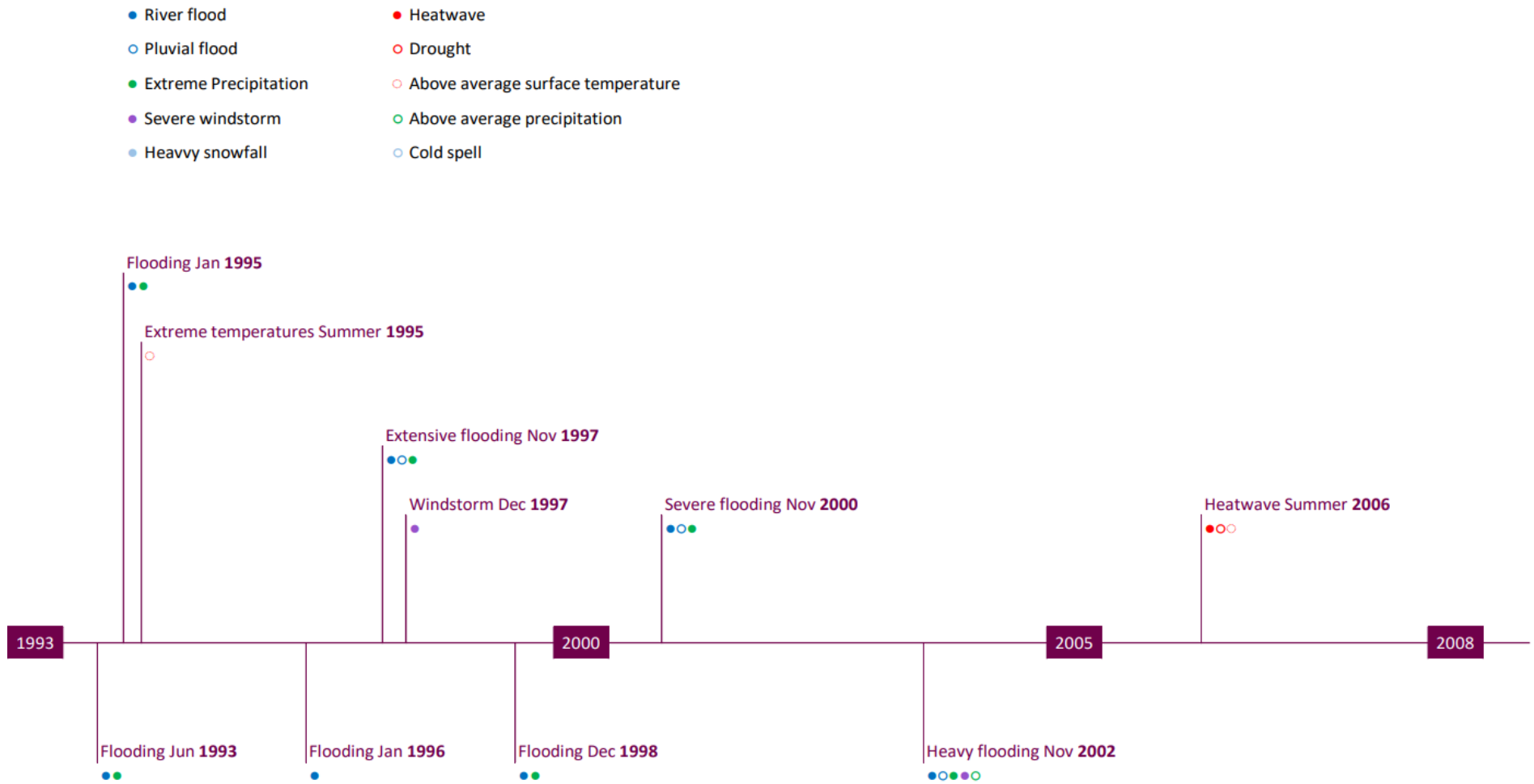


Figure 3.3 Profile of Climate Hazards in County Carlow: Representative timeline of climate hazards illustrated to show hazard and frequency 1993-2008



Figure 3.4 Profile of Climate Hazards in County Carlow: Representative timeline of climate hazards illustrated to show hazard and frequency 2008-2022



Figure 3.5 The impacts of windstorms & flooding in County Carlow

For each of the climate hazards identified, the overall severity of impact for the following risk areas were estimated for Carlow County Council:

- Asset Damage,
- Health and Wellbeing,
- Environment (including biodiversity),
- Social,
- Financial,
- Reputation, and
- Cultural Heritage

The future climate impacts of hazards projected to impact, Carlow County Council are presented according to the future frequency and future level of impact of the hazard in Figure 3.6.

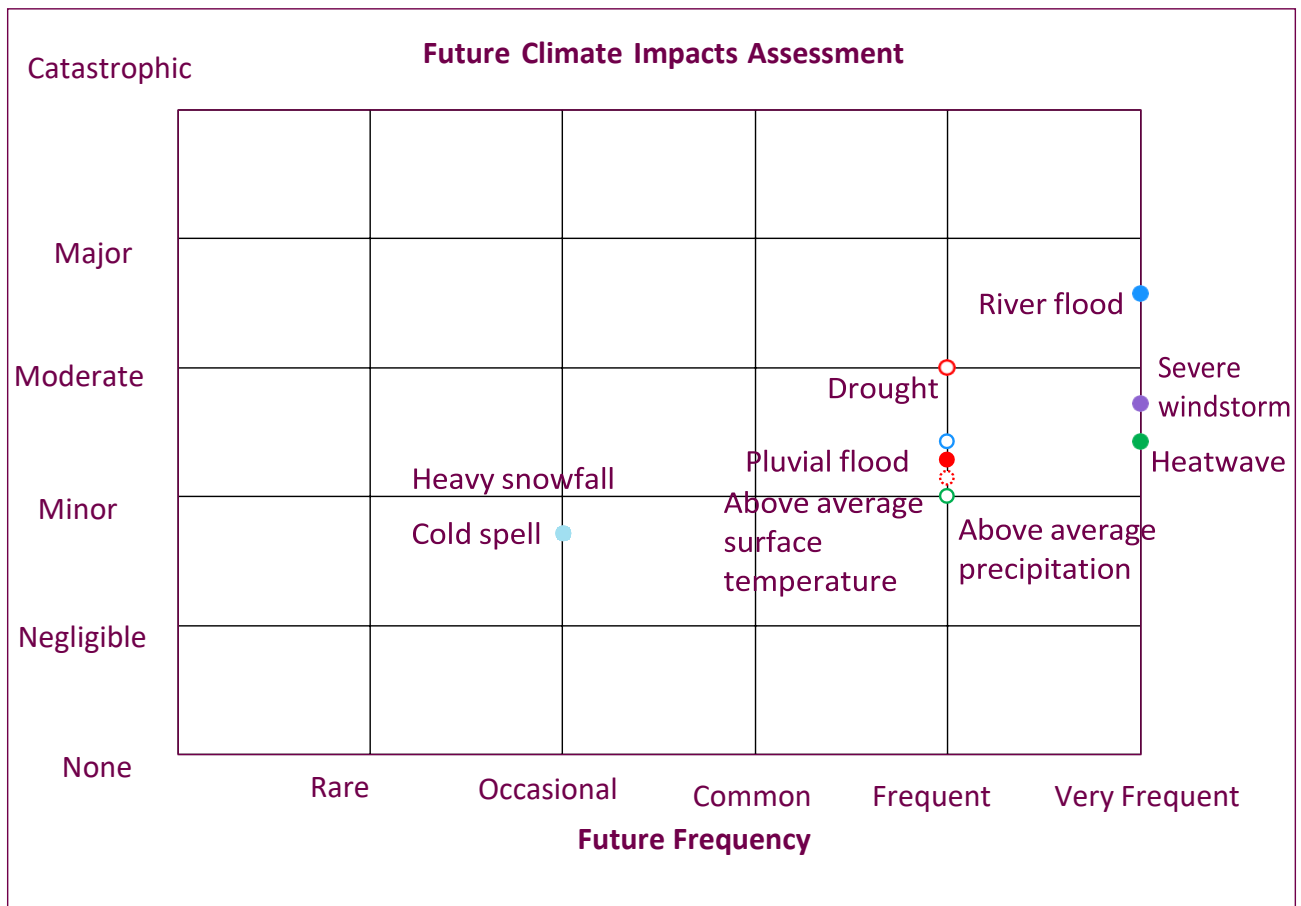


Figure 3.6 Future Climate Impacts Assessment

3.2.2 Key Climate Hazards identified for County Carlow

Key Climate Hazards identified for County Carlow:

River Flooding

Extreme Precipitation

Drought

Future projections of climate change indicate that Above Average Precipitation, Prolonged Cold Periods and Heavy Snowfall will remain consistent with existing conditions. However, risk is predicted to increase for all other identified climate hazards, with River Flooding remaining the perceived highest risk to County Carlow.

River flooding, severe windstorms, and extreme precipitation identified as the highest perceived risks implies that there may be an increased likelihood of flooding events and storms with strong winds and heavy rain, leading to potential damage to infrastructure, property, and human lives.

An increase in heatwaves, resulting in above-average surface temperatures, presents negative consequences for human health, agriculture, and wildlife, as high temperatures can lead to heat-related illnesses, crop failures, and ecosystem disruption.



Figure 3.7 Wildfires on Mount Leinster, County Carlow

Projections advise that County Carlow will experience increased periods of drought which can have severe implications for water availability, agriculture, and the overall ecosystem. It may lead to water scarcity, reduced crop yields, and impact the livelihoods of farmers and rural communities. The increasing risk of prolonged dry periods, above average temperatures and heatwaves is projected to lead to a continued reduction in soil moisture content leading to drier conditions and higher fuel loads.

The impact of Climate Change continues to influence the wide range of functions carried out by Carlow Local Authorities. The identification of future risks is critical to enable the progression of adaptation and mitigation measures in the development and execution of our plans and policies.

Above-average precipitation, prolonged cold periods, and heavy snowfall will remain relatively consistent with existing conditions. While these elements may not change significantly, they can still have important effects on the county. Increased precipitation can contribute to flooding and erosion, while prolonged cold periods and heavy snowfall can disrupt transportation and pose challenges for infrastructure maintenance. [Tier 1 Climate Change Risk Assessment](#)



Figure 3.8 Brooklodge bridge, Borris, Co. Carlow under reconstruction to prevent restrictions causing flooding upstream.

3.3 Baseline Emissions Inventory

South East Energy Agency, Carlow County Council's energy partners were commissioned to complete a baseline emissions inventory for

- a) the County,
- b) the Decarbonisation Zone and
- c) the Local Authority

in accordance with the Guidelines for Local Authority Climate Action Plans.

A baseline emissions inventory refers to a comprehensive assessment of the greenhouse gas (GHG) emissions produced by a specific entity, such as a company, organisation, or geographic region, during a particular period. It serves as a benchmark or starting point against which future emission reductions or mitigation efforts can be measured and evaluated.

Baseline emissions inventories are used as a starting point for setting emission reduction targets, developing climate action plans, and monitoring progress over time. By comparing future emissions against the baseline, organisations and policymakers can assess the effectiveness of their emission reduction efforts and adjust as necessary.

The 2030 Emission Reduction Target as set out in the Climate Action and Low Carbon Development (Amendment) Act 2021 is a 51% absolute reduction in overall greenhouse gas emissions by 2030 and setting us on a path to reach net-zero emissions by no later than 2050, as committed to in the Program for Government (Government of Ireland, 2021).

An absolute reduction means that regardless of activity in the county, the total GHG emissions across the County by 2030 must be 51% less than the total GHG emissions in the baseline year, which in this case is 2018.

As part of the preparation of this Carlow Local Authority Climate Action Plan which will outline the pathway for Carlow County Council to reduce its Greenhouse Gas Emissions (GHG) by the required 51% by 2030, Carlow County Council worked with our energy partner South East Energy Agency to conduct an emission profile and establish a Tier 2 Baseline Emission Inventory.

For the report and the data analysis, all GHG are converted and reported as CO₂ equivalent emissions, or CO₂eq. Some emissions are actual carbon dioxide (CO₂) organisations, some are methane (CH₄) and some are Nitrous Oxide (N₂O). All emissions are converted into CO₂eq.

The GHG emission baselines for the County, the Council and the Decarbonisation zone were prepared in accordance with the methodology provided in "Technical Annex C: Climate Mitigation Assessment of the Local Authority Climate Action Plan Guidelines (DECC, 2023).

3.4 Carlow County 2018 Baseline Emissions Inventory

Technical Annex C of the Climate Action Plan guidelines outline the Tier 2 approach to be taken by the Local Authorities in the development of the County level Baseline Emissions Inventory. Tier 2 is the bottom-up approach for data analysis, which takes national datasets and local-scale datasets together to look at county wide GHG emissions across various sectors which include:

- Residential
- Manufacturing & Commercial
- Industrial Processes
- Agriculture
- Transport
- Land Use Change and Forestry (LULUCF)
- Waste
- F-gases

[The baseline for emissions for Carlow](#) were calculated using data from 2018 in accordance with the prescribed methodology, full report appended in Appendix III: The Baseline - prepared by Southeast Energy Agency.

The total baseline GHG emission for 2018 for County Carlow is 909.11kt CO₂eq.

The breakdown of GHG emissions and energy consumption per sector for 2018 is as follows:

Residential

Total residential emissions were 103.74 kt of CO₂eq in 2018

Total delivered energy for the residential sector for 2018 was 352.36 GWh

Manufacturing and Commercial

Total emissions in 2018 were 134.96 kt of CO₂eq;

Total final energy used in 2018 was 510.41 GWh

Industrial Processes

Total emissions from industrial processes were 48.39 ktCO₂eq.

Agriculture

Total emissions in 2018 were 353.64 ktCO₂eq.

Total final energy used in 2018 was 81.02 GWh

Transport

Total final emissions from transport were 187.63 ktCO₂eq.

Total final Energy for Transport sector was 709.31GWh

Land Use Change and Forestry (LULUCF)

Total emissions from LULUCF sector were 66.61 ktCO₂

Waste

Total emissions from waste sector were 11.57 ktCO₂

F-Gases

In County Carlow there were no emission accounted for by F-gases

The total baseline GHG emission for 2018 for County Carlow is **909.11kt CO₂eq.**

Therefore, the allowable GHG emissions in 2030 is **445.46kt CO₂eq.**

Carlow County Council Baseline Emissions Inventory

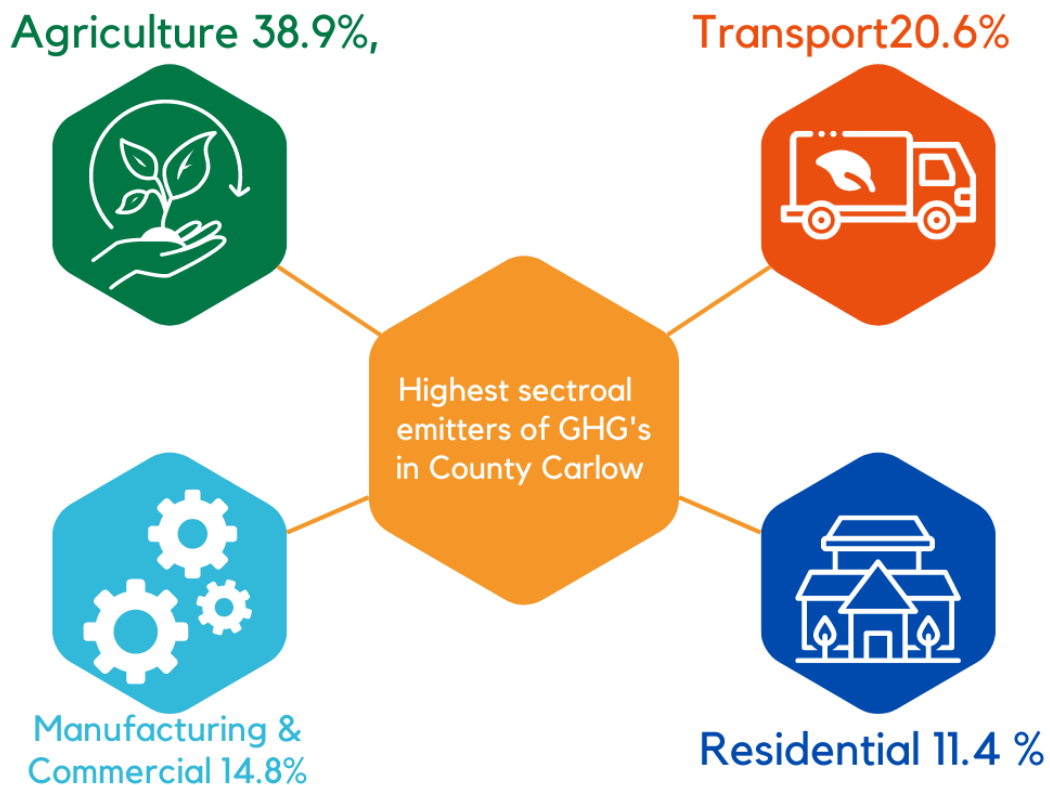


Figure 3.9 Highest emitters of GHG's in County Carlow by sector.

3.4.1 Carlow County Council Baseline Emissions Inventory.

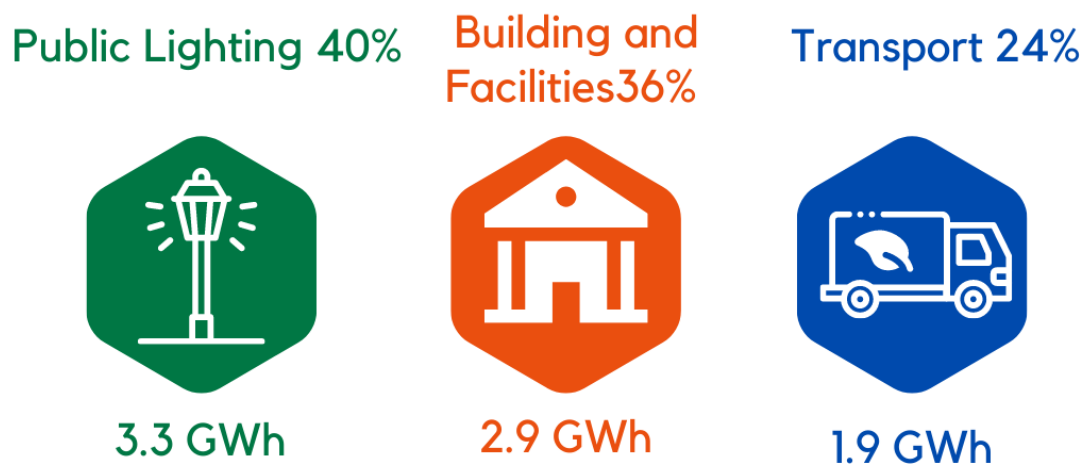
Public sector bodies are required to report on their annual energy use to the Sustainable Energy Authority of Ireland (SEAI). This is done through the Monitoring and Reporting system (M&R), which is used to track public sector bodies', including Carlow County Council's, progress towards 2030, compared to the 2018 Baseline. The National Climate Action Plan 2023 requires the public sector including local authorities in calculating their 2018 baseline to use an average of the years 2016, 2017 and 2018. The average of 2016-2018 being called the 2018 Baseline.

Carlow County Council have reported using this system since 2012, and all data has been verified and accepted by SEAI and is published in the Annual Report on Public Sector Energy Efficiency Performance.

Energy consumption was extracted from the M&R system & CO2 emissions data for Carlow County Council and is broken down by fuel type:

- Electricity – imports from national grid
- Electricity - generated by on-site PV
- Natural Gas
- LPG
- Kerosene
- Gasoil
- Petrol
- Road Diesel
- Marked Diesel

The fuel types are categorised by energy, applying Electricity, Thermal and Transport as sub-categories. Results obtained from the M&R system, show Carlow County Councils energy consumption for the 2018 Baseline was 8.1



GWh.

Figure 3.10 Carlow County Council's Energy Consumption for the 2018 Baseline

When energy use was converted into emissions, Carlow County Council's total emissions amounted to 2.81 ktCO₂eqm.

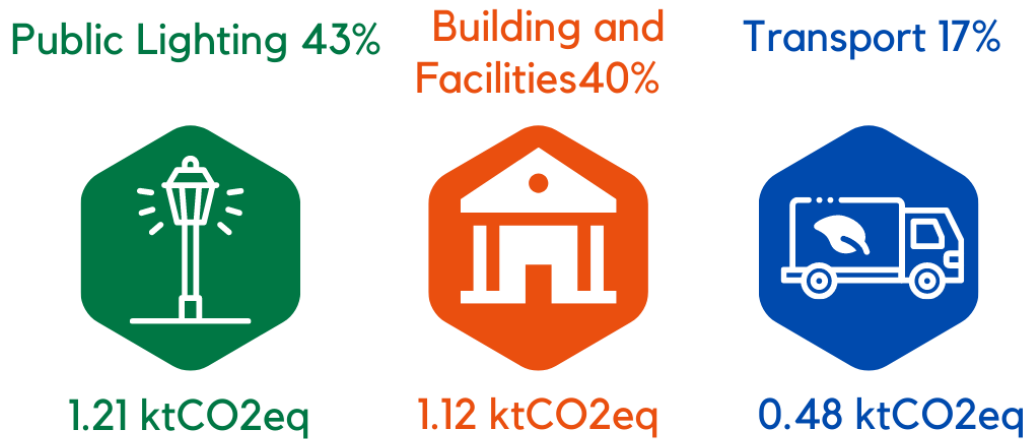


Figure 3.11 Carlow County Council's GHG Emissions for the 2018 Baseline

Carlow County Council has already made considerable progress in reducing the emissions from its own operations since its 2008-2009 baseline, with an annual update provided through the SEAI Monitoring and Reporting system.



Figure 3.12 Solar PVs in Use on Carlow County Council Buildings.

4 FRAMEWORK OF CLIMATE ACTIONS

4.1 Development of Climate Actions

The development of climate actions in this plan has been completed with due regard and cognisance of the National Climate Action Plan 2023 and National Adaptation Framework. Due consideration to the sectoral emissions ceilings and budgets that help to shape and inform government policy on climate action over the next five years has also been given.

The actions of this plan are aligned with the strategic goals of the sectoral strategy published in April 2021 by local government ***Delivering Effective Climate Action 2030, DECA***). DECA sets out the overarching commitment on climate action leadership to ensure a coherent approach to climate action across the administrative and political structures of all 31 local authorities.

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.*” This second National Implementation Plan for SDGs, Strategic Objective 2: *To integrate the SDGs into Local Authority work to better support the localisation of the SDGs.*

Carlow County Development Plan 2022-2028 sets out the strategy for the proper planning and sustainable development of the County over the Plan period from 2022 to 2028. The Plan *aims to combat climate change and its impacts in the County by promoting and supporting policies and objectives which contribute towards a transition to a low-carbon and climate resilient future, and which focus on reducing greenhouse gas emissions and energy demands through appropriate and effective climate mitigation and adaptation measures.*

4.1.1 Attributes of Actions

The actions of this plan have been identified based on their ability to help deliver on climate obligations of reducing emission and building resilience.

Actions & projects will be prioritised based on their positive climate impact, the multiple co-benefits they accrue and value for money in that context.

Multiple funding/grant sources will be used to implement actions and projects.

Implementing actions of this plan will require engagement, collaboration, and partnership with a broad range of stakeholders from Government to community level, to deliver on climate action.

The Carlow Local Authority Climate Action Plan 2024-2029 and actions contained within will strive to provide easy to understand climate information, to educate and advocate about the need to engage with climate action.

Co-benefits targeted will strive to optimise protection and enhancement of the natural environment to improve health and wellbeing outcomes as well as support for a clean and green local economy.

Carlow County Council has developed its actions using the SMART approach whereby actions identified are:

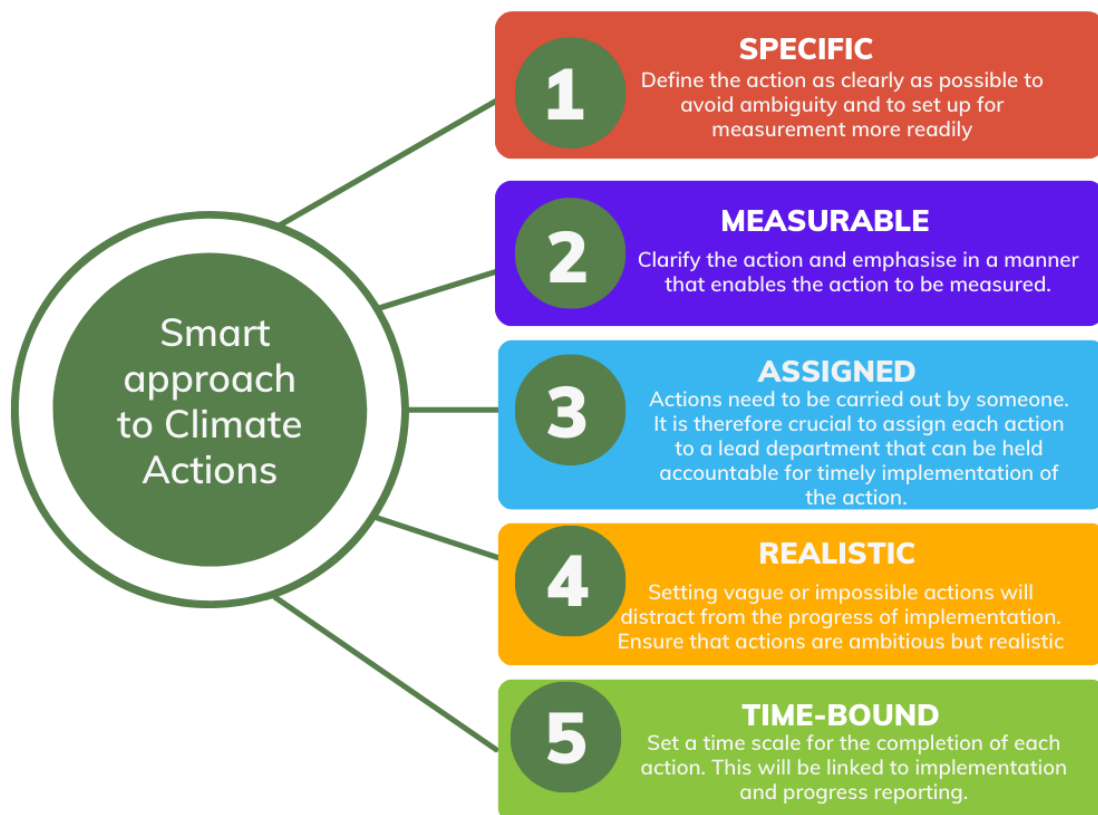


Figure 4.1 Smart Approach to Climate Actions

4.1.2 Key performance indicators

Key performance indicators have been developed for all actions proposed in the Local Authority Climate Action Plan to ensure that the actions can be measured and reported upon.

4.2 Framework of Climate Actions

The actions of this plan will be delivered within and as part of a framework to ensure their effective and successful delivery. The framework configures the arrangement of climate actions within a defined structure ensuring alignment between potential on the ground actions and the overarching vision that the Plan aspires to deliver.

Actions prioritised as part of this framework will work to reduce emissions from Carlow County Council's own assets and operations, influence sectors in the delivery of their own emission reductions, raise awareness of climate change and promote positive climate action at community level.

The Framework of climate actions in Carlow Local Authority Climate Action Plan are shown in Figure 4.2.

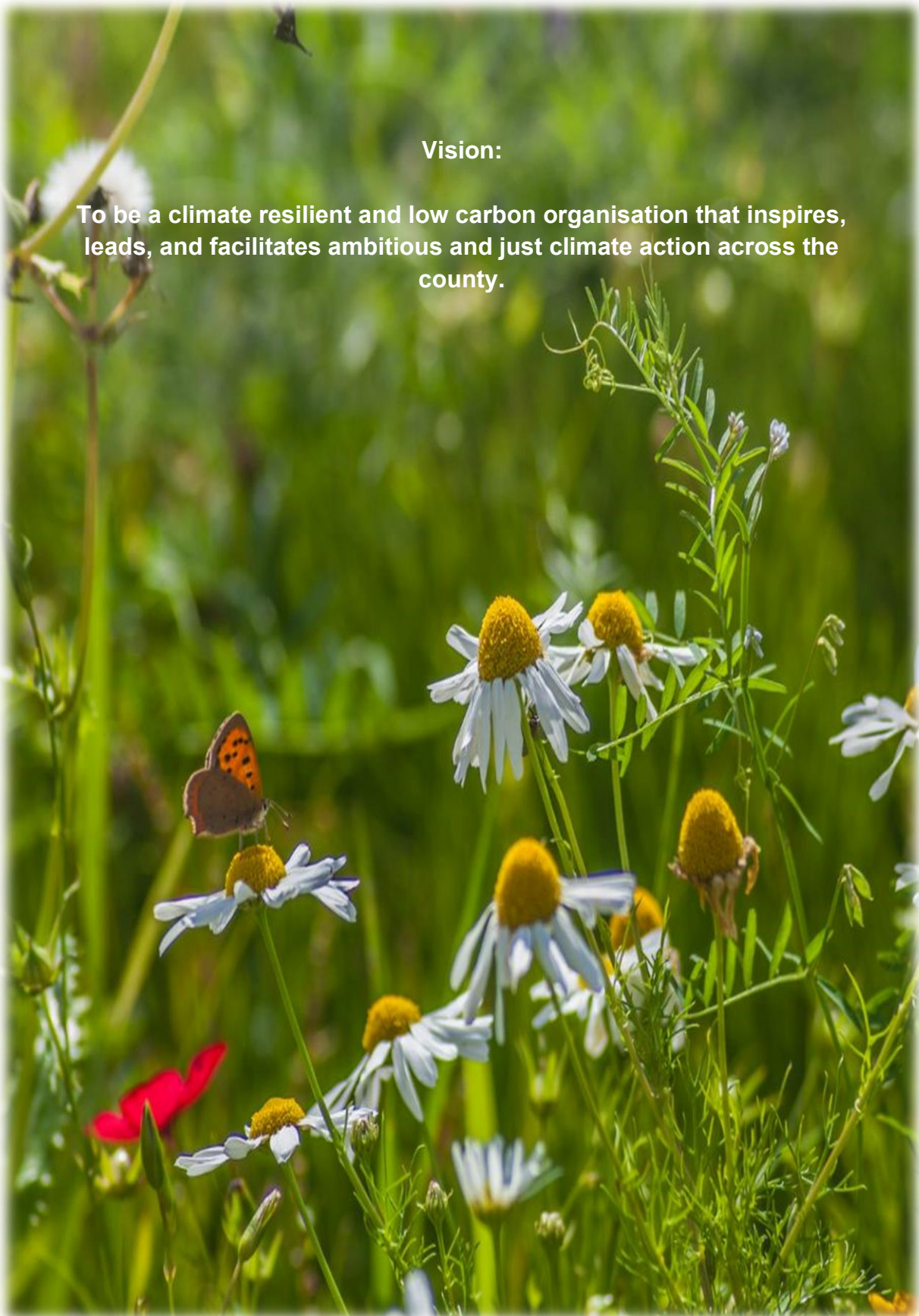


Figure 4.2 Framework of Climate Actions for Carlow Local Authority Climate Action Plan 2024 -2029

4.3 Plan Vision:

Vision:

To be a climate resilient and low carbon organisation that inspires, leads, and facilitates ambitious and just climate action across the county.



4.4 Plan Mission:

To realise the ambitious targets set out in the Climate Action and Low Carbon Development (Amendment) Act 2021 while influencing and supporting positive climate action throughout the community, ensuring that County Carlow remains an attractive and sustainable place to live, visit, study and do business in, for present and future generations.

4.5 Strategic Goals

Strategic goals set the context for mitigation and adaptations actions in service of Carlow 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 and stakeholder engagement. The 5 strategic goals of this plan include:

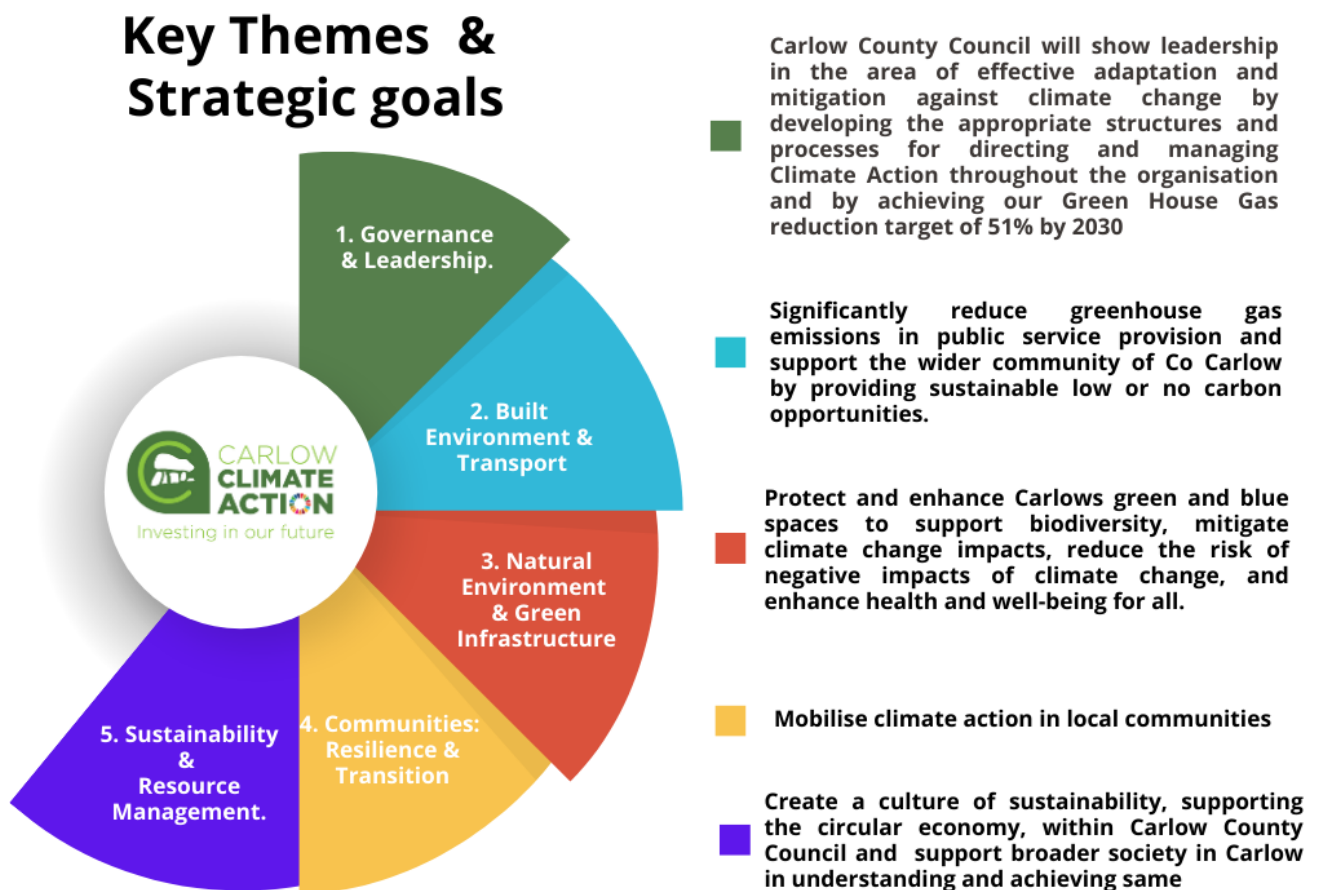
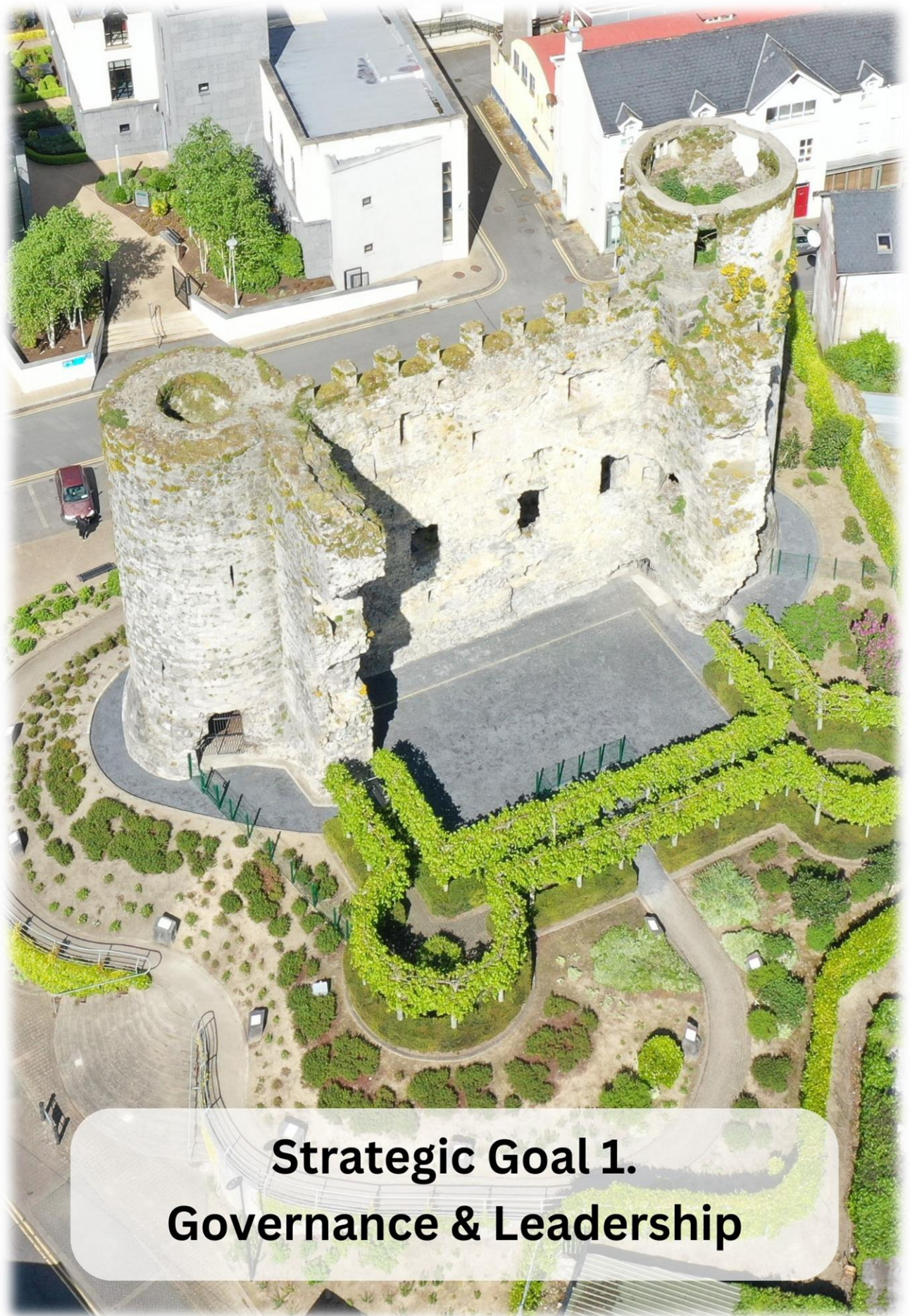


Figure 4.3 The 5 Key Themes & strategic goals of Carlow Local Authority Climate Action Plan.



**Strategic Goal 1.
Governance & Leadership**

Strategic Goal 1. Governance & Leadership.



Carlow County Council will show leadership in effective adaptation and mitigation against climate change by developing the appropriate structures and processes for directing and managing Climate Action throughout the organisation and by achieving our Green House Gas reduction target of 51% by 2030.

Objective: *Support the development and implementation of positive climate action across all operations of Carlow County Council, collaborating with others to lead, influence and assist in their endeavours to reduce their negative climate impact.*

Carlow County Council will leverage its unique climate leadership position to influence local and national climate action policy to transition to climate resilient and sustainable communities, as well as in the economy and wider society.

Carlow County Council will build internal capacity and awareness, from elected members through to circa 400 Carlow County Council employees to embed climate action across all its activities and services.

Carlow County Council will build capacity and readiness in relation to working with communities and other strategic partners to effect transformative climate action in County Carlow.

Carlow County Council is responsible for reducing greenhouse gas emissions from across its own assets and infrastructure, building resilience to ensure continued service provision.

Effective implementation of the Local Authority Climate Action Plan 2024-2029 is dependent on successful collaboration with the many stakeholders internal and external to the County and Carlow County Council commits to influencing and enabling others in Carlow to meet their own climate obligations.



Figure 4.4 Carlow County Council Headquarters.

1. Governance and Leadership							
Action No.	Action	Adaptation & Mitigation	Tracking Measure/ KPI	Lead	Partners	Timeframe	DECA Goals
G1.1	Carlow County Council will include the reduction of its carbon emissions by 51% by 2030 as mandated in the Climate Action and Low Carbon Development (Amendment) Act 2021 as a key objective of the Corporate Plan, the Annual Service Delivery plan and Municipal District Plans.	Adaptation & Mitigation	Plans approved	Management Team/Elected Members	All Departments of Carlow County Council	Annually	2,3
G1.2	Resource and fund dedicated Climate Action Staff to facilitate adaptation against and mitigate for the effects of Climate Change, to include a Climate Co-Ordinator, Climate Action Officer and a Climate Community Officer.	Adaptation & Mitigation	Climate Action Coordinator/ Climate Action Officer/ Community Climate Officer appointed	Management Team	DECC	2024	1,2,3
G1.3	Maintain a cross functional Climate Action Team to ensure the embedding of Climate considerations and actions across the range of services provided by Carlow County Council.	Adaptation & Mitigation	Team in Place and No. of Meetings per year.	Management Team	All Departments of Carlow County Council	2024-2029	1,2,3
G1.4	Implement Climate Action engagement programme in the workplace for all staff and Elected Members.	Adaptation & Mitigation	Number of attendees	Climate Dept	HR/ CARO/ LASNTG	2024-2029	1,2,3
G1.5	Implement and report on the actions in the Climate Action Plan at local and national level.	Adaptation & Mitigation	Annual review of CAP conducted and actions developed	Management Team	All CCC departments	2024-2029	1,2,3
G1.6	Mainstream climate mitigation and adaptation considerations into all new policies adopted by Carlow County Council.	Adaptation & Mitigation	Included in SPC Scheme 2024-2029	Strategic Policy Committee	Management Team, Corporate	2024-2029	1,5
G1.7	Develop a Green Public Procurement (GPP) tracking tool to measure the use of green procurement in tenders issued by Carlow County Council.	Mitigation	% of all tenders which incorporated GPP	Procurement	All CCC departments	2024-2029	1,5
G1.8	Prepare a Green Procurement Strategy for Carlow County Council to ensure GPP is considered in all tenders.	Mitigation	Develop GPP strategy	Procurement	All CCC departments	2024-2025	1,5
G1.9	Prepare Sustainable Development Goal (SDG) guidance document to support the inclusion of the global goals in all plans & strategies published by the local authority.	Adaptation & Mitigation	Document prepared	Environment Department	All CCC departments	2025	1,5
G1.10	Develop & implement a Financial Management resource for recording the cost of major climate/weather events	Adaptation & Mitigation	Resource developed	Finance	All Departments	2024-2029	1,2,5
G1.11	Complete annual energy consumption reporting to the national energy Monitoring and Reporting system (M&R) operated by the Sustainable Energy Authority of Ireland (SEAI)	Adaptation & Mitigation	M&R reporting complete	Environment Dept	SEEA/SEAI	2024-2029	1,2,3
G1.12	Provide match funding to enable climate, energy, biodiversity action projects - which promote climate action co-benefits and do not contravene relevant environmental protection criteria or cause significant negative environmental effects.	Adaptation & Mitigation	€ provided	Finance/Management Team	All CCC Departments	2024-2029	1,2,3,
G1.13	Become a Partner in the National Transport Authority administered Smarter Travel Programme and apply for the Smarter Travel Mark which recognises employers who are committed to active & sustainable travel for their workforce	Mitigation	Registration	Management Team	All CCC Departments	2024	1,2,3

Environmental Governance

The purpose of the Local Authority Climate Action Plan is to promote, develop and implement climate actions through process improvements, community engagement, progressive development and integrated learning processes, which will be refined throughout the lifetime of the plan. It is important to note that it is an integral part of the Local Authority Climate Action Plan to facilitate co-benefits for climate and other environmental factors.

In order to be realised, projects included in or supported by the Local Authority Climate Action Plan will have to comply, as relevant, with various legislation, policies, plans and programmes (including requirements for lower-tier Appropriate Assessment, Environmental Impact Assessment and other licencing requirements as appropriate) that form the statutory decision-making and consent-granting framework, of which the Plan is not part and does not contribute towards.

These considerations include the Water Framework Directive, a European Union framework that sets standards for water protection and management. River basin management plans are instrumental in implementing the Water Framework Directive's goals, as they provide detailed strategies for achieving good water status and preventing pollution across an entire river basin. These plans help coordinate efforts among various stakeholders, such as governments, communities, and industries, to achieve integrated water management and environmental protection, thereby ensuring compliance with the Directive's objectives.

An integrated approach identifying sustainable land use practices, improved water management, and ecosystem preservation, the Plan seeks to mitigate climate change's impact on water resources, safeguarding both the environment and public health. This integrated approach demonstrates Ireland's commitment to achieving climate goals while concurrently promoting a healthier and more resilient natural environment.

As well as the climate focused measures detailed throughout the Plan with environmental co-benefits and environmental notes to provide the context within which the action will be progressed, there are several environmental governance principles which will steer future works.

Environmental governance principles to be integrated into all actions/activities which result due to the implementation of the Local Authority Climate Action Plan

- Promote climate action projects that support and maximize environmental co-benefits, such as biodiversity protection and enhancement; improved air, water or soil quality; or enhanced recreation, amenity and cultural heritage value, to ensure win-win benefits are gained.
- Support or facilitate climate action related projects and initiatives which seek to make improvements in soil structure, management, and health by increasing soil organic carbon - which will create the environmental co-benefits of improving flood resilience by enhancing water holding capacity of soils and increasing the level of GHG sequestration associated with land use functions.
- Ensure all development underpinned or supported by climate action is planned and implemented in a manner that appropriately considers the potential for environmental co-benefits, potential environmental impacts, and environmental protection requirements. No climate action related development project that is likely to have a significant negative effect on the receiving environment shall be supported.
- Ensure climate action related projects are carried out in a manner that promotes climate action-cultural heritage co-benefits, and do not result in unauthorized physical damage to cultural, archaeological or architectural features, or unauthorized or inappropriate alteration of the context of sensitive cultural heritage features.
- Ensure climate action related projects are carried out in a manner that promotes climate action water quality co-benefits and align with the provisions of the Water Framework Directive and relevant River Basin Management Plan.
- Promote climate action projects that support protected trees, hedgerows, and other habitats such as wetlands, floodzones which contribute to green infrastructure.
- Support opportunities to improve ecological connectivity of non-designated habitats and sites to improve overall ecosystem resilience and functioning while supporting climate action within the county.

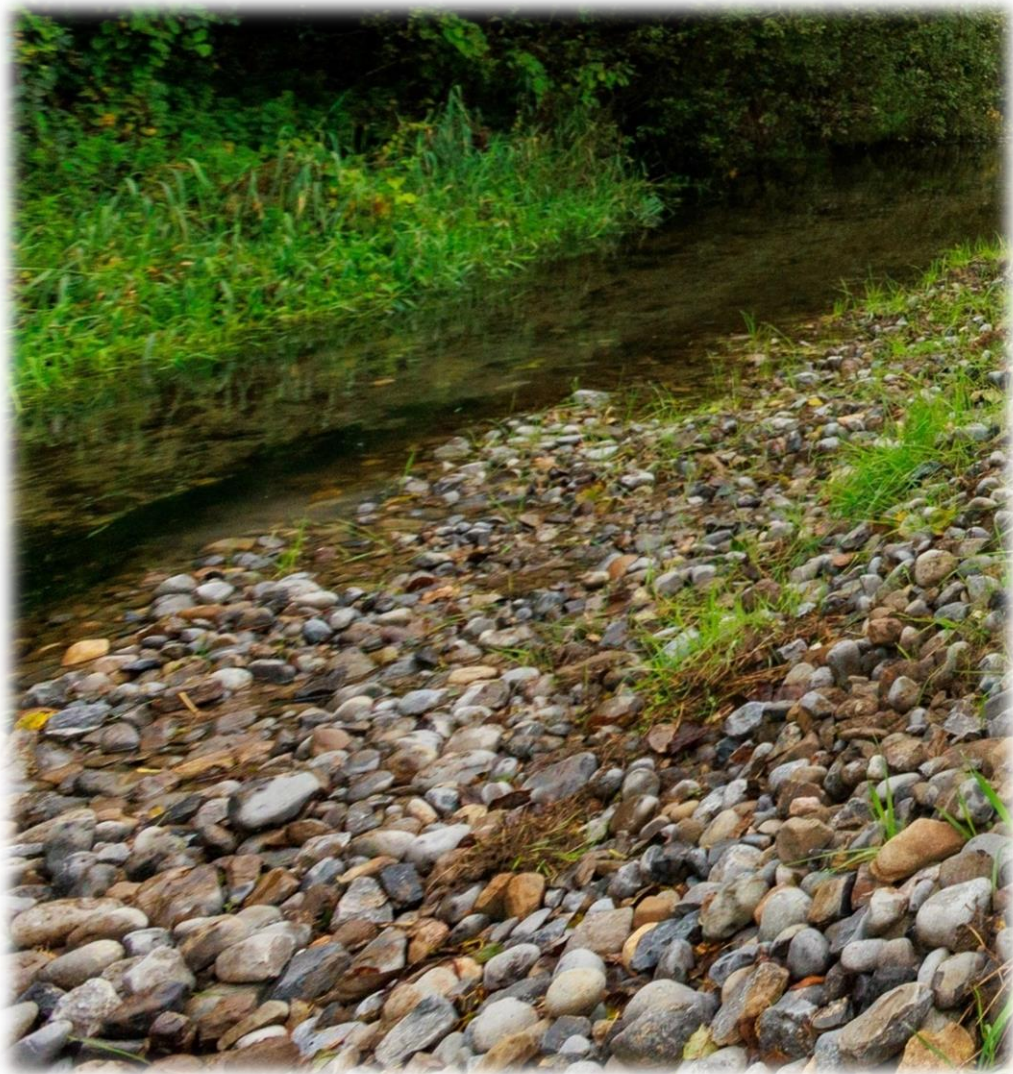


Figure 4.5 Hare's Corner & River Barrow Restoration projects in County Carlow.

**Strategic Goal 2.
Built Environment & Transport.**



Strategic Goal 2. Built Environment & Transport.



Significantly reduce greenhouse gas emissions in public service provision and support the wider community of County Carlow by providing sustainable low or no carbon opportunities.

Objective: *Reduce Carlow County Councils impact on Climate Change by increasing energy efficiency, reducing reliance on fossil-based fuels, and positively influencing the actions of others within our community.*

The built environment refers to the man-made surroundings and infrastructure in which we live, work, and interact. It encompasses all the physical structures, spaces, and systems created or modified by us for various purposes. The built environment across the County of Carlow includes residential, commercial, industrial, and recreational buildings as well as critical infrastructure such as roads, bridges, paths, and utilities which provide us with water, drainage, energy, and communication infrastructure.

Public Lighting was the highest contributor to the CO₂eq of Carlow County Council, accounting for 1.21ktCO₂eq (40%), followed by Building and Facilities contributing 0.88ktCO₂eq (37%) and Transport 0.47ktCO₂eq (23%) to the council's, respectively.

The total energy related emissions in County Carlow from Transport in 2018 were the equivalent of 185.26 ktCO₂eq which represents 20.6% of the total emissions for the County Private vehicles represented 105.2 ktCO₂eq with emissions coming from diesel (79%) and Petrol (20%).

GHG emissions, from the Manufacturing & Commercial sector in 2018 was calculated at 134.9 ktCO₂eq and total residential emissions were 103.74 ktCO₂eq.

Transport emissions in County Carlow reflect the high level of private car dependency. Action is needed to reduce car journeys, increase cycling and walking, improve public transport and more low emission vehicles. Through this, better air quality, mobility and health can be achieved.

In line with the shift away from fossil fuel-powered vehicles the transition to use of Electric Vehicles (EVs) is increasing across the country. To support this

transition Carlow County Council aims to play a proactive role in facilitating transition by working with service providers to roll out the infrastructure required to meet the demand for accessible charging.



Figure 4.6 Active Travel Project at Hanover , Carlow Town

2. Built Environment & Transport							
Action No.	Action	Adaptation/Mitigation	Tracking Measure/ KPI	Lead	Partners	Timeframe	Deca Goals
B1.1	Conduct Energy Audits across Carlow County Council's Significant Energy Users (SEUs)/Facilities to create a Gap to Target (51%) analysis to inform spending on projects to reduce carbon.	Adaptation / Mitigation	Gap to Target Complete	Environment Dept	SEEA / SEAI	2024-2029	1,2,3
B1.2	Prepare and implement a carbon savings programme of measures for Council buildings/facilities to assist in achieving a 51% reduction in greenhouse gas emissions by 2030, 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.	Adaptation / Mitigation	Preparation of implementation Plan	Climate Dept	All Departments	2024	1,2,3
B1.3	Pursue national/regional funding programmes to attain funding for emission reduction measures for Carlow County Council, e.g. Pathfinder	Mitigation	Amount of Funding Received.	Environment Dept	Tipperary, Kilkenny, Wexford & Waterford County Councils. SEEA, CARO,SEAI	2024-2029	1,2,3
B1.4	Complete the National Public Lighting Energy Efficiency Project in County Carlow to reduce the GHG emissions and energy usage of public Lighting, while ensuring the lumen levels and spectral range are maintained or reduced/controlled to avoid effects to biodiversity.	Mitigation	Project completed	Infrastructure	RMO, TII	2024	1,2,3
B1.5	Develop planning conditions with specifications and standards to minimise energy use and light pollution from outdoor lighting in all new developments, ensuring the lumen levels and spectral range are maintained or reduced/controlled to avoid effects to biodiversity.	Mitigation	Planning conditions prepared	Infrastructure	Planning Dept	2025	1,2,3,5
B1.6	Ensure all new build social housing units provided by Carlow County Council meet a minimum A2 Building Energy Rating Standard to reduce GHG emissions, energy consumption and address fuel poverty for vulnerable residents.	Adaptation / Mitigation	% of new build houses meeting A2 min.	Housing Dept	Housing Bodies	2024-2029	2,3,6
B1.7	Upgrade existing social housing units using the worst first principal to B2 or cost optimal to reduce GHG emissions, energy consumption and contribute to alleviating of fuel poverty for vulnerable residents, 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	Mitigation	Meet targets outlined in Energy efficiently retrofit programme	Housing Dept	Department of Housing, Local Government and Heritage	2024-2029	2,3,6
B1.8	Facilitate the upgrade of existing vacant & derelict residential and commercial properties in Carlow Town and County through schemes such as Towns Centre First, Croi Conaithe, 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.	Mitigation	Number of Units activated	Planning Dept	Dept. Rural Community Development. Department of Housing, Local Government and Heritage	2024-2030	2,3

B1.9	Identify derelict properties throughout the County and use legislative powers such as Compulsory Purchase Order and compulsory acquisition order to facilitate their reuse; 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.	Mitigation	Number of Units activated	Planning Dept	Dept. Rural Community Development. Department of Housing, Local Government and Heritage	2024-2029	2,3
B1.10	Target brownfield, vacancy and dereliction as part of the housing for all programme through repair and lease, buy and renew and SHIP programmes; having due regard to environmental sensitivities, 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.	Mitigation	Number achieved PA	Housing Dept	Dept. Rural Community Development. Department of Housing, Local Government and Heritage	2026	2,3,6
B1.11	Review the Major Emergency Plan & Flood Plan to ensure incorporation of climate risk	Adaptation / Mitigation	Plans Updated	Fire Service	Corporate Services	2024	1,2
B1.12	Prepare Carlow County Council guidelines for nature based sustainable drainage solutions, ensuring the guidelines have appropriate regard to environmental protection requirements, including requirements to protect European sites.	Adaptation / Mitigation	Guidelines	Transport	Environment/Planning	2025	2,3,5
T1.1	Assign the role of a fleet manager and develop a sustainable fleet management policy for Carlow County Council Fleet.	Mitigation	Development of a Fleet Management Policy	Transport	Housing, Environment, Fire Services	2024-2029	1,2
T1.2	Investigate options for a sustainably sourced renewable fuel alternative to diesel and the electrification of Council fleet vehicles including delivery of a pilot scheme, while ensuring sustainability criteria is appropriately considered during procurement processes and appropriate end-of-life vehicle management practices are in place.	Mitigation	Report & pilot scheme	Transport	Housing, Environment, Fire Services	2024	1.2
T1.3	Develop and Adopt Electric Vehicle Strategy to support the transition to electric vehicle use in the wider community for County Carlow and for the South East Region; having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, local air quality, cultural heritage etc.	Mitigation	Develop Strategy	Transport	Tipperary, Kilkenny, Wexford & Waterford County Councils. SEEA, CARO,SEAI, ZEVI	2025	1,2,3,5
T1.4	Deliver active travel projects across the County to encourage use of active travel modes such as walking or cycling; having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, local air quality, and cultural heritage.	Mitigation	Number of projects commenced/delivered	Transport	NTA, MD	2024-2029	2,3,4,5,6
T1.5	Complete Transport Plans for Carlow Town, Tullow & Muine Bheag, having due regard to the potential to create climate action co-benefits, and environmental protection requirements, including the requirement to protect European sites.	Adaptation / Mitigation	Completion of assessments	Active Travel	NTA	2024-2029	1,2,3,4,5

**Strategic Goal 3.
Natural Environment & Green
Infrastructure**



Strategic Goal 3. Natural Environment & Green Infrastructure



Protect and enhance Carlow's green and blue spaces to support biodiversity, mitigate climate change impacts, reduce the risk of negative impacts of climate change, and enhance health and well-being for all.

Objective Carlow County Council will facilitate and support protection, management and enhancement of the natural heritage, biodiversity, landscape and environment of County Carlow in recognition of its importance as a non-renewable resource, a unique identifier, and as a natural resource asset.

Carlow County Council has acknowledged the importance of protecting, maintaining, and enhancing our Natural Environment with the adoption of County Carlow Biodiversity Action Plan 2023-2025 and County Carlow Green Infrastructure Strategy.

Accelerating negative impacts of climate change result in increasing concern for the ecological structure of the county as growing seasons change, causing a shift from normal seasonal activities seen in nature. Concerns are compounded by key future climate risks identified for Carlow which include river flooding, severe windstorms, extreme precipitation, periods of heatwaves and droughts increasing.

Investment in Green infrastructure critical as it forms a valuable asset in supporting biodiversity, supporting stormwater and flood risk management, optimising carbon storage whilst also offering opportunities for eco-system services, active travel, amenity, and recreation.

Maintaining and enhancing the natural environment will provide a range of benefits that help to manage and reduce the risks of climate change and help build resilience by reducing soil erosion, absorbing, and slowing water run-off, providing cooling, and shading in urban areas, increasing wildlife and biodiversity, and contributing to health and wellbeing.

3. Natural Environment & Green Infrastructure							
Action No.	Action	Adaptation/Mitigation	Tracking Measure/ KPI	Lead	Partners	Timeframe	DECA Goals
NE1.1	Appoint a Biodiversity Officer for Carlow County Council and implement actions contained in the County Carlow Biodiversity Action Plan 2023-2025	Adaptation & Mitigation	Biodiversity Officer appointed & Number of actions delivered	Environment Dept	Heritage Council	2024 - 2029	1,3,4,5
NE1.2	Implement the actions set out in the County Carlow Green Infrastructure Strategy; having due regard to environmental sensitivities such as archaeology, European sites, biodiversity and amenity value.	Adaptation & Mitigation	Number of actions implemented	Environment Dept	MD, planning, Community	2024-2029	1,3,4
NE1.3	Prepare guidelines for Invasive Alien Species Management	Adaptation & Mitigation	Guild lines prepared	Environment Department	MD	2024-2029	1,3
NE1.4	Develop and implement a policy for the use of chemical pesticides and herbicides for areas managed by Carlow County Council, ensuring these substances are only used to a degree that does not cause significant effects on the receiving environment, such as the receiving water environment, biodiversity or European sites.	Adaptation & Mitigation	Policy Adopted	Biodiversity Officer	Roads Dept,		1,3
NE1.5	Prepare a Hedge and Road Verge Maintenance Strategy for Carlow County Council, having due regard to hedgerow conservation requirements.	Adaptation & Mitigation	Strategy prepared	Biodiversity Officer	All Departments	2024-2029	1,3
NE1.6	Develop and implement a Heritage Plan to record, conserve, and raise awareness of all aspects of built natural and cultural heritage in County Carlow having regard to increasing challenges stemming from climate change.	Adaptation & Mitigation	Adopt the Heritage Plan	Heritage Officer	Heritage Council	2024	1,3
NE1.7	Undertake a planned programme of risk assessments of the Heritage and Cultural Assets under the remit of Carlow County Council to assess the vulnerability and the risk to the historical environment from the impacts of climate change and to help build resilience to these important assets.	Adaptation & Mitigation	Planned programme of risk assessments undertaken.	Heritage Officer	Heritage Council	2024-2029	1,3
NE1.8	Develop a Native Tree Strategy to provide the vision and direction for long-term planning, planting, protection and maintenance of native trees, hedgerows and woodlands within Carlow Town and County	Adaptation & Mitigation	Adoption of Policy	Biodiversity Officer	Tree Council of Ireland, NPWS	2025	1,3
NE1.9	Investigate the feasibility of developing a Carlow County Council Garden nursery facilitating self-sufficiency by providing all new plants for public realm enhancement.	Mitigation	Feasibility report complete	Environment	Horticulturalist/ Municipal Districts	2024-2029	1,2,3

**Strategic Goal 4.
Communities':
Resilience & Transition**



Strategic Goal 4. Communities': Resilience & Transition



Mobilise climate action in local communities.

Objective: *Carlow County Council will inform, influence, and empower the community of County Carlow to develop and implement their local climate action measures.*

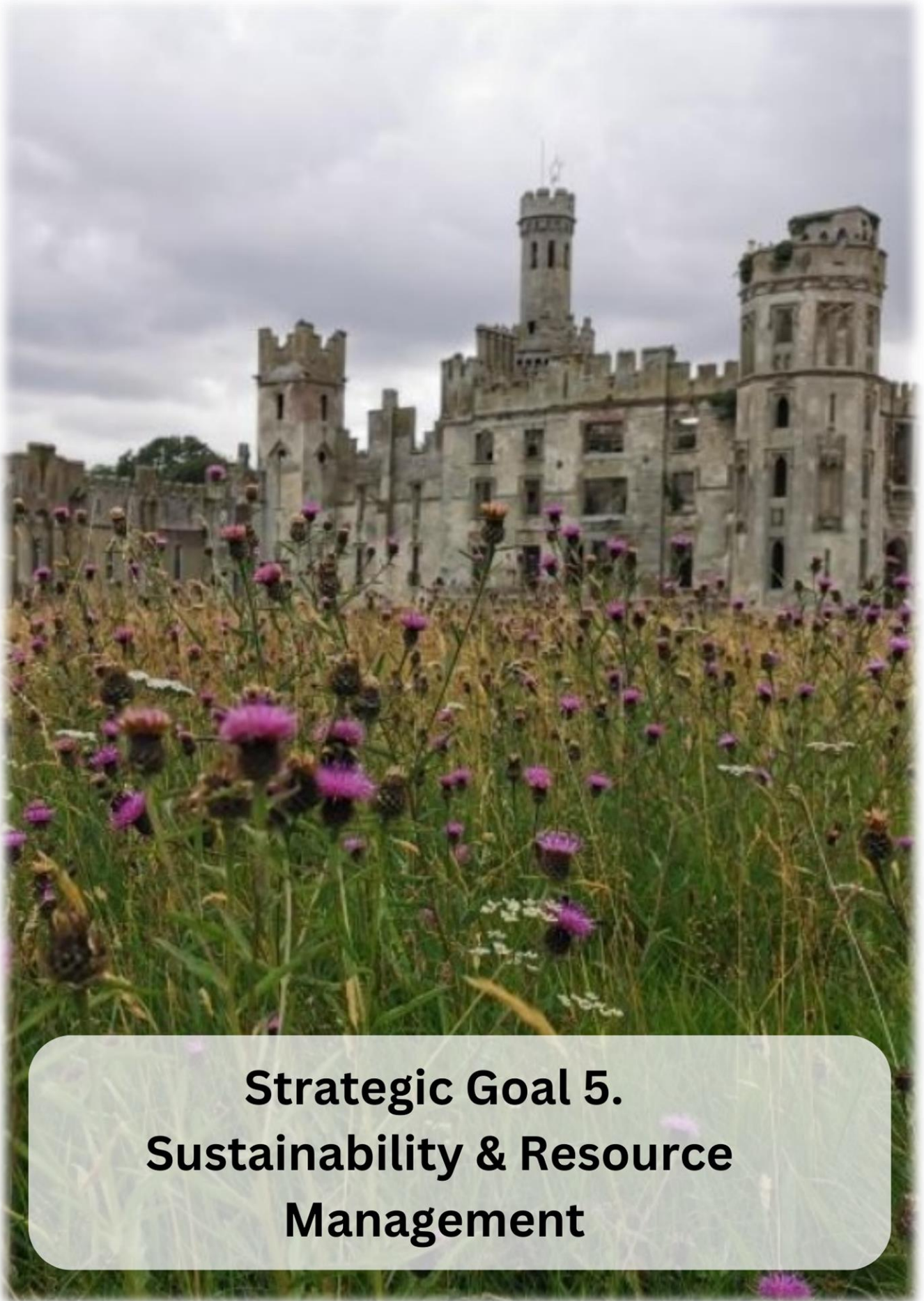
County Council will play a pivotal role in catalysing climate action by fostering a culture of active participation and collaboration and enabling our County to significantly increase its resilience to climate change and create a sustainable future for all who live, work, study, visit and do business in County Carlow.

Carlow County Council recognises the need for sustainable development and understands that transitioning to a low-carbon economy is a crucial step towards addressing climate change and promoting long-term resilience. Carlow County Council acknowledge that our communities continue to play a central role in this transition and are committed to offering ongoing support throughout the process.

Building partnerships with stakeholders, such as agencies, businesses, academic institutions, sporting, and voluntary community groups, will enhance the impact of climate action initiatives and foster a broader culture of sustainability in County Carlow.

Public engagement underpins the development and implementation of innovative adaptation and mitigation measures and methods. Carlow County Council will actively participate in informing the community of County Carlow about the challenges posed by Climate Change and the need for urgent action and will provide resources to enable us all to work together to create effective sustainable local solutions.

4. Communities: Resilience & Transition							
Action No.	Action	Adaptation/Mitigation	Tracking Measure/ KPI	Lead	Partners	Timeframe	DECA Goals
C1.1	Develop countywide climate-related educational and awareness programme to include information events, communication campaigns and guidance documentation	Adaptation & Mitigation	Annual Programme agreed	Climate	Environment/ Community/ Library Service / CCDP/ Carlow PPN/	2024-2029	4,5,6
C1.2	Implement the Community Climate Action Fund to engage communities in localised Climate Action Projects	Adaptation & Mitigation	Number of applications submitted	Climate	DECC, CARO, Community Groups, CCDP, Carlow PPN	2024-2029	4,5,6
C1.3	Include 'Sustainability and Climate Change' assessment on applicable grant assessments to ensure that community groups/stakeholders consider and incorporate Climate Mitigation and Adaptation in all their grant funded activities.	Adaptation & Mitigation	Number of application forms updated to comply with this objective	Climate	Community /Climate/ Environment/ LEO	Q2 2024	4,5,6
C1.4	Ensure that all residents of Carlow, young and old, have opportunities to meaningfully engage in and shape the development of climate action policies and projects delivered by Carlow County Council	Adaptation & Mitigation	Number of events	Community	Climate / Environment/ CRY/ Educational Facilities/Comhairle na nÓg / Older persons forum/ Carlow PPN	2024-2029	4,6
C1.5	Develop a Green Festivals & Events Strategy, ensuring these are carried out in accordance with sustainability guidelines, having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, local air quality, cultural heritage etc.	Adaptation & Mitigation	Strategy complete	LEO	Community/ Climate		1,4, 5
C1.6	Develop Community Garden Guidelines to promote sustainable community gardening in Carlow	Adaptation & Mitigation	Development of Guidelines	Community	Environment/ Climate / CCDP/ Community Gardens Ireland		1,4,6
C1.7	Develop and adopt a community Garden & Allotment Policy for Carlow County Council	Adaptation & Mitigation	Adoption of community Garden & Allotment policy	Community	Environment /Planning / SPC		1,4,6
C1.8	Partner with research institutions such as SETU and Carlow College to explore innovative climate adaptation and mitigation research projects.	Adaptation & Mitigation	Resources provided	Climate	SETU/ Carlow College/ Teagasc/		2,3,5
C1.9	Provide a point of contact to assist local organisations collaborating to implement projects which contribute to the objectives of a National climate initiative. E.G GAA green club programme.	Adaptation & Mitigation	Lead in Place	Climate	Environmental Awareness/ GAA/ CARO		4,5
C1.10	Provide dedicated Climate Action information on Carlow County Council's website www.Carlow.ie	Adaptation & Mitigation	Climate Action space provided	IT	Climate Department	Q2 2024	4,5,6



**Strategic Goal 5.
Sustainability & Resource
Management**

Strategic Goal 5. Sustainability & Resource Management



Create a culture of sustainability, promoting the circular economy, within Carlow County Council and throughout the County.

Objective: *Carlow County Council will implement and monitor a range of policies and practices to reduce our environmental impact, enhance resource efficiency, and create long term environmental, economic and social benefits.*

EU and National policy reflects and reinforces the urgency in transitioning from a linear economy, which follows a "take, make, dispose" pattern, the circular economy is designed to create a closed-loop system where resources are continuously reused, recycled, or regenerated.

The Circular Economy goes beyond the management of waste. The focus is on reducing the number of raw materials we use and maximising the value of materials along the production and consumption chain. This economic model ensures that everyone uses less resources and prevents waste to achieve sustainable economic growth.

It is vital that citizens, communities, business, and other organisations are enabled and empowered to affect positive change and improve quality of life through their buying power.

Embedding green criteria in the form of Green Procurement in Carlow County Council's purchasing, provides an opportunity to convert environmental policy objectives on carbon reduction, air and water quality, and waste reduction, into delivered actions.

Enabling local business to understand and implement carbon reduction using sustainable resource management will not only support our climate by reducing emissions but can encourage employment in new business that evolve to make innovative use of secondary materials. It is also worth noting that modern consumers are changing their expectations and needs. Sustainability and equity are on their mind, and many people only want to work with companies that share their eagerness to engage in genuine ethical, eco-friendly activities.

5. Sustainability & Resource Management							
Action No.	Action	Adaptation/Mitigation	Tracking Measure/ KPI	Lead	Partners	Timeframe	DECCA Goals
SRM1.1	Develop and Implement an annual environmental awareness campaign incorporating the objectives of the National Waste Management Plan for a Circular Economy	Adaptation / Mitigation	Campaign prepared and implemented.	Environment	EPA/ WERLA/ SRWMO/ MY WASTE	2024-2029	1,2,3,4
SRM1.2	Develop sustainability guidelines for corporate events supported, facilitated and organised by Carlow County Council	Adaptation / Mitigation	Guidelines Issued	Corporate Services/ Environment Dept	Management Team / Environment Dept.	2024	1,2,3,4
SRM1.3	Regulate and enforce the National Enforcement Priorities (NEPs) which focus on delivering positive environmental outcomes for air quality, water quality and waste management. This includes over 2,000 different environmental inspections in Carlow annually. Ensure sustainable transport modes are used to travel to and from inspection sites, where feasible.	Adaptation	Percentage compliance with annual targets for Recommended Minimum Criteria for Environmental Inspections (RMCEI)	Environment Dept	EPA	2024-2029	2,3,5
SRM1.4	Develop and provide a series of green & climate-based workshops for owner managers of indigenous Carlow companies	Adaptation / Mitigation	Number of workshops	LEO	Carlow Chamber of Commerce, Carlow Tourism	2024-2026	3,5
SRM1.5	Provide assistance to Enterprises in their investment in equipment & technologies to reduce their impact on the environment	Mitigation	Number of Enterprises assisted	LEO	CCDP, Enterprise Ireland, Carlow Tourism		3,5
SRM1.6	Provide Energy Management Training programmes to businesses in Carlow to help them reduce their carbon footprint	Adaptation / Mitigation	Number of businesses in Energy Management Programmes.	LEO	Enterprise Ireland, SETU, EI, Carlow Tourism	2024-2026	2,3,5
SRM1.7	Deliver programmes to assist businesses in Carlow improve the environmental profile of their business in the marketplace	Adaptation / Mitigation	Approved Voucher Numbers / No of Days Consultancy	LEO	Enterprise Ireland, CCDP, SETU, Carlow Tourism	2024-2026	2,3,5
SRM1.8	Increase awareness and practice of regenerative tourism in our County, to enable visitors to have a positive impact on their holiday destination.	Adaptation / Mitigation	Secure the participation of 12 tourism businesses in the programme	LEO	Carlow Chamber, CCDP, SETU, KCETB, Fáilte Ireland, Carlow Tourism	2024-2026	2,3,4,5,6
SRM1.9	Increase the range of Carlow County Council services available on an online platform.	Adaptation / Mitigation	Number of services available online	IT	All Departments of Carlow County Council	2025	1 to 6
SRM1.10	Carry out a feasibility study to identify the logistical, financial, planning, environmental and market challenges of a proposed district heating project in Carlow; ensuring the study has appropriate regard to planning and environmental protection considerations.	Mitigation	Findings issued	Climate	Industry/SEAI/SEEA	2024-2029	2,4,5,6
SRM1.11	Assign the role of Energy Officer for Carlow County Council	Mitigation	Role of Energy Officer Assigned	Management Team	Corporate Services	2024	1,2,3
SRM1.12	Conduct a review of all Local Authority offices to maximise use and reduce carbon footprint	Mitigation	Review conducted	Management Team	Corporate Services	2024	1,2,3
SRM1.13	Incorporate Climate Action in the Library Development Plan 2024-2029	Adaptation / Mitigation	Plan Published	Library Service	LGMA/Climate Dept	2025	1,2,3

5 CARLOW TOWN DECARBONISING ZONE

5.1 Decarbonisation Zones (DZs)

In response to Action 165 of the Government's Climate Action Plan 2019, Local Authorities were required to 'identify and develop plans for one Decarbonising Zone' within their respective administrative area, for submission to the Department of Housing Local Government and Heritage (DHLGH), as action lead, in Q2 2021, Circular Letter LGSM01-2021.

A Decarbonising Zone (DZ) was defined as

"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".

Decarbonising Zones will provide a test bed of what is possible for decarbonisation and climate action at local and community levels, to help support and realise national climate objectives. The Decarbonising Zone is the focus for a range of climate mitigation, adaptation and biodiversity measures including the identification of projects and outcomes to assist in the delivery of the National Climate Objective.

In the period intervening, strengthened climate policy enshrined through the Climate Action and Low Carbon Development (Amendment) Act 2021, and the publication of the Climate Action Plan 2021, influenced change to the delivery of Decarbonising Zones, from the approach previously advised. The Department of Environment, Climate and Communications (DECC) were advised as the action leads for local authority climate action planning and Decarbonising Zones (DZs).

The Local Authority Climate Action Plan (LACAP) is acknowledged as being an important instrument to promote and activate community level climate action. The relationship between the Local Authority Climate Action Plan and Decarbonising Zones being seen as instrumental in the advancement of the DZs. To ensure the success of Decarbonising Zones in developing and implementing climate change at local level they were given statutory footing as part of the Local Authority Climate Action Plan as notified by DECC in 2023.

Decarbonising Zones are now a component of the Local Authority Climate Action Plan and subject to the process, statutory timeframes, and procedural requirements of developing the Local Authority Climate Action Plan as provided for by legislation. Technical Annex D of the Local Authority Climate Action Plan Guidelines entitled Decarbonising Zones supports local authorities in the development of their Decarbonising Zone (DZ).

5.2 Purpose of Decarbonising Zones

Decarbonising Zones play a crucial role in not only accelerating learning and innovation but also understanding the complexity and scale of decarbonizing the economy and wider society. They serve as platforms to experiment with new technologies, policies, and strategies for decarbonization and provide a controlled environment where researchers, businesses, and policymakers can collaborate to test and refine innovative solutions.

This spatial area serves as a trial ground for new ideas, facilitates collaboration and knowledge-sharing, and informs decision-making for scaling up decarbonization efforts.



Figure 5. 1 Aerial view of Carlow Town Centre

Decarbonising Zones enable stakeholders to gather data and insights on the feasibility, effectiveness, and costs of different decarbonization measures. This information can then be used to inform decision-making at a larger scale, facilitating the replication and scaling up of successful interventions across the County, in other regions or other sectors.

Local Authorities are considered key drivers to advance the implementation of national climate policy at local level. They have a deep understanding of their local context, including the specific climate challenges and opportunities in their area. They can tailor national climate policies to suit local needs and priorities, ensuring effective implementation.

Despite not having direct authority over all sectors, Local Authorities can still have a significant impact on emission reductions through working with key stakeholders to influence, coordinate, facilitate and advocate for change.

Working as one community, in partnership, and sharing our knowledge, skills, and experiences to deliver effective climate action.

5.3 Decarbonising Zone Selection

Decarbonising Zones vary in terms of their nature, size, shape, geographical location, as well as natural and built characteristics. Annex D notes the stages involved in developing the framework for Decarbonising Zones is informed by the place-based and systems-thinking approach to generate locally tailored policy and assist in the delivery of effective climate action. The key characteristics being continuous learning and improvement over time, with engagement and collaboration with stakeholders crucial. This approach informs the five key stages outlined in Figure 5.2.



Figure 5.2 Five key stages to the development of the DZ

In 2021 Carlow County Council engaged RPS Consulting Ltd to prepare a [proposal for a decarbonisation zone for the County](#) taking guidance from the criteria set out in Circular Letter LGSM01-2021 issued by the DHLGH in February 2021. Carlow County Council put a countywide call out to invite communities to give their views on the selection of a pilot area in County Carlow for a Decarbonisation Zone in March 2021 and all submissions were examined as part of the proposal document. Carlow Town was selected through this process as the Decarbonising Zone for County Carlow.

The Carlow Decarbonising Zone falls within the overarching criteria set out which required the Decarbonising Zone to be either:

- (i) Urban areas and agglomerations with a population not less than 5,000 persons,
- (ii) Rural areas with an area of not less than 4km²,
- (iii) Other location/areas that can demonstrate decarbonisation at a replicable scale.

Other considerations also come into play in the identification of Carlow Town as the Decarbonising Zone. These considerations were grounded in the potential value or opportunities that may be realised to deliver on the objectives of the Decarbonising Zone.

These considerations as outlined in Annex D of the Guidelines include:

Transport: Existing and planned levels of accessibility and infrastructure looking at the potential for increased use of public transport, promotion of mobility hubs, reduction in car dependency, promotion of active travel through existing and proposed greenways, blueways and greyways within and between settlement areas to support modal shift.



Figure 5.3 New Cycle Lane in Carlow Town DZ

Buildings: The potential for emission reduction and energy efficiency of the residential sector, public sector, and commercial buildings in line with specific targets set. Consideration of settlement patterns, density, and location to support the more energy efficient use of land, infrastructure in areas of energy, transport, water etc.

Green spaces and green infrastructure: The potential for carbon sequestration, reduction in urban heat islands effects and managed enhancement of biodiversity.



Figure 5.4 Carlow Town Park & the River Barrow.

Complimentary infrastructure: The potential for existing or planned infrastructure to facilitate emissions reduction through renewable electricity generation and transmission, electric vehicle charging, anaerobic digester etc.

Land and environmental value: Consideration of important environmental designations, future development potential or legacy issues.

Air quality: The air quality status and the potential for enhanced air quality through the implementation of a range of climate action measures.

Waste management: Considerations of the opportunities that exist for promoting more efficient waste management, the circular economy and green procurement.

Co-benefits: The potential for opportunities arising from adaptation, mitigation, and biodiversity measures, in particular carbon sequestration including re-wetting and restoring peatlands, re-use of managed landfills, the enhancement of carbon sinks, improved air quality, afforestation and tree planting measures, improved health, lower noise levels.

Planning policy supports: Potential for the further integration of climate action policy and spatial planning across the policy areas of land use and transportation policy, energy efficiency, renewable energy sources and infrastructure, district heating, energy storage, natural environment policies, flood risk management and 'smart towns/cities' initiatives etc.

Community activation and readiness: Considerations of the existing and potential capacity, activation and readiness of stakeholders and communities to contribute and participate.

5.4 Carlow Town DZ

The spatial area of the Decarbonising Zone comprises of the District Electoral Division's (DED's) of Carlow Rural, Carlow urban and Graiguecullen Urban. Census 2022 shows the population of Carlow Town has reached 27,351 which represents circa just over 44% of the County Population. The spatial area consists of a mix of residential, commercial, and industrial settlements and encompasses two significant water bodies.

The River Barrow is the second longest river in Ireland, at 192km and designated Special Area of Conservation (SAC). It is of significant historical and environmental importance to Carlow Town.

The Burren River goes under the N80 again at Ballinacarrig Bridge. It flows southeast to northwest through Carlow Town and passes under the railway line, R448 and R417 (Burrin Street) and then drains into the River Barrow.



Figure 5.5 River Barrow as it runs through Carlow Town DZ

5.5 Carlow Town Decarbonising Zone Baseline Emissions Inventory

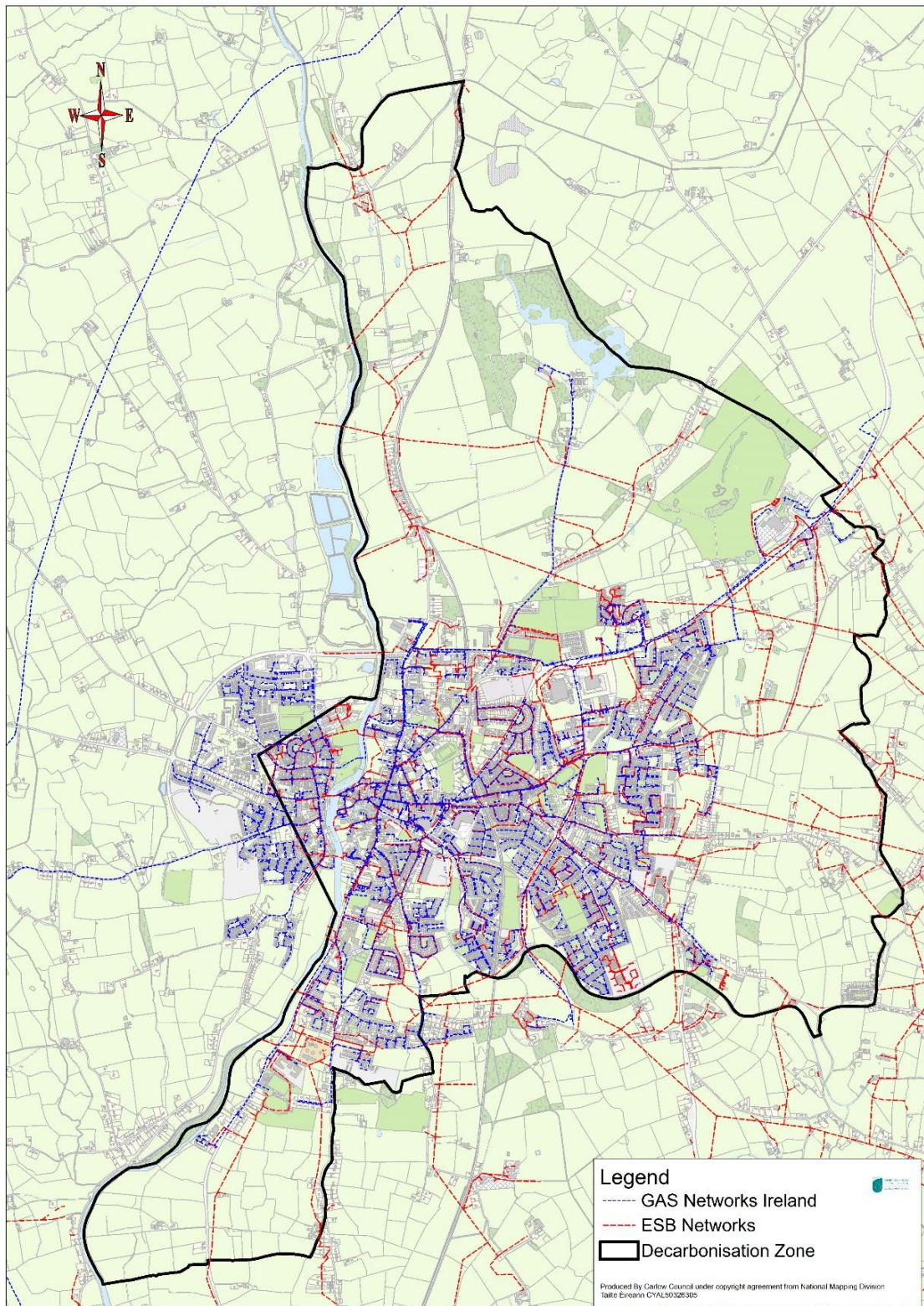


Figure 5.6 Map of Carlow Town Decarbonisation Zone

Carlow County Council engaged South East Energy Agency to carry out a Tier 3 Baseline Emissions Inventory (BEI) of GHG emissions for the baseline year 2018 for the Carlow Town Decarbonising Zone in accordance with the requirements of the Climate Action Planning Guidelines and in particular Annex D: Decarbonisation Zones. [Tier 3 Baseline Emissions Inventory for Carlow Decarbonising Zone](#)

The Tier 3 baseline emissions inventory is the bottom-up and spatially led approach for data analysis, which takes local-scale datasets to look at the Carlow Town Decarbonising Zones GHG emissions across various sectors which include:

- Carlow County Council
- Commercial & Industrial Processes
- Residential
- Social Housing
- Transport
- Agriculture
- Waste facilities and Water/Wastewater

The total baseline GHG emission for Carlow Town Decarbonisation Zone in 2018 was 108,122.86 tCO₂eq, with the Transport Sector accounting for the greatest percentage of total emission at 41.5%. Other significant emission sectors included, Residential (30.3%) and Commercial (22.8%).

5.5.1 Carlow County Council Emissions within the Decarbonising Zone

Total energy consumption by Carlow County Council within the Decarbonisation Zone use in the year 2018 was 4,420 MWh. (Please note that in estimating the council emissions within the Decarbonising Zone data is collated and provided for the year 2018 specifically and is not calculated in the same manner as the County Local Authority Baseline whereby the 2018 Baseline is calculated as an average of 2016-2018.)

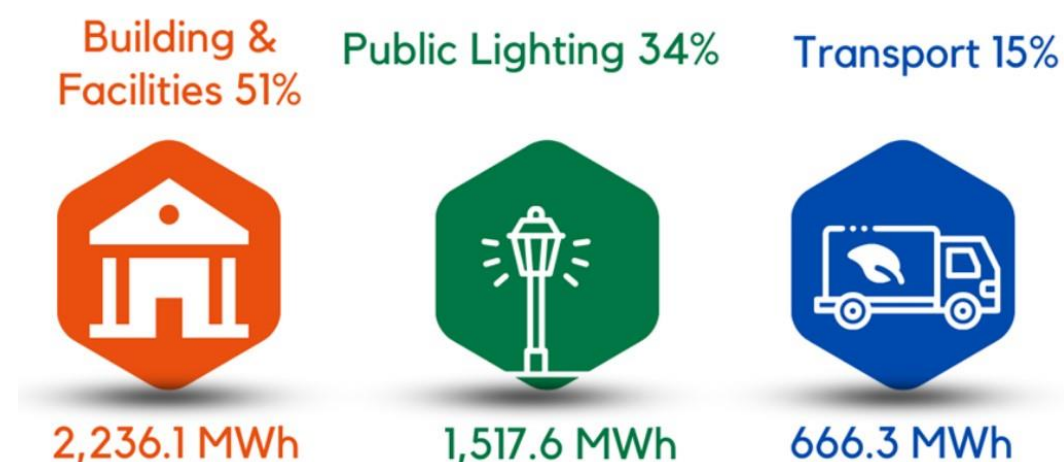


Figure 5. 7 Carlow County Council Energy Use for the Year 2018.

When energy use was converted into GHG emissions, Carlow County Council within the Decarbonisation Zone's total emissions amounted to 1,320 tCO₂eq for 2018.

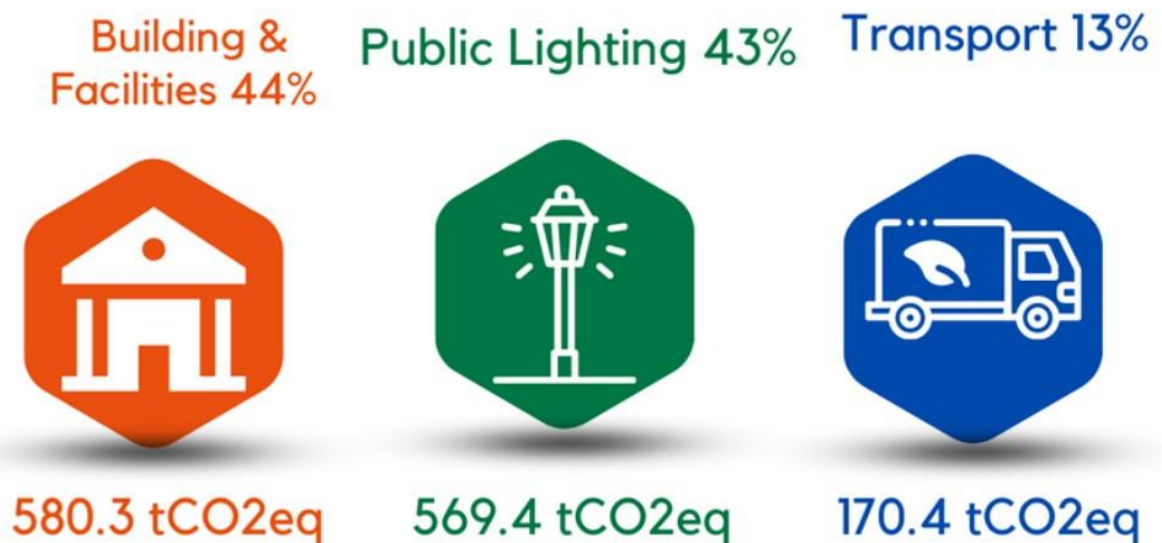


Figure 5. 8 Carlow County Council GHG Emissions for the Year 2018.

5.5.2 Transport

The Tier 3 Baseline Emissions Inventory (BEI) found that total transport emissions for the Decarbonising Zone were 44847.9 tCO₂eq with a total energy consumption of 170,612.1 MWh.

Fuel Type was further broken down as follows:

- 70.3% diesel
- 27.7% petrol
- 0.9% other (CNG and Electricity)
- 1.1% was non direct energy related emissions (CH₄ & N₂O)

There is a high dependency on private cars, it is estimated that of the 13,939 mechanically propelled vehicles within the Decarbonising Zone area, 10,272 are private cars. It was interesting to note that public transport vehicles only contribute 1.6% of the GHG emissions within the Decarbonising Zone.

5.5.3 Commercial & Industrial

For the purpose of establishing a baseline for the Decarbonising Zone properties within the Decarbonising Zone area, Commercial and industrial activities were grouped as outlined below.

- Industrial Uses
- Office
- Retail (Warehouse))
- Hospitality
- Health
- Fuel/Depot
- Retail (Shops)
- Leisure
- Minerals
- Miscellaneous

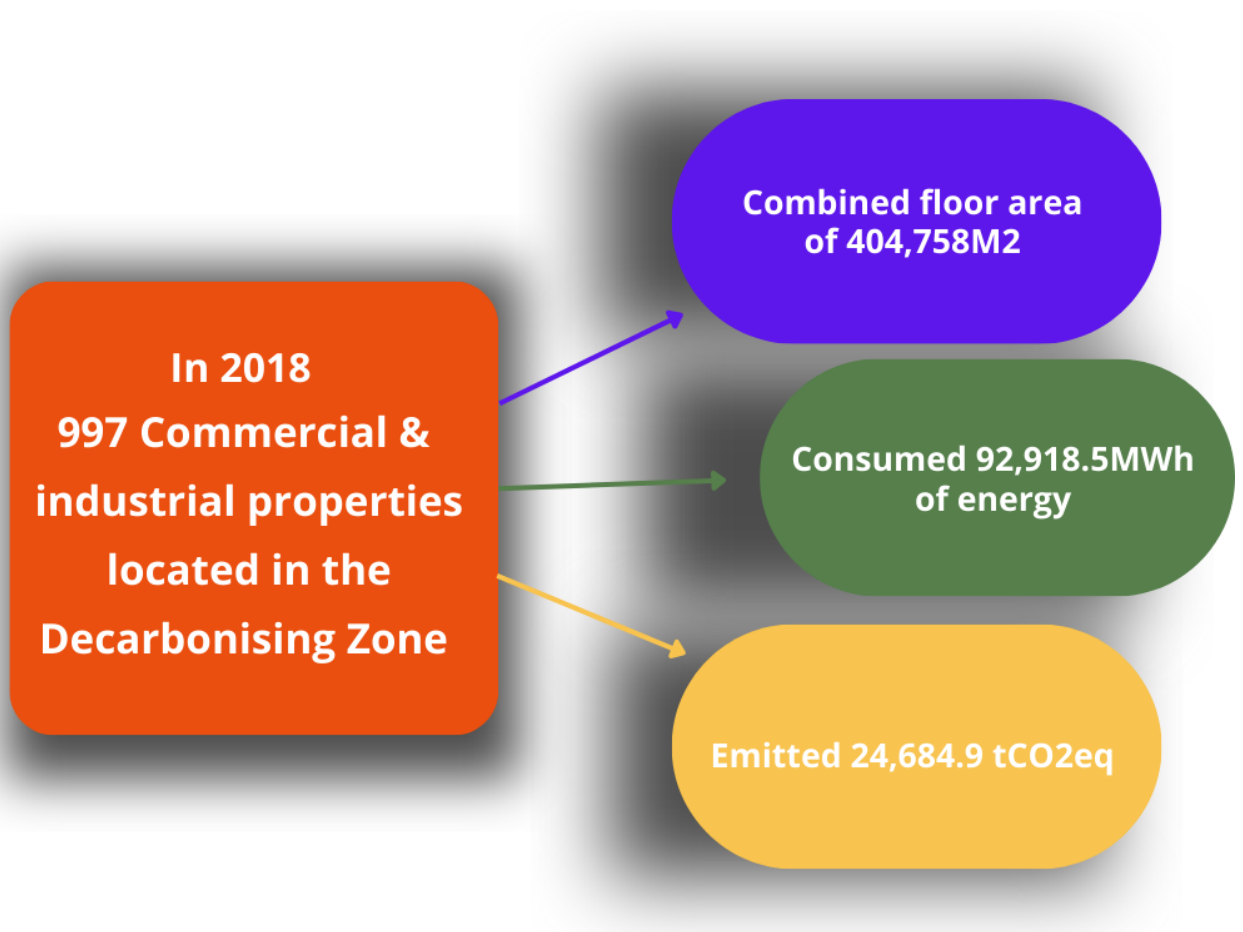


Figure 5.9 Commercial & Industrial Energy Use and GHG Emissions in 2018 in the Decarbonising Zone

5.5.4 Residential

Carlow County Council's social housing stock is not included in the following figures and is outlined separately under the heading of Social Housing.

The Census 2016 data shows that there are 7,823 residential properties in Carlow Town Decarbonising Zone (excluding social Housing units), these can be divided into various house types as shown in Figure 5.10

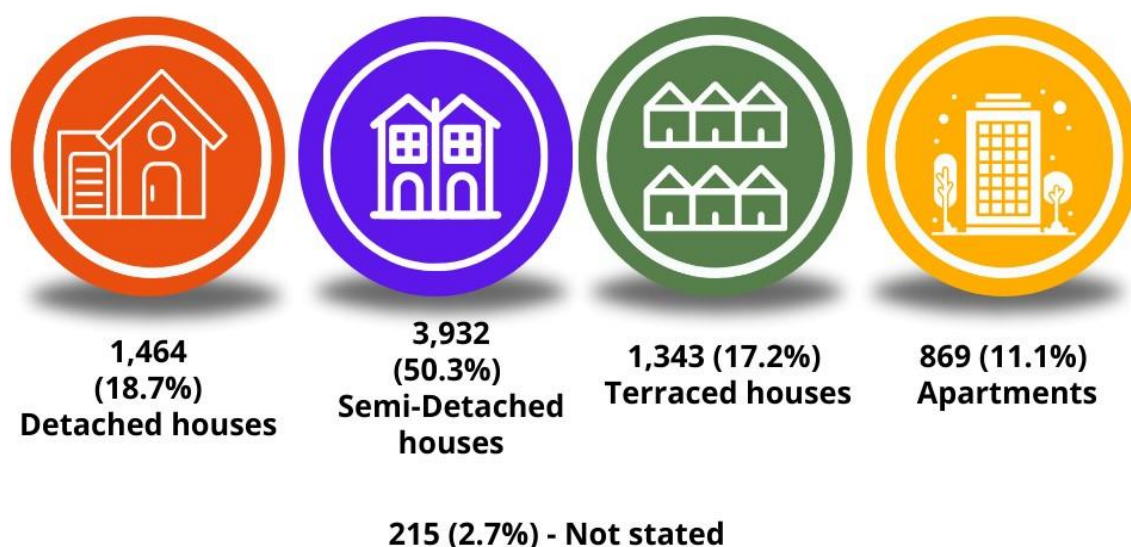


Figure 5.10 Breakdown of Housing types and their GHG Emissions in the Decarbonising Zone for 2018 (excluding social housing stock)

Total energy consumed by this sector in 2018 was 123,504.7 MWh with only 0.1% generated from Renewables.

When energy use was converted into GHG emissions, the residential sectors total emissions within the Decarbonisation Zone's amounted to 32,727.4 tCO₂eq with the largest percentage at 38.9% coming from natural Gas.

5.5.5 Social Housing

There are a total of 983 Carlow County Council social homes located in the Decarbonising Zone

Social Housing is located within the following townlands in the Decarbonising Zone to include:

- Graigue Urban DED townlands: Graigue
- Carlow Urban DED townlands: Carlow, Strawhall, Rathnapish, Pollerton Big, Kernanstown, Chaplestown, Monacurragh, Mortarstown Upper

- Carlow Rural DED townlands: Mortarstown Lower, Bestfield or Dunganstown, Mortarstown Upper, Strawhall, Newacre, Newgarden, Aghanure, OakPark, Pollerton Little, Pollerton Big, Rathnapish, Kernanstown, Chapelstown, Carlow

Home types include the following:

- Apartments
- Bungalow
- Two Storey

Homes provided are both detached and semi detached and range from 1 bed to 5 bed units. There are several specially adapted homes located in the decarbonising Zone.

5.5.6 Agriculture

The Decarbonising Zone includes a significant portion of agricultural lands as well as the Teagasc Headquarters which are based at Oak Park. Total GHG emissions from Agriculture within the Decarbonising Zone area was 3,981.3 tCO₂eq. Total energy consumption by the Agricultural Sector within the Decarbonisation Zone use in 2018 was 476.6 MWh. 58.8% of energy used was used for farming land (tillage) 41.2% of which was associated with livestock.

5.5.7 Waste Facilities and Water/Wastewater

There are 2 significant waste management facilities located within the Decarbonising Zone area:

- Ray Whelan Waste management
- Kernanstown Civic Amenity Centre.

The Waste & Wastewater sectors non-energy related GHG emissions within the Decarbonisation Zone was 561.3 tCO₂eq.

A number of water and wastewater treatment plants and facilities service Carlow Town Decarbonising Zone while not physically located within the geographical boundary of the Decarbonising Zone.



Figure 5.11 Kernanstown Civic Amenity Centre.

5.5.8 Summary of Carbon emissions by Sector in Carlow Town Decarbonising Zone

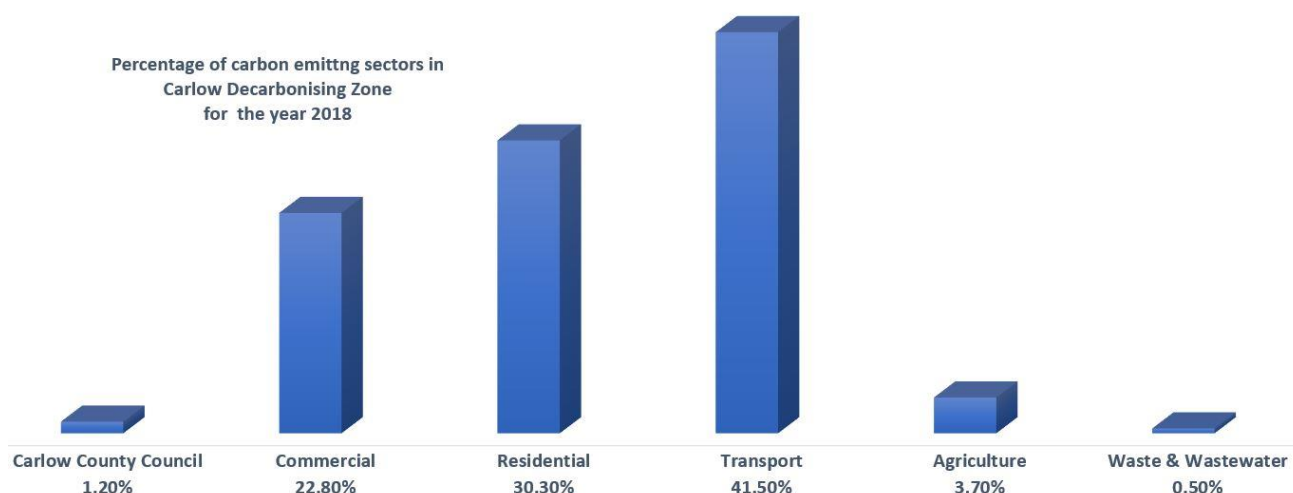


Figure 5.12 Summary of Carbon Emissions by Sector in the Decarbonising Zone for 2018

5.6 Register of Opportunities

A particular feature of the Decarbonising Zone is the portfolio and pipeline of interventions, projects and actions curated specifically through responses that include mitigation, adaptation, and biodiversity, to deliver the targets set for energy and emission reductions. This portfolio known as the Register of Opportunities is used to assist in determining strategic priority areas and actions to be commenced or delivered over the lifetime of the Plan.

Carlow Town Decarbonising Zone contains a wide and diverse register of opportunities for collaboration to facilitate reduction of CO₂ emissions as identified in the RPS Consulting Ltd Decarbonising Zone report.

Projects identified for the Decarbonising Zone under action DZ1.2 will address leverage points and prioritise primary focus areas for decarbonisation and adaptation based on:

- Projects that align with the emission reduction targets of sectors identified in the National Climate Action Plan.
- Plans, projects and initiatives planned or ongoing within the area.
- Community initiatives like SECs, RECs etc.

Sector	2018 BEI (tCo2E)	Sectoral Reduction Targets 2030 (% 2018 BEI)	Sectoral reduction required to 2030 (tCo2E)
Residential	30,184.1	40%	12,073.64
Commercial	24,964	45%	9,985.6
Public Sector	1,320.00	51%	528
Transport	44,847.9	50%	17,939.16
Agriculture	3,981.3	25%	1,592.52
Land Use, Land Change & Forestry		No National target set	
Waste & Wastewater	561.3	50%	224.52
Total (tCo2 E)	105,858.6		42,343.44

Figure 5.13 Summary of Sectoral Target Emissions Reductions Target for Decarbonising Zone as set out in the National Sectoral Emissions ceilings published July 2022.

5.6.1 Carlow County Council

Carlow County Council are embarking on an ambitious retrofitting programme to reduce GHG which includes but is not exclusive to:

- Retrofitting of public buildings to increase energy efficiency.
- Retrofitting of the 1,674 public lights contained within the Decarbonising Zone.
- Decarbonising of Fleet in line with measures outlined in Climate Action Plan 2023 (CAP23)



Figure 5.14 Carlow Public Lighting Efficiency Project

5.6.2 Transport

Carlow-Town has good access and transport infrastructure that includes road network connectivity to Dublin and Waterford via the M9, and to the Midlands and South-East via the N80. These main road routes are supplemented by a network of regional roads further linking Carlow Town to surrounding towns, villages, and rural areas.

The urban area is situated on the Dublin-Waterford railway line, with Carlow Railway Station located c. 1km from the town centre. Additional services on this line were added in 2023.



Figure 5.15 Carlow Train Station

JJ Kavanagh bus service operate on the Dublin-Waterford route, with 13 daily services from SETU Carlow and Carlow Coach Park to Dublin Airport. Bus Eireann – Expressway routes 4 and 4X link Carlow-Graigucullen with Dublin Airport as well. There are also other services to regional destinations such as Wexford, Portlaoise, Tullamore, Athlone.



On 27th July 2023, Carlow Town Bus service was launched in the DZ. As part of the NTA's programme of introducing more town bus services and in partnership with Carlow County Council, two cross-town routes (CW1 and CW2) operate 18 hours per day, 7 days a week from 6am to midnight.

Figure 5.16 Carlow Town Bus & Carlow Town Bus routes



Fully accessible busses are used to operate the following routes:

- CW1: Tyndall/CIFET to MSD Carlow via town centre
- CW2: Barrow Valley Retail Park to Wexford Road Business Park via town centre



The Local Link service offers an affordable and convenient transport primarily for rural dwellers of county Carlow that connect the urban area with towns and villages in its hinterland.

Many of their services are demand responsive and door-to-door.

An additional service was added in 2022 between Carlow, Tullow and Arklow, and a new route servicing Carlow to New Ross in 2023.

In September 2023, Carlow County Council partnered with BOLT ITX Ltd to offer an E Bike Share Pilot Scheme in Carlow Town. The scheme will see the roll out of 50 geotagged e Bikes in 40 locations throughout the Decarbonising Zone.



Figure 5.17 Carlow County Council shared mobility E Bike scheme

Carlow County Council continue to provide opportunities for the use of alternative more sustainable modes of transport and a reduction on car dependency as highlighted in the RPS Consulting Ltd report.

The Active Travel department of Carlow County Council have rolled out several transformative programmes in the Decarbonising Zone which include:

- River Burren Walking & Cycle Track - Phase 2
- Hanover to Tyndall Pedestrian and Cycle Scheme - Phase 2
- Staplestown Rd/Pollerton Rd Permeability Link, Carlow
- River Barrow Walk Permeability Link, Carlow
- Light Segregation Cycle Schemes
- Low-Cost Permeability Measures



Figure 5.18 River Barrow Walk Permeability Link, Carlow

5.6.3 Social Housing

A pilot in St Mary's Court, namely H4.0E, comprising of 2 semi-detached, 2-bedroom, bungalow housing with 4 units in Carlow were developed in partnership with South East Energy Agency as part of the pilot Interreg Northwest Europe Housing 4.0 Energy project.

The goal of the scheme was to offer people access to new affordable near-zero energy/low carbon homes (NZEHS) and zero-energy/low carbon homes (ZEHS), effectively aiming to reduce home building costs by 25% and carbon emissions by 60%.

These are Nearly Zero Energy Building (NZEB) buildings with different pre-BER energy ratings (the objective BER rating of the finished build) and have about a 30 – 60% reduction in embodied carbon compared to a standard (standard concrete brick) build. Every unit was also equipped with 2kPV and run with heat pumps.

The H4.0E Pilot in St Mary's Court, Carlow, has been named as a finalist in the Irish Construction Excellence 2023 awards for Residential: Social & Affordable Housing Up to €5m.



Figure 5.19 H4.0E Pilot in St Mary's Court, Carlow Town

5.6.4 Water & Wastewater

Carlow Town Decarbonising Zone is served by water coming from the Carlow North Regional Supply in Rathvilly, Sion Cross Water Treatment Plant in Carlow, Brownhill Reservoir, and the well field at Oak Park. This provides Carlow with resilience in security of supply for drinking water for residents and businesses in Carlow Town DZ. Uisce Eireann, the sanitary authority, is currently progressing several upgrades and improvements to these facilities which will secure Carlow water demands into the future by increasing the efficiency and production at plants. Upgrades which include water mains rehabilitation in Carlow Town will help secure Carlow's impressive low unaccounted water rates ensuring continued and improved leak reduction. These improvements in leak reduction coupled more efficient and climate friendly water production will benefit the Carlow Town Decarbonising Zone.

Equally the high standards coupled with proposed improvement works at Mortarstown Wastewater Treatment Plant serving Carlow Town will also secure and safeguard our environment and water quality in the receiving waters of the River Barrow.

5.6.5 Commercial and Industrial

Carlow's Core Economic Area (30-minute drivetime from Carlow Town) had a population of just under 109,000 in 2016. Both the Core Economic Area and the Functional Area (45-minute drivetime from Carlow Town) are experiencing high levels of population growth.

Carlow provides a base for the development of ambitious companies who want to be world class in their fields of expertise. The county is home to leaders in Technology and Innovation, Engineering, Pharmaceutical, internationally traded services, and Retail Enterprises.

5.6.6 Education

Carlow-Town is well served by educational facilities at primary, post-primary, and 3rd levels. There are a total of 10 primary schools and 6 secondary schools serving the urban area.

Further education and training beyond secondary level is also available in the Carlow Institute of Further Education. The Institute is a constituent of the Kilkenny and Carlow Educational and Training Board (ETB) and is the largest provider of further education and training courses in the region.

Carlow Town Decarbonising Zone also benefits from having the Southeast Technological University and Carlow College. Carlow College, St Patrick's, is Ireland's second oldest university-level institution founded in 1782. The College has a long history as a college of teaching and research in the Humanities providing relevant and practical third level courses ranging from humanities to psychology, social care work, community/advocacy and many more. There are approximately 2,000 students including undergraduate and post graduate students.



Figure 5.20 Carlow College and SETU Carlow

Southeast Technological University (SETU) was established on 1 May 2022 following a joined application between Carlow IT and Waterford IT for the formation of the technological university. Located on the Kilkenny Road in Carlow Town, it has a multi-campus structure with a state-of-the-art sports facility located at Mortarstown Carlow. Student numbers and staff equate to a campus population of approximately 10,000 in Carlow Town DZ.

5.6.7 Local policies and plans

Town Centre First – A Policy Approach for Irish Towns’ (2022), is the Government’s recent overarching strategy for the renewal and regeneration of Irish Towns. The strategy includes new policy aimed at tackling vacancy, combating dereliction, and breathing new life into town centres. It also includes 33 actions which are intended to give towns the tools and resources they need to become more viable and attractive places in which to live, work, visit and run a business. Carlow Town is a key focus for urban regeneration in the county. *“Project Carlow 2040: A Vision for Regeneration”* sets out a strategy for delivering regeneration in Carlow Town. The strategy seeks to reinforce the critical role of the town centre as the heart of Carlow Town, providing attractive and accessible public spaces with new pedestrian linkages. A thriving, vibrant and sustainable town centre will establish the town as a destination not just for shopping but also for tourists attracted to the unique architectural, cultural and heritage attributes of Carlow’s townscape. This vision supports increased town centre living and increased building occupancy, which will in turn improve the wellbeing of the local economy and community life. Key interventions are proposed that will reintegrate the River Barrow into the public realm through the development of pedestrian walkways and the development of key opportunity sites along the river.



Figure 5.21 Project Carlow 2040: Barrack Track/Civic Spine

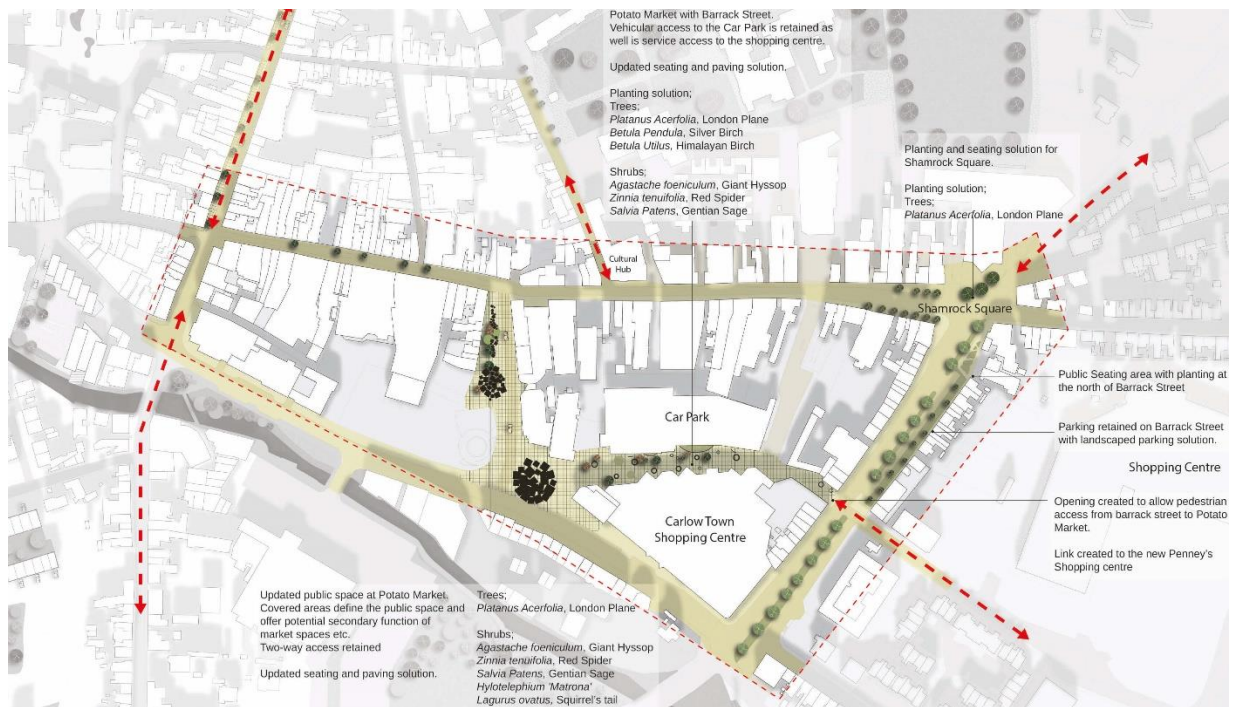


Figure 5.22 Project Carlow 2040: Improved Carlow Town Centre circulation through Barrack Street and Market Square Link

To date, a total of €17million has been awarded under the Urban Regeneration and Development Fund (URDF) for key project identified in Project Carlow 2040. When combined with Carlow County Council’s match funding this will see an overall regeneration investment of over €22million into Carlow Town over the coming years.

In collaboration with the community, Carlow County Council and Laois County Council have commenced a review of the *Joint Spatial Plan for the Carlow Graiguecullen Greater Urban Area*. The new Joint Urban Area Local Area Plan (JULAP) will set out a land use strategy for the proper planning and sustainable development of the area.

5.7 Decarbonising Zone Vision:

Carlow Town will be recognized as the leading provider of innovative, intelligent, and sustainable climate solutions in the fields of technology, engineering, construction, and biodiversity, driving positive climate action.

5.8 Decarbonising Zone objective

To develop Carlow Town as one community, working in partnership, sharing our knowledge, skills, and experiences to deliver effective climate action.

Decarbonising Zone							
Action No.	Action	Adaptation/Mitigation	Tracking Measure/ KPI	Lead	Partners	Timeframe	DECCA Goals
DZ1.1	Establish a Decarbonising Zone working group comprising of representation from Public Bodies/ Government Agencies, Business, Utility/ Infrastructure providers, Transport providers, Education Facilities, Private Sector.	Adaptation & Mitigation	Working group established	Climate Office	Management Team	Q 1. 2024	4,5,6
DZ1.2	Prepare a register of opportunities outlining projects that will aid carbon reduction in the Decarbonising Zone, ensuring integrated environmental protection requirements are appropriately considered.	Mitigation	Register completed	Climate Office		2024-2029	2,3,4,5,6
DZ1.3	Carry out a geothermal feasibility study in Carlow Town to determine the technical, financial, planning and environmental viability of a geothermal energy project, ensuring the study has appropriate regard to planning and environmental protection considerations.	Mitigation	Study completed	Climate Office	SETU/ CMD & private Sector	2024-2029	2,3,5
DZ1.4	Provide a central location, Mobility Hub, which facilitates linkages between various low carbon transport options from Carlow Town centre; having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, local air quality, and cultural heritage.	Adaptation & Mitigation	Project completed	CMD	Environment / Active Travel	2024-2029	2,3,4,5,6
DZ1.5	Reduce private car dependency through the expansion of sustainable shared mobility infrastructures and schemes for Carlow Town; having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, local air quality, and cultural heritage.	Mitigation	ebike scheme	CMD	Climate / Active Travel	2024	2,4,6
DZ1.6	Provide improved pedestrian and cycle links to Carlow Bus Park and Carlow Train Station; having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, local air quality, and cultural heritage.	Mitigation	Number of scheme introduced	Active Travel	CMD/ Climate	2024-2029	2,4,6
DZ1.7	Increase spacial awareness of town centre through the development of a town map highlighting journey times using various modes of transport to include walking, cycling, bus, car and others.	Mitigation	Produce Map	CMD	Climate / Active Travel	2024	2,4,6
DZ1.8	Implement and monitor a pilot anti-idling campaign to enable improvement in air quality	Adaptation & Mitigation	Campaign delivered	Environment Department	Climate / Active Travel/ CMD	2024 - 2025	2,4,6
DZ1.9	Develop and execute pilot rain water harvesting scheme on Local Authority owned buildings	Mitigation	Pilot executed	Environment Department	CMD	2024-2029	2,3,4
DZ1.10	Promote the awareness and understanding of the UN Sustainable Development Goals through thematic designs in public realm projects, e.g. roundabouts scheme.	Adaptation & Mitigation	Number of projects	CMD	Environment Dept/ Climate Dept	2024-2029	3,4
DZ1.11	Advance Urban Regeneration and Development Fund (URDF) projects to achieve the Carlow 2040 plan; having due regard to environmental sensitivities, 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.	Adaptation & Mitigation	Number of projects	Capital Project Office	DECC/Management Team/Elected Members	2024-2029	2,3,4,5,6

6 IMPLEMENTATION AND REPORTING

6.1 Planning for implementation

This Carlow Local Authority Climate Action Plan will be implemented by Carlow County Council. Whilst the Plan requires a whole-of-Council approach, the ownership of the Plan is held by the Elected Members and Executive of Carlow County Council. The Climate Action Office will lead the implementation of the Climate Action Plan.

A Climate Action Team was established in Carlow County Council in 2019. This team is led by the Climate Action Office which includes a Climate Action Coordinator, Climate Action Officer, and Community Climate Action Officer. The role of this team is to mainstream climate action into the activities Carlow County Council, monitor the implementation of the actions of the Carlow Local Authority Climate Action Plan and to coordinate the reporting and evaluation of the Plan, following its approval by the Elected Members. The core Climate Action Team is supported by the wider climate action teams/subgroups/subcommittees across the organisation, that have ownership of actions in the Plan. The core Climate Action Team will also be the point of contact for the public to learn about climate action in the County.

Carlow 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 – the neighbouring local authorities of Laois, Kilkenny, Wexford, Wicklow and Kildare, the Eastern & Midlands Climate Action Regional Office, South East Energy Agency, the Local Authority Services National Training Group, Eastern and Midlands Regional Assembly, Local Government Management Agency, City and County Management Agency, Public Participation Network, 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 Climate Action Regional Office whereby they can collaborate closely on the implementation of the Climate Action Plans.

An Implementation Plan will be developed for the delivery of the actions of the Plan. Carlow County Council will align the timing of internal implementation reporting intervals with that of sectoral progress reporting requirements. The success of the implementation of the Local Authority Climate Action Plan is subject to the sourcing and allocation of resources, including financial resources and the ongoing support of our Elected Members, who will be asked to adopt the final plan in January 2024.

6.2 Funding and Partnerships

To lead by example and drive the transition to a climate neutral society, Carlow County Council will need access to adequate funding for climate action projects towards achieving its 2030 and 2050 targets. Local authorities can 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. Carlow 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 Carlow County Council in partnering with the Third Level Education sector. The Third Level Education sector can provide research and development expertise to help Carlow County Council and implement innovative solutions to reduce greenhouse gas emissions and adapt to climate change. These partnerships can also help local authorities access funding opportunities for climate action projects and initiatives. Carlow 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

Performance by Carlow 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 Authority of Ireland (SEAI).

For actions outside of this, one of the reporting avenues that Carlow 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 County and City Management Association (CCMA) published strategy on behalf of local government entitled *Delivering Effective Climate Action 2030*^[1] (DECA 2021).

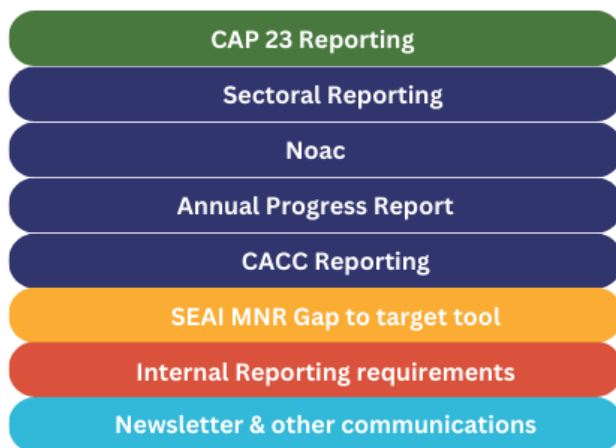
A key consideration for the local government sector on this strengthened role on climate action is accountability, and in particular the ability to track, measure and report on progress in delivering effective climate action at both local authority and sectoral levels. In this regard, KPIs will continue to play a significant role.

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 the area of climate action;
- Energy efficiency;
- Emission reductions;
- Active travel measures; and
- Severe weather response.

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

[1] [1] Published 14th April 2021: County and City Management Association [CCMA] (2021): Delivering Effective Climate Action 2030: Local authority sector strategy for delivering on the Climate Action Charter and Climate Action Plan. Dublin: Local Government Management Agency [LGMA]. Available online at: [delivering-effective-climate-action-2030.pdf](https://www.lgma.ie/publications/delivering-effective-climate-action-2030.pdf) (lgma.ie)



Carlow County Council has developed a number of its own specific key performance indicators in the delivery of its climate actions to allow for ease of measurement, monitoring and reporting on continual progress in achieving the targets set during the lifetime of this Carlow Local Authority Climate Action Plan.

Figure 6.1 Reporting Requirements Hierarchy

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. The local authority will also facilitate reporting to elected members on a quarterly basis through the SPC and full Council.

6.4.2 Monitoring and Reporting System (M&R)

Carlow County Council will continue to report on their energy performance and emission targets annually to the SEAI.

6.4.3 Sectoral Performance

Carlow County Council will report annually on their performance on climate action by way of KPIs (as outlined in Section 6.3) to inform the performance of the local government sector on climate action, as part of the local government DECA 2030 Strategy.

6.4.4 National Climate Action Plan

Carlow County Council will in accordance with part 3(w) of the Local Authority Climate Action Charter, report annually to the Department of the Environment, Climate and Environment on 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 Covenant of Mayors

Carlow County Council is a signatory to the Covenant of Mayors for Climate and Energy and as such commits to the completion and monitoring of a Sustainable Energy and Climate Action Plan (SECAP).

6.4.6 Sustainable Development Goals

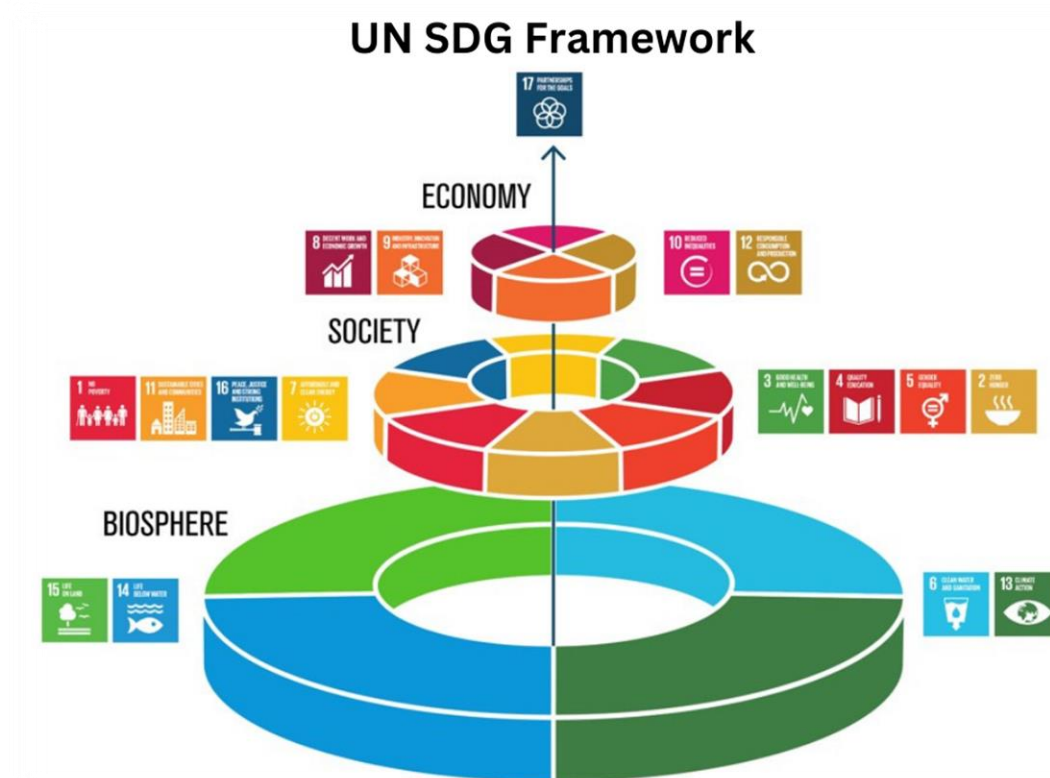


Figure 6.2 United Nations Sustainable Development Goals

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:

- i. Showcasing, sharing, and building on existing initiatives
- ii. Capacity building and awareness raising
- iii. Embedding the SDGs in Governance and reporting frameworks
- iv. Incorporating the SDGs within local planning frameworks
- v. Community Engagement

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

Carlow County Council were appointed as the first Local Authority SGD Champion in 2019 and currently hold the role of SDG Ambassador.

The role of SDG Ambassador includes:

- Advocate and promoter of the SDGs and sustainable development
- Acts as a good practice example of how an organisation or group can contribute to the SDGs and integrate the SDGs into their work or activities.
- Shares learnings with others.

Carlow County Council continues to work to advance the SDGs, including through:

- the incorporation of the SDGs into their Corporate and City/County Development Plans,
- joining/establishing local and/or international partnerships,
- the provision of training,
- the holding information events with external groups including universities, PPNs, Tidy Towns and Creative Ireland.