

STRATEGIC ENVIRONMENTAL ASSESSMENT NON-
TECHNICAL SUMMARY OF ENVIRONMENTAL REPORT
FOR THE COUNTY DONEGAL CLIMATE ACTION PLAN
2024 -2029

PREPARED FOR DONEGAL COUNTY COUNCIL UNDER SI
435 OF 2004 AS AMENDED

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1 Non Technical Summary

An Environmental Report has been prepared as part of the Strategic Environmental Assessment of the County Donegal Climate Action Plan 2024-2029. This is the Non-Technical Summary of this report.

1.1 Background

Through the Climate Action and Low Carbon Development (Amendment) Act 2021, Ireland is now on a legally binding path to net-Zero emissions no later than 2050, and to a 51% reduction in emissions by the end of this decade. The Act provides the framework for Ireland to meet its international and EU climate commitments and to become a leader in addressing climate change. As required by the 2021 Act, Donegal County Council is preparing their first Local Authority Climate Action Plan (LA-CAP) which must be adopted by the Elected Members before 23rd February 2024. This will continue the work undertaken over the first Climate Change Action Plan 2019-2024 which was non statutory.

1.2 Outline of the CAP

The plan will cover all of the functional area of County Donegal. **Figure 1.1** shows the location of County Donegal, and the Atlantic Seaboard North Climate Action Regional office extent (CARO). The principal themes are identified and these are supported by actions. These themes include:

- Governance and Leadership
- Built environment
- Transport
- Natural Environment
- Community's resilience and
- Sustainability and resource management.

Donegal County Council will use its CAP in planning how it will reduce greenhouse gas emissions from across its own assets and infrastructure, whilst also taking on a broader role to influence, facilitate and co-ordinate the climate actions of communities and other stakeholders and what it will do to advocate for climate action in Donegal. In order to ensure that the CAP is centred around a strong understanding of the role and remit of Donegal County Council on climate action, the Plan is being developed through the following framework.

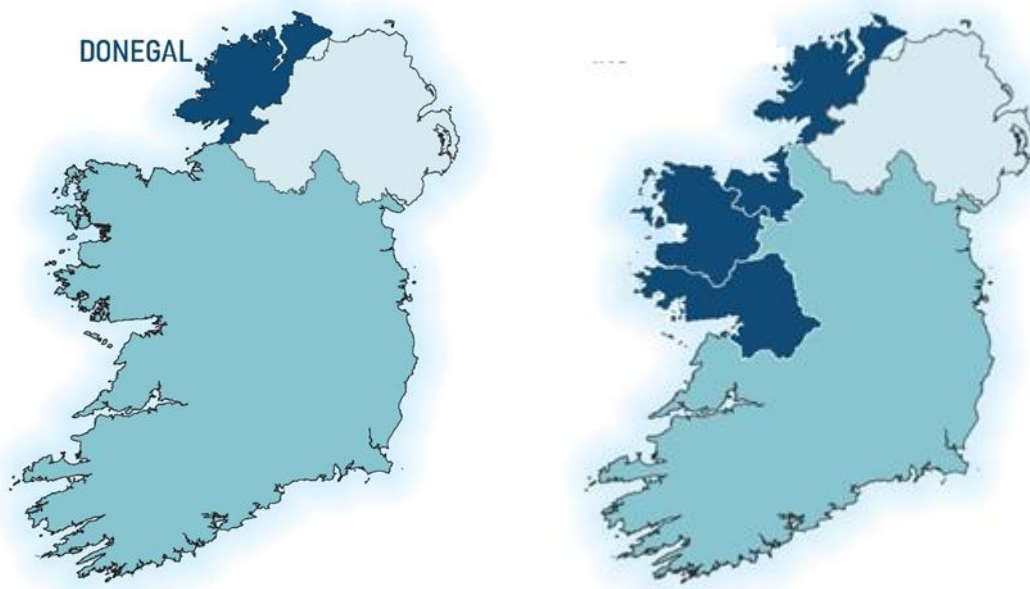
- Full accountable: Targeted actions for areas where Donegal County Council has full accountability for climate action within their own operations.
- Influence: Actions for where Donegal County Council can influence businesses, communities, and individuals in the delivery of local climate action through the functions and services they provide.
- Coordination: Actions for where Donegal County Council can coordinate and facilitate local and community action bringing together stakeholders in partnership to achieve climate action related projects.
- Advocate: Actions aligned to Donegal County Council role as advocate on climate action through raising awareness, communicating, informing, and engaging in open dialogue on the topic.

While the Climate Action Plan will be ambitious to reflect the leadership role of Donegal County Council on climate action, the Plan will not include actions whereby their implementation and achievement fall outside our role, remit, and governance.

The Plan will have to comply, as relevant, with various legislation, policies, plans and programmes (including requirements for lower-tier Appropriate Assessment, Environmental Impact Assessment,

Ecological Impact Assessment and requirements as appropriate) that form the statutory decision-making and consent granting. Actions arising from the plan will demonstrate compliance with the environmental protection measures in the Donegal County Development Plan 2022 -2028, and SEA Environmental Report and Natura Impact Report that accompanies same.

Figure 1-1 County Donegal and the CARO Atlantic Seaboard North



1.3 Steps in the SEA Process

The steps involved in SEA are as follows:

- Screening (determining whether or not SEA is required).
- Scoping (determining the range of environmental issues to be covered by the SEA).
- *The preparation of an Environmental Report (current stage)*
- The carrying out of consultations.
- The integration of environmental considerations into the Plan or Programme.
- The publication of information on the decision (SEA Statement).

1.4 Consultation on scoping stage

Submissions received at scoping stage have all informed the scope of this SEA.

1.5 Relationship to other plans and programmes

It is a requirement of the SEA to review and assess how the draft strategy may interact with other plans and programmes; this review was undertaken as part of the SEA and please see Chapter 3 of the SEA ER. Arising from the review, the following Table 1 highlights key implications from this review and how it relates to the UN sustainable development goals and the EPA State of Ireland's Environment (2020). The Strategic Environmental Objectives in the table below are used in the SEA process to assist in the assessment and identification of significant environmental effects.

TABLE 1-1 STRATEGIC ENVIRONMENTAL OBJECTIVES AND LINKS TO EPA STATE OF IRELAND’S ENVIRONMENT AND SUSTAINABLE DEVELOPMENT GOALS

Strategic Environmental Objectives in the Draft Donegal County Development Plan 2023 -2030	EPA Ireland’s Environment 2020	UN Sustainable Development Goals	
<p>Climate Change</p>	<ul style="list-style-type: none"> • Reduce Greenhouse Gas emissions in order to help mitigate climate change and meet our relevant International, European and National climate change obligations and targets including achieving the National Climate Objective. • Pursue development strategies which increase our ability to adapt to climate change and improve climate resilience • <i>Support the delivery of all national climate policy as appropriate to the county with the prioritisation and acceleration of evidence-based measures.</i> 	<p>SOE3 Health and Wellbeing SOE5 Air Quality SOE4 Climate SOE6 Nature SOE 8 Marine SOE9 Clean Energy SOE 11 Water Services SOE12 Circular Economy SOE13 Landuse</p>	<p>Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable. Goal 12: Ensure sustainable consumption and production patterns. Goal 13: Take urgent action to combat climate change and its impacts</p>
<p>Population and Human Health (PHH)</p>	<ul style="list-style-type: none"> • Provide a development and infrastructural framework which encourages economic prosperity/employment growth, adequate housing provision, balanced population growth and a socially inclusive society with lower socio-economic disadvantage. • Safeguard the Donegal’s citizens from environment-related pressures and risks to health and well-being including air, water and noise pollution, climate change and flooding. • Provide an environment increases the number of Donegal’s citizens who are healthy at all stages of life, and promotes an active and high quality lifestyle in Donegal. 	<p>SOE3 Health and Wellbeing SOE4 Climate SOE5 Air Quality SOE 11 Water Services SOE 12 Circular Economy SOE13 Landuse</p>	<p>Goal 3: Ensure healthy lives and promote well-being for all at all ages. Goal 6: Ensure availability and sustainable management of water and sanitation for all. Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all. Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation. Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable. Goal 12: Ensure sustainable consumption and production patterns. Goal 13: Take urgent action to combat climate change and its impacts. Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development</p>

Strategic Environmental Objectives in the Draft Donegal County Development Plan 2023 -2030	EPA Ireland's Environment 2020	UN Sustainable Development Goals	
Biodiversity , Flora and Fauna (BFF)	<ul style="list-style-type: none"> • Conserve, protect, maintain, and where appropriate restore biodiversity, flora and fauna, natural habitats, and associated ecosystems particularly International and EU designated sites and protected species. • Ensure no adverse effects on the integrity of any European site, with regard to its qualifying interests, associated conservation status, structure and function. • Conserve and protect Nature Conservation sites of National Importance including NHAs, pNHAs National Parks, Nature Reserves, Wildfowl Reserves and species protected under National Legislation (e.g. Wildlife Act) • Safeguard biodiversity features in both designated sites and the wider environment which function as stepping stones for migration, dispersal and genetic exchange of wild species. • Conserve and restore biodiversity in the wider countryside. • Limit the spread, dispersal and growth of invasive species. 	SOE 4 Climate SOE 5 Air Quality SOE 6 Nature SEO 8 Marine SOE 11 Water Services SEO 12 Circular Economy SOE 13 Land use	Goal 3: Ensure healthy lives and promote well-being for all at all ages. Goal 6: Ensure availability and sustainable management of water and sanitation for all. Goal 13: Take urgent action to combat climate change and its impacts. Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development. Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
Soil and Geology (SG)	<ul style="list-style-type: none"> • Protect soils against pollution, and prevent degradation of the soil resource and associated ecosystem services • Safeguard areas of prime agricultural land and designated geological sites 	SOE4 Climate SOE6 Nature SOE 11 Water Services SOE 12 Water Services SOE13 Landuse	Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable. Goal 12: Ensure sustainable consumption and production patterns. Goal 13: Take urgent action to combat climate change and its impacts. Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

Strategic Environmental Objectives in the Draft Donegal County Development Plan 2023 -2030		EPA Ireland's Environment 2020	UN Sustainable Development Goals
Water (W)	<ul style="list-style-type: none"> Protect, avoid deterioration of and, as appropriate, restore/enhance the quality of surface, ground and marine waters and their associated ecosystems including limiting the input of pollutants. Ensure the sustainable use and protection of water resources. Protect the coastal environment based on an ecosystem approach and taking ecological responsible coastal protection measures 	SOE3 Health and Wellbeing SOE5 Air Quality SOE4 Climate SOE6 Nature SOE 11 Water Services SOE13 Landuse	Goal 6: Ensure availability and sustainable management of water and sanitation for all. Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable. Goal 13: Take urgent action to combat climate change and its impacts. Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development. Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.
Air and Noise (AN)	<ul style="list-style-type: none"> Avoid, prevent and reduce air pollution and environmental noise in order to maintain and improve air quality and reduce harmful effects on human health and the environment. Achieve compliance with relevant CAFÉ and WHO air quality limits and guidelines particularly in urban areas. Achieve and maintain a 'Good' Air Quality Index for Health (AQIH) in Donegal 	SOE3 Health and Wellbeing SOE5 Air Quality SOE4 Climate SOE6 Nature SOE 8 Marine SOE9 Clean Energy SOE 11 Water Services SOE12 Circular Economy SOE13 Landuse	Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all. Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable. Goal 13: Take urgent action to combat climate change and its impacts.
Material Assets	<ul style="list-style-type: none"> To sustainably develop new and efficiently utilise and (where appropriate) protect existing material assets (e.g. residential, energy, transport, water, wastewater, community, telecoms and land) by promoting compact consolidated growth and efficient land use planning. Promote the circular economy, reduce waste and increase energy efficiency. 	SEO3 Health and Wellbeing SOE 5 Air Quality SOE9 Clean Energy SOE 13 Land use SOE 11 Water Services SOE 12 Circular Economy	Goal 6: Ensure availability and sustainable management of water and sanitation for all. Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all. Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation. Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable.

Strategic Environmental Objectives in the Draft Donegal County Development Plan 2023 -2030		EPA Ireland's Environment 2020	UN Sustainable Development Goals
	<ul style="list-style-type: none"> Avoid inappropriate development in areas at risk of current or future flooding and prevent new developments increasing flood risk elsewhere. 		<p>Goal 12: Ensure sustainable consumption and production patterns.</p> <p>Goal 13: Take urgent action to combat climate change and its impacts.</p> <p>Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.</p>
Cultural Heritage (CH)	<p><i>To support adaptive re-use of existing uninhabited and derelict structures where possible opposed to demolition and new build (to promote sustainability and reduce landfill).</i></p> <p>Conserve, enhance, ¹preserve and record architectural and archaeological heritage</p>	<p>SOE3 Health and Wellbeing</p> <p>SOE 12 Circular Economy</p> <p>SOE13 Landuse</p>	<p>Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable.</p> <p>Goal 13: Take urgent action to combat climate change and its impacts.</p>
Landscape	<p>To protect and manage the landscape (both rural and urban) in a sustainable manner.</p> <p>Promote and enhance landscape and <i>seascape</i> character at county and local scale through sensitive siting and design</p>	<p>SOE3 Health and Wellbeing</p> <p>SOE 4 Climate</p> <p>SOE 5 Air Quality</p> <p>SOE 6 Nature</p> <p>SEO 8 Marine</p> <p>SOE 11 Water Services</p> <p>SOE 12 Circular Economy</p> <p>SOE 13 Land use</p>	<p>Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable.</p> <p>Goal 13: Take urgent action to combat climate change and its impacts.</p>

¹ Amended on foot of DAERA Scoping submission and replaces SEO in draft CDP which is very similar in intent.

2 Describing the current environment

Baseline data has been gathered to present information on the current environment within the area. The Baseline section describes the following:

- Green and Blue network, ecosystem services.
- Biodiversity, Flora and Fauna
- Population and Human Health
- Soil and Geology
- Water Resources including flooding
- Air Quality and Climate
- Cultural Heritage
- Landscape
- Material Assets, and the
- Interaction between the above topics. These are summarised below:

2.1.1 Green and blue network, ecosystem services

Green Infrastructure is defined as *'an interconnected network of green space that conserves natural ecosystem values and functions and provides associated benefits to human populations'* (Comhar, 2010). Such spaces include woodlands, coastlines, flood plains, hedgerows, fields, gardens, turloughs, lakes, city parks and street trees, and the benefits to humans they provide include water purification, flood control, carbon capture, food production and recreation. Incorporation of green infrastructure in spatial planning and sectoral decision making helps to prevent biodiversity loss and fragmentation of ecosystems, thus restoring, maintaining and enhancing ecosystems and their services. It will improve resilience and adaptation to climate change and enable greater connectivity between ecosystems in protected areas and the wider countryside. There are many inter-relationships between green-infrastructure and other environmental parameters, for instance, its integration with human health through sport and recreation opportunities as well as increasing accessibility to amenity and recreation areas and promoting social inclusion; natural heritage and cultural heritage. Donegal is rich in biodiversity and developing the connectivity between existing ecological corridors offers great potential in the Plan area for biodiversity and increasing resilience to climate change effects.

Ecosystem services are the benefits that flow from nature to people. They can be provisioning (e.g. the supply of food, clean air and water and materials), regulating (e.g. water and climate regulation, nutrient cycling, pollination, or the formation of fertile soils), or cultural (e.g. recreation opportunities, or the inspiration we draw from nature). Natural ecosystems are multifunctional – they can provide a wide range of services simultaneously. The range and flow of these benefits depends largely on biodiversity and ecosystem condition.

A network of healthy ecosystems often provides cost-effective alternatives to traditional 'grey' infrastructure, offering benefits for EU citizens and biodiversity. This is why the EU promotes the use of nature-based green and blue infrastructure solutions². See below for ecosystem services provision.

² https://ec.europa.eu/environment/nature/ecosystems/index_en.htm



2.1.2 Biodiversity, Flora and Fauna

The Plan area is rich in biodiversity, containing many important, and protected, habitats and species such as, coastal habitats from cliffs to estuaries, reefs, machairs, mudflats, sandy beaches, and terrestrial habitats such as lakes, turloughs, fens, wetlands, woodlands, bats, wildfowl (duck and geese), waders, salmon, and otters. However, it also contains many other habitats which are not protected such as scrub, parks, streams, hedgerows, tree lines, roadside verges, housing estate open spaces and gardens. It is these locally important habitats and species within the landscape, including extensive areas of peatlands and heath, broadleaf woodlands, grasslands and turloughs, which provide links between the more rare and protected habitats, and are essential for the migration, dispersal and genetic exchange of wild plants and animals such as garden birds (robins, wrens, finches, etc.) and migrant summer visitors (swallows, cuckoos, warblers, etc), otters, hedgehogs, bats, pigmy shrew and other Irish mammals, Freshwater Pearl Mussel, White-clawed Crayfish, lamprey, salmon and other fish species, and a variety of invertebrates, including Geyer’s Whorl Snail, beetles, bees, butterflies, dragonflies and damselflies. They also allow for the spread of seeds, which benefit the wildflower populations of County Donegal. It is recognised that many rare and protected species are reliant on locally important species, and as such the protection of common habitats and species should not be underestimated.

2.1.3 Population and human health

Preliminary Census 2022 results indicates that Donegal now has a population of 166,231 an increase of 4.5% from the Census 2016 results (7,566 people) made up of 3,682 natural increase and 3,447 migration. This contrasts with a decrease a 6.5% decrease between Census 2011 and Census 2016 corresponding with a period of economic decline.

The county possesses a strong community identity and a rich and diverse cultural heritage. The Donegal Gaeltacht is comprised of a number of towns, villages and islands found near the mountains of the Derryveagh range including Errigal and the scenic Poisoned Glen. Further south Cill

Chartha (Kilcar), Gleann Colm Cille, and Ard a'Ratha (Ardara) . Donegal's Gaeltacht Láir (central Gaeltacht), located between Gweebarra Bay, Gleann Fhinne, and Gleann Domhain (Glendowen). Head further north and you enter na Rosa (the Rosses), Gaoth Dobhair (Gweedore) and Cloich Cheann Fhaola (Cloughaneely), areas of outstanding natural beauty. The most northerly point of the Donegal Gaeltacht is located via the Rosguill Peninsula with journey's end at Fanad Head.

Disadvantaged people are more likely to live in poor quality built environments and have limited access to transport and local amenities supporting healthy choices. This has further implications in regard to climate change and adaptation and mitigation to climate change including transport options, green infrastructure, energy provision and efficiencies and air quality emissions. Poor air quality is a major health risk, causing lung diseases, cardiovascular diseases, and cancer. Health implications of poor air quality from transport impacts the lungs, liver & spleen³Children, the elderly and citizens suffering from asthma and respiratory conditions are most affected. As well as negative effects on health, air pollution has considerable economic impacts; cutting short lives, increasing medical costs, and reducing productivity through lost working days. Other environmental resources interact with human health and include material assets (wastewater and water services, energy, transport) , and water quality as well as access to green and blue space.

2.1.4 Geology and Soil

The underlying Geology in Donegal consists of Precambrian Dalradian Gneiss, Schists, quartzite (700 million years old approx.), granite (approximately 405 Ma approx.), Devonian sandstones, land ower carboniferous sandstones and limestones (approximately 350 Ma approx.). see Figure 4.8 for bedrock geology and geological heritage sites.

The GSI's Landslide Susceptibility Map Viewer highlights potential areas of high and moderately high landslide susceptibility in Donegal most notably on steep mountainous slopes, peatlands and coastal cliffs. Peat soils in the county are very important in terms of climate change – when functioning properly they are significant carbon sinks as well as providing means to retain water and assist in flood alleviation measures plus their importance for cultural and natural heritage.

2.1.5 Water resources including flooding

Donegal contains a significant number (468) and range of waterbodies including: surface water bodies such as rivers (e.g. Finn, Leannan, Gweebarra, Swilly, Eske), lakes (e.g. Loughs Eske, Fern, Derg, Gartan, Glen and Nacung), transitional (e.g. Foyle, Swilly, Estuary, Gweedore, Gweebarra, Owenea, Inner Donegal Bay), coastal (e.g. Lough Swilly, Lough Foyle, Sheephaven, Trawenagh Bay, Gweebarra Bay, Loughros, McSwines and Inver Bay) and ground water bodies.

Importantly 138 of such water bodes have been identified as Protected Areas in accordance with the EU Water Framework Directive. A further important sub-group is comprised of those identified as having High Status Waterbody Objectives. The second cycle River Basin Management Plan, 2018 (*) identified high status environmental objectives for 310 waterbodies in the country including 26 in Donegal. Finally, it should also be noted that there are 85 shared waterbodies between Donegal and Northern Ireland.

Such Water bodies are subject to a range of environmental pressures including pollution from agriculture (e.g. farmyard wastes and land spreading of fertilisers), hydromorphology (i.e. physical modification to rivers banks, and shorelines), deficient municipal wastewater, forestry, domestic wastewater treatment systems, treatment plants, urban runoff, peat industries and quarries.

With climate change there are increased extreme weather events that contribute to flooding across a range of sources. .

³ Life Emerald 2023.

2.1.6 Air Quality and Climatic Factors

Poor air quality leads to more than 1300 premature deaths each year in Ireland. Ireland’s two main pollutants of concern are: Fine particulate matter (PM2.5), where the dominant source is residential solid fuel burning. Nitrogen dioxide (NO2), where the dominant source is transport.

2.1.7 Climate Factors

Ireland must invest in structural and behavioural change to enable the transition to a climate neutral, climate-resilient country. These changes include the rapid decarbonisation of energy and transport and the adoption of sustainable food production, management and consumption systems. In December 2022, the government published Climate Action Plan 2023 (CAP23). It is the first updated plan since the introduction of the Climate Action and Low Carbon Development (Amendment) Act 2021. CAP23 aims to keep Ireland’s emissions within its mandatory carbon budget and achieve the legally binding target of reducing emissions by 51% (from a 2018 baseline) by 2030.

Sectoral emissions ceilings refer to the total amount of greenhouse gas emissions that each sector of the economy is allowed to produce during a specific time period. In Ireland the sectoral emissions ceilings set out the maximum emissions that are permitted from each sector to ensure that Ireland remains within its carbon budgets. These sectors are:

- Electricity
- Transport
- Built Environment (Residential, Commercial & Public Sector)
- Industry & Other
- Agriculture
- Land Use, Land Use Change and Forestry (LULUCF)

Table 2.1 provides a summary of Co. Donegal emissions in comparison to National emissions.

TABLE 2-1 COUNTY DONEGAL EMISSIONS, NATIONAL EMISSIONS AND AS % OF NATIONAL EMISSIONS

Emissions Category	County Donegal Emissions (ktCO ₂ e)	National Emissions ¹ (ktCO ₂ e)
Agriculture	767 (39%)	22,134 (34%)
Commercial services	123 (6%)	4,618 (7%)
Industrial Processes	22 (1%)	2,267 (3%)
LULUCF	287 (15%)	6,657 (10%)
Manufacturing	59 (3%)	6,737 (10%)
Residential	419 (21%)	9,552 (15%)
Transport	255 (13%)	12,196 (19%)
Waste	37 (2%)	991 (2%)
TOTAL	1,970 (100%)	65,152 (100%)

Figure 2.1 presents the extreme climate events in County Donegal, from the CAP 2024.

FIGURE 2-1 EXTREME CLIMATE EVENTS COUNTY DONEGAL

Highlights of Observed Climate Change for Ireland and Donegal

Sea Level Rise



Sea levels in Ireland have risen by approximately 2-3mm per year since the early 1990s according to satellite measurements**



Highest temperature on record for County Donegal, recorded on July 28th 2018 at Glenties Hatchery

Rainfall

Average annual rainfall at Malin Head has increased by 1.5% for the most recent period (1981-2010) compared to the 1961-1990 baseline.*



0.5°C

Average temperature increase for the period 1981-2010 when compared to the 1961-1990 baseline.*

4 of the wettest years recorded were in the last 10 years based on records extending back to 1955*



In 2017, 63 mm of rainfall fell over a 6 hour period resulting in damages to roads and bridges in Donegal and the Inishowen peninsula in particular.

2.1.8 Material Assets

Access to an efficient transport network contributes to opportunities for all sectors of the population to access services, facilities and social networks that are necessary to meet daily needs. Ease of accessibility enhances quality of life, promotes social inclusion, presents opportunities, and promotes human health through expansion of cycle and walking infrastructure.

As one of the key sectors for emission reduction, actions are urgently needed to promote other forms of transport including public transport, walking and cycling. Local Transport Plans are being prepared for Letterkenny that identify short to longer term actions across scale to make walking, cycling and public transport more viable and attractive.

An analysis of the latest Irish Water Wastewater Treatment Register for 2021 indicates that 29 settlements in Donegal have no spare Wastewater Treatment Capacity either as a result of an overloaded or the absence of a municipal wastewater treatment plant. Donegal also has a high and increasing reliance on individual domestic wastewater treatment systems in the county with 30,345 systems registered in the County in 2020 and many commercial developments in unsewered areas also rely on individual treatment systems. In particular the EPA Report on Domestic WasteWater Treatment System Inspections 2021 found that 36% of the 121 systems inspected in Donegal failed and that lack of maintenance and desludging were key factors.

The Circular economy relates to a transition from carbon heavy, linear resource use. Circular economy systems:

- keep the added value in products for as long as possible and aim to eliminate waste.
- keep resources within the economy when a product has reached the end of its life, so that they can be productively used again and again and hence create further value.

2.1.9 Cultural heritage including archaeology and built heritage

County Donegal has a rich archaeological heritage. Archaeology is the study of past societies through the material remains left by those societies and the evidence of their environment. Examples of archaeological monuments in Letterkenny include souterrains (stone passages), cashels, enclosures,

and churches. Archaeology in Ireland is protected framework of International conventions and national laws and planning policies.

The architectural heritage of Donegal spans many centuries. This heritage reflects past lives and is an important record of the economic and social history of the county. Architectural heritage includes churches, courthouses, commercial and institutional buildings including banks and post offices, country houses, and also includes vernacular architecture. Within this range of building types are structures, streetscapes, village and town cores of such architectural heritage significance or special character that they are deemed worthy of protection either as individual elements which are listed on the Record of Protected Structures (RPS), as groups of buildings within Architectural Conservation Areas (ACAs) or as particular built heritage types that have been recorded as part of the unique identity of Donegal.

2.1.10 Landscape and seascape

The landscape and seascape of the County varies greatly. A Landscape Character Assessment (LCA) for Donegal, containing landscape, seascape and settlement character assessments, was prepared and endorsed by Donegal County Council in 2016. The LCA provides an analysis, characterisation and narrative of the component parts of Donegal's landscape to provide an evidence base to assist in consistent decisions making to achieve a balance between the protection, management and planning of the landscape in line with the National Landscape Strategy for Ireland 2015-2025.

The Regional LCA and SCA for Northern Ireland identifies three regional LCAs that adjoin Donegal these are:

- Foyle Valley LCA
- West Tyrone Hills and Valleys and
- Fermanagh Cavelands to the south.

Seascape character areas identified are Foyle Estuary and Lough Foyle⁴.

2.1.11 Decarbonising zone

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

In accordance with Action 165 of the National Climate Action Plan 2019, each local authority was required to 'identify and develop plans for one Decarbonising Zone' within their respective administrative area. An Action Plan for the DZs must be included in the Local Authority Climate Action Plans (LA CAP) as identified in the LACAP guidelines. As a component of the LACAP, the DZ is subject to the same statutory processes, timeframes, and other procedural requirements of making the LA Climate Action Plan. The DZs are a demonstration and test bed to focus on 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.

Carndonagh and Falcarragh have been selected as DZ zones for County Donegal.

2.1.12 Evolution of the plan area in the absence of the Climate Action Plan

The SEA legislation requires that consideration is given to the likely evolution of the current baseline where implementation of the CAP 2024-2029 does not take place. In the absence of the CAP the environment would evolve under the requirements of the current Donegal County Development Plan 2018 to 2024, and CDP 2024 -2030 once adopted.

Overall, this Climate Action Plan will be monitored and updated on an annual basis, with a review and revision every five years. Whilst the CDP-2024 -2030 will remain the primary landuse framework for the county, in the absence of the CAP, the detailed actions accompanied by targets and

⁴ [NIEA Natural Environment Map Viewer \(daera-ni.gov.uk\)](https://daera-ni.gov.uk)

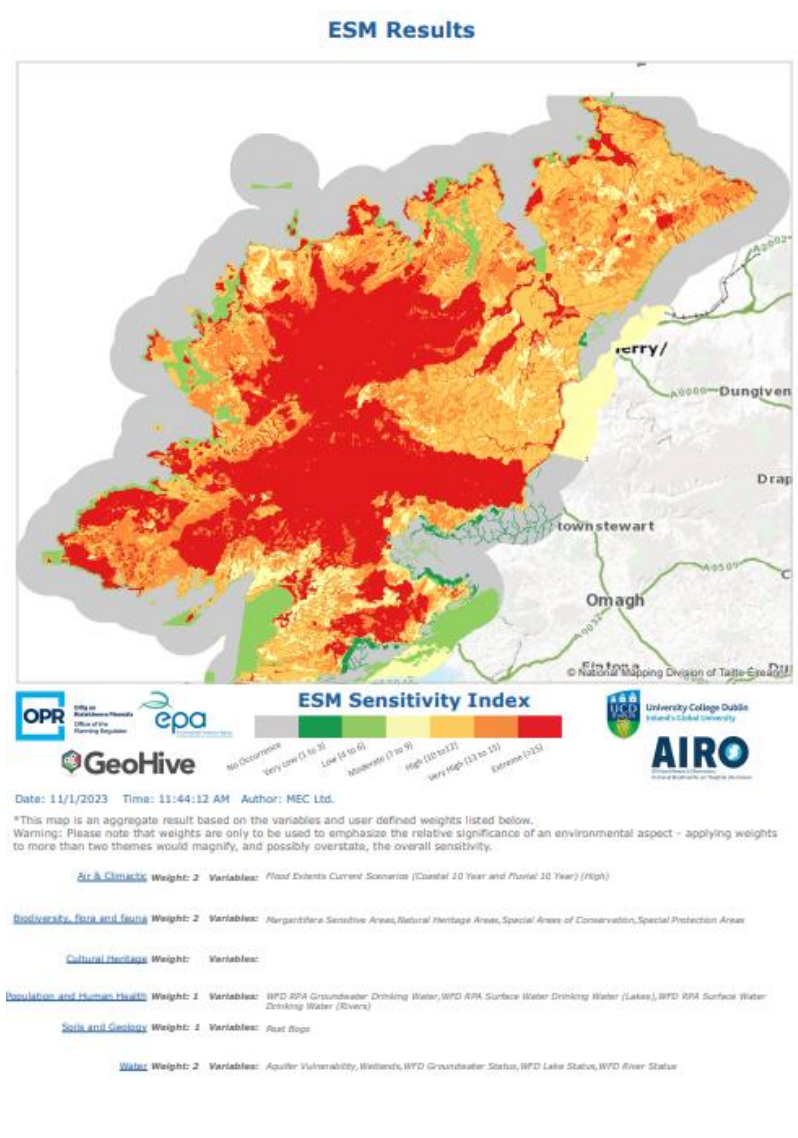
indicators will not allow for the annual measuring of progress in this area. This presents a lost opportunity to implement changes at local authority, and community level across the county. Key actions relating to nature based solutions which offer a suite of positive environmental effects would not be implemented with subsequent opportunities lost to green up infrastructure, promote food security and enhance tree planting. Other actions such as peatland rehabilitation, targeted energy efficiencies and risk assessment would be omitted.

At county level, the local authority would be less likely to contribute to continue to the reduction in carbon emissions associated with their fleet, lighting and buildings. Promoting regional or inter county actions relating to public transport, walking and cycling may be less effective in the absence of this action plan.

2.1.13 Inter-relationships

Environmental sensitivity mapping was prepared to inform the overall assessment of the CAP and to aggregate different environmental themes to help identify areas of greater and lesser environmental sensitivity. The key datasets used to inform this sensitivity mapping are shown in the ESM map in **Figure 2.2**

FIGURE 2-2 COUNTY ENVIRONMENTAL SENSITIVITY MAP



3 Consideration of Alternatives

The SEA Directive requires that reasonable alternatives be assessed to demonstrate how the preferred strategy performs against other forms of action. Alternatives must be developed, described and assessed within the SEA process, with the results presented in the Environmental Report.

- Alternative 1 - Prioritise reducing GHG emissions from largest GHG emitting sectors in the County to mitigate against climate change impacts.
- Alternative 2 - Adopt a multi-pronged approach and focus on a range of priority areas to mitigate against and adapt to climate change impacts.
- Alternative 3 -: Adopt a multipronged approach - that has a strong community engagement emphasis - and focus on a range of priority areas to mitigate against and adapt to climate change impacts.

A 'Do Nothing' or 'Do Minimum' alternative is not a reasonable alternative in this instance as the preparation of an effective LACAP is a statutory requirement under Section 16 of the Climate Act. Following the evaluation and assessment of the alternatives above against the SEOs, the preferred strategic alternative for the approach to the CAP 2024 -2029 Alternative 3. This is based on the following:

In terms of all SEOs, Alternative 3 is identified as creating most positive interactions as it provides greater environmental performance overall and also allows for a greater environmental gains, than may be achieved through Alternatives 2 and 1. In addition, the multi- faceted approach contributes to greater co-benefits by providing for a wider range of environmental effects particularly around nature based solutions and resource management. The inclusion of measures for citizen engagement and awareness raising through the CAP option is also positive for a number of SEOs.

4 Assessment of significant environmental effects

A summary of the significant environmental effects are shown below in Table 4.1 The SEA ER also considered in combination effects across other plans and programmes and within plan elements.

TABLE 4-1 SUMMARY OF SIGNIFICANT ENVIRONMENTAL EFFECTS

Topic	Discussion
Population and human health	<p>Many of the actions identified in the CAP give rise to medium to term positive effects on population and human health both by responding and adapting to the impacts of climate change, and also reducing greenhouse gas emissions through a series of measures.</p> <p>Reflecting the opportunity for co-benefits of the CAP, measures around energy efficiency and retrofitting plus renewable energy opportunities can help address fuel poverty in relation to vulnerable individuals as well as the chance to reuse energy from within the local area, for example</p> <p><i>BE3.2: Work towards new buildings (dwellings, commercial and public) are designed and constructed to Nearly Zero Energy Building (NZEB) standard by 2025 and Zero Emission Building (ZEB) standard by 2030 and BE 4.4 Support local community-based renewable energy projects and new micro-generation and small-scale generation renewable energy projects.</i></p> <p>Reflecting key objectives in the Donegal Draft CDP 2024 to 2030, the CAP will support and encourage a modal shift in transport by expanding the walking and cycling network, making walking and cycling safer and encouraging and promoting greater engagement and awareness raising in relation to walking and cycling and promoting behavioural change; for example, see <i>TR2 Promote and deliver active travel policies and projects within the County to facilitate greater walking and cycling.</i></p> <p>More strategically and at scale actions that support rail connectivity <i>TR3 Support the delivery of rail connectivity and the enhancement of other public transport options to encourage modal shift from private car transport</i> could give rise to significant, long term positive interactions on population and human health and could, depending on the route alignment provide for rail connectivity between Donegal adjacent County Tyrone in line with recommendations from the All Ireland Rail Review (2023).</p> <p>Addressing GHG emissions from the Transport and Residential sectors as the above actions do have accompanying positive impacts in terms of local air quality and therefore on human health. In addition, the impact of particulate matter and other airborne particles extend beyond human health to the entire terrestrial and aquatic environment (Tositti et al., 2018⁵).</p> <p>In the absence of mitigation, whilst the Donegal current CDP and forthcoming CDP 2024 -2030 policies will apply there could be adverse environmental effects around capacity building, training, embedding nature based solutions that can provide co benefits across many environmental resources, subject to robust assessment and design. These could result in localised and synergistic impacts on parameters including cultural heritage, landscape that may affect population and human health. Equally grey infrastructure measures particularly at sensitive locations such as coastal habitats can impact sense of place and could generate impacts transboundary in nature.</p> <p>Encouraging and accessing local knowledge and capacity is provided for within the CAP but additional recommendations are made in this regard, (<i>see Action CR2 Increase climate literacy across the community through education and raising awareness on climate action and nature based solutions that provide co benefits for human health, water and wildlife</i>).</p>

⁵ Particulate pollution and its toxicity to fish: An overview ,Gokul, Ramesh Kumar, Prema, Arun, Paulraj, Faggio. Comparative Biochemistry and Physiology Part C Vol:270. 2023.

Topic	Discussion
Biodiversity, Flora and Fauna	<p>The promotion of a peatland rehabilitation strengthen overall protection of biodiversity resources and the Biodiversity SEOS.</p> <p><i>NE1.7 Support national and regional initiatives in the rehabilitation of peatland as a carbon sink and provide habitat for biodiversity.</i></p> <p>Actions in particular those under the Natural Environment Theme (Actions including 1.4, and actions under NE 4 Nature Based solutions) are identified as positive for BFF as well as generating positive, synergistic and medium to long term positive effects on other SEOS namely soil, water, air, climate change with indirect positive effects and direct positive effects on population and human health and material assets.</p> <p>For a number of these actions, mitigation is recommended to further support and strengthen protection of habitats and species for these actions.</p> <p><i>NE 1.1: Prepare and begin to implement a Biodiversity Action Plan (including a Pollinator Plan) for the County to protect and enhance local biodiversity including climate-resilient measures - this is recommended for mitigation to strengthen ecological considerations and provide for co-benefits to other resources.</i></p> <p>For a number of transport related actions, the implementation of these could conceivably result in the support of new infrastructure that in turn could have potential to result in direct impacts such as habitat loss or habitat degradation or indirect impacts such as habitat and species disturbance and changes in key indicators of conservation status such as water quality. This could give rise to local to transboundary effects in the absence of mitigation. Actions identified include: <i>TR2.3 Deliver and maintain multiple Active Travel projects in the County.</i></p> <p>For renewable energy including production and transmission (onshore and offshore), the majority of past examples of such developments have been situated outside of European Sites. Notwithstanding this such developments can be connected to European Sites via impact pathways. Most commonly such impact pathways are mediated by hydrological pathways and the potential for new renewable natural resource developments to result in the emission of poor quality and inadequately treated surface water runoff and/or foul waters. These developments can also, if sited inappropriately, result in disturbance, habitat loss or fatalities to mobile species e.g. birds and otters that are representative of features of interest of European Sites.</p> <p>In relation to other actions, such as those relating to landuse such as built environment and many of the Decarbonising zone actions, existing mitigation in the current and Draft Donegal CDP 2024 would apply at development management and consenting. Whilst it is recognised that the provision of measures to assist communities to become future proof to climate change have positive impacts for the environment and human well-being, the implementation of such measures can result in the provision of new infrastructure that in turn could have potential to result in direct impacts such as habitat loss or habitat degradation or indirect impacts such as habitat and species disturbance and changes in key indicators of conservation status such as water quality. Therefore, additional mitigation is recommended.</p> <p>Walking and cycling actions, if they were to take place on or near sensitive habitats or species vulnerable to disturbance would give rise to adverse effects. However, the existing environmental protection provisions in the CDP will apply but a number of these are recommended for mitigation including: <i>TR2.4 Design a network of segregated, attractive and safe Active Travel paths as part of the TEN-T Public Road Improvement Project (Donegal) to encourage a greater uptake of walking and cycling and TR2.5 Expand the greenway network in the County establishing linkages with towns and villages in line with the strategic national cycle network.</i></p>

Topic	Discussion
Water resources	<p>Potential effects on water resources (and frequently biodiversity) in the absence of mitigation include:</p> <ul style="list-style-type: none"> • Surface water runoff from impermeable surfaces leading to reduced water quality in groundwater springs or surface waters affecting qualifying habitats and species downstream (impacts can range from short to long term); • Changes in the flow rate of watercourses arising from an increased footprint of impermeable surfaces within the Plan area - increasing the extent of impermeable surfaces will result in a decrease in infiltration and an increase in runoff; • Generally, land use practices can result in water quality impacts and whilst surface water impacts may be identified quickly, impacts to groundwater can take much longer to ascertain due to the slow recharge rate of this water resource; • Water quality impacts can also have human health impacts in the case where bacterial or chemical contamination arises. Pressures and impacts on material assets from climate change such as flooding with damage to wastewater treatment facilities or water supply is particularly relevant in this regard. <p>The current Donegal CDP and draft CDP 2024 -2030, already includes a range of provisions and measures to address and minimise the above effects, including measures around flood risk management and development control as well as adaptation measures that support nature based solutions. The CAP however further enhances and strengthens these through the flood resilience actions and nature based solutions in particular.</p> <p>Implementation of the Biodiversity Plan for the County and support for working to address water quality issue with different agencies, and sectors, water conservation and SuDs, these create positive interactions for Water SEOS as well as cross cutting other SEOS in a positive manner.</p> <p>A key focus on the actions should be to prioritise Nature Based solutions and learn from other relevant case studies and examples from Ireland and with EU that have demonstrated excellent outputs that provide co benefits.</p> <p>Climate change effects are transferred and impact on water resources at a very early stage and habitats and species, including human are very dependant and reliant upon water of quality and provision.. Engaging with different sectors (<i>SR4 Support farmers in the shift toward low-carbon and climate-resilient agricultural practices</i>, and support for nature based solutions is positive in this regard, as is risk assessments in terms of infrastructure that can be at risk from climate change impacts.</p> <p>Measures around SUDs, such as, creating long term direct positive effects on water resources, as well as soil and biodiversity, population and human health. The action is recommended for mitigation to further detail and strengthen overall environmental protection.</p> <p>Mitigation measures are recommended for a number of actions to reduce potential adverse effects, strengthen overall environmental protection and provide greater focus to the action, these include <i>Actions NE3 Increase coastal resilience to the changing climate and support nature based solutions to avoid coastal squeeze and make space for nature. NE2.1 Forestry - Work with Coillte to promote and implement appropriate water protection and integration of biodiversity measures in forestry catchments where potential for impact on waterbody (e.g. sediment, pesticides, colour, organic matter and high rainfall events in line with Water Framework Directive objectives. And BE5.1 Be proactive in providing flood resilience to municipal infrastructure by conducting flood risk assessments and seeking OPW Funding through their Minor Works programme where necessary and applying nature based solutions where possible</i></p>
Soil and Geology	<p>Soil quality and function may be enhanced through particular measures associated with flood resilience, nature based solutions and resource management in particular. The carbon sequestration function of soil and healthy soil quality are extremely significant, across several environmental parameters but in particular for agriculture which amounts to 39% of the GHG emissions at county level.</p>

Topic	Discussion
	<p>In this regard, actions that support collaboration and support for agricultural projects, tree policy and nature based solutions are all positive. For example, <i>SR4 Support farmers in the shift toward low-carbon and climate-resilient agricultural practices</i>, and support for peat rehabilitation</p> <p><i>NE1.7 Support national and regional initiatives in the rehabilitation of peatland as a carbon sink and provide habitat for biodiversity.</i></p> <p>Support for the circular economy in particular around food waste, local food production is also positive, particular if composting can be applied to enhance soil function.</p> <p>The support for reuse of existing buildings, and promotion of brownfield over greenfield sites is supported through national, regional and county policy and actions relating to these are supportive of such policy measures and positive for soil and geology SEOs with indirect positive measures for water, habitats and species, and human health.</p> <p>A number of the measures relating to soil are identified for mitigation to further strengthen the environmental performance of these actions.</p>
Air Quality and Climate	<p>Overall, the CAP will contribute positively to climate change adaptation, and mitigation through the actions as well as the KPIs included in the plan that will allow robust monitoring of actions. In summary, actions relating to nature based solutions, peatland restoration, energy efficiency and reductions across transport, residential and landuse can provide positive effects in terms of GHG reductions, but also carbon sequestration with accompanying co benefits across most SEOS in particular landscape, population and human health, air quality, water and soil and biodiversity. These are dependent on existing environmental resources (existing) being understood and surveyed, with interventions underpinned by scientific and robust evidence base.</p> <p>The focus on energy efficiency and innovation as seen through the actions identified in the CAP, examples include <i>GL1 Deliver the appropriate climate response on all Council owned assets to align with a trajectory to net zero emissions.</i></p> <p>Key measures relating to behavioural change around transport and the increase in walking/cycling and public transport measures are essential in addressing transport emissions over the lifetime of the CAP and beyond. The support and actions Carndonagh and Falcarragh DZ will facilitate peer to peer learning amongst communities and demonstrate successful actions at community and local scale.</p> <p>Other actions that support community engagement and creative responses to climate change are positive in terms of behavioural change and communication around climate change. Recognising the ecosystems functions of soil, water and biodiversity is a key element in the Nature Based solutions actions and is an important acknowledgement that also provides for positive effects across a number of SEOs.</p>
Material Assets	<p>Many of the measures provide for mitigation and adaptation with a view to minimising adverse effects of climate change on material assets, and also responding and facilitating behavioural and modal change in energy use and transport. Examples of these include the following:</p> <ul style="list-style-type: none"> • <i>BE5 Ensure that all Council owned buildings, facilities and infrastructure are resilient to the effects of climate change.</i> • Promotion of nature based solutions and SuDs • Climate proofing local authority actions • Actions relating to energy efficiency, renewable energy and circular economy are also identified as generating positive, long terms effects, being consistent with Material Asset SEOs, as well as soil and geology and accompanying positive medium term effects on population and human health and water, biodiversity.
Cultural Heritage	<p>Archaeology and Built heritage features are present throughout the plan area, and in particular those archaeological or built heritage features associated with the coastline may be particularly vulnerable to climate change effects. The concentration of built heritage features</p>

Topic	Discussion
	<p>and historic settlements on the coastline increases their vulnerability to the effects of climate change. Cultural heritage is not often considered or captured adequately in coastal zone management planning and this can give rise to adverse effects on cultural heritage, for example:</p> <p>Overlooking cultural resources can result in</p> <ul style="list-style-type: none"> • loss of cultural identity associated with certain habitats; • loss of tourism, recreational and educational opportunities; • decline in local ecological knowledge, skills and technology pertaining to habitat management; • and loss of opportunities for social and cultural capital⁶ <p><i>CR3 Continue to support arts and heritage within the County as a tool to support education and awareness on climate action</i> is positive in terms of engagement and culture with positive interactions for PHH and Cultural heritage.</p> <p>Research and risk assessment is important to ensure cultural heritage assets (tangible and intangible) are identified and managed with sensitive interventions to the fabric of the built heritage feature. Adaptive reuse is positive as it supports circular economy and avoids use of greenfield sites, support towns centre activity and is positive for SG1, AQ CC and PHH SEOS. In this regard, recent EPA Research⁷ (2022) identifies the following priorities in terms of adaptation for the built environment and these should be integrated over the course of the CAP,</p> <ul style="list-style-type: none"> • Mainstreaming adaptation in the built environment. This includes prioritising adaptation as a critical second pillar of climate action; focusing on the full range of climate change risks (not simply flooding); integrating built environment adaptation with the wider land use system; capturing mitigation and adaptation benefits through holistic approaches; and focusing on the whole built environment and not only new-builds. • Evidence and uncertainty in decision-making. Adaptation of the built environment requires a robust and geographically tailored evidence base; there is a need for granular and useable information on climate impacts. Uncertainty strengthens the case for early investment and points to adopting the precautionary approach, and further research is needed in relation to costs, responsibilities of key stakeholders, behaviour of building occupants and social vulnerability in relation to climate risks. • Co-designing of adaptation interventions. This includes collaborative stakeholder engagement, the inclusion of climate scenarios as part of statutory public consultation and the testing of novel public engagement methods. • Capacity-building requirements. This includes improving resourcing and institutional capacity, adopting new ways of working to avoid traditional siloed thinking and continued professional development and training for elected representatives. <p>Potential actions with Creative Ireland relating to climate change should be explored in the CAP.</p>
Landscape	<p>Long term positive effects are identified for the CAP and landscape primarily through the nature based solutions, peatland rehabilitation and habitat connectivity, this combines and interacts also with a range of other parameters that create and contribute to local landscape character including W, BFF, CH, SG and PHH.</p> <p>Similarly to the Water, BFF, PHH SEOS, the potential for transboundary effects are identified for landscape, particularly terms of larger infrastructural actions/ and/or renewable energy both offshore and onshore.</p>

⁶ Coastal cultural heritage: A resource to be included in integrated coastal zone management
[SornaKhakzad^aMarnixPieters^bKoenraadVan Balen^cOcean & Coastal Management](#)
[Volume 118, Part B](#)

⁷ Built Environment Climate Resilience and Adaptation (2019-CCRP-DS.21) EPA Research Report. Mark Scott, Louise Burns, Mick Lennon and Oliver Kinnane. [Research Report 418.pdf \(epa.ie\)](#)

Topic	Discussion
	<p>Many of the measures in the CAP require a landscape level response such as recognition of wildlife corridors and this an important approach to take when responding to climate change. Overall, positive effects identified for Landscape SEOs, as landscape change can be considerable with climate change effects in terms of changing water levels, habitat change, transport measures and adaptation measures such as flood risk management. An increase in public realm and permeability would all create long term positive effects for the Landscape SEOs.</p> <p>Mitigation measure are recommended for a number of actions to strengthen consideration of landscape.</p>

5 Mitigation measures

Mitigation measures that will prevent, reduce, and offset as much as possible any significant adverse effects on the environment of the plan area resulting from the implementation of the CAP. Mitigation involves ameliorating significant negative effects. Where the environmental assessment identifies significant adverse effects, consideration is given in the first instance to preventing such impacts or where this is not possible, to lessening or offsetting those effects. Mitigation measures can be generally divided into those that:

- Avoid effects;
- Reduce the magnitude or extent, probability and/or severity of effect;
- Repair effects after they have occurred, and
- Compensate for effects, by balancing out negative impacts with positive ones.

There are many environmental protection measures in the draft Donegal County Development Plan 2024-2030 that will apply and provide appropriate environmental protection and mitigation, and the SEA and AA processes identified additional mitigation measures. Examples of the mitigation measures to the CAP actions identified through the SEA and AA assessments are presented below in Table 5.1

TABLE 5-1 EXAMPLES OF MITIGATION MEASURES IDENTIFIED THROUGH THE SEA AND AA PROCESS

Action	Mitigation
NE3	Increase coastal resilience to the changing climate and support nature based solutions to avoid coastal squeeze and make space for nature.
CR2	Increase climate literacy across the community through education and raising awareness on climate action and nature based solutions that provide co benefits for human health, water and wildlife
CR4	Ensure that all Council funding mechanisms are underpinned by strong carbon proofing requirements.
new action	In implementing this County Donegal Climate Action Plan, ensure compliance with Donegal County Development Plan 2017-2023 and superseding plans, local area plan objectives and policies relating to environmental management, the protection of statutory Conservation Areas and ensure compliance with specific environmental management measures relating to this plan. Landuse plans and projects arising from this Climate Action Plan will be underpinned by Strategic Environmental Assessment, Environmental Impact Assessment, Appropriate Assessment, and Ecological Impact Assessments as relevant.
new action	Donegal County Council will take account of any relevant recommendations in the EPA State of Our Environment Report 2024, once published, in implementing the Plan over its lifetime.
new action	Donegal County Council will consider any relevant updated actions, measures or recommendations that may arise in updates to the National Climate Action Plan over the lifetime of the Plan.
TR2.5	Expand the greenway network in the County establishing linkages with towns and villages in line with the strategic national cycle network, subject to environmental and ecological surveys and assessments to ensure it supports and enhances local environment, habitats and species
BE1.2	Deliver the ongoing public lighting LED Retrofit and Energy Reduction Programme, while having due regard to impact of light used on biodiversity.

6 Monitoring

The monitoring programme will consist of an assessment of the relevant indicators and targets against the data relating to each environmental component. Similarly, monitoring will be carried out frequently to ensure that any changes to the environment can be identified.

It is recommended that data arising from planning applications, particularly in terms of environmental constraints mapping and Environmental Impact Statements be integrated into the GIS and monitoring system. This will assist in assessing cumulative impacts also, in particular ecology and water quality.

This Climate Action Plan will be implemented by Donegal County Council. Implementation of the LACAP and in turn monitoring and reporting will be pivotal in demonstrating commitment and leadership in climate action at the local level. A key part of the CAP is the provision of key performance indicators (KPIs) and annual reporting. Therefore the suggested monitoring table below, whilst adapted for the SEA monitoring prepared for the County Development Plan should cross reference and integrate the KPIs identified for the CAP 2024 -2029.

Key implementation and reporting activities that Donegal County Council will undertake are:

1. **Planning for Implementation:** Devising an approach for the implementation of actions on an annual basis.
2. **Tracking and reporting progress through Key Performance Indicators:** Development and inclusion of plan level KPIs to track, measure and report on progress.

Table 6.1 presents the monitoring table.

Environmental Category	Targets/Thresholds (e.g. Good Water Quality Status)	Indicators (e.g. WFD Water Quality Status)	Monitoring Agency (e.g. DCC, NPWS etc)	Monitoring Frequency (e.g. Annual)	Remedial Actions
Biodiversity	Maintain or restore of favourable conservation status of the Qualifying Interests of all Natura 2000 sites. (Article 2 of Habitats Directive Refers)	Status and Trends of Qualifying Interests (Habitats and Species) related to Natura 2000 sites affected by the CDP 2024 detailed in reports and conservation assessments prepared under Article 17 of the Habitats Directive.	NPWS	Article 17 Reporting every 6 years	Rigorous assessment of proposed developments and enforcement of planning requirements related to permitted developments within the zone of influence of Natura 2000 sites or likely to impact upon the Qualifying Interests of Natura 2000 sites.
Climate	Contribute toward achievement of International, European and National Greenhouse Gas Emission targets (e.g. 51% reduction in Greenhouse gases by 2030 and a climate neutral economy by 2050)	<ul style="list-style-type: none"> National greenhouse gas emission data. Increase in no. of persons commuting by sustainable travel modes (e.g. public transport walking and cycling). Proportion of new residential units granted within walking (400m) or cycling (800m) distance of public transport or local services. No. of developments permitted within Flood Zones A and B. No. of developments permitted utilising SUDS flood attenuation solutions. 	EPA CSO DCC DCC DCC	Annual Ongoing Biennial Biennial Biennial	<ul style="list-style-type: none"> Reduce transport related Greenhouse Gas Emissions by promoting more sustainable modes of transportation through full implementation of transport related elements of plan including: <ul style="list-style-type: none"> Compact growth through strict adherence to the zoning and policy framework within the plan. The provision of a local transport interchange hub. The delivery of a local public transport system. The provision of a local walking and cycling links including intra neighbourhood links.

Environmental Category	Targets/Thresholds (e.g. Good Water Quality Status)	Indicators (e.g. WFD Water Quality Status)	Monitoring Agency (e.g. DCC, NPWS etc)	Monitoring Frequency (e.g. Annual)	Remedial Actions
					<ul style="list-style-type: none"> ○ Provision of public electric charging infrastructure. ● Reducing greenhouse gas emissions in new residential and commercial developments through achieving greater energy efficiency in the siting, orientation and design of new developments. ● Carbon sequestration through the provision of tree planting and the retention of existing trees as an integral part of new developments as part of the development management process. ● Rigorous assessment of new development proposals vis-a-vis climate related flood risk (e.g. fluvial, pluvial and coastal). ● Enhanced use of SUDS flood attenuation measures through the development management process.
	Take the requisite measures to maintain the population of the species referred to in Article 1 at a level which corresponds in particular to ecological, scientific and cultural requirements, while	Status and trends of bird species related to Natura 2000 sites affected by the CDP 2024 detailed in reports prepared under Article 12 of the Bird Directive	NPWS	Article 12 Reporting every 6 years	Rigorous assessment of proposed developments and enforcement of planning requirements related to permitted developments within the zone of influence of Natura 2000 sites or likely to impact upon the Qualifying Interests of Natura 2000 sites.

Environmental Category	Targets/Thresholds (e.g. Good Water Quality Status)	Indicators (e.g. WFD Water Quality Status)	Monitoring Agency (e.g. DCC, NPWS etc)	Monitoring Frequency (e.g. Annual)	Remedial Actions
	<p>taking account of economic and recreational requirements, or to adapt the population of these species to that level. (Article 2 of Bird Directive refers)</p> <p>Preserve, maintain or re-establish a sufficient diversity and area of habitats for all the species of birds referred to in Article 1 of the Bird Directive. (Article 3 of Bird Directive refers).</p>	<p>Irish Wetland Bird Survey (I-WeBS) Results in relation to bird species constituting the qualifying interests in Natura 2000 sites.</p>			
	<p>Protect the habitat and species of Ramsar Sites, Nature Reserves Natural Heritage Areas, and proposed Natural Heritage Areas.</p>	<p>Overall extent of woodland habitat and diversity of species within Ramsar Sites, Nature Reserves Natural Heritage Areas, and proposed Natural Heritage Areas</p>	<p>NPWS and DCC</p>	<p>Biannual</p>	<ul style="list-style-type: none"> • Rigorous assessment of proposed developments and enforcement of planning requirements related to permitted developments to ensure that do not negatively impact on Ramsar Sites, Nature Reserves Natural Heritage Areas, and proposed Natural Heritage Areas.
	<p>Compliance with the Pollution Reduction Programme for the Designated Shellfish Areas</p>	<ul style="list-style-type: none"> • WFD Waterbody Status for rivers, lakes, transitional and coastal water bodies. • Annual Environment Reports for Irish Water WWTPs. • DCC compliance data arising from the National Inspection Plan 	<p>EPA and DCC</p>	<p>Every 5 Years</p> <p>Annual</p> <p>Ongoing</p>	<ul style="list-style-type: none"> • Collaborate with Irish Water to ensure compliance with WWTP Wastewater Discharge Licence Emission Limit Values. • Rigorous assessment of proposals for domestic WWT systems vis-a-vis EPA Code of Practice Wastewater Treatment Systems for Single Houses.

Environmental Category	Targets/Thresholds (e.g. Good Water Quality Status)	Indicators (e.g. WFD Water Quality Status)	Monitoring Agency (e.g. DCC, NPWS etc)	Monitoring Frequency (e.g. Annual)	Remedial Actions
		<p>for Domestic Wastewater Treatment Systems.</p> <ul style="list-style-type: none"> Information from DCC Environment Section with regard to compliance with Section 4 Wastewater Discharge Licences. Quality of shellfish Growing Areas as reported by DEHLG. 			<ul style="list-style-type: none"> Ensure compliance with relevant Water Pollution legislation vis-a-vis domestic WWT systems through DCC environment section. Ensure compliance with Commercial Wastewater Discharges Licences to Groundwater issued under Section 4 of the Water Pollution Act through DCC environment section.
	<p>Maintain or Restore the favourable conservation status of the Freshwater Pearl Mussel of all affected Natura 2000 sites.</p> <p>Compliance with Sub-Basin Management Plan Catchment Plans for Freshwater Pearl Mussel.</p> <p>Compliance with the measures detailed in the River Basin Management Plan.</p>	<p>Freshwater Pearl Mussel status and Trends detailed in reports and conservation assessments prepared under Article 17 of the Habitats Directive.</p>	NPWS	Every 5 Years	
	<p>Ensure conservation of species protected under the Wildlife Act 1976(as amended)</p>	<p>Species data available on the National Biodiversity Data Centre website: https://www.biodiversityireland.ie/</p>	Heritage Council, Department of Housing, Local Government	Ongoing	<p>Rigorous assessment of proposed development and enforcement of planning requirements/conditions related to permitted developments in relation to species Protected Under the Wildlife Act.</p>

Environmental Category	Targets/Thresholds (e.g. Good Water Quality Status)	Indicators (e.g. WFD Water Quality Status)	Monitoring Agency (e.g. DCC, NPWS etc)	Monitoring Frequency (e.g. Annual)	Remedial Actions
			and Heritage		
	Conserve and restore biodiversity and ecosystem services in the wider countryside and the marine environment in accordance with 4 th National Biodiversity Action Plan	Species data available on the National Biodiversity Data Centre website: https://www.biodiversityireland.ie/	Heritage Council, Department of Housing, Local Government and Heritage	Ongoing	Ensure minimal impact on existing biodiversity and provision of additional biodiversity assets through the rigorous protection of biodiversity in the development management and planning enforcement systems.
Population and Human Health	Increase population in Donegal in accordance with growth projections set out in the NPF Implementation Roadmap.	Census Results for Donegal	CSO	Every 5 Years	<ul style="list-style-type: none"> • Ensure full implementation of the Housing for All Plan at the local level including as appropriate the utilisation of site activation measures (e.g. Compulsory Purchase Orders).
	Growth in employment opportunities	Employment Growth	CSO	Monthly	<ul style="list-style-type: none"> • Ensure delivery of key transport infrastructure projects (e.g. TEN-T PRIPD, sustainable and active travel projects in settlements) • Ensure implementation of key urban regeneration projects. • Collaborate with Irish Water to ensure delivery of the requisite Water and

Environmental Category	Targets/Thresholds (e.g. Good Water Quality Status)	Indicators (e.g. WFD Water Quality Status)	Monitoring Agency (e.g. DCC, NPWS etc)	Monitoring Frequency (e.g. Annual)	Remedial Actions
					<p>Wastewater infrastructure to facilitate new development.</p> <ul style="list-style-type: none"> Review spatial allocation of residential and general employment lands.
	Promotion of Social Inclusion and reduction in social deprivation.	<ul style="list-style-type: none"> Mix of housing types, tenures, densities, and size (including proportion of social and affordable housing) in newly permitted developments. Distance from newly permitted residential areas to local services (e.g. schools, neighbourhood centre, healthcare facilities etc). 	DCC and Department of Housing,	Annual	<ul style="list-style-type: none"> Ensure appropriate mix of housing types, tenures densities and sizes (including the provision of social and affordable housing) is provided in suitably located residential areas through the Development Management process. Ensure deliver of the Housing For All plan at the local level including provision of social and affordable housing projects. Utilise state funding mechanisms such as the Buy and Renew Scheme to refurbish vacant housing for social housing use.
	Growth in active travel	Proportion of people walking and cycling to work/school etc in Donegal.	DCC, CSO		Ensure delivery of walking and cycling infrastructure within settlements.
	Compliance with the European Drinking Water Directive.	EPA Annual Drinking Water Quality Reports	EPA	Annual	Collaborate with Irish Water with regard to delivering the infrastructure necessary to improve drinking water supplies.
	Limit Noise Pollution	Noise Mapping prepared for the Draft Donegal Noise Action Plan 2018-2023.	DCC	Every 5 Years	Ensure full implementation of the measures contained in the Draft Donegal Noise Action Plan

Environmental Category	Targets/Thresholds (e.g. Good Water Quality Status)	Indicators (e.g. WFD Water Quality Status)	Monitoring Agency (e.g. DCC, NPWS etc)	Monitoring Frequency (e.g. Annual)	Remedial Actions
					2018-2023 as appropriate and where practicable.
	Air Quality	See Section on Air Quality			
	Water Quality	See Section on Water Quality			
Soil	To Protect Soils and Geology	EPA/Teagasc Soil Mapping Project. Geological Heritage Sites	Teagasc, Geological Survey of Ireland		Ensure minimal impact on soils and geology through rigorous assessment of new development proposals within the development management system.
Water	<ul style="list-style-type: none"> Compliance with the Water Framework Directive in respect of surface waters, transitional bodies and ground water including achieving 'good' status in all waters and otherwise ensuring that water quality does not deteriorate. Compliance with the Emission Limit Values for the Wastewater Treatment Plants Compliance with individual Commercial Wastewater Discharge Licences to Groundwater issued under Section 4 of 	<ul style="list-style-type: none"> Water Framework Directive Surface Water and At Risk Status for rivers, lakes, transitional and coastal water bodies. Annual Environment Reports for WWTPs. DCC compliance data arising from the National Inspection Plan for Domestic Wastewater Treatment Systems. DCC Compliance data with regard individual Commercial Wastewater Discharge Licences to Groundwater issued under Section 4 of the Water Pollution Act 1977. 	EPA and DCC Irish Water DCC DCC	Every 5 Years Annual Ongoing Ongoing	<ul style="list-style-type: none"> Collaborate with Irish Water to ensure compliance with WWTP Wastewater Discharge Licence Emission Limit Values. Rigorous assessment of proposals for new domestic and commercial independent WWT systems vis-a-vis relevant EPA Code of Practices. Ensure compliance with relevant Water Pollution legislation vis-a-vis existing domestic WWT systems through DCC environment section. Ensure compliance with individual Commercial Wastewater Discharge Licences to Groundwater issued under Section 4 of the Water Pollution Act 1977 through DCC environment section.

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	the Water Pollution Act 1977.	<ul style="list-style-type: none"> Upgrading of existing and provision of new Wastewater Treatment Plants. 			<ul style="list-style-type: none"> Review approval of further independent WWT systems for commercial premises.
Air	<ul style="list-style-type: none"> Compliance with the Ambient Air Quality and Cleaner Air For Europe (CAFE) Directive including associated limit values for specific pollutants (e.g. PM_{2.5}, PM₁₀ and SO₂) Compliance with the WHO Air Quality Guidelines for specific pollutants 	<ul style="list-style-type: none"> Air Quality Index for Health (AQIH) rating for the Letterkenny and Buncrana Air Quality Monitoring station. PM_{2.5}, PM₁₀ and SO₂ emission levels as measured at the Air Quality Monitoring station. 	EPA	Ongoing	<ul style="list-style-type: none"> Reduce PM pollution by ensuring full implementation of the Smokey Coal ban including fuel supply, distribution and use of fuels through the DCC Environment Section. Reduce transport related air pollution by promoting more sustainable modes of transportation through full implementation of transport related elements of plan including: <ul style="list-style-type: none"> Compact growth through strict adherence to the zoning and policy framework within the plan. The provision of a local transport interchange hub. The delivery of a local public transport system. The provision of a local walking and cycling links including intra neighbourhood links.

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					<ul style="list-style-type: none"> ○ Provision of public electric charging infrastructure.
Climate	<ul style="list-style-type: none"> • Contribute toward achievement of International, European and National Greenhouse Gas Emission targets (e.g. 51% reduction in Greenhouse gases by 2030 and a climate neutral economy by 2050) 	<ul style="list-style-type: none"> • National greenhouse gas emission data. • Increase in no. of persons commuting by sustainable travel modes (e.g. public transport walking and cycling). • Proportion of new residential units granted within walking (400m) or cycling (800m) distance of public transport or local services. • No. of developments permitted within Flood Zones A and B. • No. of developments permitted utilising SUDS flood attenuation solutions. 	EPA CSO DCC DCC DCC	Annual Ongoing Biennial Biennial Biennial	<ul style="list-style-type: none"> • Reduce transport related Greenhouse Gas Emissions by promoting more sustainable modes of transportation through full implementation of transport related elements of plan including: <ul style="list-style-type: none"> ○ Compact growth through strict adherence to the zoning and policy framework within the plan. ○ The provision of a local transport interchange hub. ○ The delivery of a local public transport system. ○ The provision of a local walking and cycling links including intra neighbourhood links. ○ Provision of public electric charging infrastructure. • Reducing greenhouse gas emissions in new residential and commercial developments through achieving greater energy efficiency

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					<p>in the siting, orientation and design of new developments.</p> <ul style="list-style-type: none"> • Carbon sequestration through the provision of tree planting and the retention of existing trees as an integral part of new developments as part of the development management process. • Rigorous assessment of new development proposals vis-a-vis climate related flood risk (e.g. fluvial, pluvial and coastal). • Enhanced use of SUDS flood attenuation measures through the development management process.
Material Assets	<ul style="list-style-type: none"> ○ Delivery of strategic road projects (e.g. TEN-T PRIPD). ○ Delivery of new walking and cycling and public transport infrastructure including a local transport hub. ○ Delivery of key urban regeneration projects 	<ul style="list-style-type: none"> ○ Progress on strategic road projects (e.g. TEN-T PRIPD) ○ Progress on new walking and cycling and public transport infrastructure ○ Completion of key urban regeneration projects (e.g. SEED Project, Empowering Buncrana) 	DCC, OPW, TII and NWRA	Ongoing	<ul style="list-style-type: none"> ○ Collaborate with strategic partners (e.g. TII, Department of Transport etc) to ensure full delivery of strategic roads projects. ○ Collaborate with strategic partners (e.g. National Transport Authority, Department of Transport) to ensure delivery of new walking and cycling and public transport infrastructure. ○ Utilise funding streams such as the Urban Regeneration and Development Fund to

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	<p>(e.g. SEED Project, Empowering Buncrana)</p> <ul style="list-style-type: none"> ○ Delivery new of public and private housing units completed in line with growth ambition detailed in the Core Strategy. ○ No. and floor space of new retail and commercial developments. ○ Reduction in retail and commercial vacancy levels. ○ Extension of the water and wastewater infrastructure to poorly or unserved areas ○ Provision of new green infrastructure ○ Delivery of the Flood Relief schemes. 	<ul style="list-style-type: none"> ○ No. of new of public and private housing units completed. ○ No. and floor space of new retail and commercial developments. ○ Retail and commercial vacancy levels. ○ Upgrading of existing and provision of new Wastewater Treatment Plants. ○ Completion of the Flood Relief Scheme. ○ No. of buildings and infrastructure assets damaged by flooding. 			<ul style="list-style-type: none"> ensure delivery of key urban regeneration projects. ○ Ensure full implementation of the Council's public housing programme including collaborating with the Department of Housing. ○ Collaborate with private developers in relation to the provision of new private housing development including the provision of enabling infrastructure. ○ Collaborate with Irish Water in relation to the upgrading and provision of water and wastewater infrastructure to facilitate new residential and commercial development. ○ Collaborate with strategic partners to ensure delivery new green infrastructure. ○ Collaborate with strategic partners (e.g. OPW) to ensure delivery of Flood Relief Schemes.

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	<ul style="list-style-type: none"> Reduction in flood damage to buildings and infrastructure. 				
Cultural Heritage	<ul style="list-style-type: none"> Protect and preserve architectural heritage including structures on the Record of Protected Structures, vernacular and historic structures. Protect and enhance the Cathedral Quarter Architectural Conservation Area. Protect and enhance the integrity of Archaeological Monuments. 	<ul style="list-style-type: none"> No. and condition of structures on the Record of Protected Structures and other vernacular and historic structures within Donegal. No. and condition of historic structures within the Cathedral Quarter Architectural Conservation Area. No. and condition of archaeological monuments within Donegal. 	DCC, Department of Housing, Local Government and Heritage	Ongoing	<ul style="list-style-type: none"> Utilise built heritage funding (e.g. Built Heritage Investment Scheme and Historic Structures Fund) to maintain and improve the condition of existing built heritage. Ensure compliance of new developments proposals with built heritage protection policies of the plan through the development management process. Expeditious use of the planning enforcement system to prevent unauthorised loss of built and archaeological heritage.
Landscape	To protect and manage the local landscape including landscape and visual features elements and characteristics of specific relevance to Donegal	Impact of new developments on landscape and visual features elements and characteristics.	DCC	Biennial	<ul style="list-style-type: none"> Ensure rigorous assessment of development proposals in Especially High Scenic Amenity and High Scenic Amenity areas. Ensure compliance with the zonings objective of areas zoned Open Space and Recreation.

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					<ul style="list-style-type: none"> ○ Review zonings on lands which spatially interact with key landscape and visual features, elements and characteristics as necessary.

