Comhairle Chontae Liatroma
Leitrim County Council

Comhairle Contae
Ros Comáin
Roscommon
County Council

Strategic Environmental Assessment (SEA) Environmental Report

Non-Technical Summary

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SEA Environmental Report

Appendix II – Non-Technical Summary

FOR THE

Carrick-on-Shannon
Joint Local Area Plan 2025-2031

for: Leitrim and Roscommon County Councils

Comhairle Chontae Liatroma
Leitrim County Council

Comhairle Contae
Ros Comáin
Roscommon
County Council

by: CAAS Ltd.

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Section 1 Introduction and Terms of Reference

This is the Non-Technical Summary of the Environmental Report for the Carrick-on-Shannon Local Area Plan (LAP) 2025-2031. The purpose of the Environmental Report is to provide a clear understanding of the likely environmental consequences of decisions regarding the adoption and implementation of the Plan. The Environmental Report has been prepared as part of a Strategic Environmental Assessment (SEA) process for the Plan.

What is SEA?

SEA is a systematic process of predicting and evaluating the likely environmental effects of implementing a proposed plan, or other strategic action, in order to ensure that these effects are appropriately addressed at the earliest appropriate stage of decision-making on a par with economic, social and other considerations.

Why is SEA needed? The Benefits

SEA is the Councils' and the public's guide to what are generally the best areas for development in the town.

SEA enables the Councils to direct development towards robust, well-serviced and connected areas in the town – thereby facilitating the general avoidance of incompatible development in the most sensitive, least well-serviced and least well-connected areas, in the town and beyond.

SEA provides greater certainty to the public and to developers. Plans are more likely to be adopted without delays or challenges and planning applications are more likely to be granted permission. Environmental mitigation is more likely to cost less.

The Plan directs incompatible development away from the most sensitive areas in the town and focuses on directing compact, sustainable development within the existing envelope of the Plan area. Development of these generally more robust, well-serviced and well-connected areas of the town will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation.

Compact development can be accompanied by placemaking initiatives to enable the town to become a more desirable place to live – so that it maintains populations and services.

Compatible sustainable development in the town's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.

How does the SEA work?

All of the main environmental issues in the area were assembled and considered by the team who prepared the Plan. This helped them to devise a Plan that contributes towards the protection and management of environmental sensitivities. It also helped to identify wherever potential conflicts between the Plan and the environment exist and enabled these conflicts to be mitigated.

The SEA was scoped in consultation with designated environmental authorities.

What is included in the Environmental Report that accompanies the Plan?

- A description of the environment and the key environmental issues;
- A description and assessment of alternatives for the Plan;
- An assessment of the provisions of the Plan; and,
- Mitigation measures, which will avoid/reduce the environmental effects of implementing the Plan and will contribute towards compliance with important environmental protection legislation.

Difficulties Encountered during the SEA process

No significant difficulties have been encountered during the undertaking of the assessment to date.

What happens at the end of the process?

An SEA Statement is prepared which summarises, inter alia, how environmental considerations have been integrated into the Plan.

Section 2 The Plan

2.1 Introduction

The Carrick-on-Shannon Joint Local Area Plan 2025-2031 sets out the overall strategy for the proper planning and sustainable development of Carrick-on-Shannon and consists of a written statement and accompanying maps including Local Objectives specific to Carrick-on-Shannon. These Objectives will provide a framework for guiding the future development of housing, transportation, employment, heritage, tourism, and social and community infrastructure in the town.

The Plan has been prepared under the Planning and Development Act 2000 (as amended), particularly Sections 18-20.

2.2 Vision and Structure

The Plan provides a framework to deliver on a vision for Carrick-on-Shannon to "respond positively to the distinct setting and built form of the area and to continue to create an environment that the local community and visitors can relate to and identify with in terms of its scale and quality".

The Plan's written statement is divided into ten chapters as follow:

1. Introduction and Context
2. Town Centre Frist and Regeneration
3. Economic Development and Tourism
4. Homes and Communities
5. Climate Action and Flood Risk
6. Movement and Transport
7. Social and Community Infrastructure
8. Built and Natural Heritage
9. Land Use Strategy
10. Implementation and Monitoring

2.3 Strategic work undertaken by the Councils to ensure evidence-based planning

The Plan has been prepared to deliver a collaborative and integrated framework for the future development of the town.

It is the first such joint plan for the town and it has a strong focus on the development of both the Carrick-on-Shannon and Cortober areas of the town.

In preparing the Plan, information relating to various sectors, from different Departments within the Councils and from different bodies and organisations, was gathered and analysed, contributing towards the development of evidence-led Plan provisions. This work included undertaking a Settlement Capacity Audit, undertaking a Social Infrastructure Audit and preparing a Local Transport Plan.

The undertaking of the SEA process was part of this strategic work and contributed towards the integration of environmental considerations into individual Plan provisions as summarised in Section 6 of this report.

2.4 Relationship with other relevant Plans and Programmes

The Plan sits within a hierarchy of statutory documents setting out public policy for, among other things, land use planning, infrastructure, sustainable development, tourism, environmental protection and environmental management. The Plan must comply with relevant higher-level strategic actions and will, in turn, guide lower-level strategic actions. These documents have been subject to their own environmental assessment processes, as relevant.

The National Planning Framework sets out Ireland's planning policy direction up until 2040. The National Planning Framework is to be implemented through Regional Spatial and Economic Strategies and lower tier Development Plans and Local Area Plans. The Regional Spatial and Economic Strategy for the Northern and Western Region sets out objectives for land use planning, tourism, infrastructure, sustainable development, environmental protection and environmental management that have been subject to environmental assessment and must, as relevant and appropriate, be implemented through the Leitrim and Roscommon County Development Plans, that set out the overarching development strategy for the Counties, and the Local Area Plan.

The Plan fully aligns with the provisions of the existing wider planning framework, including the National Planning Framework, the National Climate Action Plans, the Northern and Western Regional Spatial and Economic Strategy, the Leitrim County Development Plan 2023-2029, the Roscommon County Development Plan 2022-2028, the Leitrim Climate Action Plan 2024-2029 and the Roscommon Climate Action Plan 2024-2029, all of which have been subject to legislative requirements relating to public consultation and environmental assessment/screening for environmental assessment.

With respect to the Leitrim and Roscommon County Development Plans, the provisions of these plans take precedence over the Local Area Plan. For the avoidance of duplication, policies/objectives as set out in Volume 1 (Written Statements) of both of the above-mentioned County Development Plans and the Development Management standards as set out in Chapter 13 of the Leitrim County Development Plan and Chapter 12 of the Roscommon County Development Plan have not been repeated in the Local Area Plan. All development proposals put forward in accordance with the Local Area Plan's provisions must also comply with the relevant County Development Plan.

In order to be realised, projects included in the Local Area Plan (in a similar way to other projects from any other sector) 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.

Section 3 The Environmental Baseline

3.1 Introduction

The summary of the environmental baseline of the Plan area is described in this section. This baseline together with the Strategic Environmental Objectives, which are identified in Section 3.11, is used in order to identify, describe and evaluate the likely significant environmental effects of implementing the Plan and in order to determine appropriate monitoring measures.

3.2 Likely Evolution of the Environment in the Absence of the Plan

In the absence of a new Local Area Plan, the framework for development across the Plan area would be provided by the County Development Plans and other related documents. There would be no Local Area Plan to provide additional detail beyond that provided already through the existing planning framework as how to achieve sustainable development and environmental protection and management in the town.

As a result, there would be both:

- A decreased likelihood in the extent, magnitude and frequency of the positive environmental effects identified by this assessment occurring; and;
- An increased likelihood in the extent, magnitude and frequency of the adverse environmental effects identified by this assessment occurring.

3.3 Biodiversity and Flora and Fauna

Key ecological sensitivities within and surrounding the Plan area include:

- **Lough Drumharlow proposed Natural Heritage Area designated partially within/adjacent to the north-western parts of the Plan area.** Sensitive features of this site include a lake with extensive areas of wet grassland (callows), woodland, raised bog and improved pasture. The site is utilised by a flock of Greenland white-fronted goose (a species listed on Annex I of the EU Birds Directive).
- **Aquatic and riverine ecology associated with the River Shannon**, including its tributaries and riparian buffer zones, and **Lough Corry**;
- **Locally important habitats within the Plan area**, including various woodlands, trees, parks, gardens, hedgerows, old buildings/stone walls, railway lines, pollinator sites and lands used for agriculture within and surrounding the Plan area, providing habitats for flora and fauna and facilitating linkages and corridors to the surrounding countryside for the wildlife.

Designated sites in the wider area include Special Areas of Conservation[1] (SACs) and Special Protection Areas[2] (SPAs). These are mapped on Figure 3.1. There are a total of three European sites (three SACs) designated within 15 km of the Plan boundary:

- Cuilcagh-Anierin Uplands SAC (Site Code: 000584) [3];
- Annaghmore Lough (Roscommon) SAC (Site Code: 001626)[4]; and
- Lough Arrow SAC (Site Code: 001673)[5].

[1] SACs have been selected for protection under the European Council Directive on the conservation of natural habitats and of wild fauna and flora (92/43/EEC) due to their conservation value for habitats and species of importance in the European Union. The Habitats Directive seeks to establish Natura 2000, a network of protected areas throughout the EU. It is the responsibility of each member state to designate SACs to protect habitats and species, which, together with the SPAs designated under the 1979 Birds Directive, form Natura 2000. The European Communities (Birds and Natural Habitats) Regulations 2011 consolidate the European Communities (Natural Habitats) Regulations 1997 to 2005 and the European Communities (Birds and Natural Habitats) (Control of Recreational Activities) Regulations 2010. The Regulations have been prepared to address several judgments of the Court of Justice of the European Union (CJEU) against Ireland, notably cases C-418/04 and C-183/05, in respect of failure to transpose elements of the Birds Directive and the Habitats Directive into Irish law.

[2] SPAs have been selected for protection under the 1979 European Council Directive on the Conservation of Wild Birds (79/409/EEC) - referred to as the Birds Directive - due to their conservation value for birds of importance in the EU.

[3] Sensitive features comprise: oligotrophic waters containing very few minerals of sandy plains; natural dystrophic lakes and ponds; Northern Atlantic wet heaths with *Erica tetralix*; European dry heaths; alpine and boreal heaths; species-rich Nardus grasslands, on siliceous substrates in mountain areas; blanket bogs; transition mires and quaking bogs; petrifying springs with tufa formation; siliceous scree of the montane to snow levels; siliceous rocky slopes with chasmophytic vegetation; and slender green feather-moss.

[4] Sensitive features comprise: alkaline fens; and geyer's whorl snail.

[5] Sensitive features comprise hard oligo-mesotrophic waters with benthic vegetation of *Chara spp.*

The CORINE 2018[6] mapping identifies the land cover of central parts of the Plan area as urban fabric and surrounding lands identified as pastures and land principally occupied by agriculture with significant areas of natural vegetation. Areas of watercourse, water body and inland marsh follow the route of the River Shannon, that flows from the north-west to the south-east through the centre of the Plan area. Categories from CORINE mapping that may indicate areas with the potential for Annex I habitats (as shown on Figure 3.2) partially within and adjacent to the Plan area comprise water body and inland marsh (a low-lying land usually flooded in winter, and with ground saturated by fresh water all-year round).

Existing Problems
Ireland's Article 17 report on the Status of EU Protected Habitats and Species in Ireland (DCHG, 2019) identifies various Irish, EU-protected habitats and species to be of unfavourable status and many to be still declining, although it also identifies that a range of positive actions are underway. Ireland's Article 12 Birds Directive Reports and the 6th National Report under the Convention of Biological Diversity identify similar issues.

The Plan includes measures to contribute towards the protection of biodiversity and flora and fauna and associated ecosystem services.

Previous changes in land uses arising from human development have resulted in a loss of biodiversity and flora and fauna; however, legislative objectives governing biodiversity and fauna were not identified as being conflicted with. The Plan includes measures to contribute towards the protection of biodiversity and flora and fauna and associated ecosystem services.

3.4 Population and Human Health

The results of Census 2022 within the CSO settlement boundary of Carrick-on-Shannon recorded a population of 4,743 persons.

The Plan reflects the population projections for Carrick-on-Shannon and Cortober as set out in the Core Strategies outlined in the Leitrim County Development Plan 2023-2029 and Roscommon County Development Plan 2022- 2028. The Core Strategies outline the housing allocation for each settlement in their respective administrative areas. The number of housing units allocated to both Carrick-on-Shannon and Cortober allow for approximately 430 new homes to be provided for in the town as a whole with approximately 130 units to be provided on infill/brownfield lands.

The population provided for in the Plan will interact with various environmental components. Potential interactions include:

- Recreational and development pressure on habitats and landscapes;
- Contribution towards increase in demand for waste water treatment at the municipal level;
- Contribution towards increase in demand for water supply and associated potential impact of water abstraction;
- Potential interactions in flood-sensitive areas; and
- Potential effects on water quality.

Human health has the potential to be impacted upon by environmental vectors (i.e. environmental components such as air, water or soil through which contaminants or pollutants, which have the potential to cause harm, can be transported so that they come into contact with human beings). Hazards or nuisances to human health can arise as a result of exposure to these vectors arising from incompatible adjacent land uses for example. These factors have been considered with regard to the description of: the baseline of each environmental component; and the identification and evaluation of the likely significant environmental effects of implementing the Plan.

Existing Problems
The number of homes within the Plan area with radon levels above the reference level is within the normal range experienced in other locations across the country.

[6] The CORINE (Co-ordinated Information on the Environment) land cover data series was devised as a means of compiling geo-spatial environmental information in a standardised and comparable manner. CORINE has become a key data source for informing environmental and planning policy on a national and European level. The main land cover type in Ireland is agricultural land including forestry, which accounts for two-thirds of the national landmass. Most of this is permanent grassland pastures. Peatlands and wetlands are the second most widespread land cover type, covering almost one-fifth of the country. While forested areas cover about one-tenth of the country. Despite rapid development in the past two decades, Ireland's landscape is predominantly rural and agricultural.

Parts of the Plan area are vulnerable to adverse effects from changes in the occurrence of severe rainfall events and associated flooding from surface water. Flooding in certain circumstances could pose a risk to human health. There is historic and predictive evidence of flooding within the Plan area.

3.5 Soil

Main soil types surrounding the built-up areas[7] of Carrick-on-Shannon are: surface water gleys (wetland soils with slowly permeable horizons resulting in seasonal waterlogging), luvisol soils (generally fertile, widely used for agriculture and associated with significant accumulation of clay) and alluvial soils (associated with alluvial clay, silt or sand river deposits of the River Shannon). Other soil types include peat soils (these often indicative of areas that are the most sensitive to development due to ecological sensitivities and impeded drainage issues) underlying areas within the north and south of the Plan area, to the east of the Shannon.

Geological Survey Ireland coordinate the Irish Geological Heritage Programme, whereby an objective has been set to identify and select sites of geological interest within each county across the country. County Geological Sites (CGSs) do not receive statutory protection like Natural Heritage Areas but receive an effective protection from their inclusion in the planning system. The audit of CGSs in County Leitrim was completed in 2020, which identified 33 CGSs. The audit of CGSs in County Roscommon was completed in 2012, which identified 29 CGSs. There are no designated County Geological Sites occurring within the Plan area. The closest designated CGS to Carrick-on-Shannon is located c. 3 km to the south of the Plan area (in County Roscommon), namely Mid Roscommon Ribbed Moraines CGS (Site Code: RO022).

The GSI have identified[8] the Plan area as having mainly low levels of landslide susceptibility.

In the absence of mitigation, contaminated materials have the potential to adversely impact upon human health, water quality and habitats and species. As is the case with other urban and semi-urban areas across the country, there is potential for contamination at sites within the Plan area, especially where land uses occurred in the past, in the absence of environmental protection legislation.

3.6 Water

Since 2000, Water Management in the EU has been directed by the Water Framework Directive 2000/60/EC (WFD). The WFD requires that all Member States implement the necessary measures to prevent deterioration of the status of all waters - surface, ground, estuarine and coastal - and protect, enhance and restore all waters with the aim of achieving *good status*. All public bodies are required to coordinate their policies and operations so as to maintain the *good status* of water bodies which are currently unpolluted and improve polluted water bodies to *good status.*

Carrick-on-Shannon is drained by the River Shannon and its tributaries. The current WFD (2016-2021) status[9] of the rivers and streams draining the Plan area is *moderate* (identified by the EPA as 'Shannon Upper_050' and 'Shannon Upper_060'). The current WFD status (2016-2021) of lakes Eiding and Corry adjacent to the Plan area is *poor*. Subject to exemptions provided for by Article 4 of the WFD, these water bodies will need improvement in order to comply with the objectives of the WFD. Figure 3.3 illustrates the WFD surface water status within and surrounding the Plan area.

The WFD status (2016-2021) of all groundwater underlying the Plan area is currently identified as being of *good* status.

A Strategic Flood Risk Assessment (SFRA) document accompanies this SEA Environmental Report and the Plan. Requirements in relation to SFRA are provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (Department of Environment and Office of Public Works, 2009) and associated Department of the Environment, Community and Local Government Circular PL2/2014. Flood risk management and drainage provisions are already in force through the Leitrim County Development Plan 2023-2029 and Roscommon County Development Plan 2022-2028 and related provisions

[7] The built-up areas are mainly made up of urban soils. Urban soils are soils, which have been disturbed, transported or manipulated by human activity in the urban environment and are often overlain by a non-agricultural, man-made surface layer that has been produced by mixing, filling or by contamination of land surfaces in urban and suburban areas.
[8] https://www.gsi.ie/en-ie/programmes-and-projects/geohazards/projects/Pages/Landslide-Susceptibility-Mapping.aspx
[9] As per EPA's WFD Status 2016-2021 classification (https://gis.epa.ie/EPAMaps/).

have been integrated into the LAP. In addition, land use zoning contained within the Plan has been informed by the SFRA process and associated delineation of flood risk zones. Historical flooding is documented by the Office of Public Works and is included in the SFRA document that accompanies the Plan. Predictive flood risk mapping is also available from the Office of Public Works and is included in the SFRA.

The most significant source of flood risk within the Plan area is from fluvial (from rivers and streams). There are also other sources of flooding present including from pluvial (rainwater) and surface drainage systems sources.

Existing Problems

Subject to exemptions provided for by Article 4 of the WFD, based on available water data, the recorded status of certain surface and groundwater bodies will need improvement in order to comply with the objectives of the WFD. The Plan includes provisions that will contribute towards improvements in the status of waters.

There is elevated levels of flood risk from fluvial sources at various locations across the Plan area. The preparation of the Plan, SEA and SFRA has taken place concurrently and the findings of the SFRA have informed both the Plan and the SEA.

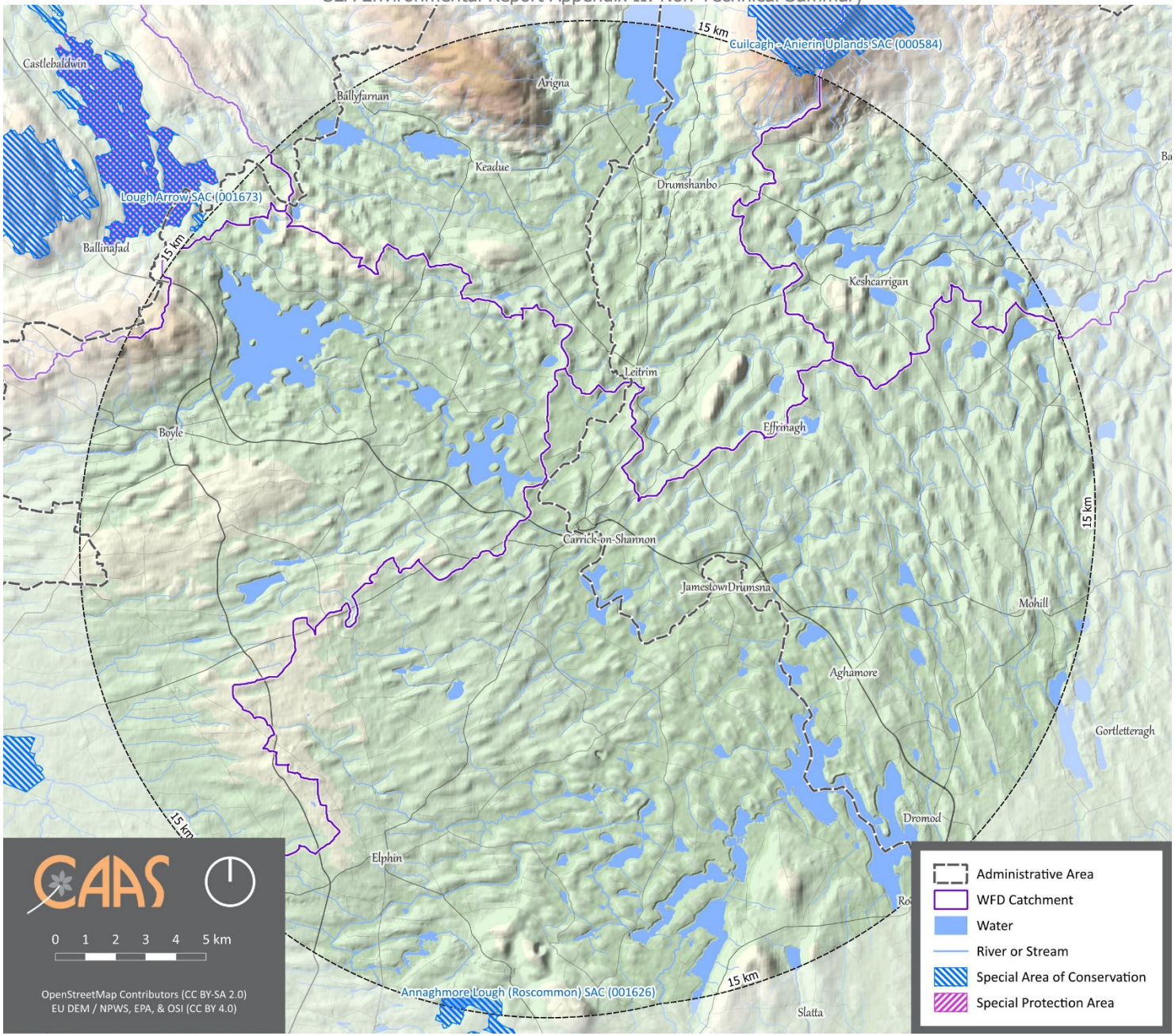

Figure 3.1 European Sites within and within 15 km buffer of the Plan area

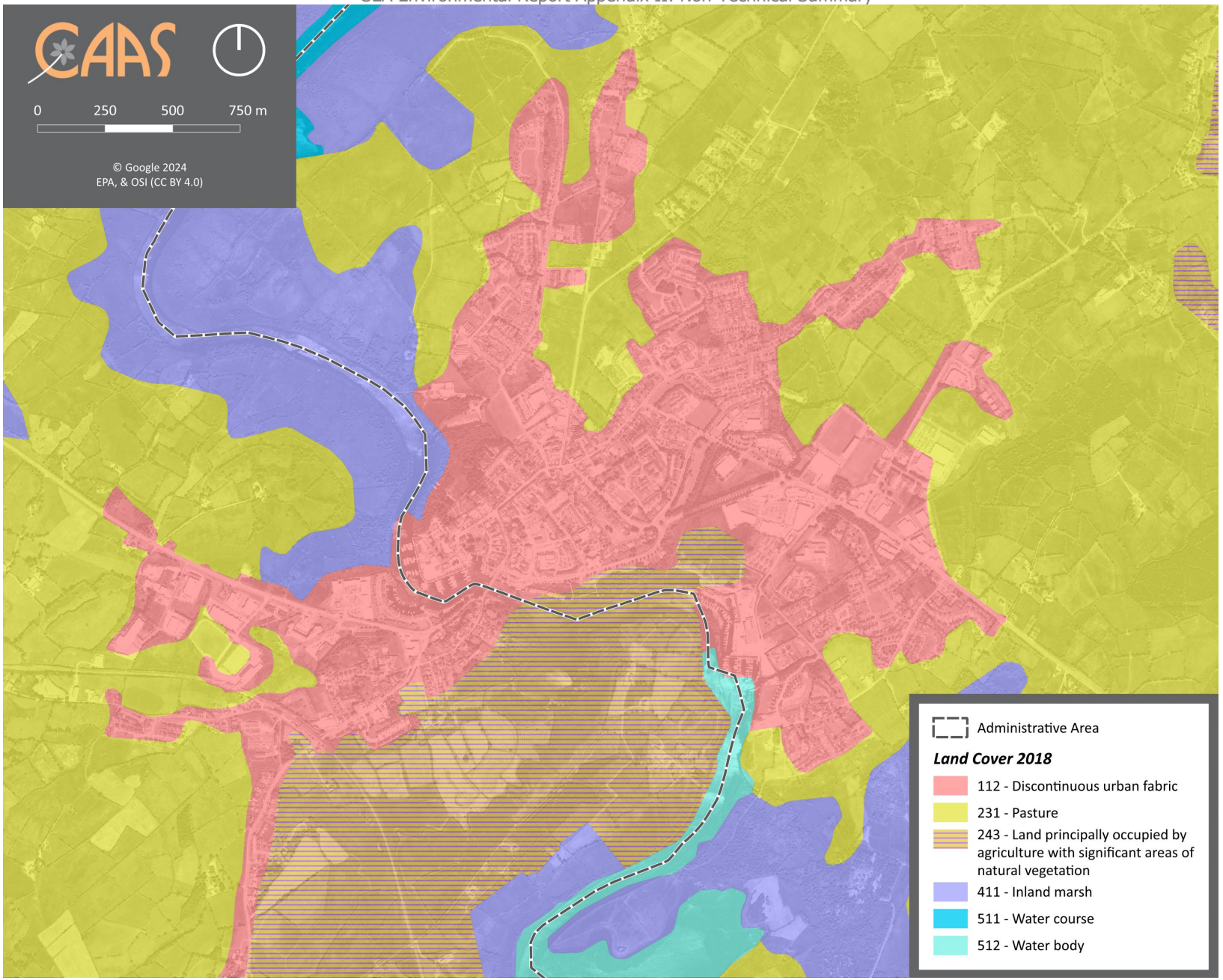

Figure 3.2 CORINE Land Cover Mapping 2018

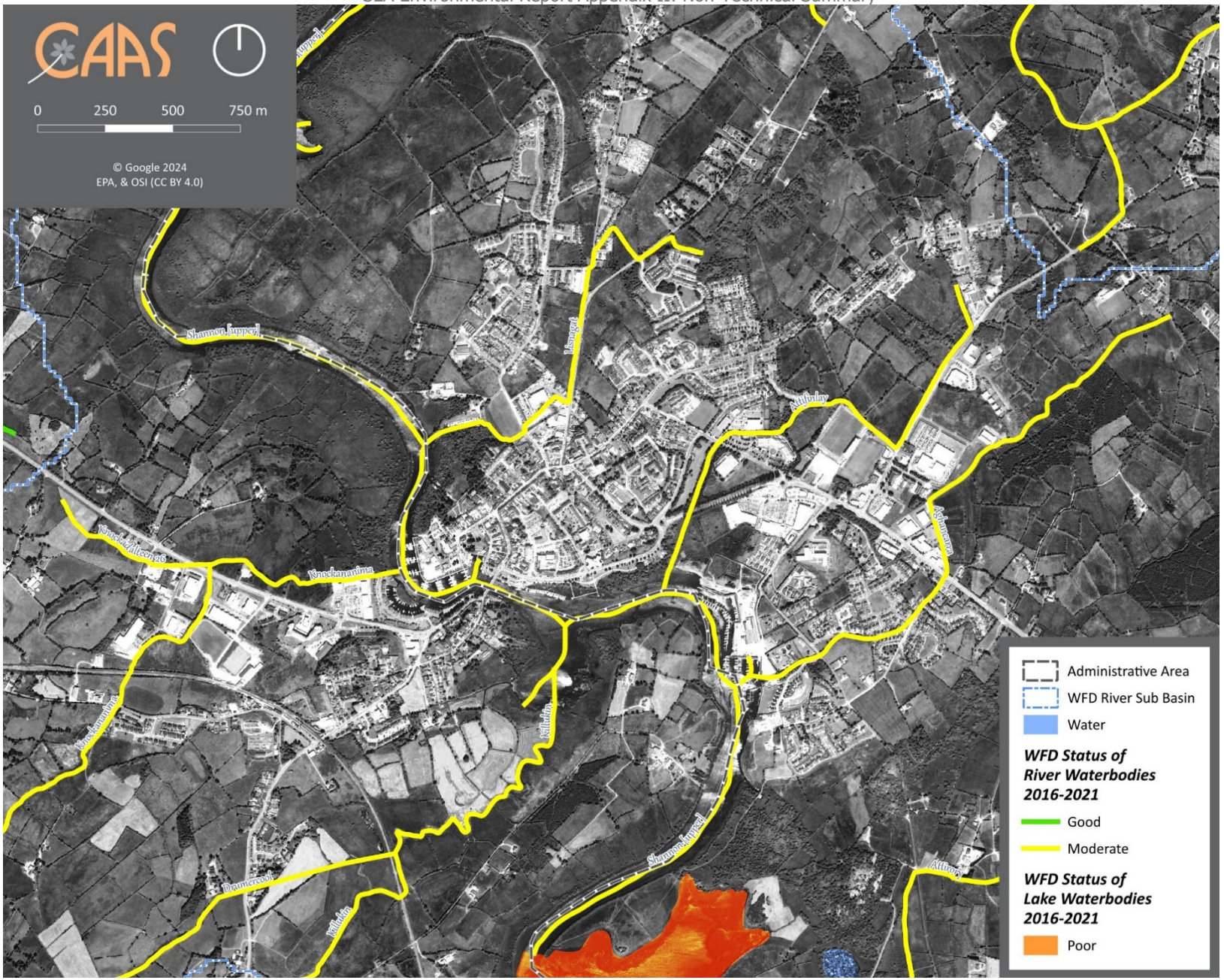

Figure 3.3 Surface Water Status (2016-2021)

3.7 Air and Climatic Factors

Climate mitigation describes the action to reduce the likelihood of climate change occurring or reduce the impact if it does occur. This can include reducing the causes of climate change (e.g. emissions of greenhouse gases) as well as reducing future risks associated with climate change.

The National Climate Action Plan 2024 is the second statutory update to the plan since the Climate Action and Low Carbon Development (Amendment) Act 2021 was signed into law, committing Ireland to 2030 and 2050 targets for reducing greenhouse gas emissions. It builds on Climate Action Plan 2023, outlining how Ireland will accelerate the actions required to respond to the climate crisis, putting climate solutions at the centre of Ireland's social and economic development.

The Climate Action Plan 2025 is the third statutory annual update to the Climate Action Plan. Climate Action Plan 2025 lays out a roadmap of actions that are intended to lead to meeting the national climate objective of pursuing and achieving, by no later than the end of the year 2050, the transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy. It aligns with legally binding economy-wide carbon budgets and sectoral emissions ceilings. Climate Action Plan 2025 builds upon the Climate Action Plan 2024 by refining and updating the measures and actions required to deliver the carbon budgets and sectoral emissions ceilings and it should be read in conjunction with Climate Action Plan 2024. The Plan provides a roadmap for taking decisive action to halve Ireland's emissions by 2030 and achieve climate neutrality by no later than 2050, as committed to in the Climate Action and Low Carbon Development (Amendment) Act 2021.

Climate adaptation is a change in natural or human systems in response to the impacts of climate change. These changes moderate harm or exploit beneficial opportunities and can be in response to actual or expected impacts.

The National Adaptation Framework (2024) aims to create a unified approach involving both government and society to adapt to climate change. It outlines how various sectors and local authorities can implement adaptation measures to minimise Ireland's vulnerability to climate change's adverse effects while taking advantage of any beneficial impacts. The Framework emphasises the importance of integrating adaptation strategies into all levels of policy making, infrastructure development, and local planning.

The Leitrim Climate Action Plan 2024-2029 and Roscommon Climate Action Plan 2024-2029 will contribute towards addressing the mitigation of greenhouse gas emissions, climate change adaptation, and strengthening the alignment between national climate policy and the delivery of local climate action.

The EPA's (2023) *Air Quality in Ireland 2022 Report* identifies that:

- Air quality in Ireland is generally good, however, there are concerning localised issues.
- Ireland met all of its EU legal requirements in 2022 but it did not meet the more stringent health-based World Health Organisation (WHO) Air Quality guidelines.
- Fine particulate matter (PM2.5) from solid fuel combustion and nitrogen dioxide (NO2) from vehicle emissions are the main pollutants.
- It is estimated that there are approximately 1,300 premature deaths annually in Ireland due to poor air quality from PM2.5.
- The choices people make in how they heat their homes and how they travel directly impact the quality of the air they breathe.
- Ireland's ambition in the Clean Air Strategy is to move towards the WHO Air Quality guidelines.

The report further identifies the critical role of local authorities in the enforcement and implementation of existing plans and investment in infrastructure to encourage cleaner and healthier air quality choices, including:

- Local authorities must provide more resources to increase air enforcement activities and implement the new solid fuel regulations.
- Investment in clean public transport infrastructure across the country must be maintained and increased.
- More safe footpaths and cycle lanes must be created to continue to increase active travel as a viable and safe alternative to car use and associated NO_2 emissions.

Existing Problems

In the *Annual Review 2023* the Climate Change Advisory Council advised that, at the current rate of policy implementation, Ireland will not meet the targets set in the first and second carbon budget periods unless urgent action is taken immediately and emissions begin to fall much more rapidly.

Air quality and noise can present challenges, especially in urban areas, as detailed under the relevant sub-sections above. With regard to air quality, air pollution from transport is dominated by NO_x emissions. Of these, NO_2 is particularly impactful from a health perspective. The Plan will help to facilitate reductions in emissions and a transition from dependence on fossil fuel combustion powered transport.

3.8 Material Assets

Other material assets, in addition to those referred to below, covered by the SEA include archaeological and architectural heritage (see Section 3.9) natural resources of economic value, such as water and air (see Sections 3.6 and 3.7).

Public Assets and Infrastructure
Public assets and infrastructure that have the potential to be impacted upon by the Plan, if unmitigated, include: the town of Carrick-on-Shannon; resources such as public open spaces, parks and recreational areas; public buildings and services; transport and utility infrastructure (electricity, gas, telecommunications, water supply, waste water infrastructure etc.); and natural resources that are covered under other topics such as water and soil.

Waste Water
Uisce Éireann, working in partnership with Leitrim and Roscommon County Councils, is making investments to undertake essential upgrade works to waste treatment plants in towns and villages across the Counties. The upgrading of infrastructure will contribute towards compliance with the Water Framework Directive, EU Urban Waste Water Treatment Directive and Drinking Water Regulations and will help to protect human health and maintain the quality of surface and ground waters.

The Wastewater Treatment Plant (WWTP) serving Carrick-on-Shannon is currently not listed as a priority area (such areas are those where improvements are required to resolve urgent environmental issues).

The Carrick-on-Shannon WWTP has a design capacity of 11,500 Population Equivalent (PE), with current load of 5,900 PE.[10] As indicated by Uisce Éireann, there is spare capacity available.[11]

The Carrick-on-Shannon WWTP (Registration No. D0154-01) is currently fully compliant with the Emission Limit Values (ELVs) set in the Wastewater Discharge Licence in the most recent available Annual Environmental Report 2023 (published in March 2024).[12]

Water Supply
Uisce Éireann is responsible for providing and maintaining adequate public water supply infrastructure throughout Counties Leitrim and Roscommon.

Carrick-on-Shannon is located within the Carrick-on-Shannon Water Resource Zone[13] and as identified by Uisce Éireann, there is potential capacity available to meet targeted population growth by 2032, although an improvement in level of service is required.[14]

The Water Supply Schemes (WSS) for the Plan area include the South Leitrim Regional Public Water Supply, which sources water from the Carrick-on-Shannon Water Treatment Plant and serves a population of 15,390 persons. The Water Treatment Plant produces approximately 10,500 m^3/day of water.[15]

Under Section 58 of the Environmental Protection Agency Act 1992, the EPA is required to collect and verify monitoring results for all water supplies in Ireland covered by the European Communities (Drinking Water) Regulations, 2000. The EPA publishes their results in annual reports that are supported by

[10] https://www.water.ie/docs/aers/2023/D0154-01_2023_AER.pdf
[11] Uisce Éireann: Settlements with Waste Water Discharge Authorisations - *Wastewater Treatment Capacity Register*. The register provides an indication of available wastewater treatment capacity based on loads received in 2021 and available treatment plan capacity now or by completion of a project by 2024 (where relevant). Available at: https://www.water.ie/connections/developer-services/capacity-registers/wastewater-treatment-capacity-register/leitrim/ (Published in June 2023).
[12] https://www.water.ie/docs/aers/2023/D0154-01_2023_AER.pdf
[13] A Water Resource Zone (WRZ) is an independent water supply system serving a region, city, town or village and is governed by topography or the extent of the water distribution network in an area. A WRZ may include multiple Water Treatment Plants and/or sources.
[14] Capacity constraints exist, connection applications will be assessed on an individual basis considering their specific load requirements - Level of service (LoS) improvement required to meet 2032 population targets. Improvement proposals will include but are not limited to leakage reduction and/or capital investment. These proposals will be required to maintain/improve levels of service as demand increases. These proposals will be developed & prioritised through the National Water Resources Plan and investment planning process. Source: https://www.water.ie/connections/developer-services/capacity-registers/water-supply-capacity-register/leitrim/(Published in June 2023).
[15] https://www.epa.ie/publications/compliance--enforcement/drinking-water/audit-reports/leitrim/South-Leitrim-Regional-Audit-24012023.pdf

Remedial Action Lists (RALs). The RAL identifies water supplies that are not in compliance with the Regulations mentioned above. The most recent EPA Remedial Action List (Q4 of 2023, published in January 2024)[16] does not include any water scheme that supplies the Plan area.

Waste Management
The National Waste Management Plan for a Circular Economy (Regional Waste Management Planning Offices, 2024) sets out a framework for the prevention and management of waste in Ireland for the period 2024 to 2030. The Plan seeks to influence sustainable consumption and prevent the generation of waste, improve the capture of materials to optimise circularity and enable compliance with policy and legislation.

Transport
Carrick-on-Shannon is strategically located near a number of well-served transport routes, including the N4, which traverses the centre of the town, and links the Plan area to Sligo, Longford and Mullingar. Carrick-on-Shannon is located on the Dublin Connolly-Sligo train line, served by Irish Rail. Carrick-on-Shannon is also served by a number of bus companies, including Bus Éireann, Local Link and private bus companies. Regional and local roads provide vital links between the town and retail, service and employment centres throughout the County and to adjoining counties.

A Local Transport Plan (LTP) has been integrated into the Plan. The purpose of the LTP is to guide the future transport and mobility needs of Carrick-on-Shannon, taking into account the transport demand from existing and projected development both within the Plan boundary and surrounding area.

Existing Problems
The provisions of the Plan will contribute towards protection of the environment with regard to impacts arising from material assets.

The provisions of infrastructure and supporting services for development, particularly water and wastewater services, is critical. Current challenges include those identified above.

3.9 Cultural Heritage

Archaeological Heritage
There are 24 identified archaeological sites and monuments protected by law located within the Plan area. Clusters of monuments are located within the centre of the Plan area and across the town's hinterland, including: the town; earthwork sites; church sites; ringforts; and enclosures. The largest of these archaeological sites (LE031-005) is found in the town core, with most of the town core lying within a zone of archaeological potential.[17]

Architectural Heritage
There are a total of 54 protected structures currently in the town (41 in Carrick-on-Shannon and 13 in Cortober)[18]. Clusters of architectural heritage are located within the town's centre and examples of architectural heritage include: St. George's Mausoleum; the Courthouse; Hartley Manor; Old Quay Walls; and remains of a tower/fort.

An Architectural Conservation Area (ACA) is a place, area, group of structures or townscape, which is of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest or contributes to the appreciation of a Protected Structure. An ACA may or may not include Protected Structures. There is currently one ACA designated within the Plan area: Carrick-on-Shannon ACA (St. George's Terrace; Main Street; and Bridge Street).

Existing Problems
The context of archaeological and architectural heritage has changed over time however no existing conflicts with legislative objectives governing archaeological and architectural heritage have been identified.

[16] Available at: https://www.epa.ie/publications/compliance--enforcement/drinking-water/annual-drinking-water-reports/Copy-of-Q4-2023-RAL-for-Drinking-Water-Supplies-FINAL.pdf
[17] Carrick-on-Shannon JLAP 2025-2031
[18] Carrick-on-Shannon JLAP 2025-2031

3.10 Landscape

Carrick-on-Shannon is located on relatively flat land, with the River Shannon flowing from the north-west to the south-east through the centre of the Plan area. The land surrounding the Plan area is predominantly agricultural with areas of peatlands identified within parts of the north and south of the Plan area, to the east of the Shannon.

he purpose of landscape character assessment is to provide the foundation for policy formulation and decision making for landscape management.

There are a range of different landscapes found in the Plan area, each with varying visual and amenity values, topography, exposure levels and each containing a variety of habitats. Each landscape type has varying capacity to absorb development related to its overall sensitivity.

The existing Leitrim County Development Plan 2023-2029 identifies 17 Landscape Character Types, 14 Landscape Character Areas and 29 Scenic Views and Prospects within Leitrim County Council's administrative area. The Plan area is located within the 'Drumlin Farmland with Peat Bogs' and 'River Floodplains' Landscape Character Types and 'South Leitrim Drumlins and Shannon Basin' Landscape Character Area. There are no Scenic Views and Prospects within the Plan area situated in County Leitrim.

The existing Roscommon County Development Plan 2022-2028 identifies seven Landscape Character Types, 36 Landscape Character Areas, 26 Scenic Views and nine Scenic Routes within Roscommon County Council's administrative area. The Plan area is located within the 'River Corridor' Landscape Character Type and Lough Corry Drumlin Basin Landscape Character area. There are no Scenic Views and Routes within the part of the Plan area situated in County Roscommon. There is one Area of High Amenity located within the Plan area, 'River Shannon and Lakes'.

Existing Problems
New developments have resulted in changes to the visual appearance of lands within the Plan area however legislative objectives governing landscape and visual appearance were not identified as being conflicted with.

3.11 Strategic Environmental Objectives

Strategic Environmental Objectives (SEOs) are methodological measures developed from policies that generally govern environmental protection objectives established at international, Community or Member State level e.g. the environmental protection objectives of various European Directives that have been transposed into Irish law and which are required to be implemented. The SEOs are set out under a range of topics (see Table 3.1) and are used as standards against which the provisions of the Plan and the alternatives are evaluated in order to help identify which provisions would be likely to result in significant environmental effects and where such effects would be likely to occur, if – in the case of adverse effects – unmitigated.

Table 3.1 Strategic Environmental Objectives

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
Biodiversity, Flora and Fauna	**BFF**	No net contribution to biodiversity losses or deterioration	• To preserve, protect, maintain and, where appropriate, enhance the terrestrial, aquatic and soil biodiversity, particularly 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 • Safeguard national, regional and local designated sites and supporting features which function as stepping stones for migration, dispersal and genetic exchange of wild species • Enhance biodiversity in line with the National Biodiversity Strategy and its targets • To protect, maintain and conserve natural capital
Population and Human Health	**PHH**	Improve quality of life for all ages and abilities based on high-quality, serviced, well connected and sustainable residential, working, educational and recreational environments	• Promote economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management • Ensure that existing population and planned growth is matched with the required public infrastructure and the required services • Safeguard citizens from environment-related pressures and risks to health and well-being

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
Soil (and Land)	**S**	Ensure the long-term sustainable management of land	• Protect soils against pollution, and prevent degradation of the soil resource • Promote the sustainable use of infill and brownfield sites over the use of greenfield sites • Safeguard areas of prime agricultural land and designated geological sites
Water	**W**	Protection, improvement and sustainable management of the water resource	• Ensure that the status of water bodies is protected, maintained and improved in line with the requirements of the Water Framework Directive • Ensure water resources are sustainably managed to deliver proposed regional and County growth targets in the context of existing and projected water supply and waste water capacity constraints ensuring the protection of receiving environments • Avoid inappropriate zoning and development in areas at risk of flooding and areas that are vulnerable to current and future erosion • Integrate sustainable water management solutions (such as SuDS, porous surfacing and green roofs) into development proposals
Material Assets	**MA**	Sustainable and efficient use of natural resources	• Optimise existing infrastructure and provide new infrastructure to match population distribution proposals • Ensure access to affordable, reliable, sustainable and modern energy for all which encourages a broad energy generation mix to ensure security of supply – wind, solar, biomass, energy from waste and traditional fossil fuels • Promote the circular economy, reduce waste, and increase energy efficiencies • Ensure there is adequate sewerage and drainage infrastructure in place to support new development • Reduce the energy demand from the transport sector and support moves to electrification of road and rail transport modes • Encourage the transition to a zero-carbon economy by facilitating the development of a grid infrastructure to support renewables and international connectivity. Reduce the average energy consumption per capita including promoting energy efficient buildings, retrofitting, smart- buildings, and grids
Air	**A**	Support clean air policies that reduce the impact of air pollution on the environment and public health	• To avoid, prevent or reduce harmful effects on human health and the environment as a whole resulting from emissions to air from all sectors with particular reference to emissions from transport, residential heating, industry and agriculture • Maintain and promote continuing improvement in air quality through the reduction of emissions and promotion of renewable energy and energy efficiency • Promote continuing improvement in air quality • Reduction of emissions of sulphur dioxide, nitrogen oxides, volatile organic compounds, ammonia and fine particulate matter which are responsible for acidification, eutrophication and ground-level ozone pollution • Meet Air Quality Directive standards for the protection of human health — Air Quality Directive • Significantly decrease noise pollution and move closer to WHO recommended levels.
Climatic Factors	**C**	Achieving transition to a competitive, low carbon, climate-resilient economy that is cognisant of environmental impacts	• To minimise emissions of greenhouse gasses • Integrate sustainable design solutions into infrastructure (e.g. energy efficient buildings; green infrastructure). • Contribute towards the reduction of greenhouse gas emissions in line with national targets. • Promote development resilient to the effects of climate change • Promote the use of renewable energy, energy efficient development and increased use of public transport
Cultural Heritage	**CH**	Safeguard cultural heritage features and their settings through responsible design and positioning of development	• Protect places, features, buildings and landscapes of cultural, archaeological or architectural heritage
Landscape	**L**	Protect and enhance the landscape character	• To implement the Plan's framework for identification, assessment, protection, management and planning of landscapes having regard to the European Landscape Convention

Section 4 Alternatives

4.1 Introduction

The SEA Directive requires that reasonable alternatives (taking into account the objectives and the geographical scope of the plan or programme) are identified, described and evaluated for their likely significant effects on the environment.

Alternatives identified for the Plan and the assessment of their likely significant effects on the environment are summarised below.

4.2 Limitations in Available Alternatives

The Plan is required to be prepared by the existing, already in force, Leitrim and Roscommon County Development Plans and the Planning and Development Act 2000 (as amended), which specifies various types of objectives that must be provided for by the Plan.

The alternatives available for the Plan are significantly limited by the provisions of higher-level planning objectives, including those of the National Planning Framework, the Regional Spatial and Economic Strategy for the Northern and Western Region and the County Development Plans. These documents set out various requirements for the content of the Plan including on topics such as land use zoning and the sustainable development of towns, including Carrick-on-Shannon.

4.3 Alternatives Already Considered

The preparation of the Leitrim and Roscommon County Development Plans and associated SEA process already considered various different types of alternatives, including those relating to population allocations and settlement roles. The selected alternatives for the County Development Plans set requirements for lower tier planning in the Counties and have been integrated into the Local Area Plan as appropriate.

4.4 Compact Development Alternatives

Compact Development Alternative A: "More Consolidated, More Compact Development"

Under this Compact Development Alternative, the town would reach its population allocation under the core strategies as contained in the Leitrim and Roscommon County Development Plans.

The approach under this alternative would allow for water supply, waste water, compact growth, public transport and co-ordinated development considerations to be integrated into the Plan to the highest degree.

The infrastructure required to be in place to achieve the growth targets is already in place or planned under this alternative.

The development of the Town and Outer Core areas would be more compact and sustainable under this scenario and would better support the longer-term viability of the settlement. 30% of residential units would be expected to take place within the existing built-up footprint on infill and/or brownfield sites, with a greater focus on use of consolidation and regeneration sites, with potential for wider regeneration benefits to the town centre, including housing provision. Regeneration, reuse and redevelopment of more central and brownfield and infill lands and

optimising the use of vacant, derelict, and underutilised sites and buildings would be more likely to be achieved.

Giving a strong preference to lands that have both greater capacity to satisfy the principles of active travel and a more realistic opportunity of being developed over the lifetime of the Plan and giving a focus to Opportunity Sites (with clear design and uses identified – making successful applications for the sustainable, compact development of the town more likely) would allow for the proper planning and sustainable development of the town as envisaged by the wider planning framework to the greatest degree.

There would be greater potential and viability for integrated land use and transportation under this alternative, including proximate development patterns linked by active travel infrastructure and public transport. Associated benefits and improvements to the public realm and appearance of the built environment, including liveability and quality of life improvements, would be more likely.

This Compact Development Alternative would make the greatest contribution towards the protection and management of the environment by facilitating development of lands (including those within the Town and Outer Core areas) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the Plan area and beyond. There would be a reduced need for greenfield land consumption under this alternative. This Compact Development Alternative would be considered the most effective out of both Compact Development Alternatives considered in the delivery of a sustainable, low carbon and climate resilient future for the town.

The approach under Compact Development Alternative A 'More Consolidated, More Compact Development' would benefit the protection of various environmental components. Although potentially adverse effects associated with land use development would exist, they would be mitigated to a significant degree. Less residual environmental effects would result.

Under this alternative there would be:

- More optimum use of land and resources, with positive role for addressing climate change, such as potential for reduced carbon heavy travel patterns.
- Greater potential for modal shift to sustainable travel such as walking, cycling and public transport, with knock on benefits for climate resilience in the Plan area.
- Use of already serviced lands in more central and built-up urban area could lead to potential reduced costs for delivery of new supporting infrastructure.
- Creation of more liveable built environments, with greater accessibility to services and amenities for local communities.

Compact Development Alternative B: "Less Consolidated, Less Compact Development"

Under this Compact Development Alternative, the Town would reach its population allocation under the core strategies as contained in the Leitrim and Roscommon County Development Plans.

The approach under this alternative would not allow for water supply, waste water, compact growth, public transport and co-ordinated development considerations to be integrated into the Plan to the highest degree.

Additional infrastructure would be required to accommodate sporadic development, more than would be required for Alternative A 'More Consolidated, More Compact Development' and some development may have to be serviced by private waste water treatment systems which would have to be properly maintained.

The development of the Town and Outer Core areas would be less compact and less sustainable under this scenario and would not optimally support the longer-term viability of the settlement. 30% of residential development would be less likely to be achieved within the existing built-up footprint on infill and/or brownfield sites in comparison with Alternative A 'More Consolidated, More Compact Development'. Under this alternative there would be potential for greater proportion of housing to be delivered outside of the built-up area, including on urban fringe and outer suburban areas and on greenfield sites, creating unsustainable travel patterns with a reliance on the private car. Giving less of a preference to lands that have both greater capacity to satisfy the principles of active travel and a more realistic opportunity of being developed over the lifetime of the Plan and giving less of a focus to Opportunity Sites (there would be no clear guidance on the design parameters or uses provided – making successful applications for the sustainable, compact development of the town less likely) would allow for the proper planning and sustainable development of the town as envisaged by the wider planning framework to a lesser degree.

There would be greater potential for negative impacts on the vitality and viability of the built-up area (including Town and Outer Core areas), due to increased and sustained levels of vacancy and dereliction for existing buildings and brownfield lands. This alternative would be likely to result in a more dispersed pattern of low-density urban development, that would be more difficult to serve with active travel infrastructure and public transport.

This Compact Development Alternative would make less of a contribution towards the protection and management of the environment by facilitating development of lands (including those within the Town and Outer Core areas) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services. Demand to develop more sensitive, less well-serviced lands elsewhere in the Plan area would be provided for. This Compact Development Alternative would be considered the least effective out of both Compact Development Alternatives considered in the delivery of a sustainable, low carbon and climate resilient future for the town.

The approach under Alternative B 'Less Consolidated, Less Compact Development' would benefit the protection of various environmental components to a lesser degree. Although potentially adverse effects associated with land use development would exist, they would be mitigated to in many cases; however, more residual environmental effects would result.

Under this alternative there would be:

- An increase in car dependency and associated carbon heavy travel patterns, which would undermine efforts aimed at securing climate resilience.
- Increased suburban pattern of residential development with potential for self-contained and disconnected built environments.
- Reduced potential for modal shift to sustainable travel options such as walking, cycling and public transport.
- Potential for increased costs associated with the delivery on new supporting infrastructure (roads, footpaths etc.) in more peripheral and outer suburban areas.
- Increased costs for the delivery of necessary supporting infrastructure for urban fringe, outer suburban areas and greenfield sites.

<u>Selected Compact Development Alternative for the Plan: A "More Consolidated, More Compact Development".</u>

4.5 Ecosystem Services Approach Alternatives

The importance of fulfilling natural capital[19] and ecosystem[20] service obligations has increasingly emerged in recent years. An Ecosystems Services Approach would provide a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. An Ecosystems Services Approach would include the integration of ecological considerations at a local level across the Plan area.

Ecosystem Services Approach Alternative A "A Plan that follows an Ecosystems Services Approach to a greater degree" would integrate a strategy throughout the Plan for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way.

Principles that would be integrated throughout the Plan, in a coordinated and comprehensive manner, would include:

- Consideration of natural systems - by using knowledge of interactions in nature and how ecosystems function
- Taking into account of the services that ecosystems provide - including those that underpin social and economic well-being, such as flood and climate regulation or recreation, culture and quality of life
- Involving people - those who benefit from the ecosystem services and those managing them need to be involved in decisions that affect them.

This would mean that there would be:

- An increased likelihood in the extent, magnitude and frequency of positive effects occurring with regard to natural capital[21] and ecosystem service issues, such as the management of air quality, noise pollution, light pollution, pollination, flood risk, water bodies and river basins and natural resources supporting energy production and recreation; and
- A decreased likelihood in the extent, magnitude and frequency of adverse effects on natural capital and ecosystem services.

Ecosystem Services Approach Alternative A "A Plan that follows an Ecosystems Services Approach to a greater degree" would, to the greatest extent:

- Underpin the requirement for nature-based solutions, green and blue infrastructure to be incorporated into development proposals at the detailed design stage, with corresponding recognition of the role natural environment in moderating and adapting to the effects of climate change.
- Contribute to flood prevention and storage capacity measures for development proposals in the Plan area.
- In the formulation of the layout and design of development proposals, contribute to a focus on the conservation, protection and restoration of the natural environment in the Plan area.
- Encourage the use of SuDS for development proposals in the Plan area, offering a more sustainable approach to the management of urban storm water runoff than impermeable surfaces, and conventional underground pipe and storage-based solution. This would contribute to offsetting the impacts of climate change and increase climate resilience.
- Provide more benefits for recreation, amenity, and biodiversity.
- Promote more healthy living environments for local communities.
- Contribute to a reduction in greenhouse gas emissions.
- Improve health and wellbeing.

Ecosystem Services Approach Alternative B: "A Plan that does not does not follow, or follows to a lesser degree, an Ecosystems Services Approach" would not integrate a strategy throughout the Plan for the integrated management of land, water and living resources that promotes conservation

[19] Renewable and non-renewable resources (e.g. plants, animals, air, water, soils, minerals).
[20] Ecosystems are multifunctional communities of living organisms interacting with each other and their environment. Ecosystems provide a series of services for human well-being (ecosystem services) either directly or indirectly contributing towards human wellbeing.
[21] Renewable and non-renewable resources (e.g. plants, animals, air, water, soils, minerals)

and sustainable use in an equitable way. This approach would be less coordinated and comprehensive than would be the case under an Ecosystems Services Approach.

This would mean that there would be:

- A decreased likelihood in the extent, magnitude and frequency of positive effects occurring with regard to natural capital and ecosystem service issues; and
- An increased likelihood in the extent, magnitude and frequency of adverse effects on natural capital and ecosystem services.

Ecosystem Services Approach Alternative B: "A Plan that does not does not follow, or follows to a lesser degree, an Ecosystems Services Approach" would result in:

- Greater potential for focus and reliance on conventional less sustainable surface water drainage methods in the Plan area, such as single function piped drainage and attenuation/storage measures.
- Reduced climate resilience in the built environment.
- Reduced scope for introduction of nature-based flood alleviation measures in development proposals.
- Greater potential for increased costs in the delivery of conventional surface water drainage infrastructure.
- Greater potential for biodiversity and habitat fragmentation.
- Reduced potential for urban greening measures in the built environment.

Selected Ecosystem Services Approach Alternative for the Plan: A "A Plan that follows an Ecosystems Services Approach to a greater degree".

4.6 Local Transport Plan Alternatives

A Local Transport Plan would assist in placing sustainable transport considerations to the forefront of land use planning decisions in the formulation of the Plan. It would examine existing and proposed transport infrastructure for all modes of transport, including walking and cycling, and would provide some insight into existing transport patterns and constraints, facilitating the integration of land use and transport provisions.

Informing the Plan with a Local Transport Plan, which focuses on delivering travel solutions that support moving people from the private car to more sustainable modes, (**Local Transport Plan Alternative A**) would provide a more coordinated and more orderly provision of transport infrastructure and services, with delivery of projects, and associated benefit with respect to sustainable mobility and compact development, more likely. This approach would be more likely to improve the potential for meeting important objectives relating to emissions and energy use. Potentially adverse impacts on environmental components including ecology and water would need to be adequately mitigated at project level.

Local Transport Plan Alternative A would:

- Support greater alignment between and integration of land use planning and transport planning.
- Ensure the assessment of transport demand and its associated impact informs the scale of development proposals, including location, density, required transport infrastructure etc.
- Facilitate a greater shift towards a more sustainable, healthy, and low carbon-built environment.
- Prioritise of active travel measures and considerations in the formulation of development proposals, including the consideration of suitable land for development.
- Promote and encourage a modal shift from the private car to walking and cycling, particularly for short to medium distance trips.
- Prioritise walking, cycling and public transport accessibility.
- Result in improvements in the built environment for the safety and security of those walking and cycling.
- Potentially reduce traffic congestion at peak traffic times, improving road network reliability.

Alternative A would be more likely to result in more connected and accessible built environments, with associated positive benefits for the health and wellbeing of local communities. Alternative A would contribute to the transition of the Plan area to a more low-carbon, climate resilient and healthy urban environment, with reduced car dependency and an increase in sustainable travel such as walking and cycling.

Not informing the Plan with a Local Transport Plan, which focuses on delivering travel solutions that support moving people from the private car to more sustainable modes, (**Local Transport Plan Alternative B**) would provide a less coordinated and less orderly provision of transport infrastructure and services, with delivery of projects, and associated benefit with respect to sustainable mobility and compact development, less likely. This approach would be less likely to improve the potential for meeting important objectives relating to emissions and energy use. Potentially adverse impacts arising from more coherently planned transport developments on environmental components, including ecology and water, could be mitigated at both Plan and project level.

Local Transport Plan Alternative B would:

- Increase the potential for land use planning and developments aspects of the Plan to be considered in isolation of transport planning considerations.
- Mean that the assessment of existing traffic, transport, and movement conditions within the Plan area would not be taken into account in the formulation of policies and objectives.
- Undermine ability to plan for efficient movement of people and services within the Plan area.
- Limit the ability and scope to plan for required transport interventions in the Plan area.
- Not inform site specific transport assessment for development proposals with a Local Transport Plan.
- Reduce support for modal shift from private car travel to active travel, including walking and cycling.

There would be greater potential for the existing pattern of car dependency to continue and increase under Alternative B. Alternative B would undermine policies and objectives supporting climate action and the transition to a more low-carbon urban environment. There would be potential for negative impacts on the health and wellbeing of local communities due to absence of measures for targeted active travel infrastructure.

Selected Local Transport Plan Alternative for the Plan: Alternative A.

4.7 Built Heritage Alternatives

A Plan that adds detailed, local-level provisions to the existing planning framework relating to the conservation of built heritage (**Built Heritage Alternative A**) would further contribute the protection of existing heritage that is already contributed towards by the existing planning framework. By integrating heritage considerations into the Plan, Alternative A would be most likely to ensure that new development respects the historic grain of the built environment and archaeology that currently exists.

Built Heritage Alternative A would:

- Provide a focus for heritage-led regeneration in the existing built environment including conservation, restoration and reuse of built heritage assets.
- Ensure that the conservation of built heritage, including architectural heritage (protected structures) and archaeology is a key consideration, in the formulation of development proposals, as appropriate.
- Promote and support the conservation of the special character and setting of designated Architectural Conservation Areas in the Plan area.
- Promote the protection, retention, and public awareness of vernacular architecture in the Plan area not listed as protected structures or located in ACAs.
- Promote and support the importance of climate-proofing built heritage assets and by reference to Department of Culture Heritage and the Gaeltacht 'Built and Archaeological Heritage, Climate Change Sectoral Adaptation Plan' (2019).

Increased opportunities would be presented for economic vitality, tourism, urban regeneration and placemaking under Alternative A. Under Alternative A, there would be potential to involve local communities in heritage projects, with the aim of improving the socio-economic profile of places, attracting new visitors, business, and residents. Alternative A would result in a reduced need for greenfield land consumption.

A Plan that does not add detailed, local-level provisions to the existing planning framework relating to the conservation of built heritage, relying solely on existing provisions, including those included as part of the County Development Plans (**Built Heritage Alternative B**) would not further contribute the protection of existing heritage that is already contributed towards by the existing planning framework. By not integrating heritage considerations into the Plan, Alternative B would be least likely to ensure that new development respects the historic grain of the built environment and archaeology that currently exists.

Built Heritage Alternative B would:

- Not provide for sufficient consideration of the built heritage in the Plan area at detailed design stage for development proposals.
- Increase the potential for loss of and/or negative impacts on the character and setting of historic built fabric in the Plan area, including protected structures and vernacular architecture.
- Increase the potential to undermine the special character and setting of the designated ACAs in the Plan area.

Under Alternative B, the role of built heritage in the Plan area would not be capitalised on in terms of tourism potential, and the delivery of urban regeneration and placemaking projects.

Selected Built Heritage Alternative for the Plan: Alternative A.

4.8 Reasons for Choosing the Selected Alternative in light of Other Reasonable Alternatives Considered

Selected alternatives for the Plan from each of the types of alternatives that emerged from the planning/SEA process are indicated above.

Alternatives were selected for the Plan having regard to both:

1. The environmental effects which are identified by the SEA and are summarised above; and
2. Planning - including social and economic - effects that also were considered.

Section 5 Summary of Effects arising from Plan

Table 5.1 summarises the overall environmental effects arising from Plan provisions. The effects encompass all in-combination/cumulative effects arising from implementation of the Plan. The potentially significant adverse environmental effects (if unmitigated) arising from implementation of the Plan are detailed as are residual effects, taking into account mitigation integrated into both the Plan and the Leitrim and Roscommon County Development Plans – see Section 6.

Environmental impacts which occur will be determined by the nature and extent of multiple or individual projects and site-specific environmental factors. Environmental impacts which occur will be determined by the nature and extent of multiple or individual projects and site-specific environmental factors. Strategic Environmental Objective (SEO) codes are taken from Table 3.1.

Appropriate Assessment (AA) Screening has been undertaken alongside the Plan. The requirement for Screening for AA is provided under the EU Habitats Directive (Directive 1992/43/EEC). The conclusion of the Screening for AA is that the Plan is not foreseen to have any likelihood for any significant effect on any European site, alone or in combination with other plans or projects. The preparation of the Plan, SEA and Screening for AA has taken place concurrently and the findings of the Screening for AA have informed the SEA.

A Strategic Flood Risk Assessment (SFRA) has been undertaken as part of the preparation of the Local Area Plan. Requirements in relation to SFRA are provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (Department of Environment and Office of Public Works, 2009) and associated Department of the Environment, Community and Local Government Circular PL2/2014. The SFRA has informed both the land use zoning and the written provisions of the Local Area Plan.

Table 5.1 Overall Findings –Effects arising from the Plan

Environmental Component	Environmental Effects, in combination with the wider planning framework Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP, the Northern and Western RSES, the Leitrim and Roscommon County Development Plans and adjacent Development Plans and lower-tier land use plans.			SEO Codes
	Significant Positive Effect, likely to occur	**Potentially Significant Adverse Environmental Effects, if unmitigated**	**Likely Residual Adverse Non-Significant Effects**	
Biodiversity and Flora and Fauna	• Contribution towards protection of ecology (including designated sites, ecological connectivity, habitats) by facilitating development of lands (including those within and adjacent to the town's core areas) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the Plan area and beyond. • Contribution towards the maintenance of existing green infrastructure and associated ecosystem services, listed species, ecological connectivity and non-designated habitats. • Contribution towards protection and/or maintenance of biodiversity and flora and fauna by contributing towards the protection of natural capital including the environmental vectors of air, water and soil. Biodiversity and flora and fauna includes biodiversity in designated sites and Annexed habitats and species (including birds and bats), listed/protected species, ecological connectivity and non-designated habitats (including terrestrial and aquatic habitats), and disturbance to biodiversity and flora and fauna – including terrestrial and aquatic biodiversity and flora and fauna.	Arising from both construction and operation of development and associated infrastructure: • Loss of/damage to biodiversity in designated sites and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance to biodiversity and flora and fauna; • Habitat loss, fragmentation and deterioration, including patch size and edge effects; and • Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species such as birds and bats.	• Loss of an extent of non-protected habitats and species arising from the replacement of semi-natural land covers with artificial surfaces. • Losses or damage to ecology (these would be in compliance with relevant legislation).	**BFF**

Environmental Component	Environmental Effects, in combination with the wider planning framework Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP, the Northern and Western RSES, the Leitrim and Roscommon County Development Plans and adjacent Development Plans and lower-tier land use plans.			SEO Codes
	Significant Positive Effect, likely to occur	**Potentially Significant Adverse Environmental Effects, if unmitigated**	**Likely Residual Adverse Non-Significant Effects**	
Population and Human Health	• Promotion of economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management. • Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands (including those within and adjacent to the town's core areas) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the Plan area and beyond • Contribution towards the protection of human health by facilitating development of lands (including those within and adjacent to the town's core areas) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the Plan area and beyond. • Contributes towards protection of human health as a result of contributing towards the protection of natural capital including environmental vectors, including air and water.	• Potential adverse effects arising from flood events. • Potential interactions if effects arising from environmental vectors.	• Potential interactions with residual effects on environmental vectors – please refer to residual adverse effects under "Soil", "Water" and "Air and Climatic Factors" below.	**PHH**
Soil	• Contribution towards the protection of soils and designated sites of geological heritage by facilitating development of lands (including those within and adjacent to the town's core areas) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the Plan area and beyond. • Contribution towards the protection of the environment from contamination the highest standards of remediation.	• Potential adverse effects on the hydrogeological and ecological function of the soil resource, including as a result of development on contaminated lands. • Potential for riverbank erosion.	• Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces. • Riverbank erosion will continue to occur naturally over time and is likely to be enhanced by climate change.	**S**

Environmental Component	Environmental Effects, in combination with the wider planning framework Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP, the Northern and Western RSES, the Leitrim and Roscommon County Development Plans and adjacent Development Plans and lower-tier land use plans.			SEO Codes
	Significant Positive Effect, likely to occur	**Potentially Significant Adverse Environmental Effects, if unmitigated**	**Likely Residual Adverse Non-Significant Effects**	
Water	• Contribution towards the protection of water by facilitating development of lands (including those within and adjacent to the town's core areas) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the Plan area and beyond. • Contributions towards the protection of water resources including the status of surface and groundwaters and water-based designations. • Contribution towards flood risk management and appropriate drainage.	• Potential adverse effects upon the status of water bodies and entries to the WFD Register of Protected Areas (ecological and human value), arising from changes in quality, flow and/or morphology. • Increase in flood risk and associated effects associated with flood events.	• Any increased loadings as a result of development to comply with the River Basin Management Plan. • Flood related risks remain due to uncertainty with regard to extreme weather events – however such risks will be mitigated by measures that have been integrated into the Plan.	**W**
Material Assets	• Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands (including those within and adjacent to the town's core areas) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the Plan area and beyond. • Contribution towards compliance with national and regional water services and waste management policies. • Contribution towards increase in renewable energy use by facilitating renewable energy and electricity transmission infrastructure developments. • Contribution towards limits in increases in energy demand from the transport sector by facilitating sustainable compact growth. • Contribution towards reductions in average energy consumption per capita including promoting sustainable compact growth, sustainable mobility, sustainable design and energy efficiency.	• Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Failure to adequately treat surface water run-off that is discharged to water bodies (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Failure to comply with drinking water regulations and serve new development with adequate drinking water (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Increases in waste levels. • Potential impacts upon public assets and infrastructure.	• Exceedance of capacity in critical infrastructure risks remain, including due to uncertainty with regard to climate – however, such risks will be mitigated by: measures, including those requiring the timely provision of critical infrastructure, and compliance with the Water Framework Directive and associated River Basin Management Plan. • Residual wastes to be disposed of in line with higher-level waste management policies. • Any impacts upon public assets and infrastructure to comply with statutory planning/consent-granting framework.	**MA**

Environmental Component	Environmental Effects, in combination with the wider planning framework Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP, the Northern and Western RSES, the Leitrim and Roscommon County Development Plans and adjacent Development Plans and lower-tier land use plans.			SEO Codes
	Significant Positive Effect, likely to occur	**Potentially Significant Adverse Environmental Effects, if unmitigated**	**Likely Residual Adverse Non-Significant Effects**	
Air and Climatic Factors	• Contribution towards climate mitigation and adaptation by facilitating compact development of lands (including those within and adjacent to the town's core areas) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the Plan area and beyond. • In combination with other plans, programmes etc., contribution towards the objectives of the wide policy framework relating to climate mitigation and adaptation, and associated contribution towards maintaining and improving air quality and managing noise levels, including through measures relating to: o Sustainable compact growth; o Sustainable mobility, including walking, cycling and public transport; o Drainage, flood risk management and resilience; o Sectors including transport, energy, buildings and agriculture; o Sustainable design, energy efficiency and green infrastructure.	• Potential conflict between development under the Plan and aiming to reduce carbon emissions in line with local, national and European environmental objectives. • Potential conflicts between transport emissions, including those from cars, and air quality[22]. • Potential conflicts between increased frequency of noise emissions and protection of sensitive receptors[23]. • Potential conflicts with climate adaptation measures including those relating to flood risk management.	• An extent of travel related greenhouse gas and other emissions to air. This has been mitigated by provisions which have been integrated into the Plan, including those relating to sustainable compact growth and sustainable mobility. • Interactions between noise emissions and sensitive receptors. Various provisions have been integrated into the Plan to ensure that noise levels at sensitive receptors will be minimised.	**AC**
Cultural Heritage	• Contributes towards protection of cultural heritage elsewhere by facilitating development within the Plan area. • Contributes towards protection of cultural heritage within the Plan area by facilitating brownfield development and regeneration.	• Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities.	• Potential effects on known architectural and archaeological heritage and unknown archaeology however, these will occur in compliance with legislation.	**CH**
Landscape	• Contributes towards protection of wider landscape and landscape designations by facilitating development within the Plan area.	• Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape.	• Landscapes will change overtime as a result of natural changes in vegetation cover combined with new developments that will occur in compliance with the Plan's landscape protection measures.	**L**

[22] Although road transport interventions would be likely to result in an overall reduction in traffic flows and associated interactions with air, noise and human heath, there would be potential for displacement of traffic to lead to localised increases traffic flows and associated localised potential impacts in terms of increased population exposure to air pollutants and/or elevated noise levels, both within the Plan area and beyond.

[23] Although road transport interventions would be likely to result in an overall reduction in traffic flows and associated interactions with air, noise and human heath, there would be potential for displacement of traffic to lead to localised increases traffic flows and associated localised potential impacts in terms of increased population exposure to air pollutants and/or elevated noise levels, both within the Plan area and beyond.

Section 6 Mitigation and Monitoring Measures

6.1 Mitigation

Mitigation measures are measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse impacts on the environment of implementing the Plan. Various environmental sensitivities and issues have been communicated to the Councils through the SEA and Strategic Flood Risk Assessment (SFRA) processes. By integrating related recommendations into the Plan, the Councils have ensured that both the beneficial environmental effects of implementing the Plan have been and will be maximised and that potential adverse effects have been and will be avoided, reduced or offset.

Mitigation was achieved through:

- Strategic work undertaken by the Councils to ensure evidence-based planning[24];
- Considering alternatives for the Plan[25];
- The integration of environmental considerations into zoning provisions of the Plan[26];
- The integration of individual provisions into the text of the Plan and the existing, already in force, County Development Plans[27].

6.2 Monitoring

The SEA Directive requires that the significant environmental effects of the implementation of plans and programmes are monitored. Monitoring is based around indicators that allow quantitative measures of trends and progress over time relating to the Strategic Environmental Objectives identified at Table 3.1 and used in the evaluation. Monitoring indicators, targets, sources and remedial action is provided at Table 6.1 overleaf.

[24] The Plan has been prepared to deliver a collaborative and integrated framework for the future development of the town.

It is the first such joint plan for the town and it has a strong focus on the development of both the Carrick-on-Shannon and Cortober areas of the town.

In preparing the Plan, information relating to various sectors, from different Departments within the Councils and from different bodies and organisations, was gathered and analysed, contributing towards the development of evidence-led Plan provisions. This work included undertaking a Settlement Capacity Audit, undertaking a Social Infrastructure Audit and preparing a Local Transport Plan.

The undertaking of the SEA process was part of this strategic work and contributed towards the integration of environmental considerations into individual Plan provisions.

[25] Although strategic alternatives in relation to the content of the Plan were significantly limited for the Plan (see Section 4), as part of the Plan preparation/SEA process alternatives for the Plan were considered. These alternatives were assessed by the SEA process and the findings of this assessment informed the selection of alternatives for the Plan, facilitating an informed choice with respect to the type of Plan that was prepared and placed on public display.

[26] Environmental considerations have been integrated into the Plan's zoning through an interdisciplinary approach.

Zoning has been applied in a way that primarily seeks to achieve sustainable and compact growth, taking into account the various requirements set out in the higher-level NPF and Northern and Western RSES.

The detailed Plan preparation process undertaken by the Planning Department combined with specialist input seeks to facilitate zoning that will help to avoids inappropriate development being permitted in areas of elevated sensitivity, such as in areas at risk of flooding or ecological sensitivity. Various provisions have been integrated into the Plan that provide for flood risk management and ecological protection and management at project level.

[27] Various provisions have been integrated into the text of the Plan through the Plan-preparation and SEA and SFRA processes. Both the Planning and the assessment teams contributed towards the mitigation which was developed over multiple iterations and was informed by, inter alia, various communications through the SEA and SFRA processes.

In addition to the individual provisions integrated into the text of the Local Area Plan, individual provisions relating to environmental protection and management have already been integrated into the existing, in force, Leitrim and Roscommon County Development Plans.

Table 6.1 Indicators, Targets, Sources and Remedial Action

Environmental Component	Indicators	Targets	Sources	Remedial Action
Biodiversity, Flora and Fauna	• Condition of European sites	• Require all local level land use plans to include ecosystem services and green/blue infrastructure provisions in their land use plans and as a minimum, to have regard to the required targets in relation to the conservation of European sites, other nature conservation sites, ecological networks, and protected species • Implement and review, as relevant, Local Biodiversity Action Plans	• DHLGH report of the implementation of the measures contained in the Habitats Directive - as required by Article 17 of the Directive (every 6 years) [28] • DHLGH National Birds Directive Monitoring Report for the under Article 12 (every 6 years) [29] • Internal monitoring of likely significant environmental effects of grants of permission	• Where condition of European sites is found to be deteriorating this will be investigated with the Regional Assembly and the DHLGH to establish if the pressures are related to Plan actions / activities. A tailored response will be developed in consultation with these stakeholders in such a circumstance.
	• Number of spatial plans that have included ecosystem services content, mapping and policy to protect ecosystem services when their relevant plans are either revised or drafted	• Require all local level land use plans to include ecosystem services and green/blue infrastructure provisions in their land use plans and as a minimum, to have regard to the required targets in relation to the conservation of European sites, other nature conservation sites, ecological networks, and protected species • Implement and review, as relevant, Local Biodiversity Action Plans	• Internal review of local land use plans	• Review internal systems
	• SEAs and AAs as relevant for new Council policies, plans, programmes etc.	• Screen for and undertake SEA and AA as relevant for new Council policies, plans, programmes etc.	• Internal monitoring of preparation of local land use plans	• Review internal systems
	• Status of water quality in water bodies	• Included under Water below	• Included under Water below	• Included under Water below
	• Compliance of planning permissions with Plan measures providing for the protection of Biodiversity and flora and fauna – see Leitrim County Development Plan Chapter 11 "Heritage" and Roscommon County Development Plan Chapter 10 "Natural Heritage"	• For planning permission to be only granted when applications demonstrate that they comply with all Plan measures providing for the protection of biodiversity and flora and fauna – see Leitrim County Development Plan Chapter 11 "Heritage" and Roscommon County Development Plan Chapter 10 "Natural Heritage"	• Internal monitoring of likely significant environmental effects of grants of permission	• Review internal systems
Population and Human Health	• Implementation of Plan measures relating to the promotion of economic growth as provided for by Leitrim County Development Plan Chapter 4 "Economic Development, including Retail" and Roscommon County Development Plan Chapter 6 "Economic Development"	• For review of progress on implementing Plan objectives to demonstrate successful implementation of measures relating to the promotion of economic growth as provided for by Leitrim County Development Plan Chapter 4 "Economic Development, including Retail" and Roscommon County Development Plan Chapter 6 "Economic Development"	• Internal review of progress on implementing Plan objectives	• Review internal systems

[28] Including confirmation with development management that the following impacts have been considered and including use of monitoring data, where available: biodiversity/habitat loss; nitrogen deposition impacts on European sites; recreational disturbance resulting from implementation of tourism and recreation policies and objectives particularly in riparian areas; biodiversity enhancement; and disturbance /visitor pressure impacts of recreation, amenity and tourism development.

[29] Including confirmation with development management that the following impacts have been considered and including use of monitoring data, where available: biodiversity/habitat loss; nitrogen deposition impacts on European sites; recreational disturbance resulting from implementation of tourism and recreation policies and objectives particularly in riparian areas; biodiversity enhancement; and disturbance /visitor pressure impacts of recreation, amenity and tourism development.

Environmental Component	Indicators	Targets	Sources	Remedial Action
	• Number of spatial concentrations of health problems arising from environmental factors resulting from development permitted under the Plan	• No spatial concentrations of health problems arising from environmental factors as a result of implementing the Plan	• Consultations with the Health Service Executive and EPA	• Consultations with the Health Service Executive and EPA
	• Proportion of people reporting regular cycling / walking to school and work above previous CSO figures	• Increase in the proportion of people reporting regular cycling / walking to school and work above previous CSO figures	• CSO data • Monitoring of Leitrim County Council's Climate Change Action Plan 2024-2029 and Roscommon County Council's Climate Change Action Plan 2024-2029	• Where proportion of population shows increase in private car use above previous CSO figures, the Councils will coordinate with the Regional Assembly, the DHLGH, DECC and NTA to develop a tailored response.
	• Number of spatial plans that include specific green infrastructure mapping/data	• Require all local level land use plans to include specific green infrastructure mapping/data	• Internal review of local land use plans	• Review internal systems
Soil (and Land)	• Proportion of population growth occurring on infill and brownfield lands compared to greenfield (also relevant to Material Assets)	• Maintain built surface cover nationally to below the EU average of 4% as per the NPF • In accordance with National Policy Objectives 3c of the National Planning Framework, a minimum of 30% of the housing growth targeted in any settlement is to be delivered within the existing built-up footprint of the settlement • To map brownfield and infill land parcels	• EPA Geoportal • Compilation of greenfield and brownfield development for the DHLGH • AA/Screening for AA for each application	• Where the proportion of growth on infill and brownfield sites is not keeping pace with the targets set in the NPF and the RSES, the Councils will liaise with the Regional Assembly to establish reasons and coordinate actions to address constraints to doing so.
	• Instances where contaminated material generated from brownfield and infill must be disposed of	• Dispose of contaminated material in compliance with EPA guidance and waste management requirements	• Internal review of grants of permission where contaminated material must be disposed of	• Consultations with the EPA and Development Management
	• Environmental assessments and AAs as relevant for applications for brownfield and infill development prior to planning permission	• Screen for and undertake environmental assessments and AA as relevant for applications for brownfield and infill development prior to planning permission	• Internal monitoring of grants of permission	• Review internal systems
Water	• Status of water bodies as reported by the EPA Water Monitoring Programme for the WFD	• Not to cause deterioration in the status of any surface water or affect the ability of any surface water to achieve 'good status' • Implementation of the objectives of the River Basin Management Plan	• EPA Monitoring Programme for WFD compliance [30]	• Where water bodies are failing to meet at least good status this will be investigated with the DHLGH Water Section, the EPA Catchment Unit, the Regional Assembly and, as relevant, Uisce Éireann to establish if the pressures are related to Plan actions / activities. A tailored response will be developed in consultation with these stakeholders in such a circumstance. • Where planning applications are rejected due to insufficient capacity in the WWTP or failure of the WWTP to meet Emission Limit Values, the Councils will consider whether it is necessary to coordinate a response with the Regional Assembly, EPA and Uisce Éireann to achieve the necessary capacity.

[30] Including monitoring of water quality and nitrogen deposition due to bioenergy and agricultural projects where available

Environmental Component	Indicators	Targets	Sources	Remedial Action
	• Number of incompatible developments permitted within flood risk areas	• Minimise developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk	• Internal monitoring of likely significant environmental effects of grants of permission	• Where planning applications are being permitted on flood zones, the Councils will ensure that such grants are in compliance with the Flood Risk Management Guidelines and include appropriate flood risk mitigation and management measures.
Material Assets	• Programmed delivery of Uisce Éireann infrastructure for all key growth towns in line with Uisce Éireann Investment Plan and prioritisation programme to ensure sustainable growth can be accommodated • Number of new developments granted permission which can be adequately and appropriately served with waste water treatment over the lifetime of the Plan	• All new developments granted permission to be connected to and adequately and appropriately served by waste water treatment over the lifetime of the Plan • Where septic tanks are proposed, for planning permission to be only granted when applications demonstrate that the outfall from the septic tank will not – in-combination with other septic tanks – contribute towards any surface or ground water body not meeting the objective of good status under the Water Framework Directive • Facilitate, as appropriate, Uisce Éireann in developing water and wastewater infrastructure • See also targets relating to greenfield and brownfield development of land under Soil	• Internal monitoring of likely significant environmental effects of grants of permission	• Where planning applications are rejected due to insufficient capacity in the WWTP or failure of the WWTP to meet Emission Limit Values, the Councils will consider whether it is necessary to coordinate a response with the Regional Assembly, EPA and Uisce Éireann to achieve the necessary capacity.
	• Proportion of people reporting regular cycling / walking to school and work above previous CSO figures	• Increase in the proportion of people reporting regular cycling / walking to school and work above previous CSO figures	• CSO data • Monitoring of Leitrim County Council's Climate Change Action Plan 2024-2029 and Roscommon County Council's Climate Change Action Plan 2024-2029	• Where proportion of population shows increase in private car use above previous CSO figures, the Councils will coordinate with the Regional Assembly, the DHLGH, DECC and NTA to develop a tailored response.
Air	• Proportion of journeys made by private fossil fuel-based car compared to previous National Travel Survey levels • NO_x, SO_x, PM10 and PM2.5 as part of Ambient Air Quality Monitoring	• Decrease in proportion of journeys made by private fossil fuel-based car compared to previous National Travel Survey levels • Improvement in Air Quality trends, particularly in relation to transport related emissions of NO_x and particulate matter	• CSO data • Data from the National Travel Survey • EPA Air Quality Monitoring	• Where proportion of population shows increase in private car use above previous CSO figures, Councils will coordinate with the Regional Assembly, DHLGH, DECC and NTA to develop a tailored response. See also entry under Population and human health above
Climatic Factors	• Implementation of Plan measures relating to climate reduction targets	• For review of progress on implementing Plan objectives to demonstrate successful implementation of measures relating to climate reduction targets	• Internal monitoring of likely significant environmental effects of grants of permission	• Review internal systems
	• A competitive, low-carbon, climate-resilient and environmentally sustainable economy	• Contribute towards transition to a competitive, low-carbon, climate-resilient and environmentally sustainable economy by 2050	• Monitoring of Leitrim County Council's Climate Change Action Plan 2024-2029 and Roscommon County Council's Climate Change Action Plan 2024-2029 • EPA Annual National Greenhouse Gas Emissions Inventory reporting • Climate Action Regional Office	• Where targets are not achieved, the Councils will liaise with the Regional Assembly and the Eastern and Midlands Climate Action Regional Office to establish reasons and develop solutions.
	• Share of renewable energy in transport	• Contribute towards the National Energy and Climate Plan 2021-2030 sectoral target for transport (RES-T) of 14%, by 2030 (this may be increased following a provisional European agreement on 30 March 2023 for a binding overall RES target of at least 42.5% by 2030)		

Environmental Component	Indicators	Targets	Sources	Remedial Action
	• Energy consumption, the uptake of renewable options and solid fuels for residential heating	• To promote reduced energy consumption and support the uptake of renewable options and a move away from solid fuels for residential heating		
	• Proportion of journeys made by private fossil fuel-based car compared to previous levels	• Decrease in the proportion of journeys made by residents of the using private fossil fuel-based car compared to previous levels	• CSO data • Monitoring of Leitrim County Council's Climate Change Action Plan 2024-2029 and Roscommon County Council's Climate Change Action Plan 2024-2029	• Where trends toward carbon reduction are not recorded, the Councils will liaise with the Regional Assembly and the Eastern and Midlands Climate Action Regional Office to establish reasons and develop solutions.
	• Proportion of people reporting regular cycling / walking to school and work above previous CSO figures	• Increase in the proportion of people reporting regular cycling / walking to school and work above previous CSO figures	• CSO data • Monitoring of Leitrim County Council's Climate Change Action Plan 2024-2029 and Roscommon County Council's Climate Change Action Plan 2024-2029	• Where proportion of population shows increase in private car use above previous CSO figures, the Councils will coordinate with the Regional Assembly, the DHLGH, DECC and NTA to develop a tailored response.
Cultural Heritage	• Percentage of entries to the Record of Monuments and Places, and the context these entries within the surrounding landscape where relevant, protected from adverse effects resulting from development which is granted permission under the Plan	• Protect entries to the Record of Monuments and Places, and the context of these entries within the surrounding landscape where relevant, from adverse effects resulting from development which is granted permission under the Plan	• Internal monitoring of likely significant environmental effects of grants of permission	• Where monitoring reveals visitor or development pressure is causing negative effects on designated archaeological or architectural heritage, the Councils will work with Regional Assembly, Fáilte Ireland and the National Monuments Service and other stakeholders, as relevant, to address pressures through additional mitigation.
	• Percentage of entries to the Record of Protected Structures and Architectural Conservation Areas and their context protected from significant adverse effects arising from new development granted permission under the Plan	• Protect entries to the Record of Protected Structures and Architectural Conservation Areas and their context from significant adverse effects arising from new development granted permission under the Plan	• Consultation with DHLGH	
Landscape	• Number of developments permitted that result in avoidable adverse visual impacts on the landscape, especially with regard to landscape and amenity designations included in Land Use Plans, resulting from development which is granted permission under the Plan	• No developments permitted which result in avoidable adverse visual impacts on the landscape, especially with regard to landscape and amenity designations included in Land Use Plans, resulting from development which is granted permission under the Plan	• Internal monitoring of likely significant environmental effects of grants of permission	• Where monitoring reveals developments permitted which result in avoidable adverse visual impacts on the landscape, the Councils will re-examine Plan provisions and the effectiveness of their implementation


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