



Comhairle Contae Thiobraid Árann  
Tipperary County Council

**Draft**  
**Nenagh Local Area Plan 2024 -**  
**2030**

**Appendix 4a: Strategic Environmental  
Assessment Non-Technical Summary**

# SEA ENVIRONMENTAL REPORT

## APPENDIX II – NON-TECHNICAL SUMMARY

---

FOR THE

### DRAFT NENAGH AND ENVIRONS LOCAL AREA PLAN 2024-2030

**for: Tipperary County Council**

Civic Offices  
Nenagh  
County Tipperary



Comhairle Contae Thiobraid Árann  
Tipperary County Council

**by: CAAS Ltd.**

1<sup>st</sup> Floor  
24-26 Ormond Quay Upper  
Dublin 7



**JULY 2023**

## Table of Contents

<b>Section 1</b>	<b>Introduction and Terms of Reference .....</b>	<b>1</b>
<b>Section 2</b>	<b>The Draft Plan.....</b>	<b>3</b>
2.1	Introduction .....	3
2.2	Summary of the Plan.....	3
2.3	Strategic work undertaken by the Council to ensure contribution towards environmental protection and sustainable development.....	4
2.4	Relationship with other relevant Plans and Programmes .....	4
<b>Section 3</b>	<b>The Environmental Baseline.....</b>	<b>5</b>
3.1	Introduction .....	5
3.2	Likely Evolution of the Environment in the Absence of the Draft Plan.....	5
3.3	Biodiversity and Flora and Fauna .....	5
3.4	Population and Human Health .....	6
3.5	Soil.....	7
3.6	Water .....	9
3.7	Air and Climatic Factors .....	11
3.8	Material Assets .....	12
3.9	Cultural Heritage.....	13
3.10	Landscape.....	14
3.11	Strategic Environmental Objectives.....	14
<b>Section 4</b>	<b>Alternatives .....</b>	<b>16</b>
4.1	Introduction .....	16
4.2	Limitations in Available Alternatives .....	16
4.3	Type 1 Alternatives: Town Centre First Approach.....	16
4.4	Type 2 Alternatives: Infrastructure and Environmental Approach.....	17
4.5	Type 3 Alternatives: Area Based Transport Assessment Alternatives .....	18
4.6	Type 4 Alternatives: Transport Infrastructure Alternatives .....	19
<b>Section 5</b>	<b>Summary of Effects arising from Plan.....</b>	<b>20</b>
<b>Section 6</b>	<b>Mitigation and Monitoring Measures .....</b>	<b>24</b>
6.1	Mitigation .....	24
6.2	Monitoring.....	24

# Section 1 Introduction and Terms of Reference

This is the Non-Technical Summary of the Environmental Report for the Draft Nenagh and Environs Local Area Plan 2024-2030 (hereafter referred to as 'the Plan'). 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 planning authority's and the public's guide to what are generally the best areas for development in the town.

SEA enables the planning authority to direct development towards robust, well-serviced and connected areas— thereby facilitating the general avoidance of incompatible development in the most sensitive, least well-serviced and least well-connected areas.

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 of Nenagh. Development of generally more robust, well-serviced and well-connected areas will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation.

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

Compatible sustainable development in Nenagh's more environmentally 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 Draft Plan

### 2.1 Introduction

Tipperary County Council has prepared a new Draft Local Area Plan (LAP) for Nenagh under the Planning and Development Act 2000 (as amended). The Plan sets out an overall strategy for the proper planning and sustainable development over the years 2024-2030.

LAPs are required to be consistent with the Policy and Objectives of the County Development Plan and its Core Strategy, as well as the National Planning Framework and Regional Spatial Economic Strategies.

The LAP should be read in conjunction with the Tipperary County Development Plan 2022-2028, which sets out the overarching development strategy for the administrative area of Tipperary County Council. Where conflicting policies and objectives arise between the LAP and the County Development Plan the County Development Plan shall take precedence.

### 2.2 Summary of the Plan

The LAP sets out an overall strategy for the proper planning and sustainable development of Nenagh in the context of Project Ireland 2040, the National Planning Framework, the Regional Spatial and Economic Strategy for the Southern Region and the County Development Plan. It is informed by Ministerial Guidelines issued pursuant to Section 28 of the Act together with EU requirements regarding SEA and AA.

The function of the Plan is to act as a framework for sustainable investment, to enable employment and homes, to protect the environment and heritage and to help deliver a good quality of life for everyone.

The LAP is comprised of the following documents:

- A Written Statement with specific policies and objectives laid out across ten sections
- Maps including land-use zoning with flood risk areas, and built and natural heritage
- Appendices as follows:
  1. Serviced Land Assessment
  2. Local Transport Plan
  3. Regeneration Sites
  4. Strategic Environmental Assessment Environmental Report and Non-Technical Summary
  5. Appropriate Assessment Natura Impact Report
  6. Strategic Flood Risk Assessment

The LAP is focused on a renewed and targeted approach to compact growth and regeneration, building on the extensive range of 'town-centre' focused projects already initiated in Nenagh. The town centre will form the heart and focal point of Nenagh, with clear consideration of climate change mitigation and adaptation measures and modal shift change in terms of how we get around. At the centre of this LAP is consideration of quality of life for the community in the form of housing, jobs, education and amenities.

Part of the Plan's Vision and Planning and Development Strategy is that: "In 2030, Nenagh will be a vibrant, sustainable and age-friendly community. The community will benefit from a high quality of life, quality housing choices, improved access to employment options and an improved range of services in the town. The town will benefit from significant investment and regeneration in the central areas of the town, enhanced social, cultural and tourism activities in the town, an increasing town centre residential population, and thriving and vibrant local businesses and services."

The Plan's overarching Planning and Development Policies are as follow:

- Policy 2.1 Require the retrofitting of existing structures on brownfield sites, unless it is demonstrated that retrofitting is unfeasible, or redevelopment of the site would provide positive carbon impact through the re-design, construction and use stages of a new building, compared with retrofitting.

- Policy 2.2 Support new development that will enable sustainable housing growth, employment, community development and prosperity for Nenagh as a Key Town in line with the Strategic Objectives of the TCDP.
- Policy 2.3 Require new development to incorporate best practice in low-carbon and energy efficient planning and techniques as reflected by the policies and objectives of the TCDP and this LAP and in accordance with the forthcoming Climate Action Plan for Tipperary 2023 (and any review thereof).
- Policy 2.4 Support compact residential growth in Nenagh through the sustainable intensification and consolidation of the town centre and established residential areas to meet identified housing targets and requirements in line with the Sustainable Residential Development in Urban Areas, Guidelines for Planning Authorities (DEHLG, 2009) and any review thereof.
- Policy 2.5 Facilitate development of existing but non-conforming and long-established uses, to support their continued operation and expansion, provided such does not result in loss of amenity to adjoining properties, adverse impact on the environment, visual detriment to the character of the area or creation of a traffic hazard.

## **2.3 Strategic work undertaken by the Council to ensure contribution towards environmental protection and sustainable development**

In advance of the placing of the Draft Plan on public display, Tipperary County Council undertook various works in order to inform the preparation of the Plan. This included a detailed population analysis and preparation of a Local Transport Plan and Serviced Land Assessment, which have informed and are appended to the draft Plan.

The findings of this strategic work have been integrated into the Plan and will contribute towards both environmental protection and management and sustainable development.

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

## **2.4 Relationship with other relevant Plans and Programmes**

Many of the major issues affecting Nenagh's development are contingent on national policy and government funding. 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 may, in turn, guide lower-level strategic actions. These documents include plans and programmes such as those referred to throughout this summary. These documents have been subject to their own environmental assessment processes, as relevant.

The National Planning Framework (NPF) sets out Ireland's planning policy direction up to 2040. The NPF is to be implemented through Regional Spatial and Economic Strategies (RSESs) and lower tier Development Plans and Local Area Plans. The RSES for the Southern Region sets out objectives for land use planning, infrastructure, sustainable development, environmental protection and environmental management that have been subject to environmental assessment and must be implemented through the Tipperary County Development Plan 2022-2028, which sets out the overarching development strategy for the administrative area of Tipperary County Council, and the Local Area 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 Draft Plan and in order to determine appropriate monitoring measures.

### 3.2 Likely Evolution of the Environment in the Absence of the Draft 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 Plan 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:

- **Aquatic and riverine ecology associated with the area's streams and rivers, their tributaries and riparian buffer zones**, including the **Nenagh River** (flowing east of the Plan area) and the **Ollatrim River** (joining the Nenagh River east of Nenagh town), their tributaries and riparian buffer zones;
- **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; and
- **Designated sites within 15 km of the Plan area**, including the Lough Ourna proposed Natural Heritage Area, located c. 5 km to the north of the Plan area, and the Lough Derg Special Protection Area and proposed Natural Heritage Area, located c. 6 km to the west of the Plan area.

There are no Special Areas of Conservation<sup>1</sup> (SACs) or Special Protection Areas<sup>2</sup> (SPAs) designated within the Plan area; however, there are a total of ten European sites (seven SACs and three SPAs) within 15 km of the Plan boundary (as listed below and shown on Figure 3.1):

- Lough Derg (Shannon) SPA (Site Code: 004058)<sup>3</sup>;
- Slievefelim to Silvermines Mountains SPA (Site Code 004165)<sup>4</sup>;
- Silvermine Mountains SAC (Site Code: 000939)<sup>5</sup>;
- Silvermines Mountains West SAC (Site Code: 002258)<sup>6</sup>;
- Bolingbrook Hill SAC (Site Code: 002124)<sup>7</sup>;

<sup>1</sup> 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.

<sup>2</sup> 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.

<sup>3</sup> Sensitive features comprise: wetland and waterbirds; tufted duck; goldeneye; common tern; and cormorant.

<sup>4</sup> Sensitive features comprise: hen harrier.

<sup>5</sup> Sensitive features comprise: Northern Atlantic wet heaths with *Erica tetralix*.

<sup>6</sup> Sensitive features comprise: European dry heaths; calaminarian grasslands of the *Violetalia calaminariae*; and Northern Atlantic wet heaths with *Erica tetralix*.



- Lough Derg, North-East Shore SAC (Site Code: 002241)<sup>8</sup>;
- Lower River Shannon SAC (Site Code: 002165)<sup>9</sup>;
- Keeper Hill SAC (Site Code: 001197)<sup>10</sup>;
- Slieve Aughty Mountains SPA (Site Code: 004168)<sup>11</sup>; and
- Scohaboy (Sopwell) Bog SAC (Site Code: 002206)<sup>12</sup>.

There is one hydrologically connected European site within the wider region beyond 15 km buffer zone (i.e. downstream of the Plan boundary)<sup>13</sup>, the River Shannon and River Fergus Estuaries SPA (Site Code: 004077).<sup>14</sup>

Ecological networks are important in connecting areas of local biodiversity with each other and with nearby designated sites so as to prevent islands of habitat from being isolated entities. They are composed of linear features, such as tree lines, hedgerows and rivers/streams, which provide corridors or stepping stones for wildlife species moving within their normal range. They are important for the migration, dispersal and genetic exchange of species of flora and fauna particularly for mammals, especially for bats and small birds and facilitate linkages both between and within designated ecological sites, the non-designated surrounding countryside and urban areas.

### 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. Categories for pressures and threats on Ireland's habitats and species identified by the report comprise:

- Agriculture;
- Forestry;
- Extraction of resources (minerals, peat, non-renewable energy resources);
- Energy production processes and related infrastructure development;
- Development and operation of transport systems;
- Development, construction and use of residential, commercial, industrial and recreational infrastructure and areas;
- Extraction and cultivation of biological living resources (other than agriculture and forestry);
- Military action, public safety measures, and other human intrusions;
- Alien and problematic species;
- Mixed source pollution;
- Human-induced changes in water regimes;
- Natural processes (excluding catastrophes and processes induced by human activity or climate change);
- Geological events, natural catastrophes;
- Climate change; and
- Unknown pressures, no pressures and pressures from outside the Member State.

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

Census 2016 has recorded a population of 8,968 persons within the Plan area<sup>15</sup>. The Core Strategy in the Tipperary County Development Plan 2022-2028 provides for a population increase of 1,793 persons for Nenagh over the Plan period.

<sup>7</sup> Sensitive features comprise: European dry heaths; species-rich Nardus grasslands, on siliceous substrates in mountain areas - and submountain areas in Continental Europe; and Northern Atlantic wet heaths with *Erica tetralix*.

<sup>8</sup> Sensitive features comprise: limestone pavements; alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*; *Juniperus communis* formations on heaths or calcareous grasslands; *Taxus baccata* woods of the British Isles; Alkaline fens; and calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*.

<sup>9</sup> Sensitive features comprise: otter; freshwater pearl mussel; large shallow inlets and bays; Mediterranean salt meadows; bottlenose dolphin; brook lamprey; coastal lagoons; Atlantic salt meadows; water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation; *Salicornia* and other annuals colonising mud and sand; perennial vegetation of stony banks; estuaries; river lamprey; mudflats and sandflats not covered by seawater at low tide; sandbanks which are slightly covered by sea water all the time; Atlantic salmon; vegetated sea cliffs of the Atlantic and Baltic coasts; *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils; sea lamprey; alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*; and reefs.

<sup>10</sup> Sensitive features comprise: blanket bogs; and Northern Atlantic wet heaths with *Erica tetralix*.

<sup>11</sup> Sensitive features comprise: merlin; and hen harrier.

<sup>12</sup> Sensitive features comprise: degraded raised bogs still capable of natural regeneration.

<sup>13</sup> There are also three additional European sites with groundwater sensitive Qualifying Interests and within the same groundwater bodies as the Plan area, but beyond 15 km buffer zone, namely: Kilcarren-Firville Bog SAC (Site Code: 000647); River Shannon Callows SAC (Site Code: 000216); and Arragh More (Derrybreen) Bog (Site Code: 002207). For more detail refer to AA NIR report.

<sup>14</sup> Sensitive features comprise: golden plover; greenshank; grey plover; ringed plover; scaup; shelduck; shoveler; teal; wetland and waterbirds; whooper swan; wigeon; knot; lapwing; light-bellied brent goose; pintail; redshank; bar-tailed godwit; black-headed gull; black-tailed godwit; cormorant; curlew; and dunlin.

Census 2022 identified that the Built-up Area (BUA(w)) of Nenagh had population of 9,895. Though a direct comparison with the settlement area in Census 2016 and the BUA area in Census 2022 cannot be drawn, the geographical areas of the Electoral Districts (EDs) of the town, Nenagh West Urban West and Nenagh East Urban have not changed in the inter-census period. The combined population of these EDs has increased from 8,656 in 2016 to 9,507 in 2022, a 9.8% increase in population. This increase in population exceeds both the state (8.1%) and county (5.2%) over the same period. Population growth in the town is driven by an increase in the density of the urban population, increasing from 1,018 persons per square km in 2016 to 1,118 in 2022, a 9.8% increase in density.<sup>16</sup>

Nenagh is identified as a “Key Town” in the Tipperary County Development Plan 2022-2028, a strategically located urban centre with accessibility and significant influence in sub-regional context, delivering social and transport infrastructure, employment and economic prosperity.<sup>17</sup>

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.

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

The built-up areas within and surrounding Nenagh 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.

There are no designated County Geological Sites occurring within the Plan area. The closest sites are Ardcroney Esker CGS (Site Code: TY002), located c. 3 km to the north-east of the Plan area and Carrigatogher M7 Road Cut CGS (Site Code: TY019), located c. 5 km to the south-west of the Plan area.

The GSI have identified<sup>18</sup> 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.

<sup>15</sup> Tipperary County Development Plan 2022-2028.

<sup>16</sup> Draft Nenagh Local Area Plan 2024-2030

<sup>17</sup> Tipperary County Development Plan 2022-2028

<sup>18</sup> <https://www.gsi.ie/en-ie/programmes-and-projects/geohazards/projects/Pages/Landslide-Susceptibility-Mapping.aspx>

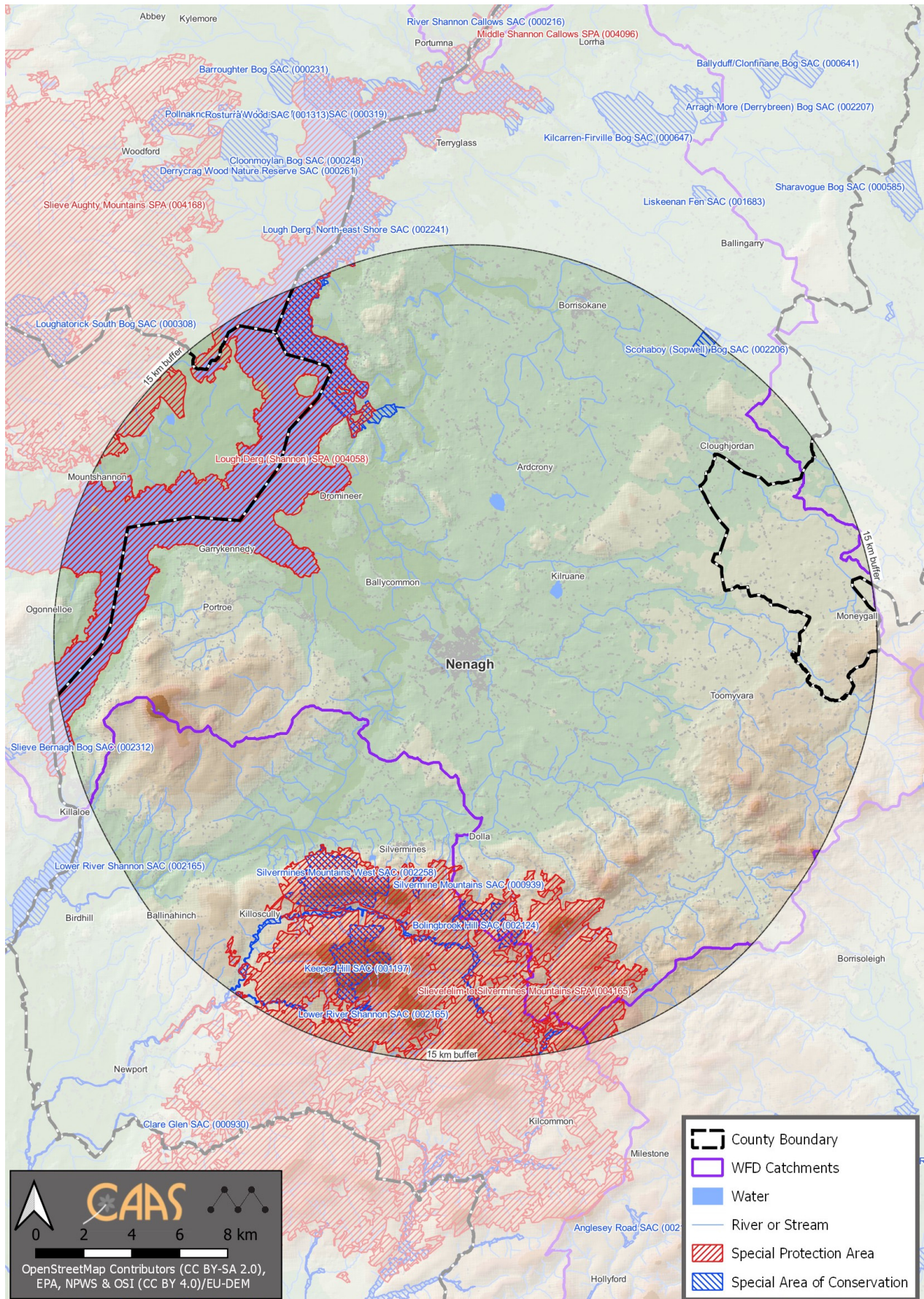


Figure 3.1 European Sites within and within 15 km buffer of the Plan area

## 3.6 Water

### Surface and Ground Water Status

Surface water at and around Nenagh is channelled by several rivers and streams, forming part of the Lower Shannon River Catchment. The confluence of the Ollatrim and Nenagh rivers is located within the Plan boundary to the east of the Millers Brook estate. Smaller partly-culverted watercourses run through the town centre, into the Nenagh River and beyond into the Shannon water system at Dromineer. A number of other watercourses to the west of the Plan boundary drain into the Shannon at Youghalarra.

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*.

The current WFD (2016-2021) status<sup>19</sup> of various sections of the River Ollatrim, River Nenagh and Ardgregane Stream draining the Plan area is *moderate* (identified by the EPA as: 'Ollatrim\_050'; 'Nenagh\_050'; 'Nenagh\_060'; 'Nenagh\_070'; and 'Ardgregane Stream\_020') and sections of the Ardgregane Stream and Gortadalaun Stream (identified by the EPA as: 'Ardgregane Stream\_010' and 'Gortadalaun Stream\_10') is *poor*. Figure 3.2 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*, meeting the objectives of the Water Framework Directive.

Surface and groundwater bodies will need to ensure no deterioration in order to comply with the objectives of the WFD. Various water bodies will need improvement to meet these objectives. The Plan includes provisions that will contribute towards maintenance and improvement in the status of waters.

### Aquifer Vulnerability and Productivity

Aquifer vulnerability refers to the ease with which pollutants of various kinds can enter into groundwater. The aquifers underlying the Plan area are as a mix of vulnerabilities:

- *High vulnerability* within central parts of the Plan area;
- *Extreme vulnerability and Extreme (Rock at or near surface or karst) vulnerability*, in parts of the west and south-east of the Plan area; and
- *Moderate vulnerability*, in parts of the south-east and north-east of the Plan area.

### Flooding

A Strategic Flood Risk Assessment (SFRA) document accompanies this SEA Environmental Report and the Draft 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 Tipperary County Development Plan 2022-2028 and related provisions have been integrated into the Draft Plan. In addition, land use zoning within the Plan area has been informed by the SFRA process and associated delineation of flood risk zones.

Historical flooding is documented by the Office of Public Works. The most significant source of flood risk within the Plan area is from fluvial (from rivers and streams), however there are other sources of flooding present including pluvial (from rainwater) and risk from surface drainage systems.

Predictive flood risk mapping is also available from the Office of Public Works and is included in the SFRA document that accompanies the Plan.

<sup>19</sup> As per EPA's WFD Status 2016-2021 classification (<https://gis.epa.ie/EPAMaps/>).  
CAAS for Tipperary County Council



**Figure 3.2 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. 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 Climate Action Plan 2023 provides a detailed plan for taking decisive action to achieve a 51% reduction in overall greenhouse gas emissions by 2030 and setting Ireland on a path to reach net-zero emissions by no later than 2050, as set out in the Climate Act 2021. The Plan lists the actions needed to deliver on climate targets and sets indicative ranges of emissions reductions for each sector of the economy. It will be updated periodically, to ensure alignment with legally binding economy-wide carbon budgets and sectoral ceilings.

The National Adaptation Framework Department of Communications, Climate Action and Environment, 2018), sets out the national strategy to reduce the vulnerability of the country to the negative effects of climate change and to avail of positive impacts. The National Adaptation Framework outlines a whole of government and society approach to climate adaptation. Under the Framework, several Government Departments will be required to prepare sectoral adaptation plans in relation to a priority area that they are responsible for. The statutory Climate Change Adaptation Plan for the Transport Sector was prepared under the Climate Action and Low Carbon Development Act (2015) and the National Adaptation Framework (2018) and published by the Department of Transport in 2019. The Plan sets out the national strategy to reduce Ireland's vulnerability to the negative effects of climate change and to avail of any positive impacts, with an objective to help develop resilience within the sector in order to safeguard transport infrastructure from future climate impacts.

The Tipperary County Council Climate Change Action Plan 2019-2024 features a range of actions across sectors, including agriculture, forestry, biodiversity, built and archaeological heritage, transport infrastructure, electricity and gas networks, communication networks, flood risk management, water quality, water services infrastructure and health. The Action Plan seeks to:

- Ensure a proper comprehension of the key risks and vulnerabilities of climate change;
- Bring forward the implementation of climate resilient actions in a planned and proactive manner; and
- Ensure that climate adaptation considerations are mainstreamed into all plans and policies and integrated into all operations and functions of Tipperary County Council.

Under the National Climate Action Plan 2023, Tipperary County Council is required to prepare a locally specific climate action plan for its administrative area. Once adopted, this plan will be valid for five years, and is subject to update at least every five years. The Tipperary County Council Climate Action Plan will be developed over the coming year and 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 Tipperary County Council Climate Action Plan must cover the following areas:

- An emphasis on a place-based approach to climate action, delivering a better understanding of greenhouse gas emissions and climate-related risks at a local level;
- Context-specific conditions and locally-tailored policy making;
- Evidence-based and integrated climate action through adaptation and mitigation measures, centred around an understanding of the role of the Council in climate action; and
- Strategic direction at local and community levels on the delivery of the national climate objective.

The EPA's (2022) *Air Quality in Ireland 2021* identifies that:

- Air quality in Ireland is generally good, however, there are localised issues.
- Ireland met all of its EU legal requirements in 2021 but it failed to meet the new WHO-based guideline levels for Health in 2021.
- Air quality monitoring results in 2021 showed that fine particulate matter (PM<sub>2.5</sub>) mainly from burning solid fuel, and nitrogen dioxide (NO<sub>2</sub>) mainly from road transport, remain the main threats to good air quality.
- It is estimated that there are approximately 1,300 premature deaths annually in Ireland due to poor air quality from fine particulate matter (PM<sub>5</sub>).

With regards to solutions, the report identifies that:

- Ireland and Europe should move towards achieving the health-based WHO air quality guidelines.
- The planned National Clean Air Strategy for Ireland needs to be published and fully implemented.
- Local Authorities must provide more resources to increase air enforcement activities.
- National investment in clean public transport is needed across the country.

### 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: 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

The Wastewater Treatment Plant (WWTP) serving Nenagh is currently not listed as a priority area (such areas are those where improvements are required to resolve urgent environmental issues).<sup>20</sup>

The Plan area is served by the Nenagh WWTP (Registration No. D0027-01), which has a design capacity of 12,000 Population Equivalent (PE).

The Nenagh WWTP is currently fully compliant with the Emission Limit Values (ELVs) set in the Wastewater Discharge Licence in the most recent available Annual Environmental Report 2022 (published in April 2023).<sup>21</sup>

A planned upgrade of the Nenagh Wastewater Treatment Plant Nenagh is expected to increase the capacity of the plant from 12,000PE (population equivalent) to 19,000PE. Uisce Éireann have indicated that a planning application for the upgrade of the WWTP will be submitted to the local authority in the first half of 2024, and though no specific date has been provided for the upgraded WWTP to be operational, it is not expected that the upgraded WWTP will be operational prior to 2027. Currently, there is insufficient capacity within the WWTP to cater for projected population growth in Nenagh. However, the upgraded WWTP will provide significant additional capacity once operational, more than meeting the projected population growth for the town. An ongoing improvement works are required in the town to ensure adequate separation of foul and surface water, and to service of lands identified for development over the lifetime of the Plan. Local network upgrades may be required some areas to provide capacity to individual sites.<sup>22</sup>

As per Section 8 of the Draft Plan, applications for development under the Plan must demonstrate that the proposal for development would not adversely affect a water body's ability to meet its objectives under the Water Framework Directive, individually, as a result of the proposed development, or cumulatively, in combination with other developments.

#### Water Supply

Nenagh is located within the Nenagh (WRZ)<sup>23</sup> and currently served by the Nenagh Regional Public Water Supply (PWS). This PWS serves a population of 14,483 and produces 6,488 m<sup>3</sup>/day. Raw water is abstracted from Lough Derg and undergoes treatment at the Coolbawn Water Treatment Plant.<sup>24</sup> As identified by Uisce Éireann, there is capacity available to meet projected population growth up to 2031, although an improvement to the level of service is required.<sup>25</sup>

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

<sup>20</sup> <https://www.epa.ie/publications/compliance--enforcement/waste-water/priority-areas-list-current.php>

<sup>21</sup> [https://www.water.ie/docs/aers/2022/D0027-01\\_2022\\_AER.pdf](https://www.water.ie/docs/aers/2022/D0027-01_2022_AER.pdf)

<sup>22</sup> Draft Nenagh Local Area Plan 2024-2030

<sup>23</sup> 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.

<sup>24</sup> Draft Nenagh Local Area Plan 2024-2030

<sup>25</sup> Capacity Available to meet 2032 population targets - Level of service (LoS) improvement required. Leakage reduction and/or capital investment will be required to maintain/improve levels of service as demand increases. These proposals will be developed and prioritised through the National Water Resources Plan and investment planning process. Available:

<https://www.water.ie/connections/developer-services/capacity-registers/water-supply-capacity-register/tipperary/> (published in June 2023).

Remedial Action Lists (RALs). The RAL identifies water supplies that are not in compliance with the Regulations mentioned above. The Nenagh Regional Water Supply, serving the Plan area, was included on the most recent EPA Remedial Action List (Q4 of 2022, published in February 2023)<sup>26</sup> due to elevated levels of trihalomethanes above the standard in the Drinking Water Regulations.

### **Waste Management**

Waste management within the Plan area is guided by the Southern Waste Management Plan 2015-2021. The Plan provides a framework for the prevention and management of waste in a sustainable manner in ten local authority areas, including that of Tipperary County Council.

There are three Region Waste Management Plans in Ireland and these will be replaced by a new National Waste Management Plan for a Circular Economy, which will take account of the various measures outlined in A Waste Action Plan for A Circular Economy - Ireland's National Waste Policy 2020-2025.

### **Transport**

Nenagh is strategically located near several well served transport links, including the M7, which bypasses the town and provides links to Limerick, Dublin and the rest of the Country. The N52 also bypasses the town, and provides access to Birr, Athlone and Tullamore. Nenagh is served by Irish Rail, with routes to Limerick, Dublin, Portlaoise and Kildare. National, regional and local roads provide vital links between the town and retail, service and employment centres throughout the County and to adjoining counties.

Bus services are provided in the town by Bus Éireann and private operators. Nenagh has inter-urban links with Limerick, Dublin and Athlone, as well as more local services to surrounding towns and villages, as well as Thurles, Roscrea, Templemore and Birr.

Nenagh is located on the main rail line (Ballybrophy to Limerick) with a rail station within walking distance of the town centre, at the south of Kenyon Street. However, train services are poor with limited services, and requiring connections to Dublin and Cork. The poor quality of services is highlighted by the very small mode share that train services provides, just 0.12% of the total mode share. The need for infrastructural improvements to the rail line to increase the commuter rail service on the Nenagh to Limerick line is recognised with the Southern RSES.

Nenagh has a relatively high reliance on the motor vehicle, though walking trips exceed the national average. A Local Transport Plan (LTP) has been integrated into the Plan to help ensure a shift towards more sustainable modes of transport.

### **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 as capacity limitations have been identified (these are summarised above).

## **3.9 Cultural Heritage**

### **Archaeological Heritage**

The Record of Monuments and Places (RMP) is an inventory, put on a statutory basis by amendment to the National Monuments Act 1994, of sites and areas of archaeological significance, numbered and mapped. It is available from the National Monuments Service and at [archaeology.ie](http://archaeology.ie).

There are various entries to the RMP within the Plan area, including: Nenagh Castle; Franciscan Abbey; Nenagh Church (at graveyard); and Nenagh Gaol.

Nenagh is a historic town, designated as one of six "Walled Towns" in County Tipperary. Town defences are considered to be monuments for the purposes of the National Monuments Acts 1930-2004. The Nenagh Castle is also identified as a National Monument in State Care (Guardianship).

<sup>26</sup> <https://www.epa.ie/publications/compliance--enforcement/drinking-water/annual-drinking-water-reports/epa-drinking-water-remedial-action-list-q4-of-2022.php>  
CAAS for Tipperary County Council



### **Architectural Heritage**

Protected Structures within the Plan area include<sup>27</sup>: Nenagh Castle Complex (including the castle field and gardens); Nenagh Courthouse; Riverston House; St. Mary's of the Rosary Church; and Nenagh Railway Station. 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. In an ACA, protection is placed on the external appearance of such areas or structures. The historic core of Nenagh (including Summerhill, Pearse Street, Kenyon Street, and Kickham Street/Banba Square) is designated as an Architectural Conservation Area.

### **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.

## **3.10 Landscape**

Nenagh is the largest town in North Tipperary, and lies within the heartlands of the mid-west region of Ireland. The town is located approximately 35 km to the north-east of Limerick City, 12 km to the east of Lough Derg and the River Shannon and 10 km to the north of the Silvermine Mountain range. Nenagh is well known nationally as a market town and provides services to the agricultural hinterland.

The topography of Nenagh is predominantly flat with a gentle slope up Summerhill in the north of the town. The land surrounding the Plan area is predominantly made up of agricultural and pasture land and an area of woodland to the north-west. The Nenagh River flows from the south to the north to the east of the Plan area towards Lough Derg.

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 Tipperary County Development Plan 2022-2028 identifies four Universal Landscape Architypes, which is subdivided into seven Landscape Character Types and 23 Landscape Character Areas, 63 Scenic Routes and Views and Primary and Secondary Amenity Areas within the council's administrative area. The Landscape Character Areas in County Tipperary are also classified according to their level of sensitivity, ranging from: 'Vulnerable'; 'Transitional Vulnerability'; 'Sensitive'; 'Transitional Sensitivity'; 'Normal'; and 'Robust'. The Plan area is located within the 'Urban & Fringe Areas – Nenagh Environs' ('Robust' identified as the dominant sensitivity level), 'Nenagh Corridor' ('Normal' identified as the dominant sensitivity level) and 'Borrisokane Lowlands' ('Transitional Sensitivity' identified as the dominant sensitivity level) Landscape Character Area.

The Draft Plan also recognises 'Respecting Views/Streetscapes/Landscapes' that are particularly important and should be given due consideration as part of the design process for new development.

### **Existing Environmental 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.

<sup>27</sup> Nenagh Town & Environs Development Plan 2013-2019 Record of Protected Structures  
CAAS for Tipperary County Council

**Table 3.1 Strategic Environmental Objectives**

<b>Environmental Component</b>	<b>Guiding Principle</b>	<b>Strategic Environmental Objectives</b>
<b>Biodiversity, Flora and Fauna</b>	No net contribution to biodiversity losses or deterioration	<ul style="list-style-type: none"> <li>To preserve, protect, maintain and, where appropriate, enhance the terrestrial, aquatic and soil biodiversity, particularly EU designated sites and protected species</li> <li>Ensure no adverse effects on the integrity of any European site, with regard to its qualifying interests, associated conservation status, structure and function</li> <li>Safeguard national, regional and local designated sites and supporting features which function as stepping stones for migration, dispersal and genetic exchange of wild species</li> <li>Enhance biodiversity in line with the National Biodiversity Action Plan and its targets</li> <li>To protect, maintain and conserve the County's natural capital</li> </ul>
<b>Population and Human Health</b>	Improve quality of life for all ages and abilities based on high-quality, serviced, well connected and sustainable residential, working, educational and recreational environments	<ul style="list-style-type: none"> <li>Promote economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management</li> <li>Ensure that existing population and planned growth is matched with the required public infrastructure and the required services</li> <li>Safeguard the County's citizens from environment-related pressures and risks to health and well-being</li> </ul>
<b>Soil (and Land)</b>	Ensure the long-term sustainable management of land	<ul style="list-style-type: none"> <li>Protect soils against pollution, and prevent degradation of the soil resource</li> <li>Promote the sustainable use of infill and brownfield sites over the use of greenfield sites</li> <li>Safeguard areas of prime agricultural land and designated geological sites</li> </ul>
<b>Water</b>	Protection, improvement and sustainable management of the water resource	<ul style="list-style-type: none"> <li>Ensure that the status of water bodies is protected, maintained and improved in line with the requirements of the Water Framework Directive</li> <li>Ensure water resources are sustainably managed to deliver proposed regional and County growth targets in the context of existing and projected water supply and wastewater capacity constraints ensuring the protection of receiving environments</li> <li>Avoid inappropriate zoning and development in areas at risk of flooding and areas that are vulnerable to current and future erosion</li> <li>Integrate sustainable water management solutions (such as SuDS, porous surfacing and green roofs) into development proposals</li> </ul>
<b>Material Assets</b>	Sustainable and efficient use of natural resources	<ul style="list-style-type: none"> <li>Optimise existing infrastructure and provide new infrastructure to match population distribution proposals - this includes transport infrastructure</li> <li>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, hydro, biomass, energy from waste and traditional fossil fuels</li> <li>Promote the circular economy, reduce waste, and increase energy efficiencies</li> <li>Ensure there is adequate sewerage and drainage infrastructure in place to support new development</li> <li>Reduce the energy demand from the transport sector and support moves to electrification of road and rail transport modes</li> <li>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, towns and grids</li> </ul>
<b>Air</b>	Support clean air policies that reduce the impact of air pollution on the environment and public health	<ul style="list-style-type: none"> <li>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</li> <li>Maintain and promote continuing improvement in air quality through the reduction of emissions and promotion of renewable energy and energy efficiency</li> <li>Promote continuing improvement in air quality</li> <li>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</li> <li>Meet Air Quality Directive standards for the protection of human health – Air Quality Directive</li> <li>Significantly decrease noise pollution and move closer to WHO recommended levels</li> </ul>
<b>Climatic Factors</b>	Achieving transition to a competitive, low carbon, climate-resilient economy that is cognisant of environmental impacts	<ul style="list-style-type: none"> <li>To minimise emissions of greenhouse gasses</li> <li>Integrate sustainable design solutions into the County's infrastructure (e.g. energy efficient buildings; green infrastructure)</li> <li>Contribute towards the reduction of greenhouse gas emissions in line with national targets</li> <li>Promote development resilient to the effects of climate change</li> <li>Promote the use of renewable energy, energy efficient development and increased use of public transport</li> </ul>
<b>Cultural Heritage</b>	Safeguard cultural heritage features and their settings through responsible design and positioning of development	<ul style="list-style-type: none"> <li>Protect places, features, buildings and landscapes of cultural, archaeological or architectural heritage</li> </ul>
<b>Landscape</b>	Protect and enhance the landscape character	<ul style="list-style-type: none"> <li>To implement the Plan's framework for identification, assessment, protection, management and planning of landscapes having regard to the European Landscape Convention</li> </ul>

## 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. Summaries of the alternatives for the Plan and their assessment are provided below.

### 4.2 Limitations in Available Alternatives

The Plan is required to be prepared by 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 (NPF), the Regional Spatial and Economic Strategy (RSES) for the Southern Region and the County Development Plan. These documents set out various requirements for the content of the Plan including on topics such as land use zoning and population projections.

### 4.3 Type 1 Alternatives: Town Centre First Approach

**Type 1 Alternative A:** This approach would strongly embody the principle of town centre first and compact development. The Plan would designate the town centre as the primary growth area with 50% of new residential development to occur in the central area in the areas zoned for town centre. Key regeneration and consolidation sites would be identified. Further expansion on out-of-town greenfield lands that are not well linked, or proposed to be linked via LTP active travel measures, with the town centre would not be permitted.

However, the limiting of 50% of new housing development to existing town centre sites only, could result in the town not meeting its housing and accommodation targets in line with population projections. Opportunities to consolidate existing peripheral neighbourhoods and to provide better active travel linkages might not be availed of, and potential for services growth and employment growth on sites outside of the town centre area might be lost. In particular, this alternative could risk the further detachment of residential neighbourhoods to the north and south of the town.

**Type 1 Alternative B:** This approach would embody and support the principles of Town Centre First and compact development, and would specify 'neighbourhoods' with unique characteristics and development criteria. In line with the National Planning Framework, at least 30% of new residential development would be facilitated in the town centre area and there would be a general focus for new growth on the Compact Growth area of the town. Key regeneration sites would be identified as well as well-connected neighbourhood expansion opportunities. Complimentary 'edge-of-centre' new residential sites would support the development of additional options to meet the housing needs of the town and consolidate existing peripheral neighbourhoods. Further expansion on out-of-town greenfield lands that are not well linked, or proposed to be linked via LTP active travel measures, with the town centre would not be permitted. Proportionate growth of employment and industry would also be supported adjacent to existing employment sites in the town.

This alternative would strengthen the town centre and reduce pressure for expansion into greenfield out of town sites, whilst at the same time ensuring that projected growth can be delivered.

Selected Type 1 Alternative for the Plan: Alternative B.

## 4.4 Type 2 Alternatives: Infrastructure and Environmental Approach

- **Type 2 Alternative A:** A Plan that deeply embeds the principles of infrastructural capacity, ecosystems services and strong support for a low-carbon and climate resilient economy and society.
- **Type 2 Alternative B:** A Plan that supports to a lesser degree, infrastructural capacity assessment in terms of land development, and the integration of ecosystems services and climate action led approaches to spatial planning.

It is essential that development under the Plan is adequately served by infrastructure and supports the move to a low-carbon and climate resilient economy and society. Alternative A would fully support achieving the objectives of the NPF and RSES. An infrastructure led approach would provide a strategy for sustainable compact growth across the Plan area, contribute to carbon reduction targets and achieve environmental enhancement and economic growth.

Alternative A would ensure that the sustainable development of the town occurs, with new development accompanied by adequate and appropriate infrastructure, in a manner which is compatible with climate action objectives. This alternative would benefit the efficient provision of infrastructure and the environment (including water, human health, ecology and air/climate) the most and would provide the highest levels of certainty and coherence to both decision makers and stakeholders, including residents and potential developers. Applications for developments would be more likely to be successful, and residual adverse effects would be least likely.

A Plan that deeply embeds the principles of infrastructural capacity, ecosystems services and strong support for a move to a low-carbon and climate resilient economy and society would provide for the:

- Support of compact development that enables active travel and efficient use of services and infrastructure as the most sustainable and low-carbon form of settlement in line with the provisions of the Climate Action Plan.
- Consideration of and protection of the role of natural systems and consideration 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
- Involvement and empowerment of people and communities - in decision making and in an active move to a low-carbon society.

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 (renewable and non-renewable resources, e.g. plants, animals, air, water, soils, minerals) 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;
- A decreased likelihood in the extent, magnitude and frequency of adverse effects on natural capital and ecosystem services; and
- Active support for the provisions of the National Climate Action Plan and national targets for GHG emissions.

Alternative B considers existing and future demand and capacity in infrastructure, but the allocation of growth and associated climate action policy responses are looser than under Alternative A. Decisions relating to infrastructure assessment are left to project level wherever this is possible. Climate action is supported, but not to the same degree as under Alternative A.

Alternative B would benefit the efficient provision of infrastructure, climate action and the environment (including water, human health, ecology and air/climate) the least and would provide reduced levels of

certainty and coherence to both decision makers and stakeholders, including residents and potential developers. Applications for developments would be less likely to be successful, and residual adverse effects would be more likely. Taking a less supportive infrastructure led approach would not contribute towards achieving policy objectives of the RSES or NPF to the same degree as Alternative A.

Under Alternative B, many natural capital and ecosystem service issues would be integrated into individual Plan Policy Objectives and into decision making at lower tiers of plan preparation and development management. However, this approach would be less coordinated and comprehensive than would be the case under Alternative A. 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;
- An increased likelihood in the extent, magnitude and frequency of adverse effects on natural capital and ecosystem services; and
- A decreased likelihood of compliance with the provisions of the National Climate Action Plan and national targets for GHG emissions.

Selected Type 2 Alternative for the Plan: Alternative A.

## 4.5 Type 3 Alternatives: Area Based Transport Assessment Alternatives

- **Type 3 Alternative A:** Inform the Plan with an Area Based Transport Assessment, which focuses on delivering travel solutions that support moving people from the private car to more sustainable modes.
- **Type 3 Alternative B:** Do not inform the Plan with an Area Based Transport Assessment, which focuses on delivering travel solutions that support moving people from the private car to more sustainable modes, relying solely on existing provisions, including those included as part of the County Development Plan. The Development Plan policy objectives are also focused on the Avoid-Shift-Improve approach, but specific interventions for Nenagh are not set out in detail.

Informing the Plan with an Area Based Transport Assessment, which focuses on delivering travel solutions that support moving people from the private car to more sustainable modes, (**Area Based Transport Assessment 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 arising from more coherently planned transport developments on environmental components, including ecology and water, could be mitigated at both LAP and project level.

Not informing the Plan with an Area Based Transport Assessment, which focuses on delivering travel solutions that support moving people from the private car to more sustainable modes, (**Area Based Transport Assessment 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 on environmental components including ecology and water would need to be adequately mitigated at project level.

Selected Area Based Transport Assessment Alternative for the Plan: Alternative A

## **4.6 Type 4 Alternatives: Transport Infrastructure Alternatives**

Under **Transport Infrastructure Alternative A**, new transport infrastructure would be considered subject to environmental constraints, including those related to habitats and potential impacts (e.g. disturbance from lighting). This would include minimising river crossings, avoiding sensitive habitats, not increasing barriers to flood waters and sustainable design and construction techniques. By focusing on mitigation at both plan and project levels, Alternative A would offer the most certainty for environmental protection and management and would be more likely to result in important individual projects (relating to sustainable mobility and emissions/energy objectives) receiving permission.

Under **Transport Infrastructure Alternative B**, all additional environmental mitigation would be left to be defined in the future, at project level. This would offer the least certainty for environmental protection and management and would be more likely to result in important individual projects (relating to sustainable mobility and emissions objectives) not been given permission.

Selected Transport Infrastructure Alternative for the Plan: Alternative A

## Section 5 Summary of Effects arising from Plan

Table 5.1 summarises the overall environmental effects arising from Draft 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 Draft Plan and the Tipperary County Development Plan 2022-2028 – 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.

Appropriate Assessment (AA) Screening and Stage 2 AA are being undertaken alongside the preparation of the Plan. The requirement for AA is provided under the EU Habitats Directive (Directive 1992/43/EEC). As part of the AA Screening process, the Council determined that it could not be excluded, on the basis of objective information, that the emerging Draft Plan, individually, or in combination with other plans and projects would have a likely adverse effect on the integrity of a European Site. Therefore, Stage 2 AA is required. The emerging conclusion of the Stage 2 AA is that, following the application of mitigation, the Plan will not affect the integrity of the European Sites, alone or in combination with other plans or projects.<sup>28</sup>

A Strategic Flood Risk Assessment (SFRA) document accompanies the SEA Environmental Report and the Draft 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 Tipperary County Development Plan 2022-2028 and related provisions have been integrated into the LAP.

---

<sup>28</sup> Except as provided for in Article 6(4) of the Habitats Directive, viz. There must be:

(a) no alternative solution available,  
 (b) imperative reasons of overriding public interest for the plan to proceed; and  
 (c) adequate compensatory measures in place.

**Table 5.1 Overall Findings – Environmental Effects arising from Draft Plan Provisions**

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 Southern RSES, the Tipperary County Development Plan 2022-2028, adjacent Development Plans and lower-tier land use plans.		
	Significant Positive Effect, likely to occur	Potentially Significant Adverse Environmental Effects, if unmitigated	Likely Residual Adverse Non-Significant Effects
<b>Biodiversity and Flora and Fauna</b>	<ul style="list-style-type: none"> <li>Contribution towards protection of ecology (including designated sites, ecological connectivity, habitats) by facilitating development of lands (including those within and adjacent to the Plan area's existing built-up footprint) 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-served lands elsewhere in the County and beyond.</li> <li>Contribution towards the maintenance of existing green infrastructure and associated ecosystem services, listed species, ecological connectivity and non-designated habitats.</li> <li>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 (including European Sites and Wildlife 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.</li> <li>Sustains existing sustainable rural management practices – and the communities who support them – to ensure the continuation of long-established managed landscapes and the flora and fauna that they contain.</li> </ul>	<p>Arising from both construction and operation of development and associated infrastructure:</p> <ul style="list-style-type: none"> <li>Loss of/damage to biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance to biodiversity and flora and fauna;</li> <li>Habitat loss, fragmentation and deterioration, including patch size and edge effects; and</li> <li>Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species such as birds and bats.</li> </ul>	<ul style="list-style-type: none"> <li>Loss of an extent of non-protected habitats and species arising from the replacement of semi-natural land covers with artificial surfaces.</li> <li>Losses or damage to ecology (these would be in compliance with relevant legislation).</li> </ul>
<b>Population and Human Health</b>	<ul style="list-style-type: none"> <li>Promotion of economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management.</li> <li>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 Plan area's existing built-up footprint) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-served lands elsewhere in the County and beyond.</li> <li>Contribution towards the protection of human health by facilitating development of lands (including those within and adjacent to the Plan area's existing built-up footprint) 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-served lands elsewhere in the County and beyond.</li> <li>Contributes towards protection of human health as a result of contributing towards the protection of natural capital including environmental vectors, including air and water.</li> </ul>	<ul style="list-style-type: none"> <li>Potential adverse effects arising from flood events.</li> <li>Potential interactions if effects arising from environmental vectors.</li> </ul>	<ul style="list-style-type: none"> <li>Potential interactions with residual effects on environmental vectors – please refer to residual adverse effects under "Soil", "Water" and "Air and Climatic Factors" below.</li> </ul>



SEA Environmental Report Appendix II: Non-Technical Summary

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 2018, the Southern RSES, the Tipperary County Development Plan 2022-2028, adjacent Development Plans and lower-tier land use plans.		
	Significant Positive Effect, likely to occur	Potentially Significant Adverse Environmental Effects, if unmitigated	Likely Residual Adverse Non-Significant Effects
<b>Soil</b>	<ul style="list-style-type: none"> <li>Contribution towards the protection of soils (including those used for agriculture) and designated sites of geological heritage by facilitating development of lands (including those within and adjacent to the Plan area's existing built-up footprint) 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-served lands elsewhere in the County and beyond.</li> <li>Contribution towards the protection of the environment from contamination the highest standards of remediation, and where appropriate to consultations with the EPA and other relevant bodies, will be required to resolve any instances of environmental pollution created by contaminated land.</li> </ul>	<ul style="list-style-type: none"> <li>Potential adverse effects on the hydrogeological and ecological function of the soil resource, including as a result of development on contaminated lands.</li> <li>Potential for riverbank erosion.</li> </ul>	<ul style="list-style-type: none"> <li>Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces.</li> <li>Riverbank erosion will continue to occur naturally over time and is likely to be enhanced by climate change.</li> </ul>
<b>Water</b>	<ul style="list-style-type: none"> <li>Contribution towards the protection of water by facilitating development of lands (including those within and adjacent to the Plan area's existing built-up footprint) 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-served lands elsewhere in the County and beyond.</li> <li>Contributions towards the protection of water resources including the status of surface and groundwaters and water-based designations.</li> <li>Contribution towards flood risk management and appropriate drainage.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Increase in flood risk and associated effects associated with flood events.</li> </ul>	<ul style="list-style-type: none"> <li>Any increased loadings as a result of development to comply with the River Basin Management Plan.</li> <li>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.</li> </ul>
<b>Material Assets</b>	<ul style="list-style-type: none"> <li>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 Plan area's existing built-up footprint) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-served lands elsewhere in the County and beyond.</li> <li>Contribution towards compliance with national and regional water services and waste management policies.</li> <li>Contribution towards increase in renewable energy use by facilitating renewable energy and electricity transmission infrastructure developments.</li> <li>Contribution towards limits in increases in energy demand from the transport sector by facilitating sustainable compact growth.</li> <li>Contribution towards reductions in average energy consumption per capita including promoting sustainable compact growth, sustainable mobility, sustainable design and energy efficiency.</li> </ul>	<ul style="list-style-type: none"> <li>Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity ensures the mitigation of potential conflicts).</li> <li>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).</li> <li>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).</li> <li>Increases in waste levels.</li> <li>Potential impacts upon public assets and infrastructure.</li> <li>Interactions between agriculture and soil, water, biodiversity and human health - including phosphorous and nitrogen deposition as a result of agricultural activities and the production of secondary inorganic particulate matter.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Residual wastes to be disposed of in line with higher-level waste management policies and will be reduced in line with the Circular Economy concept.</li> <li>Any impacts upon public assets and infrastructure to comply with statutory planning/consent-granting framework.</li> </ul>

SEA Environmental Report Appendix II: Non-Technical Summary

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 2018, the Southern RSES, the Tipperary County Development Plan 2022-2028, adjacent Development Plans and lower-tier land use plans.		
	Significant Positive Effect, likely to occur	Potentially Significant Adverse Environmental Effects, if unmitigated	Likely Residual Adverse Non-Significant Effects
<b>Air and Climatic Factors</b>	<ul style="list-style-type: none"> <li>Contribution towards climate mitigation and adaptation by facilitating compact development of lands (including those within and adjacent to the Plan area's existing built-up footprint) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-served lands elsewhere in the County and beyond.</li> <li>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:               <ul style="list-style-type: none"> <li>Sustainable compact growth;</li> <li>Sustainable mobility, including walking, cycling and public transport;</li> <li>Drainage, flood risk management and resilience;</li> <li>Renewable energy; and</li> <li>Sustainable design, energy efficiency and green and blue infrastructure.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Potential conflict between development under the Plan and aiming to reduce carbon emissions in line with local, national and European environmental objectives.</li> <li>Potential conflicts between transport emissions, including those from cars, and air quality.</li> <li>Potential conflicts between increased frequency of noise emissions and protection of sensitive receptors.</li> <li>Potential conflicts with climate adaptation measures including those relating to flood risk management.</li> </ul>	<ul style="list-style-type: none"> <li>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, in particular.</li> <li>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.</li> </ul>
<b>Cultural Heritage</b>	<ul style="list-style-type: none"> <li>Contributes towards protection of cultural heritage elsewhere in the County by facilitating development within the town.</li> <li>Contributes towards protection of cultural heritage within the town by facilitating brownfield development and regeneration.</li> </ul>	<ul style="list-style-type: none"> <li>Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities.</li> </ul>	<ul style="list-style-type: none"> <li>Potential effects on known architectural and archaeological heritage and unknown archaeology however, these will occur in compliance with legislation.</li> </ul>
<b>Landscape</b>	<ul style="list-style-type: none"> <li>Contributes towards protection of wider landscape and landscape designations by facilitating development within the town.</li> </ul>	<ul style="list-style-type: none"> <li>Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>

## 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 Council through the SEA, Appropriate Assessment (AA) and Strategic Flood Risk Assessment (SFRA) processes. By integrating all related recommendations into the Plan, the Council 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 Council to ensure contribution towards environmental protection and sustainable development<sup>29</sup>;
- Considering alternatives for the Plan<sup>30</sup>;
- The integration of environmental considerations into the zoning provisions of the Plan<sup>31</sup>;
- The integration of individual SEA, AA and SFRA provisions into the text of the Plan; and
- The integration of individual provisions into the text of the County Development Plan.

### 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.

Given the position of the Local Area Plan in the land use planning hierarchy beneath the Tipperary County Development Plan 2022-2028, the measures identified in that County Development Plan SEA have been used as they are or having been slightly modified – in most instances. This consistency across the hierarchy of land use plans will improve the efficiency and effectiveness of future monitoring.

Monitoring indicators, targets, sources and remedial action is provided at Table 6.1. These measures can be considered and used as appropriate when it comes to monitoring the likely significant effects of implementing the Plan. The indicators may be updated over time, as new requirements and information emerge, for example. Reporting may be undertaken in conjunction with the monitoring reporting on other plans, such as the County Development Plan and other Local Area Plans.

---

<sup>29</sup> In advance of the placing of the Draft Plan on public display, Tipperary County Council undertook various works in order to inform the preparation of the Plan. This included a detailed population analysis and preparation of a Local Transport Plan and Serviced Land Assessment, which have informed and are appended to the draft Plan.

The findings of this strategic work have been integrated into the Plan and will contribute towards both environmental protection and management and sustainable development.

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

<sup>30</sup> Although strategic alternatives in relation to the content of the Plan were guided by higher level planning objectives, as part of the Plan preparation/SEA process, the Council considered a number of alternatives for the Plan. These alternatives were assessed by the SEA process and the findings of this assessment informed the selection of preferred alternatives, facilitating an informed choice with respect to the type of Plan that was prepared and placed on public display.

<sup>31</sup> Environmental considerations, including those relating to sustainable and compact growth, sustainable mobility, sustainable infrastructure, flood risk and ecology, were integrated into the Plan's zoning provisions through an interdisciplinary approach. The Plan's land use zoning seeks to achieve sustainable and compact growth, taking into account the various requirements set out in the higher-level NPF, Southern RSES and Tipperary County Development Plan 2022-2028.

**Table 6.1 Indicators, Targets, Sources and Remedial Action**

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
<b>Biodiversity, Flora and Fauna</b>	BFF	<ul style="list-style-type: none"> <li>Condition of European sites</li> </ul>	<ul style="list-style-type: none"> <li>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</li> <li>Implement and review, as relevant, the Tipperary Heritage Plan 2017-2021, and any superseding version of same</li> </ul>	<ul style="list-style-type: none"> <li>DHLGH report of the implementation of the measures contained in the Habitats Directive - as required by Article 17 of the Directive (every 6 years)<sup>32</sup></li> <li>DHLGH National Birds Directive Monitoring Report for the under Article 12 (every 3 years)<sup>33</sup></li> <li>Consultations with the NPWS<sup>34</sup></li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>
		<ul style="list-style-type: none"> <li>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 (focus on nature based solutions to surface water management)</li> </ul>	<ul style="list-style-type: none"> <li>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</li> <li>Implement and review, as relevant, the Tipperary Heritage Plan 2017-2021, and any superseding version of same</li> </ul>	<ul style="list-style-type: none"> <li>Internal review of local land use plans</li> </ul>	<ul style="list-style-type: none"> <li>Review internal systems</li> </ul>
		<ul style="list-style-type: none"> <li>SEAs and AAs as relevant for new Council policies, plans, programmes etc.</li> </ul>	<ul style="list-style-type: none"> <li>Screen for and undertake SEA and AA as relevant for new Council policies, plans, programmes etc.</li> </ul>	<ul style="list-style-type: none"> <li>Internal monitoring of preparation of local land use plans</li> </ul>	<ul style="list-style-type: none"> <li>Review internal systems</li> </ul>
		<ul style="list-style-type: none"> <li>Status of water quality in the County's water bodies</li> </ul>	<ul style="list-style-type: none"> <li>Included under Water below</li> </ul>	<ul style="list-style-type: none"> <li>Included under Water below</li> </ul>	<ul style="list-style-type: none"> <li>Included under Water below</li> </ul>
		<ul style="list-style-type: none"> <li>Compliance of planning permissions with Plan measures providing for the protection of Biodiversity and flora and fauna – from County Development Plan and Local Area Plan</li> </ul>	<ul style="list-style-type: none"> <li>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 – from County Development Plan and Local Area Plan</li> </ul>	<ul style="list-style-type: none"> <li>Internal monitoring of likely significant environmental effects of grants of permission<sup>35</sup></li> </ul>	<ul style="list-style-type: none"> <li>Review internal systems</li> </ul>

<sup>32</sup> 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 Natura 2000 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.

<sup>33</sup> 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 Natura 2000 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.

<sup>34</sup> 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 Natura 2000 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.

<sup>35</sup> 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 Natura 2000 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.

SEA Environmental Report Appendix II: Non-Technical Summary

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
<b>Population and Human Health</b>	PHH	<ul style="list-style-type: none"> <li>Implementation of Plan measures relating to the promotion of economic growth as provided for by County Development Plan and Local Area Plan</li> </ul>	<ul style="list-style-type: none"> <li>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 County Development Plan and Local Area Plan</li> <li>By 2020 all citizens will have access to speeds of 30Mbps, and that 50% of citizens will be subscribing to speeds of 100Mbps (Also relevant to Material Assets)</li> </ul>	<ul style="list-style-type: none"> <li>Internal review of progress on implementing Plan objectives</li> <li>Consultations with DECC</li> </ul>	<ul style="list-style-type: none"> <li>Review internal systems</li> <li>Consultations with DECC</li> </ul>
		<ul style="list-style-type: none"> <li>Number of spatial concentrations of health problems arising from environmental factors resulting from development permitted under the Plan</li> </ul>	<ul style="list-style-type: none"> <li>No spatial concentrations of health problems arising from environmental factors as a result of implementing the Plan</li> </ul>	<ul style="list-style-type: none"> <li>Consultations with the Health Service Executive and EPA</li> </ul>	<ul style="list-style-type: none"> <li>Consultations with the Health Service Executive and EPA</li> </ul>
		<ul style="list-style-type: none"> <li>Proportion of people reporting regular cycling / walking to school and work above previous CSO figures</li> </ul>	<ul style="list-style-type: none"> <li>Increase in the proportion of people reporting regular cycling / walking to school and work above previous CSO figures</li> </ul>	<ul style="list-style-type: none"> <li>CSO data</li> <li>Monitoring of Tipperary County Council's Climate Change Adaptation Strategy 2019-2024</li> </ul>	<ul style="list-style-type: none"> <li>Where proportion of population shows increase in private car use above CSO 2016 figures, the Council will coordinate with the Regional Assembly, the DHLGH, DECC and NTA to develop a tailored response.</li> </ul>
		<ul style="list-style-type: none"> <li>Number of spatial plans that include specific green infrastructure mapping</li> </ul>	<ul style="list-style-type: none"> <li>Require all local level land use plans to include specific green infrastructure mapping</li> </ul>	<ul style="list-style-type: none"> <li>Internal review of local land use plans</li> </ul>	<ul style="list-style-type: none"> <li>Review internal systems</li> </ul>
<b>Soil (and Land)</b>	S	<ul style="list-style-type: none"> <li>Proportion of population growth occurring on infill and brownfield lands compared to greenfield (also relevant to Material Assets)</li> </ul>	<ul style="list-style-type: none"> <li>Maintain built surface cover nationally to below the EU average of 4% as per the NPF</li> <li>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</li> <li>To map brownfield and infill land parcels across the Plan area's existing built-up footprint</li> </ul>	<ul style="list-style-type: none"> <li>EPA Geoportal</li> <li>Compilation of greenfield and brownfield development for the DHLGH</li> <li>AA/Screening for AA for each application</li> </ul>	<ul style="list-style-type: none"> <li>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 Council will liaise with the Regional Assembly to establish reasons and coordinate actions to address constraints to doing so.</li> </ul>
		<ul style="list-style-type: none"> <li>Instances where contaminated material generated from brownfield and infill must be disposed of</li> </ul>	<ul style="list-style-type: none"> <li>Dispose of contaminated material in compliance with EPA guidance and waste management requirements</li> </ul>	<ul style="list-style-type: none"> <li>Internal review of grants of permission where contaminated material must be disposed of</li> </ul>	<ul style="list-style-type: none"> <li>Consultations with the EPA and Development Management</li> </ul>
		<ul style="list-style-type: none"> <li>Environmental assessments and AAs as relevant for applications for brownfield and infill development prior to planning permission</li> </ul>	<ul style="list-style-type: none"> <li>Screen for and undertake environmental assessments and AA as relevant for applications for brownfield and infill development prior to planning permission</li> </ul>	<ul style="list-style-type: none"> <li>Internal monitoring of grants of permission</li> </ul>	<ul style="list-style-type: none"> <li>Review internal systems</li> </ul>

SEA Environmental Report Appendix II: Non-Technical Summary

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
<b>Water</b>	<b>W</b>	<ul style="list-style-type: none"> <li>Status of water bodies as reported by the EPA Water Monitoring Programme for the WFD</li> </ul>	<ul style="list-style-type: none"> <li>Not to cause deterioration in the status of any surface water or affect the ability of any surface water to achieve 'good status'</li> <li>Implementation of the objectives of the River Basin Management Plan</li> </ul>	<ul style="list-style-type: none"> <li>EPA Monitoring Programme for WFD compliance<sup>36</sup></li> </ul>	<ul style="list-style-type: none"> <li>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, Irish Water 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.</li> <li>Where planning applications are rejected due to insufficient capacity in the WWTP or failure of the WWTP to meet Emission Limit Values, the Council will consider whether it is necessary to coordinate a response with the Regional Assembly, EPA and Irish Water to achieve the necessary capacity.</li> </ul>
		<ul style="list-style-type: none"> <li>Number of incompatible developments permitted within flood risk areas</li> </ul>	<ul style="list-style-type: none"> <li>Minimise developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk</li> </ul>	<ul style="list-style-type: none"> <li>Internal monitoring of likely significant environmental effects of grants of permission</li> </ul>	<ul style="list-style-type: none"> <li>Where planning applications are being permitted on flood zones, the Council will ensure that such grants are in compliance with the Flood Risk Management Guidelines and include appropriate flood risk mitigation and management measures.</li> </ul>
<b>Material Assets</b>	<b>MA</b>	<ul style="list-style-type: none"> <li>Programmed delivery of Irish Water infrastructure for all key growth towns in line with Irish Water Investment Plan and prioritisation programme to ensure sustainable growth can be accommodated</li> <li>Number of new developments granted permission which can be adequately and appropriately served with waste water treatment over the lifetime of the Plan</li> </ul>	<ul style="list-style-type: none"> <li>All new developments granted permission to be connected to and adequately and appropriately served by waste water treatment over the lifetime of the Plan</li> <li>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</li> <li>Facilitate, as appropriate, Irish Water in developing water and wastewater infrastructure</li> <li>See also targets relating to greenfield and brownfield development of land under Soil and broadband under Population and Human Health</li> </ul>	<ul style="list-style-type: none"> <li>Internal monitoring of likely significant environmental effects of grants of permission Consultations with the Irish Water</li> <li>DHLGH in conjunction with Local Authorities</li> </ul>	<ul style="list-style-type: none"> <li>Where planning applications are rejected due to insufficient capacity in the WWTP or failure of the WWTP to meet Emission Limit Values, the Council will consider whether it is necessary to coordinate a response with the Regional Assembly, EPA and Irish Water to achieve the necessary capacity.</li> </ul>
		<ul style="list-style-type: none"> <li>Proportion of people reporting regular cycling / walking to school and work above previous CSO figures</li> </ul>	<ul style="list-style-type: none"> <li>Increase in the proportion of people reporting regular cycling / walking to school and work above previous CSO figures</li> </ul>	<ul style="list-style-type: none"> <li>CSO data</li> <li>Monitoring of Tipperary County Council's Climate Change Adaptation Strategy 2019-2024</li> </ul>	<ul style="list-style-type: none"> <li>Where proportion of population shows increase in private car use above CSO 2016 figures, the Council will coordinate with the Regional Assembly, the DHLGH, DECC and NTA to develop a tailored response.</li> </ul>

<sup>36</sup> Including monitoring of water quality and nitrogen deposition due to bioenergy and agricultural projects where available.

SEA Environmental Report Appendix II: Non-Technical Summary

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
<b>Air</b>	<b>A</b>	<ul style="list-style-type: none"> <li>Proportion of journeys made by private fossil fuel-based car compared to previous National Travel Survey levels</li> <li>NO<sub>x</sub>, SO<sub>x</sub>, PM10 and PM2.5 as part of Ambient Air Quality Monitoring</li> </ul>	<ul style="list-style-type: none"> <li>Decrease in proportion of journeys made by private fossil fuel-based car compared to previous National Travel Survey levels</li> <li>Improvement in Air Quality trends, particularly in relation to transport related emissions of NO<sub>x</sub> and particulate matter</li> </ul>	<ul style="list-style-type: none"> <li>CSO data</li> <li>Data from the National Travel Survey</li> <li>EPA Air Quality Monitoring</li> <li>Consultations with Department of Transport and Department of Environment, Climate and Communications</li> </ul>	<ul style="list-style-type: none"> <li>Where proportion of population shows increase in private car use above CSO 2016 figures, Council will coordinate with the Regional Assembly, DHLGH, DECC and NTA to develop a tailored response. See also entry under Population and human health above</li> </ul>
<b>Climatic Factors</b> <sup>37</sup>	<b>C</b>	<ul style="list-style-type: none"> <li>Implementation of County Development Plan and Local Area Plan measures relating to climate reduction targets</li> </ul>	<ul style="list-style-type: none"> <li>For review of progress on implementing County Development Plan and Local Area Plan objectives to demonstrate successful implementation of measures relating to climate reduction targets, including renewable energy production</li> </ul>	<ul style="list-style-type: none"> <li>Internal monitoring of likely significant environmental effects of grants of permission</li> </ul>	<ul style="list-style-type: none"> <li>Review internal systems</li> </ul>
		<ul style="list-style-type: none"> <li>A competitive, low-carbon, climate-resilient and environmentally sustainable economy</li> </ul>	<ul style="list-style-type: none"> <li>Contribute towards transition to a competitive, low-carbon, climate-resilient and environmentally sustainable economy by 2050</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring of Tipperary County Council's Climate Change Adaptation Strategy 2019-2024</li> <li>EPA Annual National Greenhouse Gas Emissions Inventory reporting</li> <li>Climate Action Regional Office</li> <li>Consultations with DECC (at monitoring evaluation)</li> </ul>	<ul style="list-style-type: none"> <li>Where targets are not achieved, the Council will liaise with the Regional Assembly and the Eastern and Midlands Climate Action Regional Office to establish reasons and develop solutions.</li> </ul>
		<ul style="list-style-type: none"> <li>Share of renewable energy in transport</li> </ul>	<ul style="list-style-type: none"> <li>Contribute towards the target of the Renewable Energy Directive (2009/28/EC), for all Member States to reach a 10% share of renewable energy in transport by facilitating the development of electricity charging and transmission infrastructure, in compliance with the provisions of the Plan</li> </ul>		
		<ul style="list-style-type: none"> <li>Carbon dioxide (CO<sub>2</sub>) emissions across the electricity generation, built environment and transport sectors</li> </ul>	<ul style="list-style-type: none"> <li>Contribute towards the reduction targets of carbon dioxide (CO<sub>2</sub>) emissions across the electricity generation, built environment and transport sectors</li> </ul>		
		<ul style="list-style-type: none"> <li>Energy consumption, the uptake of renewable options and solid fuels for residential heating</li> </ul>	<ul style="list-style-type: none"> <li>To promote reduced energy consumption and support the uptake of renewable options and a move away from solid fuels for residential heating</li> </ul>		
		<ul style="list-style-type: none"> <li>Proportion of journeys made by private fossil fuel-based car compared to previous levels</li> </ul>	<ul style="list-style-type: none"> <li>Decrease in the proportion of journeys made by residents of the County using private fossil fuel-based car compared to previous levels</li> </ul>	<ul style="list-style-type: none"> <li>CSO data</li> <li>Monitoring of Tipperary County Council's Climate Change Adaptation Strategy 2019-2024</li> </ul>	<ul style="list-style-type: none"> <li>Where trends toward carbon reduction are not recorded, the Council will liaise with the Regional Assembly and the Eastern and Midlands Climate Action Regional Office to establish reasons and develop solutions.</li> </ul>
		<ul style="list-style-type: none"> <li>Proportion of people reporting regular cycling / walking to school and work above previous CSO figures</li> </ul>	<ul style="list-style-type: none"> <li>Increase in the proportion of people reporting regular cycling / walking to school and work above previous CSO figures</li> </ul>	<ul style="list-style-type: none"> <li>CSO data</li> <li>Monitoring of Tipperary County Council's Climate Change Adaptation Strategy 2019-2024</li> </ul>	<ul style="list-style-type: none"> <li>Where proportion of population shows increase in private car use above CSO 2016 figures, the Council will coordinate with the Regional Assembly, the DHLGH, DECC and NTA to develop a tailored response.</li> </ul>

<sup>37</sup> Please also refer to relevant legislation and requirements under Section 4.10, Section 8.7 and Appendix I. Targets under the national Climate Action Plan are reviewed and updated periodically and include those under the headings of Electricity, Built Environment, Transport, Agriculture, Forestry & Land Use and Enterprise.

## SEA Environmental Report Appendix II: Non-Technical Summary

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
<b>Cultural Heritage</b>	CH	<ul style="list-style-type: none"> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>Internal monitoring of likely significant environmental effects of grants of permission</li> </ul>	<ul style="list-style-type: none"> <li>Where monitoring reveals visitor or development pressure is causing negative effects on designated archaeological or architectural heritage, the Council will work with the Regional Assembly, Fáilte Ireland and the National Monuments Service and other stakeholders, as relevant, to address pressures through additional mitigation.</li> </ul>
		<ul style="list-style-type: none"> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>Consultation with DHLGH</li> </ul>	
<b>Landscape</b>	L	<ul style="list-style-type: none"> <li>Number of developments permitted that result in avoidable adverse visual impacts on the landscape, especially with regard to landscape designations, resulting from development which is granted permission under the Plan</li> </ul>	<ul style="list-style-type: none"> <li>Minimise the impact of developments permitted which result in avoidable adverse visual impacts on the landscape, especially with regard to landscape designations, resulting from development which is granted permission under the Plan</li> </ul>	<ul style="list-style-type: none"> <li>Internal monitoring of likely significant environmental effects of grants of permission</li> </ul>	<ul style="list-style-type: none"> <li>Where monitoring reveals developments permitted which result in avoidable adverse visual impacts on the landscape, the Council will re-examine Plan provisions and the effectiveness of their implementation</li> </ul>