



Comhairle Contae Thiobraid Árann  
Tipperary County Council

# Tipperary County Development Plan 2022 – 2028

## Strategic Environmental Assessment Statement and Environmental Report



# 5

Volume 5 ~

August 2022



# Shaping Our Future



# SEA STATEMENT

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FOR THE

## TIPPERARY COUNTY DEVELOPMENT PLAN 2022-2028

**for: Tipperary County Council**

Civic Offices  
Nenagh  
County Tipperary



Comhairle Contae Thiobraid Árann  
Tipperary County Council

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**AUGUST 2022**

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# Section 1 Introduction

## 1.1 Introduction and Legislative Context

This is the Strategic Environmental Assessment (SEA) Statement for the Tipperary County Development Plan 2022-2028.

SEA is a systematic process of predicting and evaluating the likely environmental effects of implementing a 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 and social considerations.

Directive 2001/42/EC of the European Parliament and of the Council of Ministers, of 27<sup>th</sup> June 2001, on the Assessment of the Effects of Certain Plans and Programmes on the Environment, referred to hereafter as the SEA Directive, introduced the requirement that SEA be carried out on plans and programmes which are prepared for a number of sectors, including land use. The SEA Directive was transposed into Irish Law through the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 and the Planning and Development (Strategic Environmental Assessment) Regulations 2004. The Regulations have been amended by the European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011 and the Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2011.

## 1.2 Content of the SEA Statement

Where SEA is undertaken, the Regulations require that a Statement is made available to the public and the competent environmental authorities after the making of the Plan.

This Statement is referred to as an SEA Statement.

The SEA Statement is required to include information summarising:

- a) how environmental considerations have been integrated into the Plan;
- b) how the following have been taken into account during the preparation of the Plan:
  - the environmental report,
  - submissions and observations made to the planning authority on the Draft Plan and Environmental Report, and
  - any transboundary consultations (not required for this SEA).
- c) the reasons for choosing the Plan in the light of the other reasonable alternatives dealt with; and
- d) the measures decided upon to monitor the significant environmental effects of implementing the Plan.

## 1.3 Implications of SEA for the Plan

SEA has been undertaken on the Plan and the findings of the SEA are expressed in an Environmental Report, the first published version of which accompanied the Draft Plan on public display. The Environmental Report was updated in order to take account of changes to the original Draft Plan that were made on foot of submissions and recommendations in the submissions.

Tipperary County Council has been provided with the findings of SEA output during their consideration of the Plan and before the Plan was adopted.

## Section 2 How Environmental Considerations were integrated into the Plan

### 2.1 Overview

Environmental considerations were presented to the Council for its consideration through:

1. Consultations;
2. Communication of environmental sensitivities throughout the SEA process;
3. Appropriate Assessment;
4. Strategic Flood Risk Assessment;
5. Consideration of alternatives;
6. Integration of environmental considerations; and
7. Integration of individual SEA and AA provisions into the Plan.

All parts of the Plan-preparation process were informed by the SEA, AA and SFRA processes - this includes the preparation of the Chief Executive's Draft Plan, Members' Amendments to that Plan in advance of public display, Proposed Material Alterations and Further Modifications. The mitigation integrated into the final, adopted Plan includes that identified in Section 9 of this report.

### 2.2 Consultations

As environmental authorities identified under the Planning and Development (SEA) Regulations, as amended, the following authorities were sent SEA scoping notices indicating that submissions or observations in relation to the scope and level of detail of the information to be included in the environmental report could be made to Tipperary County Council<sup>1</sup>: Environmental Protection Agency; Department of Environment, Climate and Communications; Department of Agriculture, Food and the Marine; Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media; Department of Housing, Local Government and Heritage; Galway County Council; Clare County Council; Limerick City and County Council; Cork County Council; Waterford County Council; Kilkenny

<sup>1</sup> The names of some of the authorities have changed since notification was provided as a result of changes in Ministerial responsibilities across Departments.

County Council; Laois County Council; and Offaly County Council.

Detail on submissions made on foot of the SEA scoping notice is provided under Section 3.2.

Detail is also provided on submissions that were made on the Draft Plan and/or the SEA Environmental Report while they were on public display (see Section 3).

### 2.3 Communication of environmental sensitivities throughout the SEA process

Environmental considerations were integrated into the Plan before it was placed on public display. Individual sensitivities that were considered by the Planning Team preparing the Plan included the following:

- European Sites (Special Areas of Conservation and Special Protection Areas);
- Other Ecological Designations;
- Status of Surface and Ground Waters;
- Various entries to the Water Framework Directive's Register of Protected Areas;
- Groundwater Vulnerability;
- Water Services Capacity, Performance and Demand;
- Cultural heritage (archaeological and architectural) sensitivities; and
- Landscape Designations.

A number of these sensitivities are mapped on Figures 2.1 to 2.3.

Overlay mapping of environmental sensitivities was also prepared and a number of the environmental sensitivities described above were weighted and mapped overlapping each other. Figure 2.4 provides the overlay mapping of Environmental Sensitivities that was prepared. Environmental sensitivities are

indicated by colours which range from higher to lower sensitivity.

## 2.4 Appropriate Assessment

Appropriate Assessment (AA) Screening and Stage 2 AA have been undertaken alongside the Plan. The requirement for AA is provided under the EU Habitats Directive (Directive 1992/43/EEC).

The conclusion of the AA is that the Plan will not affect the integrity of the European Sites, alone or in combination with other plans or projects.<sup>2</sup>

The preparation of the Plan, SEA and AA has taken place concurrently and the findings of the AA have informed the SEA.

## 2.5 Strategic Flood Risk Assessment

A Strategic Flood Risk Assessment (SFRA) has been undertaken alongside the Plan. The requirement for SFRA is 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. Recommendations from the SFRA have been integrated into the Plan.

## 2.6 Consideration of Alternatives

Consideration of the environmental effects arising from a variety of different alternatives for the Plan (see Section 4) has contributed towards the protection and management of the environment within the Plan.

## 2.7 Integration of environmental considerations into Zoning of the Plan

Environmental considerations were integrated into the Plan's zoning through an interdisciplinary approach.

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

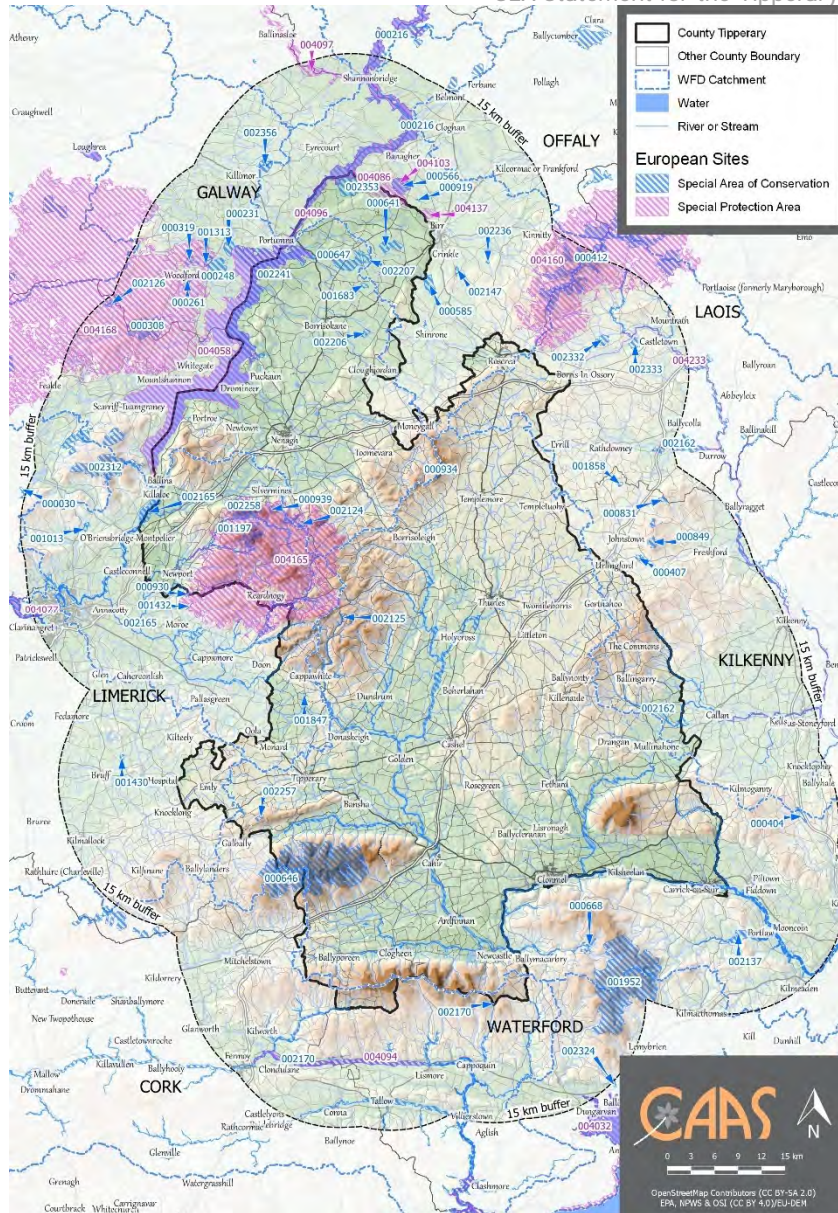
The detailed Plan preparation process undertaken by the Planning Department, combined with input from consultants, seeks to facilitate zoning that will help to avoid inappropriate development being permitted in areas of elevated sensitivity, such as in areas at risk of flooding or ecological sensitivity.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

Also taken into account were environmental sensitivities relating to ecology, cultural heritage, landscape and water, as well as the overlay mapping of environmental sensitivities.

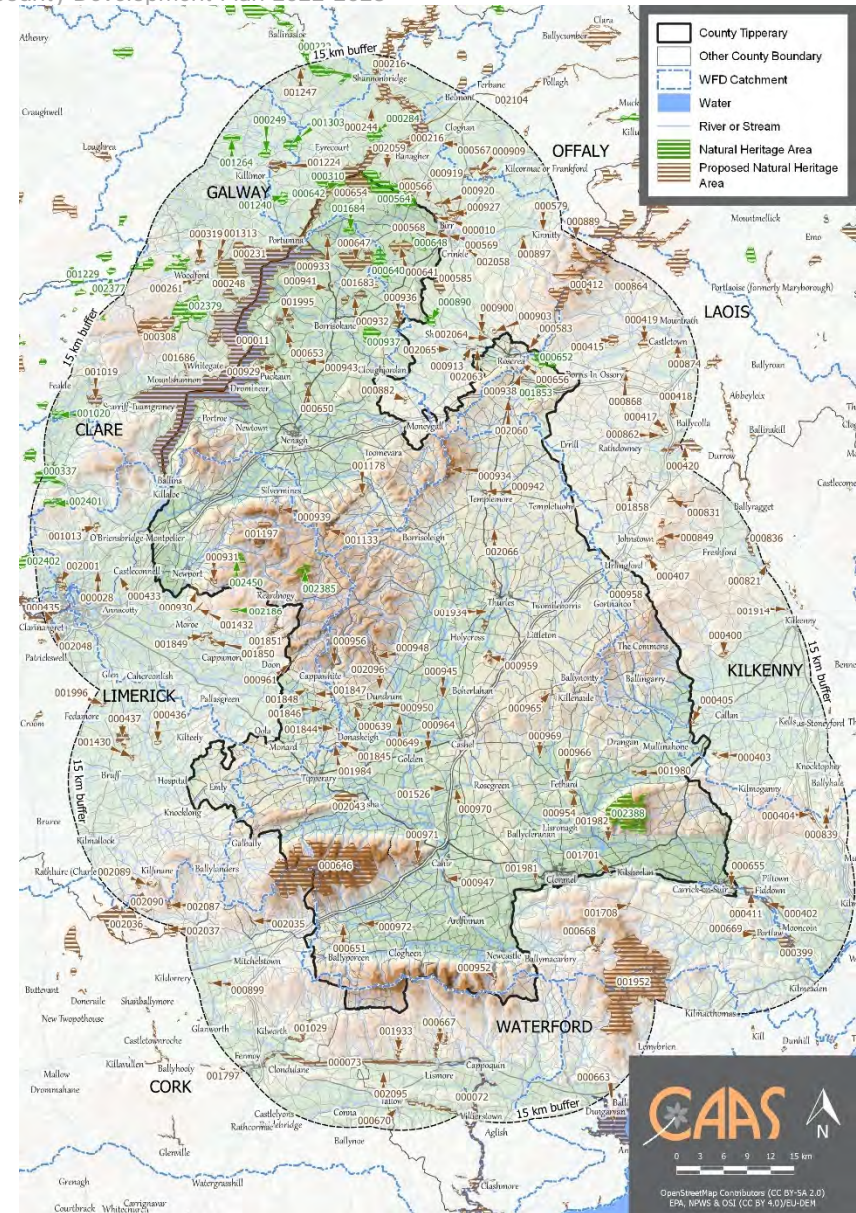
## 2.8 Integration of individual SEA, AA and SFRA provisions into the text of the Plan

Table 2.1 links key mitigation measure(s) - which have been integrated into the Plan - to the potential significant adverse effects of implementing the Plan, if unmitigated. The integration of these measures into the Plan occurred over a number of iterations and was informed by, inter alia, various communications through the SEA, AA and SFRA processes. The measures generally benefit multiple environmental components i.e. a measure providing for the protection of biodiversity, flora and fauna could beneficially impact upon the minimisation of flood risk and the protection of human health, for example.

<sup>2</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.



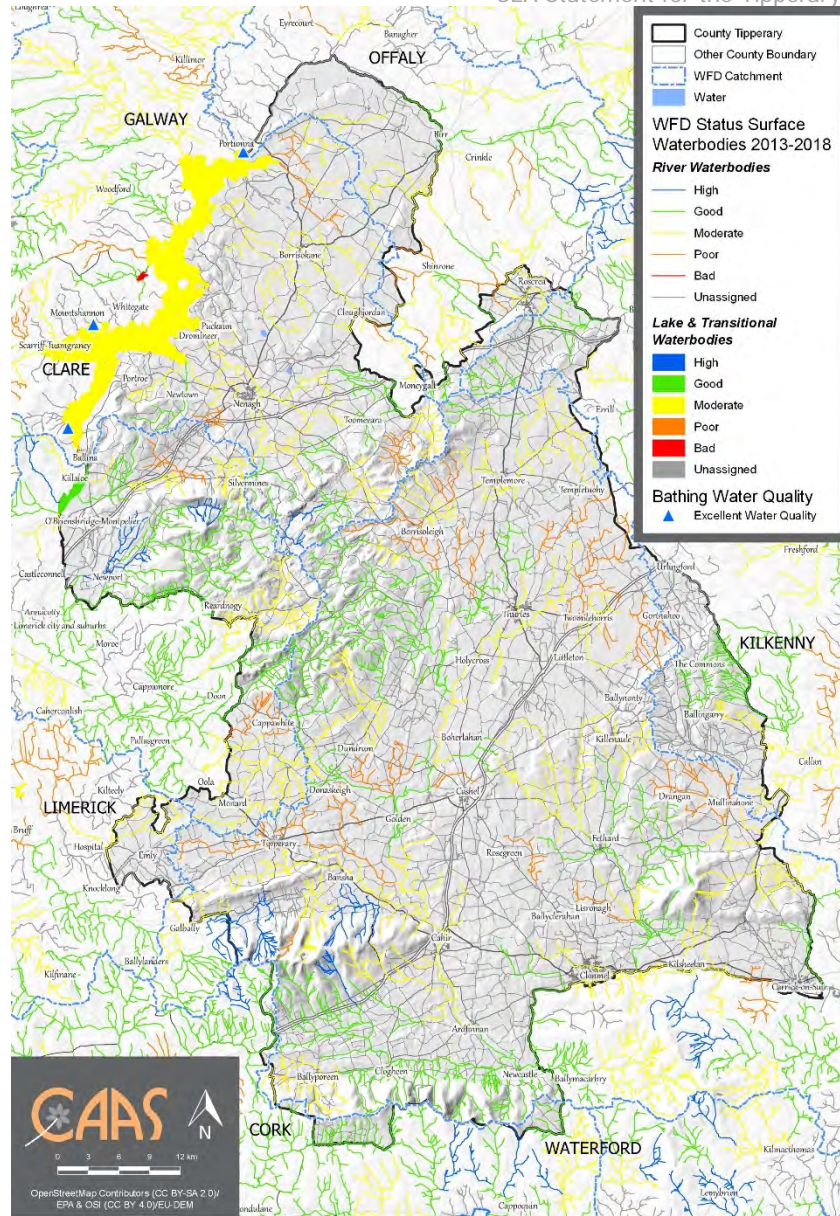
European Sites within and adjacent to the Plan area



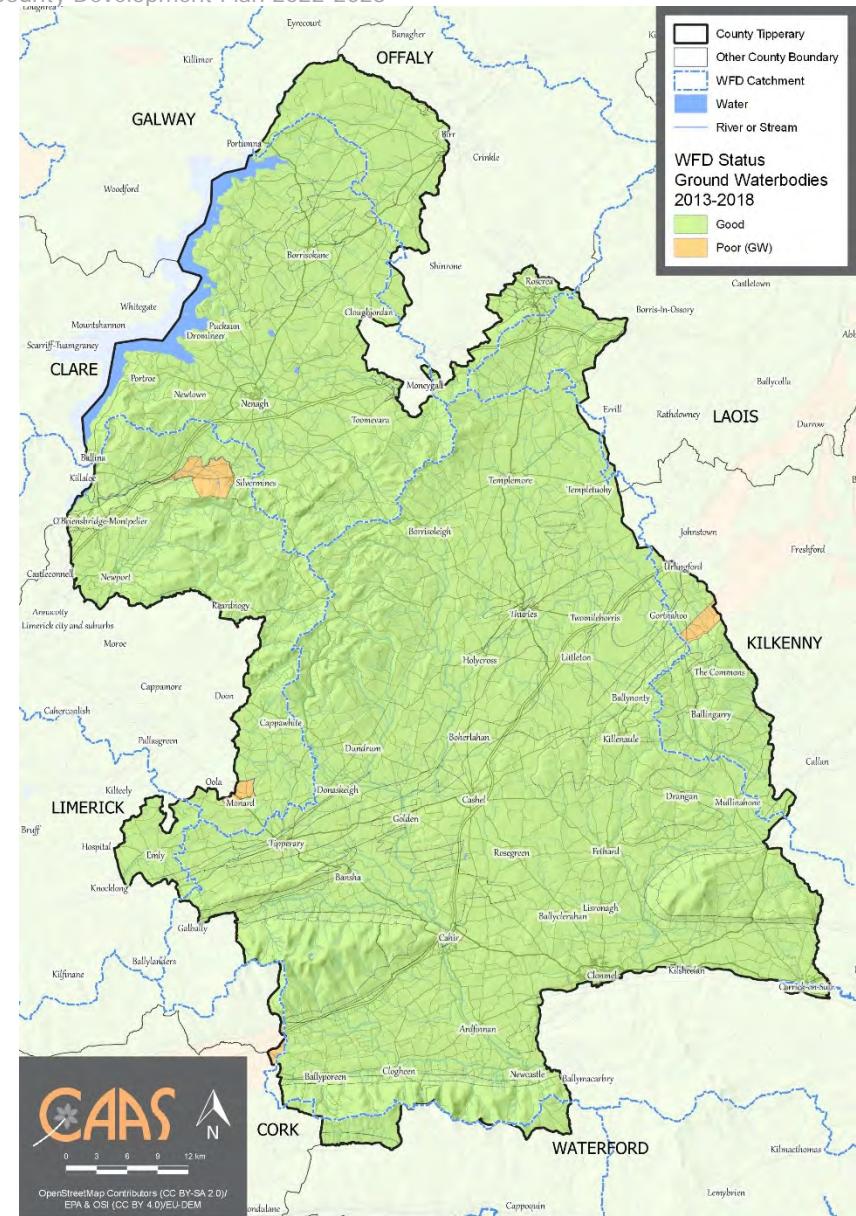
Other Ecological Designations within and adjacent to the Plan area

**Figure 2.1 Selection of Individual Environmental Sensitivities taken into account (1 of 3)**



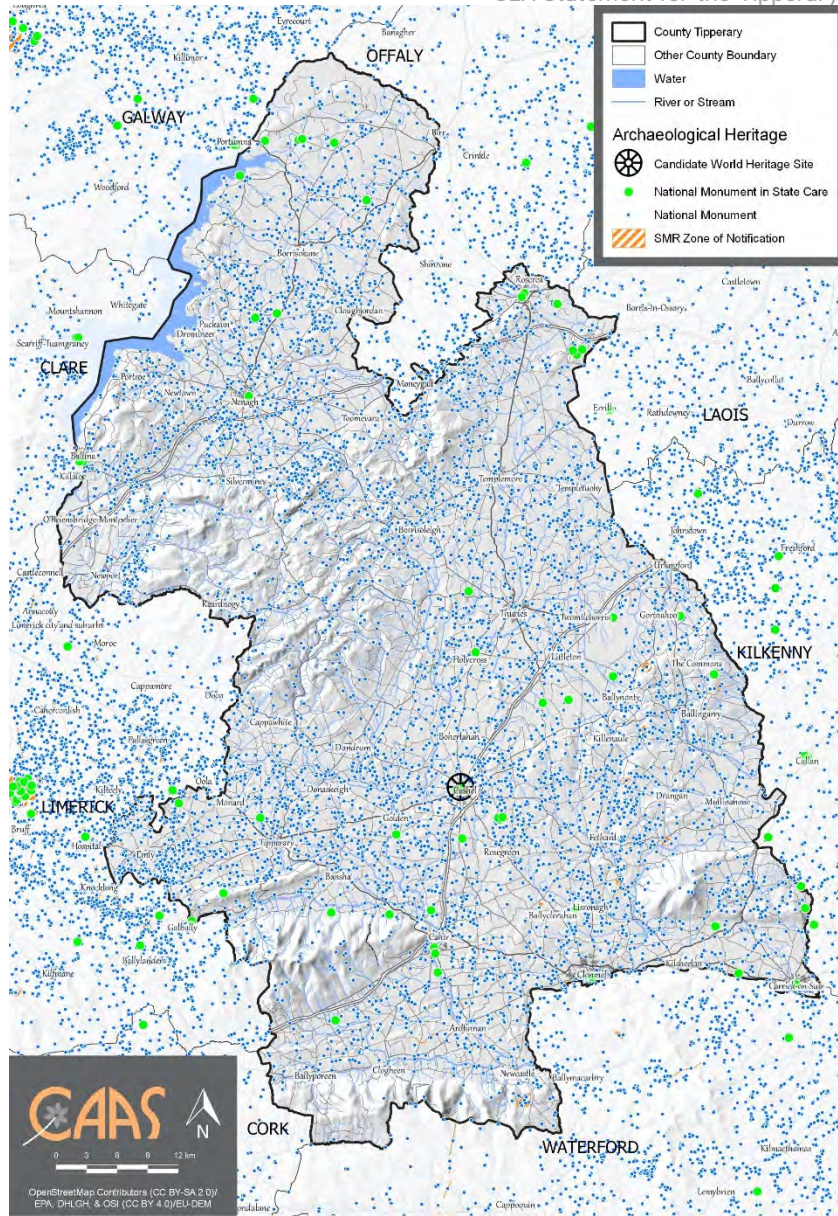


Surface Water Status

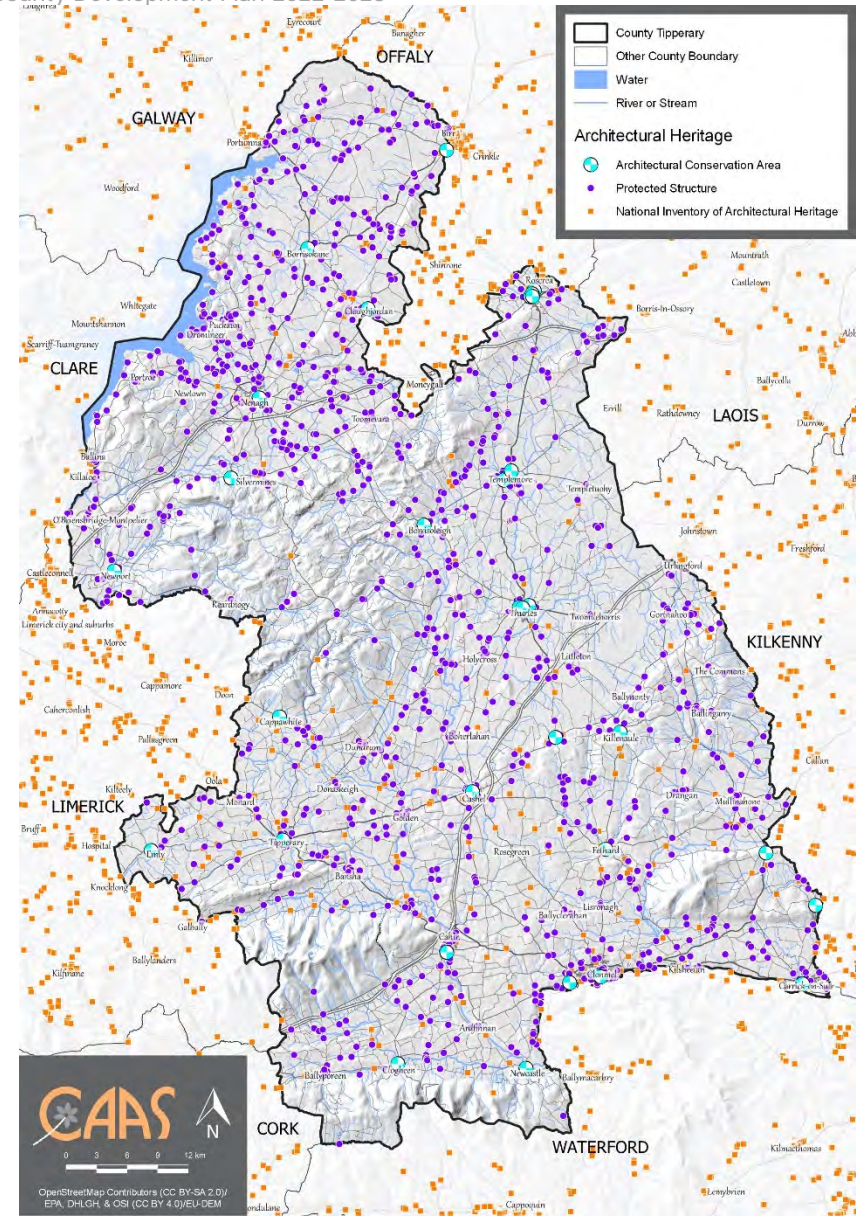


Groundwater Status

Figure 2.2 Selection of Individual Environmental Sensitivities taken into account (2 of 3)



Archaeological Designations



Architectural Designations

**Figure 2.3 Selection of Individual Environmental Sensitivities taken into account (3 of 3)**

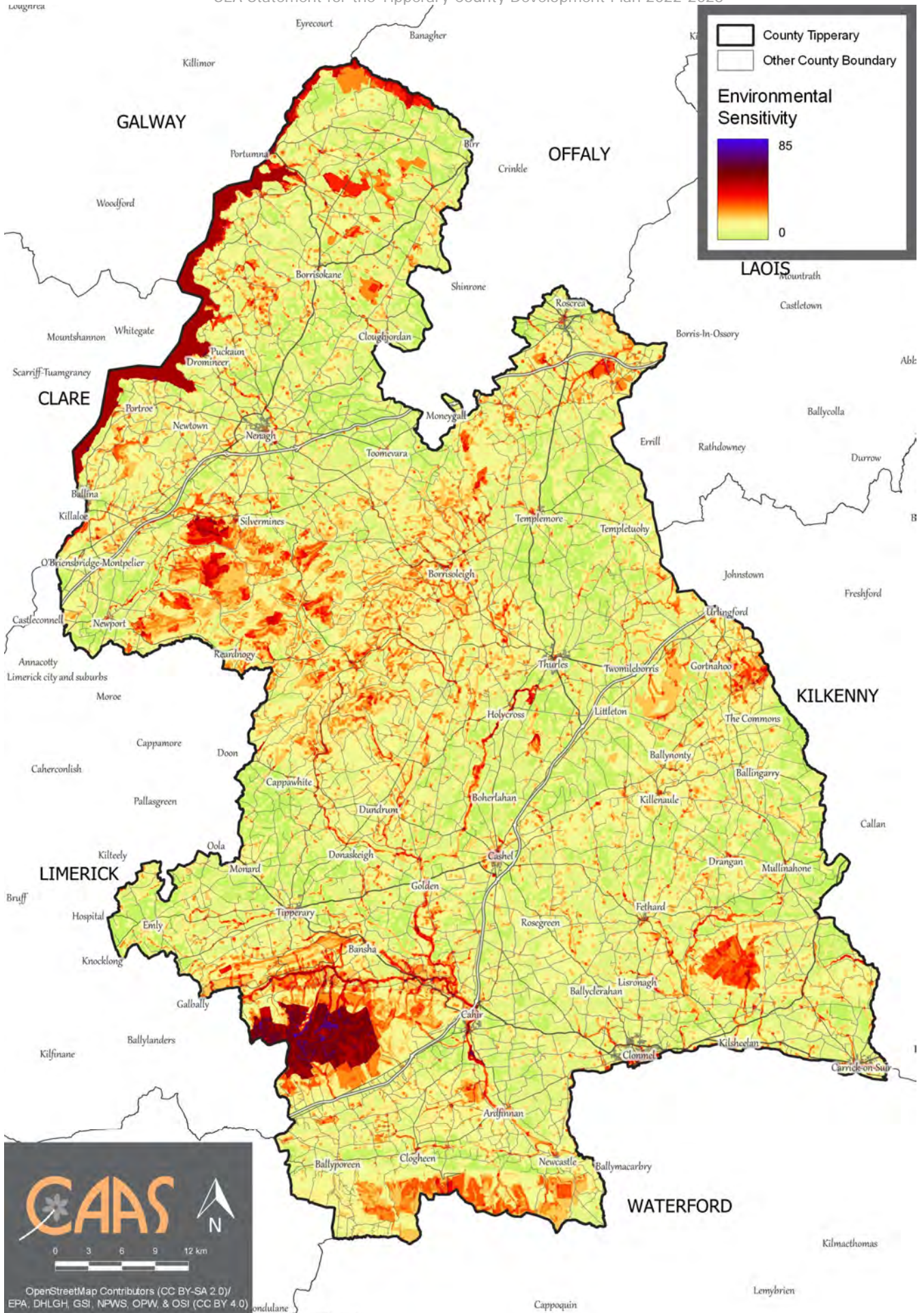


Figure 2.4 Overlay of Environmental Sensitivities

**Table 2.1 Integration of Environmental Considerations**

Topic	Potentially Adverse Effect, if Unmitigated	Significant Effect, if	Recommendations integrated into the Plan, included in:
<p><b>Various see below</b></p>	<p>Various – see below</p>	<p>Chapter 9 under “Supporting Tourism product development” The Council will facilitate opportunities for harnessing the potential of scenic areas, trails, uplands, lakes and waterways in a manner that is compatible with the natural heritage and environment of the area. Development proposals outside of settlement centres, including those associated with agri-tourism and eco-tourism, wellness facilities, adventure sports, outdoor recreational installations and water-based tourism activities, (including water side interpretive/ activity centres and jetties), will be required to demonstrate a clear need to locate in the area, and to ensure that the development is compatible with the protection of the environment, including lakeshore and riparian habitats. Proposals for new tourism or recreation projects will be required to demonstrate adequate mitigation of potential environmental effects, including: • Management any increase in visitor numbers and/or any change in visitor behaviour, including through visitor/habitat management plans, in order to avoid significant effects including loss of habitat and disturbance; and • Ensuring provision of infrastructure with adequate capacity and performance.</p> <p>8 - J In conjunction with Coillte and other stakeholders to support the development of forestry resources with a number of functions including, flood retention, biodiversity, water quality/catchment management and tourism and recreation.</p> <p>8- 3 In assessing applications for new development in the open-countryside, to facilitate the development of alternative farm enterprises, whilst balancing the need for a proposed rural based activity with the need to protect, promote and enhance the viability and environmental quality of the existing rural economy and agricultural land.</p> <p>8 - 6 Support new forestry plantation and works related to forestry including works relating to tree-felling, subject to the protection of visually sensitive areas, ecology (both terrestrial and aquatic), water resources and abstractions, and compliance with national regulations with respect to protection of the environment.</p> <p>8 - 7 Support the extraction of minerals and aggregates, and to have regard to:</p> <p>a) Quarries and Ancillary Activities, Guidelines for Planning Authorities, (DEHLG 2004), where such activities do not have a significant impact on the environment, landscape or residential amenities of the area.</p> <p>b) In considering new development, to have regard to potential adverse impacts on sites of geological importance or known high quality aggregate reserves as set out in the County Geological Sites record (and any review thereof) as maintained by the GSI.</p> <p>c) Where development proposals involve the redevelopment, rehabilitation or reuse of historic mining sites in the county, the Council may seek the preparation of a Master Plan for the entire landholding of the former mine to ensure the appropriate level of co-ordination of the entire landholding and protection of the environment.</p> <p>11 - A Support education and awareness programmes related to protection and promotion of the environment, biodiversity and our natural systems i.e. through membership of the All-Ireland Pollinators Plan, Tidy Towns, Green Schools etc.</p> <p>Chapter 12 under “Feasibility” New transport infrastructure projects, including greenways and blueways, that are not already provided for by existing plans/ programmes or are not already permitted, will be subject to feasibility assessment, considering need, environmental sensitivities as identified in the SEA Environmental Report, and objectives relating to sustainable mobility. Where feasibility is established, a Corridor and Route Selection Process will be undertaken, where appropriate, in two stages: Stage 1 – Route Corridor Identification, Evaluation and Selection; and Stage 2 – Route Identification, Evaluation and Selection.</p> <p>14 - 1 (a) Require new development proposals to incorporate a Green Infrastructure approach to the planning, design and management of built form/public realm and green and blue spaces, (where feasible), and to consider all opportunities for synergies and linkages with existing Blue and Green infrastructure in both urban and rural areas, in line with the Development Management Standards set out in Volume 3.</p> <p>(b) Ensure that proposals for greenway/blueway development contribute towards the protection or enhancement of existing green infrastructure and have regard to the “Connecting with nature for health and wellbeing” EPA Research Report 2020 and the Development Management Standards 1.1 Habitats Directive Assessment and 1.2 Environmental Assessment.</p> <p>(c) Where new development is required to prepare a ‘Sustainability Statement’, they must demonstrate compliance with this policy to the satisfaction of the Council.</p> <p>16 - 1 Undertake a programme of monitoring and evaluation of the County Development Plan over its lifetime, as follows and to align these monitoring protocols with each other as part of an overall monitoring framework:</p> <p>a) Prepare a 2 Year Progress Report of the County Development Plan (as required under Section 15(2) of The Act), having consideration to any regional monitoring programme in place.</p> <p>b) Prepare a Report to the Regional Assembly setting out progress made in supporting objectives of the RSES (as required under Section 25A(1) of The Act).</p> <p>c) SEA Monitoring as detailed in the Environmental Report.</p>	
<p><b>Biodiversity and flora and fauna</b></p>	<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</li> </ul>	<p>Chapter 9 under “Supporting Tourism product development” The Council will facilitate opportunities for harnessing the potential of scenic areas, trails, uplands, lakes and waterways in a manner that is compatible with the natural heritage and environment of the area. Development proposals outside of settlement centres, including those associated with agri-tourism and eco-tourism, wellness facilities, adventure sports, outdoor recreational installations and water-based tourism activities, (including water side interpretive/ activity centres and jetties), will be required to demonstrate a clear need to locate in the area, and to ensure that the development is compatible with the protection of the environment, including lakeshore and riparian habitats. Proposals for new tourism or recreation projects will be required to demonstrate adequate mitigation of potential environmental effects, including: • Management any increase in visitor numbers and/or any change in visitor behaviour, including through visitor/habitat management plans, in order to avoid significant effects including loss of habitat and disturbance; and • Ensuring provision of infrastructure with adequate capacity and performance.</p> <p>Chapter 11.3 under “Conservation and Protection of Sites” The main threats and pressures on the natural environment including habitats and species, are from works associated with development including agriculture, forestry and fisheries, natural system modifications (including drainage), tourism, mining and quarrying (including peat extraction) and issues such as climate change, pollution, and invasive and problematic species. Habitat loss is also recognised as an ongoing pressure. Proposals for new development, will be required to demonstrate adequate mitigation of potential environmental effects, including ensuring provision of infrastructure with adequate capacity and performance. The Council in accordance with the Core Strategy objective of the Plan, will seek to ensure the protection the natural</p>	

SEA Statement for the Tipperary County Development Plan 2022-2028

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
	<p>fauna;</p> <ul style="list-style-type: none"> <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>	<p>habitats and species as part of the management of new development and through its enforcement procedures.</p> <p>11 - 1 In assessing proposals for new development to balance the need for new development with the protection and enhancement of the natural environment and human health. In line with the provisions of Article 6(3) and Article 6 (4) of the Habitats Directive no plans, programmes, etc. or projects giving rise to significant cumulative, direct, indirect or secondary impacts on European sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall be permitted on the basis of this Plan (either individually or in combination with other plans, programmes, etc. or projects<sup>3</sup>).</p> <p>11 - 2 Ensure the protection, integrity and conservation of European Sites and Annex I and II species listed in EU Directives. Where it is determined that a development may individually, or cumulatively, impact on the integrity of European sites, the Council will require planning applications to be accompanied by a NIS in accordance with the Habitats Directive and transposing Regulations, 'Appropriate Assessment of Plans and Projects, Guidelines for Planning Authorities', (DEHLG 2009) or any amendment thereof and relevant EPA and European Commission guidance documents.</p> <p>11 - 3 Ensure the conservation and protection of existing, and proposed NHAs, and to ensure that proposed developments within or in close proximity to an existing or proposed NHA would not have a significant adverse impact on the status of the site as described.</p> <p>11 - 4 (a) Conserve, protect and enhance areas of local biodiversity value, habitats, ecosystems and ecological corridors, in both urban and rural areas, including rivers, lakes, streams and ponds, peatland and other wetland habitats, woodlands, hedgerows, tree lines, veteran trees, natural and semi-natural grasslands in accordance with the objectives of the National Biodiversity Plan (DCHG 2017) and any review thereof.</p> <p>(b) Safeguard, enhance and protect water bodies (rivers/canals/lakes) and river walks and to provide links, where possible, to wider Green Infrastructure networks as an essential part of the design process.</p> <p>(c) Require an 'Ecosystems Services' approach for new development to incorporate nature-based solutions, in so far as practical, as part of water management systems, public realm design and landscaping, in line with best practice.</p> <p>(d) Seek the retention of trees and hedgerows of particular local value, or where retention is not feasible, require their replacement, and seek a proactive focus on new tree-planting as part of new development.</p> <p>11 - 6 Ensure the integration of river corridors with green infrastructure in settlements in line with the 'Planning for Watercourses in the Urban Environment' (Inland Fisheries Ireland, 2020).</p> <p>11 - 8 Provide for the sustainable development of fisheries, in compliance with the Habitats and Birds Directives, and other ecological protection objectives. New infrastructure should be positioned at already modified locations where feasible; and sedimentation and siltation issues should be considered, with floating infrastructure used where feasible. Fishery related developments may necessitate the preparation of a Visitor/Habitat Management Plan that includes requirements in relation to: sustainable fishing practices that would not affect the ecological site integrity; and invasive species.</p> <p>11 - 12 Seek to control the spread of invasive plant and animal species, including consideration of potential pathways for invasive species spread, i.e. watercourses.</p> <p>11 - 14 Support the diversification of peatlands, whilst ensuring the protection of their ecological, archaeological, cultural and educational significance in line with the National Peatlands Strategy (DAHG 2015). The Council may request landowners to prepare a 'Peatland Master Plan', especially for areas of industrial cut-over peatland, and will work with all stakeholders involved in the process in this regard. Any Masterplan should identify any significant tourism, amenity and recreation potential of these lands.</p> <p>11 -18 Ensure that new development does not result in significant disturbance as a result of light pollution and to ensure that all new developments are designed and constructed to minimise the impact of light pollution on the visual, environmental and residential amenities of surrounding areas.</p> <p>11 - B Undertake a survey of non-designated wetlands as defined by the Ramsar Convention (2010) in the county over the lifetime of the County Development Plan.</p> <p>11 - C (a) Support and facilitate the implementation of the objectives of the Tipperary Heritage Plan 2017- 2021, and,</p> <p>(b) Prepare a 'Biodiversity and Heritage Plan' for County Tipperary over the lifetime of the County Development Plan.</p> <p>11 - D (a) Support the objectives of the All Ireland Pollinator Plan 2021-2025 by incorporating pollinator friendly native trees and plants within grass verges along public roads and existing and future greenways, new hedgerows, public parks and public open spaces in towns and villages, including part of mixed use and residential developments.</p> <p>(b) Prepare a 'Pollinator Action Plan' for County Tipperary over the lifetime of the County Development Plan, having consideration to the All-Ireland Pollinator Plan, 2021 -2025.</p> <p>11 - G Apply best practice in sustainable environmental standards in the design and development of collaborative and/or public sector development in Tipperary, including:</p> <p>(a) Ensure that biodiversity issues are considered at the earliest possible stages of plan making;</p> <p>(b) Ensure that plans and strategies comply with nature conservation legislation and policy as required (fulfil SEA and AA requirements); and</p> <p>(c) Carry out ecological impact assessment of plans and strategies as appropriate.</p>
<p><b>Population and human health</b></p>	<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>	<p>Also refer to measures under other environmental components including Soil, Water and Air and Climatic Factors.</p> <p>8 - 8 Implement the requirement of the Seveso III Directive, and any regulations giving effect to this Directive, with regard to the following:</p> <p>a) The siting of Major Accidents Sites;</p> <p>b) The modification of development on an existing, or within the vicinity of a Major Accident Hazard Site.</p> <p>11 - 1 In assessing proposals for new development to balance the need for new development with the protection and enhancement of the natural environment and human health. In line with the provisions of Article 6(3) and Article 6 (4) of the Habitats Directive no plans, programmes, etc. or projects giving rise to significant cumulative, direct, indirect or secondary impacts on European sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall be permitted on the basis of this Plan (either individually or in combination with other plans, programmes, etc. or projects<sup>4</sup>).</p> <p>11 - 17 Ensure that new development does not result in significant noise disturbance and to ensure that all new developments are designed and constructed to minimise noise disturbance in</p>

<sup>3</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.

<sup>4</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.

SEA Statement for the Tipperary County Development Plan 2022-2028

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
		<p>accordance with the provisions of the Noise Action Plan 2018 and relevant standards and guidance that refer to noise management.</p> <p>11 -18 Ensure that new development does not result in significant disturbance as a result of light pollution and to ensure that all new developments are designed and constructed to minimise the impact of light pollution on the visual, environmental and residential amenities of surrounding areas.</p> <p>11 – H Apply the provisions of the Tipperary County Council Noise Action Plan 2018 – 2023 as it relates to Noise Action Areas in order to reduce disturbance from noise.</p>
Soil	<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>	<p>Also refer to measures under other environmental components including Water.</p> <p>8 - 7 Support the extraction of minerals and aggregates, and to have regard to:</p> <p>a) Quarries and Ancillary Activities, Guidelines for Planning Authorities, (DEHLG 2004), where such activities do not have a significant impact on the environment, landscape or residential amenities of the area.</p> <p>b) In considering new development, to have regard to potential adverse impacts on sites of geological importance or known high quality aggregate reserves as set out in the County Geological Sites record (and any review thereof) as maintained by the GSI.</p> <p>c) Where development proposals involve the redevelopment, rehabilitation or reuse of historic mining sites in the county, the Council may seek the preparation of a Master Plan for the entire landholding of the former mine to ensure the appropriate level of co-ordination of the entire landholding and protection of the environment.</p> <p>11 - 11 In assessing proposals for new development to protect, support and conserve the geological heritage sites of Tipperary and their value as outlined in the Tipperary Audit of Geological Heritage Sites, (GSI/TCC, 2019).</p>
Water	<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>	<p>Also refer to measures under other environmental components including Soil and Material Assets.</p> <p>11 - 5 Ensure that new developments proposed in or near 'Ground Water Protection Schemes' and 'Zones of Contribution' which contribute to public water supplies, do not result in a significant negative impact on the integrity, function and management of these important assets.</p> <p>11 - 6 Ensure the integration of river corridors with green infrastructure in settlements in line with the 'Planning for Watercourses in the Urban Environment' (Inland Fisheries Ireland, 2020).</p> <p>11 - 7 a) Ensure the protection of water quality in accordance with the EU WFD, and support the objectives and facilitate the implementation of the associated Programme of Measures of the River Basin Management Plan 2018-2021 and any successor. This includes contributing towards the protection of blue-dot catchments and drinking water resources. Also, have cognisance of the EU's Common Implementation Strategy Guidance Document No. 20 and 36 which provide guidance on exemptions to the environmental objectives of the WFD.</p> <p>b) Support an integrated, and collaborative approach to catchment management in accordance with the River Basin Management Plan 2018-2021 and any successor.</p> <p>c) Require an undisturbed edge or buffer zone to be maintained, where appropriate, between new developments and riparian zones of water bodies to maintain the natural function of existing ecosystems associated with water courses and their riparian zones, and to enable sustainable public access.</p> <p>11 - 9 Assess all new developments (both within and without designated Flood Risk Zones) in line with the 'Staged Approach' and pre-cautionary principle set out in the Planning System and Flood Risk Management Guidelines for Planning Authorities, (DEHLG, 2009) and any amendment thereof, and the following:</p> <p>(a) Require the submission of site-specific Flood Risk Assessments for developments undertaken within Flood Zones A &amp; B and on lands subject to the mid-range future scenario floods extents, as published by the OPW. These Flood Risk Assessments shall consider climate change impacts and adaptation measures including details of structural and non-structural flood risk management measures, such as those relating to floor levels, internal layout, flood-resistant construction, flood-resilient construction, emergency response planning and access and egress during flood events.</p> <p>(b) SFRA and site-specific flood risk assessments shall provide information on the implications of climate change with regard to flood risk in relevant locations. The 2009 OPW Draft Guidance on Assessment of Potential Future Scenarios for Flood Risk Management (or any superseding document) shall be consulted with to this effect.</p> <p>(c) Ensure each flood risk management activity is examined to determine actions required to embed and provide for effective climate change adaptation as set out in the OPW Climate Change Sectoral Adaptation Plan for Flood Risk Management applicable at the time.</p> <p>(d) Applications for development on land identified as 'benefitting land' may be prone to flooding, and as such site-specific flood risk assessments may be required in these areas.</p> <p>(e) Require applications for new development, or for an extension to an existing development on land zoned for 'Social and Public' or 'Amenity' use and where a potential flood risk is identified, and where the proposed use might be vulnerable, to be subject to site-specific flood risk assessment to the satisfaction of the Council.</p> <p>11 - 10 (a) Ensure that new developments proposed in Arterial Drainage Schemes and Drainage Districts do not result in a significant negative impact on the integrity, function and management of these areas.</p> <p>(b) Consult with the OPW in relation to proposed developments in the vicinity of Flood Relief Schemes and drainage channels and rivers for which the OPW are responsible, and to retain a strip on either side of such channels, where required, to facilitate maintenance access thereto.</p> <p>(c) Protect the integrity of any formal flood risk management infrastructure (see key flood risk infrastructure identified in Section 2.2 "Drainage, Key Flood Risk Infrastructure and Early Warning Systems" of the SFRA), thereby ensuring that any new development does not negatively impact any existing defence infrastructure or compromise any proposed new defence infrastructure</p> <p>11 - E Require an integrated, and collaborative approach to local catchment management to assist in the effective implementation of the RBMP (and any review thereof) and to support the activities LAWPRO in rolling out the local Authorities Waters Programme.</p> <p>11 - F (a) To support and facilitate the CFRAM Programme, and to support the OPW in the development and implementation of sustainable flood risk management plans and actions.</p> <p>(b) To consider, as appropriate any new and/or emerging data, including, when available, any relevant information contained in the CFRAM Flood Risk Management Plans.</p> <p>11 - I Comply with the Arterial Drainage Act 1945 (as amended) prior to the carrying out of construction/ alteration works, or drainage works etc on water channels.</p>
Air and Climatic Factors	<ul style="list-style-type: none"> <li>Potential conflict between development under the Plan and aiming to reduce carbon emissions in line</li> </ul>	<p>Refer, in particular, to the detailed measures for Climate Action described at Section 8.6 of the SEA Environmental Report "Error! Reference source not found." and the provisions of Chapter 3 of the Plan "Low-Carbon Society and Climate Action".</p> <p>11 - 17 Ensure that new development does not result in significant noise disturbance and to ensure that all new developments are designed and constructed to minimise noise disturbance in accordance with the provisions of the Noise Action Plan 2018 and relevant standards and guidance that refer to noise management.</p>

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Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
	<p>with local, national and European environmental objectives.</p> <ul style="list-style-type: none"> <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>	
<p><b>Material Assets</b></p>	<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>	<p>Also refer to measures under other environmental components including Population and Human Health, Cultural Heritage, Soil, Water, Air, various Land Use and Phasing provisions.</p> <p>8- 3 In assessing applications for new development in the open-countryside, to facilitate the development of alternative farm enterprises, whilst balancing the need for a proposed rural based activity with the need to protect, promote and enhance the viability and environmental quality of the existing rural economy and agricultural land.</p> <p>8 - 6 Support new forestry plantation and works related to forestry, subject to the protection of visually sensitive areas, ecology (both terrestrial and aquatic), water resources and abstractions, and compliance with national regulations with respect to protection of the environment.</p> <p>8 - 7 Support the extraction of minerals and aggregates, and to have regard to:</p> <p>a) Quarries and Ancillary Activities, Guidelines for Planning Authorities, (DEHLG 2004), where such activities do not have a significant impact on the environment, landscape or residential amenities of the area.</p> <p>b) In considering new development, to have regard to potential adverse impacts on sites of geological importance or known high quality aggregate reserves as set out in the County Geological Sites record (and any review thereof) as maintained by the GSI.</p> <p>Chapter 9 under "Supporting Tourism product development"</p> <p>The Council will facilitate opportunities for harnessing the potential of scenic areas, trails, uplands, lakes and waterways in a manner that is compatible with the natural heritage and environment of the area. Development proposals outside of settlement centres, including those associated with agri-tourism and eco-tourism, wellness facilities, adventure sports, outdoor recreational installations and water-based tourism activities, (including water side interpretive/ activity centres and jetties), will be required to demonstrate a clear need to locate in the area, and to ensure that the development is compatible with the protection of the environment, including lakeshore and riparian habitats. Proposals for new tourism or recreation projects will be required to demonstrate adequate mitigation of potential environmental effects, including: • Management any increase in visitor numbers and/or any change in visitor behaviour, including through visitor/habitat management plans, in order to avoid significant effects including loss of habitat and disturbance; and • Ensuring provision of infrastructure with adequate capacity and performance.</p> <p>10 - 1 Support and facilitate new development that will produce energy from local renewable sources such as hydro, bio-energy, wind, solar, geothermal and landfill gas, including renewable and non-renewable enabling plant, subject to compliance with normal planning and environmental criteria, in co-operation with statutory and other energy providers. The provisions of the Tipperary Renewable Energy Strategy (and any review thereof) as set out in Volume 3, will apply to new development.</p> <p>a) Quarries and Ancillary Activities, Guidelines for Planning Authorities, (DEHLG 2004), where such activities do not have a significant impact on the environment, landscape or residential amenities of the area.</p> <p>b) In considering new development, to have regard to potential adverse impacts on sites of geological importance as set out in the County Geological Sites record (and any review thereof) as maintained by the GSI.</p> <p>11 - 5 Ensure that new developments proposed in or near 'Ground Water Protection Schemes' and 'Zones of Contribution' which contribute to public water supplies, do not result in a significant negative impact on the integrity, function and management of these important assets.</p> <p>11 - 13 Ensure that proposals for agricultural developments, as appropriate, comply with the European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2010 or any amendment thereof.</p> <p>15 - 1 Implement the provisions of the Water Services Guidelines for Planning Authorities (DHLGH, 2018) (and any amendment) in assessing applications for new development.</p> <p>15 - 2 Require that all new septic tanks, proprietary effluent treatment systems and percolation areas to be located and constructed in accordance with the Water Services Guidelines for Planning Authorities (and any review thereof) and the Code of Practice for Domestic waste water treatment systems (EPA, 2021) (and any amendment) and the development management standards of this Plan as set out in Volume 3.</p> <p>15 - 3 In line with the provisions of Section 5.3.1 of the Draft Water Services Guidelines for Planning Authorities (or any review thereof) new development will connect to existing water infrastructure, where capacity exists, in order to maximise the use of existing infrastructure and reduce additional investment costs. There is a general presumption that development will be focused into areas that are serviced by public water supply and wastewater collection network.</p> <p>In settlement centres where, municipal treatment plants do not have the capacity to cater for additional development, the Council will facilitate development, where the developer has agreed</p>

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Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
		<p>proposals for the up-grade of the treatment plant and/or network, as may be necessary, with Irish Water in accordance with the Draft Water Services Guidelines for Planning Authorities and any amendment thereof and the Irish Water Connection Charges Policy. The Council will require that such infrastructure is in place, prior to the commencement of the development.</p> <p>15 - 4 Require development proposals to connect to the public water supply, where such facilities are available.</p> <p>15 - 5 Require all new development to provide a separate foul and surface water management system and to incorporate water sensitive urban design, where appropriate, in new development and the public realm. New developments or retrofit/upgrading works, including those contributing to combined drainage systems where streetscape enhancement programmes or resurfacing programmes are planned, will incorporate measures to reduce the generation of storm water run-off, and to ensure that all storm water generated is managed on-site, or is attenuated and treated prior to discharge to an approved storm water system, with consideration to the following:</p> <p>(a) Nature-Based Solutions to the Management of Rainwater and Surface Water Runoff in Urban Areas (water sensitive urban design) Best Practice Interim Guidance Document (DHLGH, 2001) and any review there off,</p> <p>(b) The infiltration into the ground through the development of porous pavement such as permeable paving, swales and detention basis,</p> <p>(c) The holding of water in storage areas through the construction of green roofs, rainwater harvesting, detention basis, ponds and wetlands etc.</p> <p>(d) The slow-down in the movement of water.</p> <p>15-6 Require all new development to provide a separate foul and surface water management system and to incorporate water sensitive urban design, where appropriate, in new development and the public realm. New developments or retrofit/upgrading works, including those contributing to combined drainage systems where streetscape enhancement programmes or resurfacing programmes are planned, will incorporate measures to reduce the generation of storm water run-off, and to ensure that all storm water generated is managed on-site, or is attenuated and treated prior to discharge to an approved storm water system, with consideration to the following:</p> <p>(a) Nature-Based Solutions to the Management of Rainwater and Surface Water Runoff in Urban Areas (water sensitive urban design) Best Practice Interim Guidance Document (DHLGH, 2001) and any review there off,</p> <p>(b) The infiltration into the ground through the development of porous pavement such as permeable paving, swales and detention basis,</p> <p>(c) The holding of water in storage areas through the construction of green roofs, rainwater harvesting, detention basis, ponds and wetlands etc.</p> <p>(d) The slow-down in the movement of water.</p> <p>15 - A Work in partnership with Irish Water in the performance of its functions and in the implementation of the WSSP, Investment Plan and NWRP (and any amendment thereof), to ensure that water infrastructure complies with appropriate regulations and to ensure and support the sustainable development of the county.</p> <p>15 - B Provide additional and improved surface water networks to both reduce pollution and support sustainable development.</p> <p>15 - C Carry out on-going monitoring and registration of private septic tanks in the County in line with the EPAs National Inspection Plan.</p> <p>15 - D Support the sustainable development, maintenance and upgrading of electricity and gas infrastructure, by network providers, to enable the integration of renewable energy sources and enable an energy system that is safe, secure and adaptable.</p>
<p><b>Cultural Heritage</b></p>	<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>	<p>11 - C (a) Support and facilitate the implementation of the objectives of the Tipperary Heritage Plan 2017- 2021, and,</p> <p>(b) Prepare a 'Biodiversity and Heritage Plan' for County Tipperary over the lifetime of the County Development Plan.</p> <p>13 - 1 Encourage and support the sympathetic restoration, re-use and maintenance of protected structures thereby ensuring their conservation and protection. In considering proposals for development, the Council will have regard to the Architectural Heritage Protection Guidelines for Planning Authorities, (DAHG 2011) or any amendment thereof, and proposals that will have an unacceptable impact on the character and integrity of a protected structure or adjoining protected structure will not be permitted.</p> <p>13 - 2 Encourage and support the enhancement and management of Architectural Conservation Areas with regard to;</p> <p>a) The impact of development on the character, appearance and integrity of the Architectural Conservation Area in terms of compatibility in design, colour, finishes and massing of form;</p> <p>b) The impact of development on the existing amenities, character and heritage of the area;</p> <p>c) The need to retain important architectural and townscape elements such as shopfronts, sash windows, gutters and down pipes, plasterwork, etc</p> <p>d) The relevant Architectural Conservation Area Statement of Character, as set out in Volume 3.</p> <p>13 - 3 Seek the sympathetic restoration, appropriate re-use and maintenance of buildings/features which are considered to be of local and vernacular architectural importance.</p> <p>13 - 4 Safeguard sites, features and objects of archaeological interest, including Recorded monuments, National Monuments and Monuments on the Register of Historic Monuments, and archaeological remains found within Zones of Archaeological Potential located in historic towns and other urban and rural areas. In safeguarding such features of archaeological interest, the Council will seek to secure the preservation (i.e. preservation in situ or in exceptional circumstances preservation by record) and will have regard to the advice and recommendation of the DAHG.</p> <p>Where developments, due to their location, size or nature, may have implications for archaeological heritage, the Council may require archaeological assessment to be carried out. This may include for a requirement for a detailed Visual Impact Assessment of the proposal and how it will impact on the character or setting of adjoining archaeological features. Such developments include those that are located at, or close to an archaeological monument or site, those that are extensive in terms of area (1/2 ha or more) or length (1 kilometre or more), those that may impact on the underwater environment and developments requiring EIA.</p> <p>13 - 5 Respect and preserve the remains (both sub-surface and upstanding) of the medieval towns in line with the Conservation, Management and Interoperation Plans in place for each town, in line with the guidance of the Heritage Council and the National Policy on Town Defences (DEHLG, 2008).</p> <p>13 - 6 Consider landscapes of archaeological significance and, if considered necessary, require an impact assessment for proposed development which could have a significant impact on the identified landscape.</p> <p>13 - 7 Consider underwater archaeology and ensure that development to river banks edges within the vicinity of a site of archaeological interest shall not be detrimental to the character of the archaeological site or its setting.</p> <p>13 - A Support the owners of Protected Structures and structures in Architectural Conservation Areas through educational and information actions to assist in the conservation and active use</p>



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Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
		<p>of built heritage.</p> <p>13 - B Administer and manage built heritage funding schemes such as the 'Built Heritage Investment Scheme', 'Structures at Risk Scheme' etc and any review thereof, to support owners of built heritage in the county.</p> <p>13 - C Ensure that the towns of Cashel, Fethard, Carrick on Suir and Clonmel remain members of the Irish Walled Towns Network, and to carry out an annual maintenance, interpretation and conservation programme in respect of each of these towns</p> <p>13 - D Carry out an audit of archaeological landscapes in Tipperary over the lifetime of the County Development Plan, having consideration to landscapes that may extend into adjoining counties.</p> <p>13 - E Work closely with the relevant State bodies, ICOMOS, UNESCO, the relevant local authorities and local stakeholders to support the designation of the Royal Sites as a UNESCO World Heritage Site.</p> <p>13 -F Safeguard archaeological artefacts found on land or in rivers and, as appropriate, to file a 'Report of Discovery' with the National Museum of Ireland under Section 68 (2) of the National Cultural Institutions Act, 1997.</p>
<p><b>Landscape</b></p>	<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>	<p>Also refer to measures under Biodiversity and Flora and Fauna and Cultural Heritage.</p> <p>11 - 15 Facilitate new development which integrates and respects the character, sensitivity and value of the landscape in accordance with the designations of the LCA, and the schedule of Views and Scenic Routes (or any review thereof). Developments which would have a significant adverse material impact on visual amenities will not be supported.</p> <p>11 – 16 Ensure the protection of the visual amenity, landscape quality and character of designated Primary and Secondary Amenity Areas. Developments which would have a significant adverse material impact on the visual amenities of the area will not be supported. New development shall have regard to the following:</p> <p>a) Developments should avoid visually prominent locations and be designed to use existing topography to minimise adverse visual impact on the character of primary and secondary amenity areas.</p> <p>b) Buildings and structures shall integrate with the landscape through careful use of scale, form and finishes.</p> <p>c) Existing landscape features, including trees, hedgerows and distinctive boundary treatment shall be protected and integrated into the design proposal.</p> <p>11 -18 Ensure that new development does not result in significant disturbance as a result of light pollution and to ensure that all new developments are designed and constructed to minimise the impact of light pollution on the visual, environmental and residential amenities of surrounding areas.</p> <p>13 - 4 Safeguard sites, features and objects of archaeological interest, including Recorded monuments, National Monuments and Monuments on the Register of Historic Monuments, and archaeological remains found within Zones of Archaeological Potential located in historic towns and other urban and rural areas. In safeguarding such features of archaeological interest, the Council will seek to secure the preservation (i.e. preservation in situ or in exceptional circumstances preservation by record) and will have regard to the advice and recommendation of the DAHG.</p> <p>Where developments, due to their location, size or nature, may have implications for archaeological heritage, the Council may require archaeological assessment to be carried out. This may include for a requirement for a detailed Visual Impact Assessment of the proposal and how it will impact on the character or setting of adjoining archaeological features. Such developments include those that are located at, or close to an archaeological monument or site, those that are extensive in terms of area (1/2 ha or more) or length (1 kilometre or more), those that may impact on the underwater environment and developments requiring EIA.</p> <p>13 - E Work closely with the relevant State bodies, ICOMOS, UNESCO, the relevant local authorities and local stakeholders to support the designation of the Royal Sites as a UNESCO World Heritage Site.</p>

## **Section 3 Environmental Report and Submissions/ Observations**

### **3.1 Introduction**

This section details how both the Environmental Report and submissions and observations made to Tipperary County Council on the Environmental Report and SEA process have been taken into account during the preparation of the Plan and the SEA.

The issues raised in these submissions and how these issues have been taken into account during preparation of the Plan and the SEA are provided on Table 3.1 below. Taking into account these submissions included integrating environmental considerations into the Plan, including through the selection of Plan provisions identified on Table 2.1).

### **3.2 SEA Scoping Notices and Submissions**

As part of the scoping process for preparation of the Plan, environmental authorities<sup>5</sup> were notified that a submission or observation in relation to the scope and level of detail of the information to be included in the Environmental Report could be made to the Council.

Three submissions were received in response to the SEA Scoping Notices and Draft SEA Scoping Report from the following environmental authorities:

- Environmental Protection Agency; and
- Department of the Environment, Climate and Communications (one from the Waste Policy and resource Efficiency Division and one from Geological Survey of Ireland).

In addition to the responses from these two environmental authorities made under the SEA scoping process, another designated environmental authority (the Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media) made a response as part of the pre-Draft Public Consultation on the Plan process.

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<sup>5</sup> The following authorities were notified (the names of some of the authorities have changed since notification was provided as a result of changes in Ministerial responsibilities across Departments): Environmental Protection Agency; Department of Environment, Climate and Communications; Department of Agriculture, Food and the Marine; Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media; Department of Housing, Local Government and Heritage; Galway County Council; Clare County Council; Limerick City and County Council; Cork County Council; Waterford County Council; Kilkenny County Council; Laois County Council; and Offaly County Council.

**Table 3.1 Taking into account SEA Scoping Submissions**

Ref.	Issue raised in submission	SEA Response
<b>1</b>	<b>Submission from the Environmental Protection Agency</b>	
<b>A</b>	We acknowledge your notice, dated 17th September 2020, in relation to the Scoping Report/Issues Paper for the Tipperary County Development Plan 2022-2028 (the 'Plan'). The EPA is one of five statutory environmental authorities under the SEA Regulations. In our role as an SEA environmental authority, we focus on promoting the full and transparent integration of the findings of the Environmental Assessment into the Plan and advocating that the key environmental challenges for Ireland are addressed as relevant and appropriate to the Plan. Our functions as an SEA environmental authority do not include approving or enforcing SEAs or plans.	Noted.
<b>B</b>	As a priority, we focus our efforts on reviewing and commenting on key sector plans. For land use plans at county and local level, we provide a 'self-service approach' via the attached guidance document 'SEA of Local Authority Land Use Plans – EPA Recommendations and Resources'. This document is updated regularly and sets out our key recommendations for integrating environmental considerations into Local Authority land use Plans. We recommend that you take this guidance document into account in preparing the Plan and SEA.	The 'SEA of Local Authority Land Use Plans – EPA Recommendations and Resources' document has been considered in the preparation of the SEA Scoping Report and will be kept on file for reference throughout the SEA process.
<b>C</b>	In preparing the Plan, Tipperary County Council should also ensure that the Plan aligns with key relevant higher-level plans and programmes and is consistent with the relevant objectives and policy commitments of the National Planning Framework and the Regional Spatial and Economic Strategy for the Southern Region.	The National Planning Framework, the Regional Spatial and Economic Strategy for the Southern Region and other relevant plans and programmes will be considered as part of the preparation of the Plan and associated environmental assessments, as relevant.
<b>D</b>	Specific Comments: As well as our attached guidance, we include here some key environmental considerations which should also be taken into account in preparing the Plan. <i>State of the Environment Report – Ireland's Environment 2016</i> In preparing the Plan and SEA, the recommendations, key issues and challenges described within our most recent State of the Environment Report Ireland's Environment – An Assessment 2016 (EPA, 2016) should be considered, as relevant and appropriate to the Plan.	The recommendations, key issues and challenges described within the current version of Ireland's Environment (2020) will be considered in the preparation of the Plan.
<b>E</b>	<i>Community Engagement</i> One of the key messages from the State of the Environment Report (EPA, 2016) is the importance and value of Community Engagement. In preparing the Plan and carrying out the SEA (including developing alternatives), the need to proactively engage local communities should be a core consideration.	The public consultation (including the local community) will be provided with an opportunity to make a submission on the Draft Plan and associated environmental documents during public display.
<b>F</b>	<i>Sustainable Development Goals</i> Describing the links with the UN Agenda 2030 for Sustainable Development and the related Sustainable Development Goals (SDGs) would help to frame the Plan (and SEA) within the context of the wider sustainable development agenda and ensure that the Plan is consistent with achieving the SDGs. Relevant targets and actions in Ireland's SDG Implementation Plan (DCCAE, 2018) should be integrated as appropriate into the Plan.	The UN Sustainable Development Goals (SDGs) and relevant targets and actions in Ireland's SDG Implementation Plan (DCCAE, 2018) has been considered in the preparation of the SEA Scoping Report and will be kept on file for reference throughout the SEA process, as relevant and appropriate to the Plan.
<b>G</b>	<i>Critical service infrastructure</i> In proposing and in implementing the Plan, you should ensure that the Plan is consistent with the need for proper planning and sustainable development. Adequate and appropriate critical service infrastructure should be in place, or required to be put in place, to service any development proposed and authorised during the lifetime of the Plan.	Noted. The SEA will consider implications of the potential additional pressures on existing critical infrastructure. The SEA will also consider effects arising from the construction of any ancillary developments.
<b>H</b>	<i>Integration of transport &amp; land-use planning</i> The Plan should support the need for compact growth and better integration of transport and land-use planning, including walking and cycling infrastructure, public transport, park-and-ride facilities, etc.	The SEA will seek to ensure that the Plan supports compact growth and sustainable transport solutions.
<b>I</b>	<i>Biodiversity</i> The Plan should include specific actions/objectives and commitments to protect designated habitats and protected species (and associated ecological corridors/linkages) within, and adjacent to, the Plan area. The EPA has published guidance on Integrated Biodiversity Impact Assessment - Streamlining AA, SEA and EIA Processes. Best Practice Guidance. The aim of this guidance is to inform practitioners, plan/project proponents and consent authorities on integrating SEA, EIA and AA processes and requirements to streamline biodiversity considerations. This may be useful to consider in preparing the Plan and SEA.	Provisions contributing towards the protection of European Sites, habitats and species will be integrated into the Plan. The cited guidance has been considered in the preparation of the SEA Scoping Report and will be considered throughout the SEA process.
<b>J</b>	<i>Climate Action</i> You should ensure that the Plan aligns with national commitments on climate change mitigation and adaptation, including those set out in the Climate Action Plan 2019, as well as incorporating any relevant recommendations and measures in sectoral, regional and local climate adaptation and mitigation plans. Key climate-related aspects to consider in the Plan and SEA include: • Direct and indirect impacts of the Plan on greenhouse gas emissions and removals (Mitigation); • Direct and indirect impacts of climate change on the implementation of the Plan, e.g. the resilience of critical water service infrastructure to flooding and drought (Adaptation); • The linkages between mitigation and adaptation (inter-relationships). The following resources may be of assistance in incorporating these factors into the Plan and SEA:	The SEA will seek to ensure that the Plan contributes towards climate mitigation and adaptation and that the Plan is aligned with national commitments on climate change mitigation and adaptation.

Ref.	Issue raised in submission	SEA Response
	<ul style="list-style-type: none"> <li>• Ireland's Greenhouse Gas Emissions Projections for 2018-2040</li> <li>• Integrating Climatic Factors into the Strategic Environmental Assessment Process in Ireland</li> <li>• Local Authority Adaptation Strategy Development Guideline</li> <li>• Integration of Climatic Factors into SEA in Ireland</li> </ul>	
<b>K</b>	<p><i>Key Plans and Programmes</i> Some suggested national/regional/sectoral plans to consider in preparing the Plan and SEA are listed below.</p> <p><i>Spatial Planning</i></p> <ul style="list-style-type: none"> <li>- Local Authority Development Plans</li> </ul> <p><i>Sustainable Development</i></p> <ul style="list-style-type: none"> <li>- National Implementation Plan for the Sustainable Development Goals</li> </ul> <p><i>Tourism</i></p> <ul style="list-style-type: none"> <li>- National Greenways Strategy</li> <li>- Local authority tourism strategies</li> </ul> <p><i>Climate</i></p> <ul style="list-style-type: none"> <li>- Relevant sectoral, regional and local authority climate adaptation and mitigation plans/strategies – including Climate Change Adaptation Plan for Built and Archaeological Heritage (DCHG, in preparation).</li> <li>- Relevant OPW Flood Risk Managements Plans and associated flood risk mapping</li> <li>- National Climate Action Plan 2019</li> <li>- National Energy and Climate Plan (DCCA, in preparation)</li> <li>- National Mitigation Plan</li> <li>- National Adaptation Framework</li> </ul> <p><i>Biodiversity</i></p> <ul style="list-style-type: none"> <li>- National Biodiversity Action Plan</li> <li>- All Island Pollinator Plan</li> <li>- Any available biodiversity/heritage plans and habitat mapping</li> </ul> <p><i>Water &amp; Water Services</i></p> <ul style="list-style-type: none"> <li>- River Basin Management Plan for Ireland 2018-2021</li> <li>- Water Services Strategic Plan / Capital Investment Programme and Draft National Water Resources Plan (Irish Water)</li> </ul> <p><i>Transport</i></p> <ul style="list-style-type: none"> <li>- Planning Land Use and Transport – Outlook 2040 (DTTAS, in preparation)</li> </ul> <p><i>Air &amp; Noise</i></p> <ul style="list-style-type: none"> <li>- Local Authority Noise Action Plans</li> <li>- National Clean Air Strategy (DCCA, in preparation)</li> <li>- National Air Pollution Control Programme (DCCA, 2019)</li> </ul>	Recommended key plans and programmes will be considered as part of the preparation of the Plan and associated environmental assessments.
<b>L</b>	<p><b>Available Guidance &amp; Resources</b> Our website contains various SEA resources and guidance, including:</p> <ul style="list-style-type: none"> <li>- SEA process guidance and checklists</li> <li>- Inventory of spatial datasets relevant to SEA</li> <li>- topic specific SEA guidance (including <i>Good practice note on Cumulative Effects Assessment</i> (EPA, 2020), <i>Guidance on SEA Statements and Monitoring</i> (EPA, 2020), <i>Integrating climatic factors into SEA</i> (EPA, 2019), <i>Developing and Assessing Alternatives in SEA</i> (EPA, 2015), and <i>Integrated Biodiversity Impact Assessment</i> (EPA, 2012)) You can access these resources at: <a href="http://www.epa.ie/monitoringassessment/assessment/sea/">www.epa.ie/monitoringassessment/assessment/sea/</a></li> </ul>	These resources and guidance have been considered in the preparation of the SEA Scoping Report and will be accessed, as relevant, for reference throughout the SEA process.
<b>M</b>	<p><b>Environmental Sensitivity Mapping (ESM) Webtool</b> The ESM Webtool is a new decision support tool to assist SEA and planning processes in Ireland. The tool brings together over 100 datasets and allows users to explore environmental considerations within a particular area and create plan-specific environmental sensitivity maps. These maps can help planners anticipate potential land-use conflicts and help identify suitable development locations, while also protecting the environment. The ESM Webtool is available at <a href="http://www.enviromap.ie">www.enviromap.ie</a>.</p>	The ESM Webtool has been considered in the preparation of the SEA Scoping Report and will be considered throughout the SEA process, where relevant.
<b>N</b>	<p><b>EPA SEA WebGIS Tool</b> Our SEA WebGIS Tool, available through the EDEN portal (<a href="https://gis.epa.ie/EIS_SEA/">https://gis.epa.ie/EIS_SEA/</a>), allows public authorities to produce an indicative report on key aspects of the environment in a specific geographic area. It is intended to assist in SEA screening and scoping exercises.</p>	Available online EPA resources, including mapping resources, have been considered in the preparation of the SEA Scoping Report and will be considered throughout the SEA and AA processes.
<b>O</b>	<p><b>EPA WFD Application</b> Our WFD Application provides a single point of access to water quality and catchment data from the national WFD monitoring programme. The Application is accessed through EDEN <a href="https://wfd.edenireland.ie/">https://wfd.edenireland.ie/</a> and is available to public agencies. Publicly available data can be accessed via the <a href="http://Catchments.ie">Catchments.ie</a> website.</p>	
<b>P</b>	<p><b>EPA AA GeoTool</b> Our AA GeoTool application has been developed in partnership with the NPWS. It allows users to select a location, specify a search area and gather available information for each European Site within the area. It is available at: <a href="http://www.epa.ie/terminalfour/ApproAssess/index.jsp">http://www.epa.ie/terminalfour/ApproAssess/index.jsp</a></p>	
<b>R</b>	<p><b>Environmental Authorities</b> Under the SEA Regulations, you should also consult with:</p> <ul style="list-style-type: none"> <li>• The Minister for Housing, Planning and Local Government,</li> <li>• The Minister for Agriculture, Food and the Marine, and the Minister for Communications, Climate Action and Environment, where it appears to you as the competent authority that the plan or programme, or modification to a plan or programme, might have significant effects on fisheries or the marine environment,</li> <li>• The Minister for Culture, Heritage and the Gaeltacht where it appears to you as the competent authority that the plan or programme, or modification to a plan or programme, might have significant effects in relation to the architectural or archaeological heritage or to nature conservation, and</li> <li>• any adjoining planning authority whose area is contiguous to the area of a planning</li> </ul>	Notice has also been given to relevant environmental authorities as part of the SEA scoping process.

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	authority which prepared a draft plan, proposed variation or local area plan.	
2	<b>Submission from the Department of Environment, Climate and Communications (from the Waste Policy and Resource Efficiency Division)</b>	
A	In respect of waste in the within documentation, we would be obliged if the local authority would consult directly with their respective Regional Waste Management Planning Office regarding development of the final plans.	Noted. The Draft Plan will be placed on public display in the future and submissions will be invited. Any submissions made on the Draft Plan and associated environmental assessments will be taken into account before the Plan is finalised. A submission made by the Southern Region Waste Management Office as part of the initial consultation on the review of the Plan is being taken into account by the Draft Plan preparation process.
3	<b>Submission from the Department of Environment, Climate and Communications (from Geological Survey of Ireland)</b>	
A	<p>Geological Survey Ireland is the national earth science agency and has datasets including Bedrock Geology, Quaternary Geology, Geological Heritage Sites, Mineral deposits, Groundwater Resources, Geohazards and the Irish Seabed. These comprise maps, reports and extensive databases that include mineral occurrences, bedrock/mineral exploration groundwater/site investigation boreholes, karst features, wells and springs. Please see our website for data availability and we recommend using these various data sets, when undergoing the EIAR, planning and scoping processes. Geological Survey Ireland should be referenced to as such and should any data or geological maps be used, they should be attributed correctly to Geological Survey Ireland.</p> <p>With reference to your letter dated the 08 October 2020, concerning the SEA Scoping for preparation of a new Tipperary County Development Plan 2022-2028, Geological Survey Ireland (a division of the Department of Environment, Climate and Communications) welcome the opportunity to be included in the consultation process at this early 'SEA scoping' stage.</p>	Noted.
B	<p><b>Geoheritage</b></p> <p>The Geological heritage county audit was completed in 2019. The resulting report was a contribution to the County Tipperary Heritage Plan 2017-2021. We welcome mention of the County Geological Sites (CGSs) within the SEA scoping under Section 3.4 'Soil'. However, we would encourage their inclusion as specific policy objectives within the County Development Plan (CDP).</p> <p>The following points are suggested by the Geological Heritage Programme of Geological Survey Ireland, as appropriate ways in which to address the need to protect geological heritage in any one of Ireland's local authority areas:</p> <p>As a minimum, Geological Survey Ireland would like the Local Authority to include a policy objective with wording such as:</p> <p>"to protect from inappropriate development the scheduled list of geological heritage sites [Appendix X]." Or "to protect from inappropriate development the following list of County Geological Sites"</p> <p>The Geological Heritage Programme views the Local Authorities as critical partners in protecting, through the planning system, those CGS which fall within their county limits. In many cases these are often sites of high amenity or educational value, already zoned or listed in the plan. Listing in the CDP provides protection of the sites against potentially damaging developments that normally require planning permission, such as building, quarrying, landfilling or forestry.</p> <p>Geological Survey Ireland is the national earth science agency and has datasets including Bedrock Geology, Quaternary Geology, Geological Heritage Sites, Mineral deposits, Groundwater Resources, Geohazards and the Irish Seabed. These comprise maps, reports and extensive databases that include mineral occurrences, bedrock/mineral exploration groundwater/site investigation boreholes, karst features, wells and springs. Please see our website for data availability and we recommend using these various data sets, when undergoing the EIAR, planning and scoping processes. Geological Survey Ireland should be referenced to as such and should any data or geological maps be used, they should be attributed correctly to Geological Survey Ireland.</p> <p>It is also important that the democratic process of public consultation and approval by councillors of the CDP means that stakeholders in the sites and all the local community can buy into the process.</p> <p>CGSs have been adopted in the National Heritage Plan, and will form a major strand of geological nature conservation to complement the various ecological and cultural conservation measures.</p> <p>It is important to note however, that management issues for the majority of geological heritage sites may differ from ecological sites, and in some cases development may facilitate enhanced geological understanding of a site by exposing more rock sections - for example, in a quarry extension. Consultation at the earliest stages can identify any issues relevant to an individual site or proposed development.</p> <p>County Geological Sites are the optimal way of addressing the responsibility of each authority under the Planning and Development Act 2000 and its amendments, to protect sites of geological interest. It would also be necessary to include a policy objective to protect geological NHAs as they become designated and notified to the Local Authority, during the lifetime of the Plan.</p>	This information on geoheritage will be considered when preparing the Draft Plan and undertaking the SEA.

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	As always we are available if you require any further information, please feel free to contact the GSI.	
<b>C</b>	<p><b>Culture and Tourism</b></p> <p>Over the past number of years geology has become a large part of Irish tourism. Ireland currently has three UNESCO Global Geoparks, with one aspiring Geopark, Joyce Country and Western Lakes Aspiring Geopark. These Geoparks, along with other tourism initiatives such as the Wild Atlantic Way, Irelands Ancient East, and Irelands Hidden Heartlands have bolstered tourism in various parts of Ireland and helped to increase its levels in areas that were previously not as popular with tourists. We would encourage Tipperary County Council to continue this trend, and to use the geological audit information making it easily available to the general public. We would encourage geology to be a significant part of any tourism initiative that may be introduced.</p>	This information on culture and tourism will be considered when preparing the Draft Plan and undertaking the SEA, where relevant.
<b>D</b>	<p><b>Dimension Stone/Stone Built Ireland</b></p> <p>Geological Survey Ireland recently signed a research collaboration agreement between Geological Survey Ireland, TCD &amp; OPW, to run for a 2 year period with the aim of documenting building and decorative stone in Ireland to inform government agencies, building owners and conservationists of the sources for suitable replacement stone in restoration work and to develop a greater awareness among the general public. In addition to promoting citizen science and awareness of local materials, the inventory will aid the public in complying with part 4 of the Planning and Development Act 2000, which requires owners to conserve protected structures. It will also assist local authorities in issuing Section 57 Declarations, which outline 'the type of works which it considers would or would not materially affect the character of the structure or any element of the structure'.</p> <p>This project will build on work already completed funded by the Irish Research Council (March 2019 - September 2020) that carried on primary research on the topic and developed a simple database and web-based platform as well as hosting various heritage displays at venues. The project described above could also be considered as part of Section 3.8.2 'Architectural Heritage' within the CDP.</p>	This information will be considered when preparing the Draft Plan and undertaking the SEA, where relevant.
<b>E</b>	<p><b>Geological Mapping</b></p> <p>Geological Survey Ireland's geological mapping programme creates maps that depict the rocks (Bedrock Mapping) and subsoils (Quaternary &amp; Physiographic Mapping) of the onshore area of Ireland. We collect new data by field surveying and borehole drilling, and combine them with existing mapping to produce map products at various scales and levels of complexity. We maintain online data sets of bedrock and subsoils geological mapping that is reliable, accessible and meets the requirements of all users. These data sets include depth to bedrock data and subsoil classifications. We would encourage you to use this data for informing your County Development Plan (2022-2028).</p>	<p>Mineral resources will be recognised as a material asset by the SEA.</p> <p>Aquifer productivity and vulnerability mapping will be included in the SEA Environmental Report and the SEA will reference datasets available from GSI that may be useful to lower-tier project planning, including those relating to Aquifer Productivity, Aquifer Vulnerability, Bedrock Geology, Quaternary Geology, Mineral deposits, Aggregate Potential, Groundwater Resources and Geohazards, such as Landslide Events and Landslide Susceptibility Mapping.</p> <p>The GWflood tools will be accessed, as relevant, for reference throughout the SEA/SFRA process.</p> <p>Regarding geothermal energy, SEA considers the environmental effects of Plan policies and objectives – including any providing for geothermal energy. Potential environmental effects arising from geothermal energy may include contributions towards greenhouse gas emission targets and effects on water quality, ecology, soil stability. Inclusion of Geothermal Suitability mapping is not within the scope of the SEA, however where it forms part of Plan policies/objectives, it would be considered by the SEA.</p>
<b>F</b>	<p><b>Groundwater</b></p> <p>Groundwater is important as a source of drinking water, and it supports river flows, lake levels and ecosystems. It contains natural substances dissolved from the soils and rocks that it flows through, and can also be contaminated by human actions on the land surface. As a clean, but vulnerable, resource, groundwater needs to be understood, managed and protected.</p> <p>Through our Groundwater Programme, Geological Survey Ireland provides advice and maps to members of the public, consultancies and public bodies about groundwater quality, quantity and distribution. Geological Survey Ireland monitors groundwater nationwide by characterising aquifers, investigating karst landscapes and landforms and by helping to protect public and group scheme water supplies. We recommend the use of our National Aquifer, Vulnerability and Recharge maps within the CDP. Further information is available on our Map viewer.</p> <p>With regard to Flood Risk Management, there is a need to identify areas for integrated mitigation and management and we note reference within the draft SEA scoping report to the OPW datasets on flooding in Section 3.5.2 'Flooding'. Our GWflood project is a groundwater flood monitoring and mapping programme aimed at addressing the knowledge gaps surrounding groundwater flooding in Ireland. The project is providing the data and analysis tools required by local and national authorities to make scientifically-informed decisions regarding groundwater flooding. Although primarily focused on karst areas, this may provide information to benefit the proposed CDP. We recommend using our GWflood tools found under our programme activities (in conjunction with OPW data) to this end.</p> <p>With regards to Climate Change, there is a need to improve the monitoring capacity of groundwater levels in Ireland so that the potential impacts of climate change can be monitored and assessed. In this context the Geological Survey Ireland has established the GWClimate project in January 2020. GWClimate will 1) establish a long-term strategic groundwater level monitoring network and 2) develop modelling and analytical approaches for evaluating the impacts of Climate Change to Irish groundwater systems. Further information can be found on the Groundwater flooding page of the Groundwater Programme.</p>	<p>Regarding geothermal energy, SEA considers the environmental effects of Plan policies and objectives – including any providing for geothermal energy. Potential environmental effects arising from geothermal energy may include contributions towards greenhouse gas emission targets and effects on water quality, ecology, soil stability. Inclusion of Geothermal Suitability mapping is not within the scope of the SEA, however where it forms part of Plan policies/objectives, it would be considered by the SEA.</p>
<b>G</b>	<p><b>Geohazards</b></p> <p>Geohazards can cause widespread damage to landscapes, wildlife, human property and human life. While in Ireland, landslides are the most prevalent of these hazards flooding is becoming an increasing risk. Geological Survey Ireland has information available on past landslides for viewing as a layer on our Map Viewer.</p> <p>Geological Survey Ireland also engages in national projects such as Landslide Susceptibility Mapping and Groundwater Flooding (GWflood), and in international projects, such as the Tsunami Warning System, coordinated by the Intergovernmental Oceanographic Commission of UNESCO. Historical records and geological evidence indicate that, while tsunamis are unlikely events around Ireland, the Irish coast is vulnerable to tsunamis from submarine landslides and distant earthquakes. Associated levels of coastal flooding are expected to be similar to those seen during storm surges, but with much more energetic inundation and a</p>	

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	<p>much shorter time to react. Ireland participates in an international tsunami detection and alerting system, coordinated by the Intergovernmental Oceanographic Commission of UNESCO. We recommend that geohazards and particularly flooding be taken into consideration, especially when developing areas where these risks are prevalent, and we encourage the use of our data when doing so.</p> <p>We welcome the inclusion in Section 3.4 'Soils', for consideration of use of Geological Survey Ireland's online mapping data sets for Landslide Events and Landslide Susceptibility.</p>	
<b>H</b>	<p><b>Geothermal Energy</b></p> <p>Geothermal energy harnesses the heat beneath the surface of the Earth for heating applications and electricity generation, and has proven to be secure, environmentally sustainable and cost effective over long time periods.</p> <p>Geothermal applications can range in depth from a few metres below the surface to several kilometres. Ireland has widespread shallow geothermal resources for small and medium-scale heating applications, which can be explored online through Geological Survey Ireland's Geothermal Suitability maps for both domestic and commercial use. We recommend use of our Geothermal Suitability maps to determine the most suitable type of ground source heat collector for use with heat pump technologies. The Geothermal Suitability maps could also be considered in Section 3.7.7 as part of the Renewable Energy Potential for the CDP.</p> <p>Ireland also has recognised potential for 'deep' (&gt;400m) geothermal resources. Geological Survey Ireland currently supports and funds research into this national energy resource. Along with our partners in research and industry we have been investigating the potential for geothermal energy in Ireland. Although Ireland does not possess high temperature (high enthalpy) reserves such as those in Iceland or the Azores, we do have the potential to use our resources for low enthalpy application such as district heating and industrial processes that require heating/cooling. We are currently completing a roadmap for geothermal energy use in Ireland which we expect to publish in 2020. For further information please see our geoenergy pages on our website or contact the Groundwater Programme of the Geological Survey Ireland directly.</p>	
<b>I</b>	<p><b>Natural Resources (Minerals/Aggregates)</b></p> <p>We welcome the reference to mineral locations and aggregate potential in Section 3.7 'Material Assets'. These are important resources for the future, particularly in relation to the projected public developments, such as sustainable infrastructure development, roads, schools etc., and housing requirements for the County.</p> <p>Geological Survey Ireland is of the view that the sustainable development of our natural resources should be an integral part of all development plans from a national to regional to local level to ensure that the materials required for our society are available when required. Geological Survey Ireland provides data, maps, interpretations and advice on matters related to minerals, their use and their development in our Minerals section of the website. Aggregates are an essential natural resource for the construction industry and with the Government of Ireland "Building Ireland 2040" plan, understanding of aggregate source and supply will be important. The Active Quarries, Mineral Localities and the Aggregate Potential maps are available on our Map Viewer. We would welcome the consideration of aggregate potential sterilisation included as part of the CDP.</p>	
<b>4</b>	<p><b>Submission from Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media - made in response to the pre-Draft Public Consultation on the Plan</b></p>	
<b>A</b>	<p>The Department welcomes the invitation to make a submission in relation to the preparation of the Tipperary County Development Plan 2022-2028. The following observations are made by the Department in its role as a statutory authority with overarching responsibility for nature conservation and the nature directives (i.e. the Birds and Habitats Directives). The observations are not exhaustive but are intended to assist the planning authority in meeting its obligations in relation to nature conservation, European sites, biodiversity and environmental protection in the process of reviewing and preparing the County Development Plan 2022-2028 for Tipperary County, hereafter referred to as the Plan. The Department welcomes this opportunity to provide observations at this early stage of the review process.</p>	Noted.
<b>B</b>	<p><b>Government policy on nature conservation</b></p> <p>Government policy on nature conservation is clearly set out in the National Biodiversity Action Plan 2017-2021 (NBAP) and Ireland is fully committed to halting the loss of biodiversity and the degradation of ecosystem services as set out in the EU Biodiversity Strategy to 2020 and is a signatory to the United Nations (UN) Convention on Biological Diversity Strategic Plan for Biodiversity 2011-2020. These policies are reflected in Ireland's vision for biodiversity "That biodiversity and ecosystems in Ireland are conserved and restored, delivering benefits essential for all sectors of society and that Ireland contributes to efforts to halt the loss of biodiversity and the degradation of ecosystems in the EU and globally." Biodiversity in general is under threat at a global, national and local scale. Ireland's recent 6th National Report to the Convention on Biological Diversity has identified that although some progress has been made by Ireland in achieving the targets, the rate of progress is not sufficient to halt the loss of biological diversity. The Covid-19 pandemic has also highlighted the value of biodiversity in relation to our physical and mental wellbeing. There is therefore an urgent need to protect our natural resources for present and future generations. A County Development Plan (CDP) that has biodiversity embedded in its core policies will help build a county that is a healthy place for its people and visitors, and provide fully functioning and resilient ecosystems.</p>	Noted. Government policy on nature conservation will inform the Plan and the SEA and AA will seek to ensure that the Plan contributes towards the protection and management of biodiversity.
<b>C</b>	<p><b>Nature conservation within the Plan</b></p> <p>While it is important that the plan sets out the legislative requirements in relation to the protection of designated sites and protected species under both European (i.e. Birds and Habitats Directive) and national legislation (i.e. Wildlife Act 1976-2018), the plan should also ensure that legislative requirements and Government policy on biodiversity generally can be</p>	It is intended that all relevant parts of the Plan will contribute towards the protection and management of biodiversity.

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	<p>delivered and that account is taken of Objective 1 in the NBAP to “Mainstream biodiversity into decision-making across all sectors”. There are real opportunities to protect and enhance biodiversity when considered early in any development proposal and in particular at a strategic level during the plan-making process. The Department recommends that biodiversity considerations are integrated into all aspects of the Plan. It is important when biodiversity measures are incorporated into development proposals that the measures are appropriate to the particular situation and they can be sustained long term. In particular the Plan should avoid policies and objectives that undermine or are in direct conflict with natural heritage policies and objectives and should seek to provide a net gain for biodiversity wherever possible.</p>	
<b>D</b>	<p><b>Natural Heritage Objectives</b> The Department notes the Council's existing commitment to biodiversity protection in the current Tipperary Development Plans, and it is hoped that this focus on biodiversity protection will continue when reviewing the natural heritage objectives as part of the plan review process. The Department would like to commend the Council on their achievements to date and acknowledges the many positive initiatives of the Council such as the Local Authority Pollinator Award supporting the All Ireland Pollinator Plan 2015-2020. The Council should build on this work and seek to strengthen biodiversity protection within the Plan area and its zone of influence. The county contains many habitats and species of international and national importance both within and outside designated sites and these require clear protection and conservation if they are not to be degraded or lost.</p>	<p>Noted. It is intended that the Plan will continue to build on previous contributions to the protection and management of biodiversity.</p>
<b>E</b>	<p><b>Threats and Pressures on Nature Conservation</b> The recent Article 17 report and Article 12 Report under the Habitats and Birds Directives, respectively, have shown that even with strict protection habitats and species are continuing to deteriorate or decline. The Department notes that Tipperary County Council is committed to the protection of the designated sites across the county. It is important that the Plan recognises the potential for tourism and recreation related proposals to impact such sites. Many species listed for protection within European sites also depend on habitats and landscape features outside of the designated site boundaries. The loss of these features, due to development pressure can indirectly cause disturbance and deterioration to the conservation status of internationally important species. It is important to ensure that these issues are addressed in both the Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA) for the Plan. This will ensure that robust objectives are in place to ensure the protection of habitats and species within Natura 2000 sites.</p> <p>The Department recommends that natural heritage objectives are clear and robust, and include an objective to protect, conserve and enhance biodiversity both within and outside protected sites. This is critical in ensuring that the Council meets its obligations in relation to nature conservation and biodiversity. Where development projects arising from the plan are not subject to the legal requirements to prepare either an Environmental Impact Assessment Report (EIAR) or Natura Impact Statement (NIS) the impacts to biodiversity may best be facilitated through the preparation of an Ecological Impact Assessment (EclA), and the Department recommends including this as an objective in the Plan. The Plan should acknowledge the strict protection, provided for by the Habitats Directive, which applies to Annex IV species (e.g. bats and Otter) wherever they occur; and should provide for this protection to be fully implemented in any plans and projects arising from the Plan. The loss of trees and hedgerows can, in general, impact on bat species and other wildlife and affect the connectivity of hedgerows as wildlife corridors. Bat roosts can also be affected where there is redevelopment of old buildings. A specific objective should be included in the Plan requiring that surveys for these strictly protected species and other species protected under the Wildlife Acts, are included in all development proposals where there is a reasonable likelihood of these species being present and affected by the development.</p> <p>It is imperative that the integrated environmental assessments in relation to the Plan review, including Strategic Environmental Assessment (SEA), Appropriate Assessment (AA) and Strategic Flood Risk Assessment (SFRA), apply the precautionary principle to ensure there is no further deterioration of habitats and species both within and outside designated sites across the county and in its zone of influence. It is also important that the Plan provides for unauthorised development to be addressed in a comprehensive manner to ensure that such development does not impact biodiversity in the county, including impacts to sites designated by law. The Plan should include an objective that will ensure appropriate restoration works will be required where impacts to biodiversity have occurred as a result of unauthorised development. Retention planning permission should not be granted where ecological damage has occurred without consideration of the need for either EIA or AA particularly where this involves a designated site.</p>	<p>The SEA and AA will seek to ensure that the Plan recognises the potential for tourism and recreation related proposals to impact upon designated sites. The SEA and AA will also seek to ensure that appropriate measures are included in the Plan to contribute towards the protection and management of these sites.</p> <p>The SEA and AA will seek to ensure that natural heritage objectives are clear and appropriately robust. The biodiversity issues raised throughout this section of the submission will be considered when recommending measures for integration into the Plan.</p> <p>The precautionary principle will be applied through the SEA, AA and SFRA.</p>
<b>F</b>	<p><b>Lighting</b> The Department recommends that ‘Lighting’ objectives are included within the plan both for town and rural areas where incorrect types or inappropriate use of LEDs can have an impact on bat species and other wildlife. The Department would like to highlight the EUROBATs and Dark Sky lighting recommendations which provide further information on reducing the impact of lighting on wildlife, the correct LEDs and lighting fittings can ensure that these impacts are avoided or minimised and can also reduce carbon emissions.</p>	<p>The SEA and AA will seek to ensure that the Plan contributes towards the protection and management of biodiversity, including with respect to the topic of lighting.</p>
<b>G</b>	<p><b>Invasive Alien Species (IAS)</b> The Department would like to highlight the threat of Invasive Alien Species (IAS) as one of the key pressures which increases biodiversity loss in Ireland. The control of IAS is a target of the NBAP. Rhododendron and Laurel are a serious threat to native woodland sites and Himalayan Balsam, Giant Hogweed and Japanese Knotweed (among other species) to river catchments. The Department recommends that specific objectives in relation to the containment and control of IAS in the context of development proposals are included in the</p>	<p>The SEA and AA will seek to ensure that the Plan contributes towards the protection and management of biodiversity, including with respect to the topic of invasive alien species.</p>



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	plan with reference to the EC (Birds and Natural Habitats) Regulations, 2011.	
H	<p><b>Green Infrastructure (GI) and Greenways</b></p> <p>The Department would welcome a commitment in the plan to the preparation of an overall green infrastructure strategy for the county, as defined by the EU and would like to draw your attention to the EU definition of G.I. as an important link in the connectivity of European sites in the County. A clear distinction should be made between G.I. and Greenways, Blueways and tourist trails within the Plan. As advised in the National Greenway Strategy, greenways and other associated linear trails should be designed to take into account, and avoid where necessary, the sensitivities of natural heritage. Whilst the development of Greenways, Blueways and tourist trails is generally welcomed, the same risks to biodiversity are associated with these type of trails, as with any other development.</p> <p>The Department is aware of cases where damage has occurred to nature conservation interests as a consequence of such developments carried out without proper environmental assessment. Greenways can include measures to enhance biodiversity and to provide enhancement measures for the All-Ireland Pollinator Plan. The Department recommends that such proposals are subject to route/site selection processes to ensure that impacts to biodiversity and nature conservation interests are avoided. The Department also notes the need to apply the precautionary principle when screening for Appropriate Assessment (AA) and/or undertaking AA for Greenways, Blueways and tourist trails. A 2019 An Bord Pleanála's inspector's report considered that a greenway and cycleway were the same thing (<a href="http://www.pleanala.ie/casenum/303499.htm">http://www.pleanala.ie/casenum/303499.htm</a>). This would seem to indicate that, as well as Appropriate Assessment, proposed greenways and cycleways should be subject to what could be termed pre-screening for Environmental Impact Assessment (EIA) as set out in Article 120(1a) and (1b)) of the Planning and Development Regulations and screening for EIA as set out in Article 120(1), (1A) and (1B) of these Regulations, as appropriate.</p> <p>In the case of Blueways, in addition to other concerns biosecurity assessments and procedures are necessary. Crayfish plague and other damaging organisms can be accidentally introduced to rivers via importation and use of water craft which have been in infected areas. Crayfish plague has devastated native crayfish populations in the River Suir catchment and the risk of transfer of the disease is high.</p>	<p>The SEA and AA will seek to ensure that the Plan contributes towards the protection and management of biodiversity, including with respect to the various issues identified by the Department under the topic of green infrastructure and greenways, including design, route/site selection processes and biosecurity.</p>
I	<p><b>Hedgerows</b></p> <p>Developments should avoid the fragmentation of landscape features, including ecological corridors which allow for the mobility of species in a changing climate. Hedgerows are essential wildlife corridors and of great ecological importance. Removal of hedgerows at key locations can lead to habitat fragmentation, thereby threatening the coherence of this important ecological network. The Department recommends that a clear policy to protect, conserve and enhance field boundaries as part of all development proposals is included in the Plan. Mitigation measures, aimed at ensuring that habitat fragmentation does not occur, should be incorporated into any development proposals where field boundaries must be removed.</p> <p>The Department recommends the inclusion of clear objectives with regard to the protection of trees, hedgerows and other habitats, which contribute to G.I., in the county.</p>	<p>The SEA and AA will seek to ensure that the Plan contributes towards the protection and management of biodiversity, including with respect to the topic of hedgerows.</p>
J	<p><b>Water and Wetlands</b></p> <p>Inland Fisheries Ireland has launched an updated version of its Planning for Watercourses in the Urban Environment booklet which contains much useful advice on avoiding adverse effects of new development on aquatic ecosystems. The recommendations contained in this publication should be considered for incorporation in the policies and objectives of the Draft Plan.</p> <p>The Department recommends that clear policy objectives are included in the Plan to ensure that undesignated wetland areas are protected.</p> <p>Qualifying interest species of river SACs in Tipperary include Atlantic Salmon and Lamprey species which are migratory in addition the European Eel is classified as critically endangered. Barriers to fish migration negatively impact on these species and the Department recommends that this issue is considered in the Plan. There may be scope for barrier removal or mitigation in conjunction with Local Authority projects and this should be explored with Inland Fisheries Ireland.</p>	<p>The SEA and AA will seek to ensure that the Plan contributes towards the protection and management of biodiversity, including with respect to the topic of water and wetlands. Inland Fisheries Ireland Planning for Watercourses in the Urban Environment booklet will be considered in the undertaking of the SEA.</p>
K	<p><b>Peatlands</b></p> <p>The Department recommends that the requirements of the National Peatland Strategy and the National Raised Bog SACs Management Plan 2017-2022 are reflected in the policy in relation to peatlands in the Plan. The Department notes a recent An Bord Pleanála decision (ABP-305340-19) in relation to peatlands, which found that the drainage of wetland (raised bog) and mechanical disturbance, extrusion of peat and removal of turf at a site is development. As with all development, development in peatlands is subject in all cases to screening for appropriate assessment and, as may be required, to screening for EIA. The Department advises that the Plan should reflect these requirements in relation to development in peatland areas.</p>	<p>The SEA and AA will seek to ensure that the Plan contributes towards the protection and management of biodiversity, including with respect to the topic of peatlands.</p>

Ref.	Issue raised in submission	SEA Response
L	<p><b>Hen Harrier SPAs and wind-farms</b></p> <p>The Slievefelim to Silvermines Mountains is a designated Special Protection Area (4165) for hen harrier and given the outcome of the European Union Court of Justice (CJEU) Case C-164/17, the Department is of the view that provisions of the Draft Development Plan must ensure that applications for wind-farms within and adjacent to this SPA, require full appropriate assessment taking into account the findings of this judgement. This will include applications for upgrades, renewal, repowering or extension of existing wind farms, in addition to new applications.</p>	<p>The SEA and AA will seek to ensure that the Plan contributes towards the protection and management of biodiversity, including with respect to the topic of SPAs and windfarms.</p>
M	<p><b>Road development and barn owl</b></p> <p>Barn owl is a protected species of threatened status (red-listed) at national level. Barn owls are attracted to feeding on the rough grass growing on the margins of motorways, and significant traffic-caused mortality may be causing a long-term population decline to occur. The barn owl population in south Tipperary, north Cork, north Kerry and Limerick is one of the largest in the State, in an area which has many existing and planned motorways. A technical group has been set up by TII (Transport Infrastructure Ireland) to investigate this issue, and it is recommended that an objective is included in the Draft County Development Plan to support any emerging solution to reduce mortality of barn owls on motorways and large roads in co-operation with TII and other stakeholders.</p>	<p>The SEA and AA will seek to ensure that the Plan contributes towards the protection and management of biodiversity, including with respect to the topic of road development and barn owls.</p>
N	<p><b>Monitoring</b></p> <p>The Department would welcome a clear and specific monitoring plan to be included with the Strategic Environmental Report that would clearly outline how it is proposed to record the impacts of plan implementation on biodiversity, both in terms of biodiversity loss and biodiversity enhancement during the lifetime of the plan. The Department would also welcome the publishing of such reports.</p> <p>The Department would welcome the opportunity to discuss any of the matters raised here if this would assist the planning authority in the process of preparing the County Development Plan.</p>	<p>The SEA Environmental Report will include a comprehensive monitoring programme that will provide for the monitoring of implementation of the Plan on biodiversity.</p>
O	<p>You are requested to send further communications to the Development Applications Unit (DAU) at <a href="mailto:manager.dau@chg.gov.ie">manager.dau@chg.gov.ie</a>, or to the address below.</p>	<p>Noted.</p>

### 3.3 Submissions on the Environmental Report for the Draft Plan

Various submissions were made on the Draft Plan, Proposed Material Alterations and/or associated environmental assessment documents while these documents were on public display.

Updates made on foot of submissions include:

- To make reference to the Non-Technical Summary at the beginning of the SEA Environmental Report.
- To add the following subsection to SEA Environmental Report Section 7 "Evaluation of Alternatives":

"7.4 Reasons for Selecting Chosen Alternatives

"The selected alternatives for the Plan are indicated above.

These alternatives have been incorporated into the Plan having regard to both:

1. The environmental effects which are identified by the SEA and are detailed above; and
2. Planning - including social and economic - effects."

- To update the SEA Monitoring Programme at Section 10 of the SEA Environmental Report to qualify a number of sources and indicators and to identify that monitoring reports will be made publicly available.
- To update the environmental protection and management provisions contained in the Draft Plan to take account of submissions and to update the SEA, AA and SFRA Reports to take account of these changes, including in relation to flood risk management, land use zoning and natural heritage provisions.

For further information on how submissions were considered, refer to the Chief Executive's Report on submissions received on the Draft Plan and associated documents and the Chief Executive's Report on submissions received on the Proposed Material Alterations and associated documentation – both available at <https://www.tipperarycoco.ie/cdp/>.

All parts of the Plan-preparation process were informed by the SEA, AA and SFRA processes - this includes the preparation of the Chief Executive's Draft Plan, Members' Amendments to that Plan in advance of public display, Proposed Material Alterations and Further Modifications. The mitigation integrated into the final, adopted Plan includes that identified in Section 9 of this report.

### 3.4 SEA documents including SEA Environmental Report

The Draft Plan and accompanying documents (including SEA Environmental Report and AA and SFRA documents) were placed on public display, having integrated various recommendations arising from the SEA, AA and SFRA processes.

Responses to submissions made during the period of public display of a Draft Plan were integrated into a Chief Executive's Report and considered by Tipperary County Council. A number of material alterations were proposed after public display of the Draft Plan. The Proposed Material Alterations were subject to Screening for SEA and AA and a selection of Alterations were subject to SEA and Stage 2 AA.

On adoption of the Plan, the Environmental Report was placed on public display alongside the Draft Plan is updated to become a final Environmental Report that is consistent with the adopted Plan, taking into account all changes that were made to the original Draft Plan that was placed on public display.

## Section 4 Summary of Alternatives considered

### 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. Available reasonable alternatives for the Plan are provided under Types 1 to 3 detailed 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 limited by the provisions of higher-level planning objectives, including those of the National Planning Framework (NPF) and the Regional Spatial and Economic Strategy (RSES) for the Southern Region. These documents set out various requirements for the content of the Plan including on topics such as settlement typology, land use zoning and the sustainable development of rural areas.

### 4.3 Type 1: Alternatives for an Environmental Approach to the Plan

Although many environmental (including infrastructure, natural capital<sup>6</sup> and ecosystem<sup>7</sup> service and climate action issues) have been considered over previous Plan periods, the importance of these in fulfilling environmental obligations has increasingly emerged as a key focus of the NPF, the RSES and new and emerging planning legislation.

In addition, the protection and promotion of biodiversity, ecosystems services and natural amenities was a key concern of people and communities in pre-draft consultation for the Draft Plan. In this respect, the Chief Executive Report sets out details of the 190 (no.) submissions received at [www.tipperarycoco.ie/cdp](http://www.tipperarycoco.ie/cdp).

Three pillars in terms of the overall environmental approach to the Plan are set out:

1. An Infrastructural capacity led approach would primarily use strategic Infrastructural Assessment and Serviced Land Assessment to provide an evidence base to inform future development to be provided for by the Plan.
2. An Ecosystems-Services Approach supporting the integrated management of land, water and living resources that promotes conservation Nature-Based Solutions and sustainable landuse.
3. Support for a move to a low-carbon and climate resilient economy and society incorporating stronger responses in how the population of the County lives, travels and works to contribute towards the achievement of a low-carbon Tipperary.

Having consideration to the above, two alternative approaches to the overall approach of the Plan have been considered:

#### Alternative A

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:

<sup>6</sup> Renewable and non-renewable resources (e.g. plants, animals, air, water, soils, minerals)

<sup>7</sup> Ecosystems are multifunctional communities of living organisms interacting with each other and their environment. Ecosystems provide a series of services for human well-being (ecosystem services) either directly or indirectly contributing towards human wellbeing

- Support for 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<sup>8</sup> and ecosystem service issues, such as the management of air quality, noise pollution, light pollution, pollination, flood risk, water bodies and river basins and natural resources supporting energy production and recreation; and
- A decreased likelihood in the extent, magnitude and frequency of adverse effects on natural capital and ecosystem services.
- Active support for the provisions of the National Climate Action Plan and the national targets for GHG emissions as set out.

Furthermore, 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 in all settlements, contribute to carbon reduction targets and achieve environmental enhancement and economic growth.

Alternative A would ensure that the sustainable development of settlements 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. This approach would also contribute towards compliance with the objectives of the RSES and NPF.

Under **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", as has been the case over previous plan periods, 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 the national targets for GHG emissions as set out.

Furthermore, this alternative 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.

This alternative 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

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<sup>8</sup> Renewable and non-renewable resources (e.g. plants, animals, air, water, soils, minerals)

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.

**Selected Type 1 Alternative for the Plan: Alternative A.** Under Alternative A, the County Development Plan enshrines a move to a low-carbon and climate resilient economy and society in its Core Strategy and other Plan provisions.



Figure 2.2: Core Ambitions for Tipperary

#### 4.4 Type 2: Alternatives for Settlement Hierarchy Positioning and Growth

In considering significant realistic alternatives for placing of individual settlements under alternative typologies, or in other words the development of a Settlement Hierarchy, the planning authority has taken into account the objectives of the NPF and the Southern RSES. It is noted that the RSES has designated the Towns of Clonmel, Nenagh and Thurles as Key Towns with the remaining towns and villages to be designated by the Planning Authority having consideration to a sustainable infrastructure-led approach. In this respect, alternative approaches to how these lower tier settlements could be set out in a settlement strategy are outlined below:

**Alternative A “Plan for Settlement growth based on urban capacity and compact growth”** would support the function of the Key towns of Clonmel, Nenagh and Thurles and set out typologies for the smaller settlements taking into account factors such as population, infrastructural availability and capacity assessment. Based on this, a Settlement Hierarchy could be devised with appropriate population projections across the tiers and land development policies appropriate to the tiers. This would enable structured and plan-led growth of towns and rural areas. Growth would be guided by an infrastructural assessment, with growth allocated within existing or planned capacity of infrastructure. Positive environmental effects and compact growth would be maximised and negative environmental effects minimised.

**Alternative B “Strong support for Key Towns with flexible and organic growth enabled in all other settlements”** would support the growth of the Key Towns, planning for 30% of new population in these settlements, and plan for the equal growth and expansion of all the other towns and villages in the County. While this option would support the Key Towns it would result in a poor settlement structure among the other settlements that would not support the sustainable delivery of services and facilities in line with a strong settlement hierarchy. There is also the risk that development would occur in settlements that would not be of a nature and scale appropriate to individual settlements. Infrastructural capacity would be exceeded within settlements and compact growth would not be maximised, with unnecessary levels of greenfield development in areas outside of built development envelopes occurring. This would present potential significant adverse environmental effects that would be challenging to fully mitigate.

**Alternative C “New settlement favour in urban and rural areas on an equal basis”** would support the development of urban towns (i.e. towns >1,500 persons) and rural settlements (settlements <1,500 persons) equally. This would provide for 50% of population growth to occur in the 12 urban towns and 50% of population growth to occur in the 114 rural villages and open countryside. This would result in a poor settlement structure and a lack of critical mass that would not support the sustainable delivery of services and facilities in line with a strong settlement hierarchy. Development would be likely to occur in settlements that would not be of a nature and scale appropriate to individual settlements. This alternative would be likely propagate decline of rural settlements and increase demand for one-off rural housing. This alternative would not be sustainable and would conflict with environmental protection and management the most.

**Selected Type 2 Alternative for the Plan: Alternative A** was chosen as the most appropriate response to the sustainable development of the County and the achievement of the provisions of the NPF and RSES. The function of the Key towns of Clonmel, Nenagh and Thurles is provided for in the development of the County and the Region, with a 30% growth allocation and ensuring delivery of critical mass in terms of population and services. In addition, ensuring the competitiveness of Tipperary in the region. The other urban towns will each grow strongly each by at least 10% and by 15% where they are over 4,000 persons. Typologies for the smaller settlements have been set out taking into account factors such as population, infrastructural availability and capacity assessment.

## 4.5 Type 3: Alternatives for Rural Tipperary

NPO 19 of the NPF sets out provisions for the designation of ‘Areas under Urban Influence’ based on the core consideration of commuter patterns to key employment centres. The objective being to limit applications for rural housing in these areas to those with a social and economic need to reside in the open countryside and to direct urban generated rural housing demand to smaller settlements and serviced sites.

### Rural Areas under ‘Strong Urban Influence’

- **Type 3 (i) Alternative A:** Designate Rural Areas under ‘Strong Urban Influence’ that require various criteria to be demonstrated in advance of planning permission being granted for a single dwelling for permanent occupation. Also designate primary amenity areas and strategic roads, whereby housing will be similarly assessed. This would support the provisions of the NPF, limit housing in areas demonstrated to be under pressure, and protect sensitive areas and infrastructure.

**Alternative A** provides for a robust and transparent policy approach to manage rural housing.

Restricting the development of single dwellings in rural areas that are under strong urban influence/pressure would positively impact upon the protection and management of the environment and sustainable development. The restrictions would help to both reduce levels of greenfield development in areas immediately surrounding existing centres and encourage brownfield development within existing centres.

Single dwellings in rural areas would be facilitated as appropriate, taking into account primary amenity areas and strategic roads, and urban development would be directed towards established settlements. This alternative would help to prevent low density urban sprawl and associated adverse effects upon sustainable mobility, climate emission reduction targets and various environmental components.

- **Type 3 (i) Alternative B:** Do not designate Rural Areas under Strong Urban Influence, with all areas, including rural areas near large employment centres, designated in the same way, with planning applications assessed on their own merits. Designate primary amenity areas and strategic roads that require various criteria to be demonstrated in advance of planning permission being granted for a single dwelling for permanent occupation. This would protect sensitive areas and infrastructure, however, all areas outside of these would be treated the same and there would be continued pressure for rural housing in close proximity to large towns.

**Alternative B** Provides a vague and unclear policy approach to rural housing and risks facilitating a significant increase in urban-generated one-off housing in the open countryside which will undermine the role of small towns and villages and have consequences for the environment, including primary amenity areas, and the function of strategic roads.

Not restricting the development of single dwellings in rural areas that are under strong urban influence/pressure would adversely impact upon the protection and management of the environment and sustainable development. The absence of restrictions would result in increased levels of greenfield development in areas immediately surrounding existing centres and less demand for brownfield development within existing centres.

Urban generated housing development would occur within rural areas outside of established settlements. This alternative would result in low density urban sprawl and associated adverse effects upon sustainable mobility, climate emission reduction targets and various environmental components.

**Selected Type 3 (i) Alternative for the Plan: Alternative A.** Under Alternative Type 3 (i) A, the Core Strategy, in line with the provisions of the NPF has designated 'Rural Areas under Strong Urban Influence' that require various criteria to be demonstrated in advance of planning permission being granted for a single dwelling for permanent occupation. Primary Amenity Areas and Strategic Roads also designated whereby housing will be similarly assessed. This will respect those areas most at risk of urban generated housing and where the impacts of uncontrolled housing would be most significant. This approach will also support social and economic need for rural housing in line with the provisions of the Core Strategy. (Refer to Chapters 2 and 3).

### **Type 3 (ii) Smaller settlements and Serviced Sites**

- **Type 3 (ii) Alternative A:** Provide focus to, support and deliver targeted policies/objectives for smaller settlements to act as a viable alternative to one-off housing in the open countryside through serviced sites. This would be an important alternative in terms of encouraging development in rural settlements and would provide an alternative for those seeking to live in the rural are.

Serviced sites would be served by infrastructure (including water services infrastructure) and more likely to protect the environment including the status of ground and surface waters, water used for drinking water, human health, biodiversity and flora and fauna and the landscape. Development would be required to be subject to siting, design, protection of residential amenities and normal development management criteria, subject to the satisfactory provision of infrastructure and services and in keeping with the character of the settlement. The Tipperary County Council Design Guidelines for Cluster Housing in Rural Villages 2019 would apply.



- **Type 3 (ii) Alternative B:** Smaller settlements are included, but no focus or incentive for these locations to act as a viable alternative to one-off housing in the open countryside. The current patterns would continue with little development in rural villages.

Alternative B would be less likely to provide a viable alternative to one-off housing in the open countryside. Development within the open countryside would be less likely to be served by infrastructure (including water services infrastructure) and less likely to protect the environment including the status of ground and surface waters, water used for drinking water, human health, biodiversity and flora and fauna and the landscape. Alternative B would be the least sustainable of these two alternatives and would be most harmful to the environment.

**Selected Type 3 (ii) Alternative for the Plan: Alternative A.** This approach will also support social and economic need for rural housing in line with the provisions of the Core Strategy. The Council will actively support regeneration and land use in settlements to support the development of cluster housing and accommodate rural housing demand in settlements (Chapters 4 and 6).

## 4.6 Type 4: Alternatives for Settlement Plans

Land-use zoning has been applied in a way that primarily seeks to achieve sustainable and compact growth, considering the various requirements set out in the higher-level NPF and Southern RSES.

It should be noted that a detailed rationalisation of land zoning under the current County Development Plan area (with SEA, AA and SRFA) was carried out in 2017 and informed a Variation to the current County Development Plan. Therefore, all lands zoned in the County Development Plan are already based on a detailed SLA and environmental assessment.

The NPF further emphasises the requirement to provide a linkage between the zoning of land for development, and the availability of infrastructure required to facilitate development, implemented through a tiered approach to land use zoning<sup>9</sup>.

To address this requirement, the Settlement Hierarchy is underpinned by a Serviced Land Assessment (SLA) which applies a standardised and tiered approach to residential land zoning, identifying lands within the settlements that are fully serviced by available infrastructure (Tier 1) and lands which will be serviced within the lifetime of the Plan (Tier 2). The SLA provides an evidence base for the zoning of lands, by assessing the infrastructural capacity of land coupled with the principles set out in the NPF to promote compact sustainable growth.

**Alternative A** identifies and zones Tier 1 lands (within the settlements that are fully serviced by available infrastructure) and Tier 2 lands (which will be serviced within the lifetime of the Plan) for residential use across the Service Centres in accordance with the NPF Methodology, including based on the principle of sequential development. Landowning is applied to settlements >400 persons.

Alternative A would both ensure that the most suitable lands are designated for development and that sufficient lands are zoned to enable variety and choice in terms of land availability, with a greater extent of new development located on zoned lands that are less environmentally sensitive, better-serviced and better connected.

The supply of zoned land would meet the projected demand for new housing in line with the Core Strategy. This would be more likely to ensure alignment between new development and essential services provision with associated positive effects on the protection of environmental components.

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<sup>9</sup> NPO 72a, 72b & 72c

Alternative A would help to ensure compact, sustainable development within and adjacent to the existing built-up footprint and would conflict with the protection and management of environmental components the least. A more compact form of development would help to:

- Avoid potential adverse environmental effects on unzoned lands that are more environmentally sensitive, less well-serviced and less well-connected
- Maximise benefits from infrastructural investment
- Contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health).
- Deliver population growth targets and housing choice in liner with the Core Strategy

**Alternative B** identifies Tier 1 and Tier 2 lands for residential use across the Service Centres in accordance with the NPF Methodology, however; Alternative B would only zone Tier 1 lands for new development.

This alternative would significantly reduce the availability of lands for new residential development and would not meet the targets of the Core Strategy in terms of sustainable settlement growth.

Alternative B would restrict choice, variety and land availability and would have the potential to push new development towards more environmentally sensitive lands that are less well-serviced and less well-connected, resulting in unnecessary potentially significant adverse effects on all environmental components.

The zoning of only Tier 1 lands could result in a mis-alignment between the supply of zoned land to meet the projected demand for new housing with associated consequences for compact development and essential services provision. A less compact form of development would:

- Increase potential adverse environmental effects on unzoned lands that are more environmentally sensitive, less well-serviced and less well-connected;
- Increase inefficiencies in infrastructural investment; and
- Hinder efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health).

**Selected Type 4 Alternative for the Plan: Alternative A.** Alternative A was chosen - identify all Tier 1 lands, and those Tier 2 lands most suitable for development over the lifetime of the Plan, based on the principle of sequential development and in line with the provisions of the Core Strategy. This alternative will both ensure that the most suitable lands are designated for development and that sufficient lands are zoned to enable variety and choice in terms of land availability.

## 4.7 Reasons for Selecting Chosen Alternatives

The selected alternatives for the Plan are indicated above.

These alternatives have been incorporated into the Plan having regard to both:

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

## Section 5 Monitoring Measures

### 5.1 Introduction

The SEA Directive requires that the significant environmental effects of the implementation of plans and programmes are monitored. This section details the measures which will be used in order to monitor the likely significant effects of implementing the Plan.

Monitoring can both demonstrate the positive effects facilitated by the Plan and can enable, at an early stage, the identification of unforeseen adverse effects and the undertaking of appropriate remedial action.

The occurrence of significant adverse environmental effects not predicted and mitigated by this assessment, which are directly attributable to the implementation of the Plan, would necessitate consideration of these effects in the context of the Plan and potential remediation action(s) and/or review of part(s) of the Plan.

### 5.2 Indicators and Targets

Monitoring is based around indicators which allow quantitative measures of trends and progress over time relating to the Strategic Environmental Objectives identified in the main SEA Environmental Report and used in the evaluation. Each indicator to be monitored is accompanied by the target(s) which were identified with regard to the relevant strategic actions. Given the position of the Development Plan in the land use planning hierarchy beneath RSES, the measures identified in the RSES SEAs, including the Southern RSES 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.

Table 5.1 overleaf shows the indicators and targets which have been selected for monitoring the likely significant environmental effects of implementing the Plan, if unmitigated.

Monitoring is an ongoing process and the programme allows for flexibility and the further refinement of indicators and targets.

The Monitoring Programme may be updated to deal with specific environmental issues – including unforeseen effects – as they arise.

### 5.3 Sources

The Plan forms part of the wider land use planning framework comprising a hierarchy of policies, plans, programmes, etc. This wider framework, including the National Planning Framework and the Southern RSES, is subject to its own SEA (and associated monitoring) requirements. At lower tiers of the hierarchy, Local Area Plans and individual projects will be subject to their own monitoring requirements as relevant.

In implementing the Monitoring Programme the Council will take into account this hierarchy of planning and environmental monitoring.

Sources for indicators may include existing monitoring databases (including those maintained by planning authorities and national/regional government departments and agencies) and the output of lower-tier environmental assessment and decision making (including a review of project approvals granted and associated documents and the output of any EIA monitoring programmes).

### 5.4 Reporting and Responsibility

As provided by Policy 16 – 1, the Council shall:

*“Undertake a programme of monitoring and evaluation of the County Development Plan over its lifetime, as follows and to align these monitoring protocols with each other as part of an overall monitoring framework:*

- a) *Prepare a 2 Year Progress Report of the County Development Plan (as required under Section 15(2) of The Act), having consideration to any regional monitoring programme in place.*
- b) *Prepare a Report to the Regional Assembly setting out progress made in supporting objectives of the RSES (as required under Section 25A(1) of The Act).*
- c) *SEA Monitoring as detailed in the Environmental Report.”*

Reporting will seek to address the indicators set out on Table 5.1. The Council is responsible for the ongoing review of indicators and targets, collating existing relevant monitored data, the preparation of monitoring evaluation report(s), the publication of these reports (reports will be made available to the public) and, if necessary, the carrying out of remedial action.

**Table 5.1 Indicators, Targets, Sources and Remedial Action**

Environmental Component	Indicators	Targets	Sources	Remedial Action
<b>Biodiversity, Flora and Fauna</b>	<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>10</sup></li> <li>DHLGH National Birds Directive Monitoring Report for the under Article 12 (every 3 years)<sup>11</sup></li> <li>Consultations with the NPWS<sup>12</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 – see Chapter 11 “Environment and Natural Heritage”</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 – see Chapter 11 “Environment and Natural Heritage”</li> </ul>	<ul style="list-style-type: none"> <li>Internal monitoring of likely significant environmental effects of grants of permission<sup>13</sup></li> </ul>	<ul style="list-style-type: none"> <li>Review internal systems</li> </ul>
<b>Population and Human Health</b>	<ul style="list-style-type: none"> <li>Implementation of Plan measures relating to the promotion of economic growth as provided for by Chapter 8 “Enterprise and Rural Employment”</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 Chapter 8 “Enterprise and Rural Employment”</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>

<sup>10</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>11</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>12</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>13</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 Statement for the Tipperary County Development Plan 2022-2028

Environmental Component	Indicators	Targets	Sources	Remedial Action
	<ul style="list-style-type: none"> <li>Proportion of people reporting regular cycling / walking to school and work above 2016 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 2016 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>	<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 County's settlements</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>
<b>Water</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>14</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>	<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</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>

<sup>14</sup> Including monitoring of water quality and nitrogen deposition due to bioenergy and agricultural projects where available.

SEA Statement for the Tipperary County Development Plan 2022-2028

Environmental Component	Indicators	Targets	Sources	Remedial Action
		brownfield development of land under Soil and broadband under Population and Human Health		
	<ul style="list-style-type: none"> <li>Proportion of people reporting regular cycling / walking to school and work above 2016 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 2016 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>
<b>Air</b>	<ul style="list-style-type: none"> <li>Proportion of journeys made by private fossil fuel-based car compared to 2016 National Travel Survey levels of 74%</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 2016 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>	<ul style="list-style-type: none"> <li>Implementation of Plan measures relating to climate reduction targets</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 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</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 target of aggregate reduction in carbon dioxide (CO<sub>2</sub>) emissions of at least 80% (compared to 1990 levels) by 2050 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 2016 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 2016 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 2016 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 2016 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>

SEA Statement for the Tipperary County Development Plan 2022-2028

Environmental Component	Indicators	Targets	Sources	Remedial Action
<b>Cultural Heritage</b>	<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>	<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>



# SEA ENVIRONMENTAL REPORT

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FOR THE

## TIPPERARY COUNTY DEVELOPMENT PLAN 2022-2028

**for: Tipperary County Council**

Civic Offices  
Nenagh  
County Tipperary



**Comhairle Contae Thiobraid Árann**  
Tipperary County Council

**by: CAAS Ltd.**

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**AUGUST 2022**

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## List of Abbreviations

<b>AA</b>	Appropriate Assessment
<b>ACA</b>	Architectural Conservation Area
<b>CAFE</b>	Cleaner Air for Europe
<b>CFRAM</b>	Catchment Flood Risk Assessment and Management
<b>CORINE</b>	Co-ORDinated INformation on the Environment
<b>CSO</b>	Central Statistics Office
<b>DAFM</b>	Department of Agriculture, Food and Marine
<b>DCCA</b>	Department of Communication, Climate Action and Environment
<b>DCHG</b>	Department of Culture, Heritage and the Gaeltacht
<b>DECC</b>	Department of Environment, Climate and Communications
<b>DEHLG</b>	Department of the Environment, Heritage and Local Government
<b>DHLGH</b>	Department of Housing, Local Government and Heritage
<b>EIA</b>	Environmental Impact Assessment
<b>EPA</b>	Environmental Protection Agency
<b>EQS</b>	Environmental Quality Standard
<b>EU</b>	European Union
<b>FPO</b>	Flora Protection Order
<b>GSI</b>	Geological Survey of Ireland
<b>NHA</b>	Natural Heritage Area
<b>NIAH</b>	National Inventory of Architectural Heritage
<b>NTA</b>	National Transport Authority
<b>OPW</b>	Office of Public Works
<b>pNHA</b>	proposed Natural Heritage Area
<b>PAS</b>	Priority Action Substance
<b>POPs</b>	Persistent Organic Pollutants
<b>RAL</b>	Remedial Action List
<b>RBD</b>	River Basin District
<b>RMP</b>	Record of Monuments and Places
<b>RPA</b>	Register of Protected Areas
<b>RSES</b>	Regional Spatial and Economic Strategy
<b>SAC</b>	Special Area of Conservation
<b>SEA</b>	Strategic Environmental Assessment
<b>SEO</b>	Strategic Environmental Objective
<b>SI No.</b>	Statutory Instrument Number
<b>SLA</b>	Serviced Land Assessment
<b>SPA</b>	Special Protection Area
<b>THMs</b>	Trihalomethanes
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organisation
<b>WHO</b>	World Health Organisation
<b>WFD</b>	Water Framework Directive
<b>WRZ</b>	Water Resource Zone
<b>WWTP</b>	Wastewater Treatment Plant

# Glossary

## Appropriate Assessment

The obligation to undertake Appropriate Assessment (AA) derives from Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC. AA is a focused and detailed impact assessment of the implications of a strategic action (such as a plan or programme) or project, alone and in combination with other strategic actions and projects, on the integrity of a European Site in view of its conservation objectives.

## Biodiversity and Flora and Fauna

Biodiversity is the variability among living organisms from all sources including inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species and of ecosystems' (United Nations Convention on Biological Diversity 1992).

Flora is all of the plants found in a given area.

Fauna is all of the animals found in a given area.

## Environmental Problems

Annex I of Directive 2001/42/EC of the European Parliament and of the Council of Ministers, of 27<sup>th</sup> June 2001, on the assessment of the effects of certain plans and programmes on the environment (the Strategic Environmental Assessment Directive) requires that information is provided on 'any existing environmental problems which are relevant to the plan or programme', thus, helping to ensure that the proposed strategic action does not make existing environmental problems worse.

Environmental problems arise where there is a conflict between current environmental conditions and ideal targets. If environmental problems are identified at the outset they can help focus attention on important issues and geographical areas where environmental effects of the plan or programme may be likely.

## Environmental Vectors

Environmental vectors are environmental components, such as air, water or soil, through which contaminants or pollutants, which have the potential to cause harm, can be transported, coming into contact with human beings.

## Mitigate

To make or become less severe or harsh.

## Mitigation Measures

Mitigation measures are measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse impacts on the environment of implementing a human action, be it a plan, programme or project. Mitigation involves ameliorating significant negative effects. Where there are significant negative effects, consideration should be given in the first instance to preventing such effects or, where this is not possible, to lessening or offsetting those effects. Mitigation measures can be roughly divided into those that: avoid effects; reduce the magnitude or extent, probability and/or severity of effects; repair effects after they have occurred; and compensate for effects, balancing out negative impacts with other positive ones.

In the context of Article 6 of the Habitats Directive, mitigation measures are clearly distinguished from compensatory measures. Compensatory measures are intended to offset the negative effects of the plan or project so that the overall ecological coherence of the Natura 2000 Network is maintained.

## **Natural Heritage**

The Heritage Act (1995) defines natural heritage as including flora, fauna, wildlife habitats, landscapes, seascapes, wrecks, geology, inland waterways, heritage gardens and parks.

## **Protected Structure**

Protected Structure is the term used in the Planning and Development Act 2000 (as amended) and associated Regulations (as amended) to define a structure included by a planning authority in its Record of Protected Structures. Such a structure shall not be altered or demolished in whole or part without obtaining planning permission or confirmation from the planning authority that the part of the structure to be altered is not protected.

## **Recorded Monument**

A monument included in the list and marked on the map which comprises the Record of Monuments and Places that is set out county by county under Section 12 of the National Monuments (Amendment) Act, 1994 by the Archaeological Survey of Ireland. The definition includes Zones of Archaeological Potential in towns and all other monuments of archaeological interest which have so far been identified. Any works at or in relation to a recorded monument requires two months' notice to the Department of Tourism, Culture, Arts, Gaeltacht, Sports and Media under Section 12 of the National Monuments (Amendment) Act, 1994.

## **Scoping**

Scoping is the process of determining what issues are to be addressed, and setting out a methodology in which to address them in a structured manner appropriate to the plan or programme. Scoping is carried out in consultation with appropriate environmental authorities.

## **Strategic Environmental Assessment (SEA)**

Strategic Environmental Assessment (SEA) is the formal, systematic evaluation of the likely significant environmental effects of implementing a plan or programme before a decision is made to adopt it.

## **Strategic Environmental Objective (SEO)**

Strategic Environmental Objectives (SEOs) are methodological measures developed from policies which generally govern environmental protection objectives established at International, Community or Member State level and are used as standards against which the provisions of the Plan and the alternatives were 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.



# Section 1 SEA: Introduction and Benefits

## 1.1 Introduction

This is the Strategic Environmental Assessment (SEA) Environmental Report for the Tipperary County Development Plan 2022-2028 (“the Plan”). It has been undertaken by CAAS Ltd. on behalf of Tipperary County Council. The purpose of this report is to provide a clear understanding of the likely environmental consequences of decisions regarding the adoption and implementation of the Plan. Appended to this SEA Environmental Report is a Non-Technical Summary.

Environmental assessment is a procedure that ensures that the environmental implications of decisions are taken into account before such decisions are made. *Environmental Impact Assessment*, or EIA, is generally used for describing the process of environmental assessment for individual projects, while *Strategic Environmental Assessment* or SEA is the term which has been given to the environmental assessment of plans and programmes, which help determine the nature and location of individual projects taking place. SEA is a systematic process of predicting and evaluating the likely significant environmental effects of implementing a proposed plan or programme, in order to ensure that these effects are adequately addressed at the earliest appropriate stages of decision-making in tandem with economic, social and other considerations.

The SEA is being undertaken in order to comply with European SEA Directive<sup>1</sup>, which introduced the requirement that SEA be carried out on plans and programmes that are prepared for a number of sectors, including land use planning.

## 1.2 Implications for the Planning Authority

SEA identifies the likely significant environmental effects of implementing the Plan. The findings of the SEA are expressed in

this Environmental Report, an earlier version of which accompanied the Draft Plan on public display and has been updated following consultation, and identifies how environmental considerations were integrated into the Plan and how alternatives for the Plan were considered.

The planning authority has taken into account the findings of this report and other related SEA output during the Plan preparation process.

Following adoption of the Plan, an SEA Statement is prepared that summarises, inter alia, how environmental considerations have been integrated into the Plan.

## 1.3 Why SEA? The Benefits

SEA is the planning authority’s and the public’s guide to what are generally the best areas for development in the County.

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

An overlay of environmental sensitivities in County Tipperary are shown on Figure 1.1. Further detail on the weighting applied to different sensitivities is provided under Section 1.1.

The overlay mapping shows that environmental sensitivities are not evenly distributed throughout the County. Much of the County is

<sup>1</sup> Directive 2001/42/EC of the European Parliament and of the Council of Ministers, of 27<sup>th</sup> June 2001, on the assessment of the effects of certain plans and programmes on the environment, transposed into Irish Law through the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (SI No. 435 of 2004), as amended by the

European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011 (SI No. 200 of 2011), and the Planning and Development (SEA) Regulations 2004 (SI No. 436 of 2004), as amended by the Planning and Development (SEA) (Amendment) Regulations 2011 (SI No. 201 of 2011).

identified as having low to moderate levels of sensitivity.

Higher levels of environmental sensitivities are found in upland and foothill areas and foothills due to ecological designations (including SAC, NHA and pNHA), water sensitivities (extremely and highly vulnerable aquifers), sensitive landcover (peat bogs) and landscape designations (the highest level of landscape sensitivity).

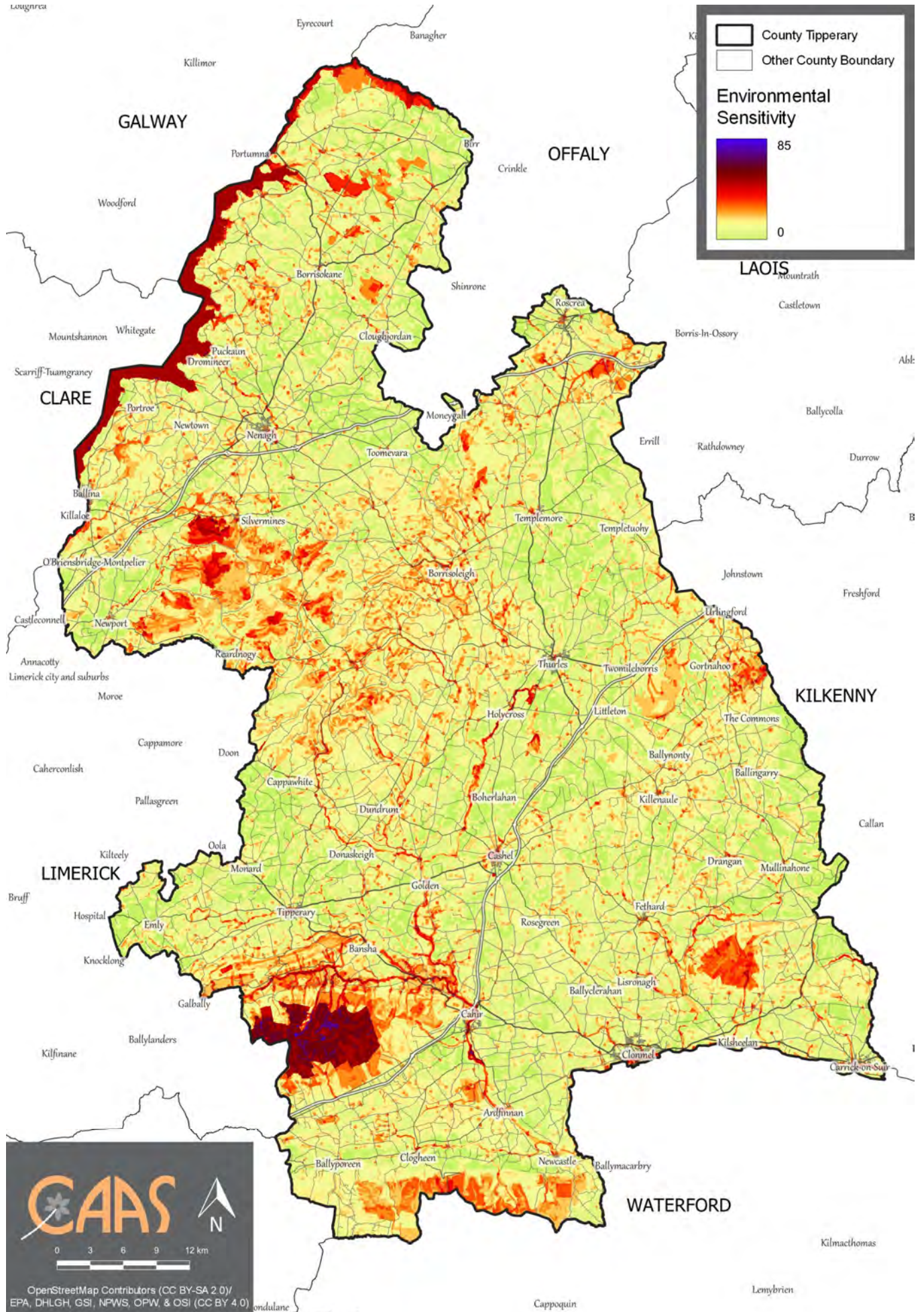
Water bodies throughout the County, including Lough Derg and the River Shannon along the County's northern and western boundary, due to sensitivities such as: ecological designations; nutrient sensitivity; and flood risk.

Areas within the County's settlements, on account of sensitivities including those related to architectural and archaeological heritage.

The Plan directs incompatible development away from the most sensitive areas in the County and focuses on directing: compact, sustainable development within and adjacent to the existing built-up footprints of the County's towns and villages; and sustainable development elsewhere, including in rural areas. Development of these generally more robust, well-serviced and well-connected areas of the County will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation.

Compact development can be accompanied by placemaking initiatives to enable the County's towns and villages to become more desirable places to live – so that they maintain and improve services to existing and future communities.

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



**Figure 1.1 Overlay of Environmental Sensitivities in County Tipperary**  
 CAAS for Tipperary County Council

## Section 2 The Plan

### 2.1 Introduction

The Plan is a land use plan and overall strategy for the proper planning and sustainable development of the functional area of County Tipperary over the six-year period 2022-2028. The Plan sets out the Council's proposed policies and objectives for the development of the County over the Plan period.

### 2.2 Content of the Plan

The Plan is set out over five volumes:

- Volume 1: Written Statement
- Volume 2: Settlement Statements and Maps, and Serviced Land Assessment
- Volume 3: Appendices
- Volume 4: Built Heritage
- Volume 5: Environmental Reports

Volume 1 is set out in 16 chapters under key headings that broadly reflect the themes of the RSES as follow:

- 1) Introduction
- 2) Core Strategy
- 3) Low-Carbon Society & Climate Action
- 4) Settlement Strategy
- 5) Housing
- 6) Supporting Sustainable Communities
- 7) Town Centres & Placemaking
- 8) Enterprise and Rural Employment
- 9) Tourism
- 10) Renewable Energy and Bio-Economy
- 11) Environment and Natural Assets
- 12) Sustainable Transport
- 13) Built Heritage
- 14) Green and Blue Infrastructure
- 15) Water and Energy Utilities
- 16) Monitoring and Evaluation

Volume 2 sets out the village statements and maps for the rural settlements. Volume 3 sets out the appendices that inform the Plan as follows:

- County Housing Strategy
- Renewable Energy Strategy
- Landscape Character Assessment and schedule of scenic Views and Routes
- Rural Housing Design Guide
- Cluster Housing Design Guide
- Development Management Standards
- Statement of Compliance with Ministerial Guidelines

Volume 4 sets out the Record of Protected Structures with proposed additions and

deletions and a schedule of Architectural Conservation areas and Volume 5 contains the SEA Environmental Report, this AA NIR and the SFRA.

### 2.3 Overarching Vision and Strategic Objectives

The Vision for the Plan included is one for “for resilience and for recovery from the impacts of the Covid-19 pandemic, for sustainable towns and rural areas, and for self-sustaining and inclusive communities. The Plan is a proactive spatial planning framework for sustainable future growth, building on the strengths and assets of the county, its communities and its environment. The Vision presented underpins the Vision Statement for Tipperary as set out in the Corporate Plan 2020 – 2024: Tipperary - A vibrant place where people can live, visit and work in a competitive and resilient economy, a sustainable environment and an inclusive and active community”.

The Overarching Strategic Objectives of the Plan are as follows:

- SO – 1: To support the just transition to a climate resilient, biodiversity-rich, environmentally-sustainable and climate-neutral economy.
- SO – 2: To facilitate and promote the development of Clonmel, Nenagh and Thurles as Key Towns, economic drivers and significant population and service centres for the Southern Region.
- SO – 3: To support the implementation of the County Settlement Hierarchy, in regenerating our towns and villages, creating vibrant town centres, attracting new residents and delivering quality residential neighbourhoods.
- SO – 4: To facilitate the development of active, connected and socially inclusive communities, where affordable and quality housing is provided in line with the needs of the population, and integrated with the delivery of community and social infrastructure.
- SO – 5: To promote, support and enable sustainable economic development, and foster new opportunities harnessing the talent of our workforce and communities.
- SO – 6: To support a sustainable, diverse and resilient rural economy, whilst integrating the sustainable management of land and natural resources.

- SO – 7: To protect, enhance and connect areas of natural heritage, blue and green infrastructure and waterbodies, for quality of life, biodiversity, species and habitats, while having regard to climate change adaptation and flood risk management measures.
- SO – 8: To support, value and protect our Artistic, Cultural and Built Heritage for future generations and to recognise its key role in our economy.
- SO – 9: To enhance connectivity and promote sustainable transport, through the integration of land-use and transport planning and promotion of and prioritisation of public transport and walking cycling.
- SO – 10: To protect existing infrastructural assets and utilities, and the strategic function of the existing national road and rail network, and associated junctions and support investment in strategic infrastructure both at the county, and the regional level thereby ensuring Tipperary's access to key services for economic growth and resilience.

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

Far in advance of both the submission of the pre-Draft Plan to the Elected Members for approval, the placing of the Draft Plan on public display and the adoption of the Plan, Tipperary County Council carried out research and data analysis, including the preparation of a Strategic Issues Paper and Background papers in order to inform the preparation of the Plan. This was supported by a period pre-draft public and stakeholder consultation held from September to November 2020. During this time 190 submissions were received, and summarised and considered in a report by the Chief Executive.

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

management and sustainable development within the County.

Strategic work undertaken by the Council includes background work in relation to Plan Strategies and other provisions for a variety of sectors.

The undertaking of this SEA process and the associated AA and SFRA processes contributed towards the integration of environmental considerations into individual Plan provisions as detailed in Section 9 of this report.

## 2.5 Relationship with other relevant Plans and Programmes

It is acknowledged that many of the major issues affecting the County'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 will, in turn, guide lower-level strategic actions. These documents include plans and programmes such as those detailed in Appendix I<sup>2</sup> (see also, Section 4 "Environmental Baseline", Section 5 "Strategic Environmental Objectives", Section 6 "Description of Alternatives" and Section 9 "Mitigation Measures"). 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 (RSEs) and lower tier Development Plans and Local Area Plans. The RSE for the Southern Region sets out objectives for land use planning, tourism, infrastructure, sustainable development, environmental protection and environmental management that have been

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<sup>2</sup> Appendix I is not intended to be a full and comprehensive review of EU Directives, the transposing regulations or the regulatory framework for environmental protection and management. The information is not exhaustive and it is recommended to consult the Directive, Regulation, Plan or Programme to become familiar with the full details of each.

subject to environmental assessment and must be implemented through the Plan.

As required by the Planning and Development Act 2000, as amended, the Plan is consistent with and conforms with national and regional policies, plans and programmes, including the NPF and the RSES for the Southern Region. The Plan will, in turn, guide lower-level strategic actions, such as Local Area Plans that will be subject to their own lower-tier environmental assessments.

In order to be realised, projects included in the 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 AA, EIA and other licencing requirements as appropriate) that form the statutory decision-making and consent-granting framework.

## Section 3 SEA Methodology

### 3.1 Introduction to the Iterative Approach

Figure 3.1 provides an overview of the integrated Plan preparation, SEA, AA and SFRA processes.

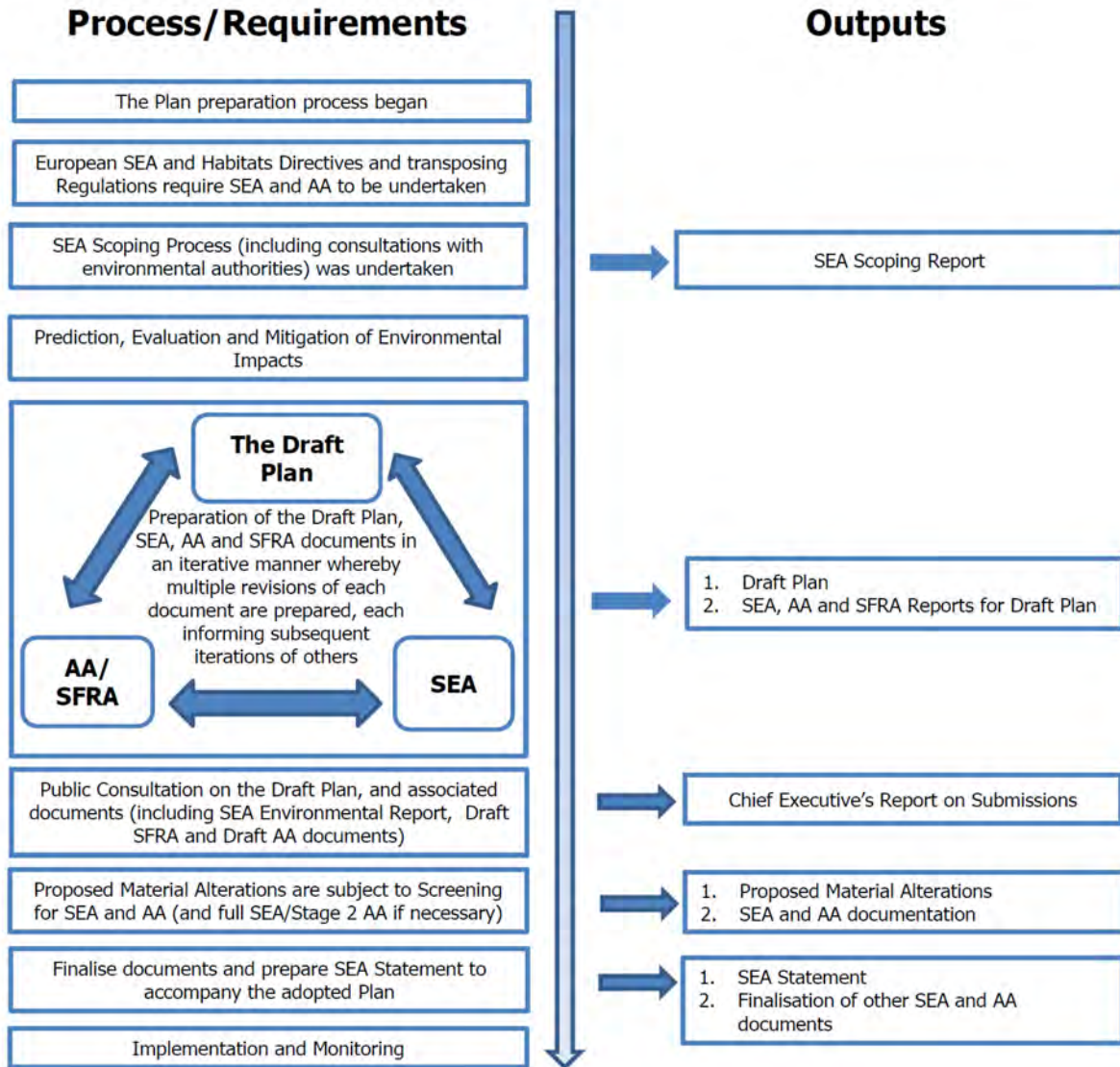


Figure 3.1 Overview of the SEA/AA/SFRA Plan-preparation Processes

## 3.2 Appropriate Assessment and Integrated Biodiversity Impact Assessment

### 3.2.1 Appropriate Assessment

Appropriate Assessment (AA) Screening and Stage 2 AA were undertaken alongside the Plan. The requirement for AA is provided under the EU Habitats Directive (Directive 1992/43/EEC).

The conclusion of the AA is that the Plan will not affect the integrity of the European Sites, alone or in combination with other plans or projects.<sup>3</sup>

The preparation of the Plan, SEA and AA has taken place concurrently and the findings of the AA have informed the SEA.

### 3.2.2 Integrated Biodiversity Impact Assessment

Many elements of Integrated Biodiversity Impact Assessment as detailed in the EPA's (2013) Practitioner's Manual have been aligned with in the undertaking of the SEA for the Plan. These include:

#### Scoping

- Biodiversity-relevant issues were identified for consideration at scoping stage and these are now detailed in Section 4.
- Reference to a zone of influence is provided at Section 4.

#### Baseline

- Biodiversity data sources relevant for this local level assessment have been identified and datasets collated/gathered.
- The biodiversity baseline addresses designated sites and other habitats and species of ecological value.
- AA information has been incorporated into the SEA baseline.

#### Alternatives

- Impacts upon biodiversity are considered under each of the alternatives and potential conflicts can be mitigated.

#### Impact assessment

- Effects on biodiversity are identified and assessed and the AA considers the interrelationship between biodiversity and potential effects on European Sites.

#### Mitigation and monitoring

- Considering all measures contained within the Plan, all the proposed mitigation measures deriving from the various processes were generally consistent and compatible.
- Indicators and associated targets have been included in SEA for monitoring European Sites.

#### Reporting

- This SEA ER addresses all biodiversity-related considerations relevant for this level of assessment.
- This SEA ER contains all biodiversity-relevant information, data, figures and maps relevant for this level of assessment.
- This SEA ER has been informed by the AA findings.

#### Communication and consultation

- Submissions received have been taken on board.
- The preparation of the Plan, SEA and AA have taken place concurrently and the findings of the AA have informed the SEA.

## 3.3 Strategic Flood Risk Assessment

A Strategic Flood Risk Assessment (SFRA) has been undertaken alongside the Plan. The requirement for SFRA is 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. Recommendations from the SFRA have been integrated into the Plan.

## 3.4 Scoping

The scope of environmental issues to be dealt with by the SEA of the Plan together with the level of detail to which they are addressed was broadly decided upon considering the collection of environmental baseline data and input from environmental authorities. Scoping allowed the SEA to become focused upon key issues relevant to the environmental components that are specified under the SEA Directive<sup>4</sup>.

<sup>3</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.

<sup>4</sup> These components comprise biodiversity, fauna, flora, population, human health, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.



All relevant environmental authorities identified under the SEA Regulations as amended, were sent SEA scoping notices by the Council indicating that submissions or observations in relation to the scope and level of detail of the information to be included in the environmental report could be made to the Council<sup>5</sup>.

Three submissions were received in response to the SEA Scoping Notices and Draft SEA Scoping Report from the following environmental authorities:

- Environmental Protection Agency; and
- Department of the Environment, Climate and Communications (one from the Waste Policy and resource Efficiency Division and one from Geological Survey of Ireland).

In addition to the responses from these two environmental authorities made under the SEA scoping process, another designated environmental authority (the Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media) made a response as part of the pre-Draft Public Consultation on the Plan process.

All of the above submissions influenced the scope of the assessment undertaken, the findings of which are included in this report.

### 3.5 Alternatives

The SEA Directive requires that reasonable alternatives (considering the objectives and the geographical scope of the plan or programme) are identified, described and evaluated for their likely significant effects on the environment. In accordance with this requirement, alternatives for the Plan are identified and assessed in Sections 6 and 7.

### 3.6 Informing the Plan-preparation process

All parts of the Plan-preparation process were informed by the SEA, AA and SFRA processes - this includes the preparation of the Chief Executive's Draft Plan, Members' Amendments to that Plan in advance of public display, Proposed Material Alterations and Further

Modifications. The mitigation integrated into the final, adopted Plan includes that identified in Section 9 of this report. There were no Material Alterations to the Draft Plan, modified or otherwise, that were advised against by the SEA and adopted as part of the final Plan.

### 3.7 Environmental Report

This SEA Environmental Report predicts and evaluates the likely significant effects of the Plan and the alternatives.

The Environmental Report provides Tipperary County Council, stakeholders and the public with a clear understanding of the likely environmental consequences of implementing the Plan.

Mitigation measures to prevent or reduce significant adverse effects posed by the Plan are identified in Section 9 – these have been integrated into the Plan.

An earlier version of this report was report was updated in order to take account of relevant recommendations contained in submissions and in order to take account of changes that were made to the original, Draft Plan that was placed on public display.

The Environmental Report is required to contain the information specified in Schedule 2B of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. No. 436 of 2004), as amended (see Table 3.1).

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

There is a data gap relating to WFD surface water status data. There are a number of waterbodies within the Plan area with overall status currently not assigned to them and the term "unassigned status" applies in respect of these waterbodies. The SEA ensured that the Plan contains measures that will contribute towards the maintenance and improvement of status of all water bodies within the zone of influence.

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<sup>5</sup> The following authorities were notified: Environmental Protection Agency; Department of Environment, Climate and Communications; Department of Agriculture, Food and the Marine; Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media; Department of

Housing, Local Government and Heritage; Galway County Council; Clare County Council; Limerick City and County Council; Cork County Council; Waterford County Council; Kilkenny County Council; Laois County Council; and Offaly County Council.

### **3.8 SEA Statement**

On finalisation of the Plan, an SEA Statement is prepared that includes information on:

- How environmental considerations have been integrated into the Plan, highlighting the main changes to the Draft Plan that resulted from the SEA process;
- How the SEA Environmental Report and consultations have been taken into account, summarising the key issues raised in consultations and in the Environmental Report indicating what action was taken in response;
- The reasons for choosing the Plan in the light of the other alternatives, identifying the other alternatives considered, commenting on their potential effects and explaining why the Plan as adopted was selected; and
- The measures decided upon to monitor the significant environmental effects of implementing of the Plan.

**Table 3.1 Checklist of Information included in this Environmental Report**

<b>Information Required to be included in the Environmental Report</b>	<b>Corresponding Section of this Report</b>
(A) Outline of the contents and main objectives of the plan or programme, and of its relationship with other relevant plans and programmes	Sections 2, 5 and 8
(B) Description of relevant aspects of the current state of the environment and the evolution of that environment without implementation of the plan or programme	Section 4 and Appendix II
(C) Description of the environmental characteristics of areas likely to be significantly affected	Sections 4, 7 and 8
(D) Identification of any existing environmental problems which are relevant to the plan or programme, particularly those relating to European protected sites	Section 4
(E) List of environmental protection objectives, established at international, EU or National level, which are relevant to the plan or programme and describe how those objectives and any environmental considerations have been taken into account when preparing the Plan	Sections 5, 7, 8, 9 and Appendix I
(F) Describe the likely significant effects on the environment	Sections 7 and 8
(G) Describe any measures envisaged to prevent, reduce and as fully as possible offset any significant adverse environmental effects of implementing the plan or programme	Section 9
(H) Give an outline of the reasons for selecting the alternatives considered, and a description of how the assessment was undertaken (including any difficulties)	Sections 3, 6, 7 and 8
(I) A description of proposed monitoring measures	Section 10
(J) A non-technical summary of the above information	Appendix III Non-Technical Summary
(K) Interrelationships between each environmental topic	Addressed as it arises within each Section

## Section 4 Environmental Baseline

### 4.1 Introduction

Reflecting the specifications in the SEA Directive, the relevant aspects of the current state of the environment for the following environmental components are described in this section: biodiversity and flora and fauna, population and human health, soil, water, air and climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.

This description includes information that is relevant to lower tier planning, environmental assessments and decision-making<sup>6</sup>.

Given the potential for impacts beyond the County boundary, the spatial scope of the SEA considers the zone of influence (15km or greater where relevant) of the Plan.

### 4.2 National Reporting on the Environment

The EPA's *"Ireland's Environment – An Assessment 2020"* report provides an integrated assessment of the overall quality of Ireland's environment, the pressures being placed on it and the societal responses to current and emerging environmental issues. This report has informed various parts of the environmental baseline provided below. The key environmental challenges or messages identified by the report are:

#### Environmental Policy Position

A national policy position for Ireland's Environment.

#### Full implementation

Full implementation of existing environmental legislation and a review of the governance around the coordination on environmental protection across public bodies.

#### Health and Wellbeing

Protecting the Environment is an Investment in Our Health and Wellbeing.

#### Climate

Systemic change is required for Ireland to become the climate-neutral and climate resilient society and economy that it aspires to be.

#### Air Quality

Adoption of measures to meet the World Health Organization air quality guideline values should be the target to aim for in the Clean Air Strategy.

#### Nature

Safeguard nature and wild places as a national priority and to leave a legacy for future generations.

#### Water Quality

Improve the water environment and tackle water pollution locally at a water catchment level.

#### Marine

Reduce the human-induced pressures on the marine environment.

#### Clean Energy

Ireland needs to move rapidly away from the extensive use of fossil fuels to the use of clean energy systems.

#### Environmentally Sustainable Agriculture

An agriculture and food sector that demonstrates validated performance around producing food with a low environmental footprint.

#### Water Services

Drinking water and wastewater infrastructure must meet the needs of our society.

#### Circular Economy

Move to a less wasteful and circular economy where the priority is waste prevention, reuse, repair and recycling.

#### Land Use

Promote integrated land-mapping approaches to support decision-making on sustainable land use.

The report highlights that high-quality green and blue spaces are not just for nature but are for peoples' health and wellbeing, particularly in the context of an increasingly urban society and increasing settlement densities.

<sup>6</sup> Article 5 of the SEA Directive, in accordance with the established European principle of subsidiarity, requires that the Environmental Report includes the information that may reasonably be required

taking into account, inter alia, the extent to which certain matters are more appropriately assessed at different levels in that process in order to avoid duplication of the assessment.

### 4.3 Sustainable Development Goals

Implementation of the Plan will contribute towards efforts to achieve a number of the 17 Sustainable Development Goals of the 2030 Agenda for Sustainable Development, which were adopted by world leaders in 2015 at a United Nations Summit and came into force in 2016. These Goals include:

- Goal 3. Ensure healthy lives and promote well-being for all at all ages.
- Goal 6. Ensure availability and sustainable management of water and sanitation for all.
- Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all.
- Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.
- Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.
- Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable.
- Goal 12. Ensure sustainable consumption and production patterns.
- Goal 13. Take urgent action to combat climate change and its impacts.
- Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

### 4.4 Likely Evolution of the Environment in the Absence of a new Plan

In the absence of a new Plan, there would be no framework for planning applications and no regulation of development across the County.

The existing Development Plans have contributed towards environmental protection within County Tipperary. If the existing Development Plans were to expire and not be replaced by a new Plan, this would result in a deterioration of the County's planning and environmental protection framework. Although higher level environmental protection objectives – such as those of various EU Directives and transposing Irish Regulations – would still apply, the deterioration of this framework would mean that new development would be less coordinated and controlled.

As a result, there would be a decreased likelihood in the extent, magnitude and

frequency of positive effects occurring, including:

- Contribution towards protection of ecology (including designated sites, ecological connectivity, habitats) by facilitating development of lands (including those within and adjacent to the County's settlements) 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.
- Contribution towards the maintenance of existing green infrastructure and associated ecosystem services, listed species, ecological connectivity and non-designated habitats.
- Contribution towards protection and/or maintenance of biodiversity and flora and fauna by contributing towards the protection of natural capital including the environmental vectors of air, water and soil. Biodiversity and flora and fauna includes biodiversity in designated sites (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.
- 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.
- Promotion of economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management.
- Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands (including those within and adjacent to the County's settlements) 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.
- Contribution towards the protection of human health by facilitating development of lands (including those within and adjacent to the County's settlements) 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.
- Contributes towards protection of human health as a result of contributing towards the protection of natural capital including environmental vectors, including air and water.
- 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 County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more

- sensitive, less well-serviced lands elsewhere in the County and beyond.
- 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.
  - Contribution towards the protection of water by facilitating development of lands (including those within and adjacent to the County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond.
  - Contributions towards the protection of water resources including the status of surface and groundwaters and water-based designations.
  - Contribution towards flood risk management and appropriate drainage.
  - 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 County's settlements) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the County and beyond.
  - Contribution towards compliance with national and regional water services and waste management policies.
  - Contribution towards increase in renewable energy use by facilitating renewable energy and electricity transmission infrastructure developments.
  - Contribution towards limits in increases in energy demand from the transport sector by facilitating sustainable compact growth.
  - Contribution towards reductions in average energy consumption per capita including promoting sustainable compact growth, sustainable mobility, sustainable design and energy efficiency.
  - Contribution towards climate mitigation and adaptation by facilitating compact development of lands (including those within and adjacent to the County's settlements) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the County and beyond.
  - In combination with other plans, programmes etc., contribution towards the objectives of the wide policy framework relating to climate mitigation and adaptation, and associated contribution towards maintaining and improving air quality and managing noise levels, including through measures relating to:
    - Sustainable compact growth;
    - Sustainable mobility, including walking, cycling and public transport;
    - Drainage, flood risk management and resilience;
    - Renewable energy; and
    - Sustainable design, energy efficiency and green and blue infrastructure.
  - Contributes towards protection of cultural heritage elsewhere in the County by facilitating development within existing settlements.
  - Contributes towards protection of cultural heritage within existing settlements by facilitating brownfield development and regeneration.
  - Contributes towards protection of wider landscape and landscape designations by facilitating development within existing settlements.
- As a result, there would be an increased likelihood in the extent, magnitude and frequency of adverse effects on all environmental components occurring, including:
- Arising from both construction and operation of development and associated infrastructure:
    - 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;
    - Habitat loss, fragmentation and deterioration, including patch size and edge effects; and
    - Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species such as birds and bats.
  - Potential interactions if effects arising from environmental vectors.
  - Potential adverse effects on the hydrogeological and ecological function of the soil resource, including as a result of development on contaminated lands.
  - Potential for riverbank erosion.
  - Potential adverse effects upon the status of water bodies and entries to the WFD Register of Protected Areas (ecological and human value), arising from changes in quality, flow and/or morphology.
  - Increase in flood risk and associated effects associated with flood events.
  - Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity ensures the mitigation of potential conflicts).
  - Failure to adequately treat surface water run-off that is discharged to water bodies (water services infrastructure and capacity ensures the mitigation of potential conflicts).
  - Failure to comply with drinking water regulations and serve new development with adequate drinking water (water services infrastructure and capacity ensures the mitigation of potential conflicts).
  - Increases in waste levels.
  - Potential impacts upon public assets and infrastructure.
  - 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.
  - Potential conflict between development under the Plan and aiming to reduce carbon emissions in line with local, national and European environmental objectives.
  - Potential conflicts between transport emissions, including those from cars, and air quality.

- Potential conflicts between increased frequency of noise emissions and protection of sensitive receptors.
- Potential conflicts with climate adaptation measures including those relating to flood risk management.
- Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities.
- Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape.

## 4.5 Natural Capital and Ecosystem Services

County Tipperary's **natural capital** comprises its renewable and non-renewable resources (e.g. plants, animals, air, water, soils, minerals) that combine to yield a flow of ecosystem services that provide benefits to people. These benefits can include clean air and water, a stable climate, protection from floods, food, resources for fuel, building materials, clothes and medicines, recreation. Managing natural capital so that it can continue to deliver the ecosystem services that give us these benefits is important in order to ensure sustainable development. Unmanaged natural capital risks the continued degradation and depletion of these assets, and in turn, of their capacity to provide the economy and society with the ecosystem benefits that they depend on. These services also regulate climate, regulate water flows (e.g. through wetlands and forests), sequester and store carbon in peatlands and improve soil quality for crops.

Ecosystems are multifunctional communities of living organisms interacting with each other and their environment. Ecosystems provide a series of services for human well-being (ecosystem services) either directly or indirectly contributing towards human wellbeing. There are four main types; provisioning, regulating, supporting and cultural services. Provisioning services are the products obtained from ecosystems such as food, fresh water, wood, fibre, genetic resources and medicines. Regulating services are defined as the benefits obtained from the regulation of ecosystem processes such as climate regulation, natural hazard regulation, water purification and waste management, pollination or pest control. Support services highlight the importance of ecosystems to provide habitat for migratory species and to maintain the viability of gene-

ools. Cultural services include non-material benefits that people obtain from ecosystems such as spiritual enrichment, intellectual development, recreation and aesthetic values<sup>7</sup>.

In preparing the Plan and developing policy objectives, the Council have followed these ecosystem services approach principles:

- a) Consideration of natural systems - by using knowledge of interactions in nature and how ecosystems function (including at Plan Chapter 9 "Landscape and Green Infrastructure" and Chapter 11 "Environment and Natural Heritage");
- b) Taking into account of the services that ecosystems provide - including those that underpin social and economic well-being, such as flood and climate regulation (including at Plan Chapter 7 "Climate Action and Energy"), resources for food, fibre or fuel (including at Plan Chapter 14 "Rural Development"), or for recreation, culture and quality of life (including at Plan Chapters 8 "Community Development" and 11 "Tourism and Recreation");
- c) Involving people - those who benefit from the ecosystem services and those managing them need to be involved in decisions that affect them. Public consultation has informed the preparation of the Plan which was further refined before adoption, taking into account submissions/observations made on the Plan during public display.

The Plan recognises that (Chapter 11): "Tipperary has a rich and diverse natural environment, and landscape with mountain ranges, uplands and valleys, forestry, rivers, lakes, and peatlands. These living and non-living natural assets benefit society and the economy, with outcomes including food, fibre and fuel provision, and cultural services such as recreation and appreciation of nature. Other services are not so well known, however are of great importance. These include the regulation of the climate, purification of air and water, flood protection, soil formation and nutrient cycling." Various natural capital and ecosystem services have been taken into account in the provisions of the Plan.

## 4.6 Biodiversity and Flora and Fauna

### 4.6.1 Introduction

Information on biodiversity and flora and fauna that is relevant to project planning and development and associated environmental assessment and administrative consent of

<sup>7</sup> <https://biodiversity.europa.eu/topics/ecosystem-services>

projects includes that on designated ecological sites and protected species, ecological connectivity (including stepping stones and corridors) and non-designated habitats.

#### 4.6.2 Overview of High Value Biodiversity and Designations

The most ecologically sensitive and heavily designated and protected areas within County Tipperary include wetland and upland areas. These areas contain many rare and threatened habitats and species of national and international importance, including those protected under the national and European legislation.

Ecological sensitivities within and surrounding the County include: peatlands; uplands; lakes; ponds; marshes; swamps; rivers; streams; canals; woodlands; wetlands; grasslands; eskers; turloughs; and hedgerows. These habitats support a variety of species and ecosystems that contribute to the biodiversity of the County. Dispersed areas of marginal agricultural lands that may include ecological sensitivities occur throughout the County's lowlands and foothills.

A network of green spaces, including gardens, parks, graveyards, amenity walks, railway lines and patches of woodland and scrub, provide habitats and ecological connectivity within the County and beyond.

#### Ecological designations in County Tipperary include:

- Special Protection Areas<sup>8</sup>;
- Special Areas of Conservation<sup>9</sup>;
- Natural Heritage Areas<sup>10</sup>
- Proposed Natural Heritage Areas<sup>11</sup>;
- Nature Reserves<sup>12</sup>;
- Certain entries to the Water Framework Directive Register of Protected Areas<sup>13</sup>;
- Freshwater Pearl Mussel catchments<sup>14</sup>
- Salmonid Rivers identified by Regulations (S.I. 293 only)<sup>15</sup>;
- Wildfowl Sanctuaries<sup>16</sup>; and
- Flora Protection Order sites<sup>17</sup>.

The zone of influence of the Plan beyond the County area with respect to impacts upon ecology via surface waters – including designated ecology – can be estimated to be areas within 15 km of the County boundary and all downstream areas of catchments which drain the County.

#### 4.6.3 European Sites

European sites in the County occur in the greatest concentrations along the waterways, wetlands and in upland areas. European sites comprise:

- Special Areas of Conservation<sup>18</sup> (SACs); and
- Special Protection Areas<sup>19</sup> (SPAs).

The SEA uses the same general zone of influence cited in the AA, a 15 km buffer around the County. There are 64 European sites (51 SACs and 13 SPAs) designated within this zone (mapped on Figure 4.1) out of which 27 European sites (23 SACs and 4 SPAs) are designated within or partially within the County.

<sup>8</sup> For more detail refer to Section 4.6.3.

<sup>9</sup> For more detail refer to Section 4.6.3.

<sup>10</sup> For more detail refer to Section 4.6.4.

<sup>11</sup> For more detail refer to Section 4.6.4.

<sup>12</sup> For more details refer to Section 4.6.9.

<sup>13</sup> For more detail refer to Sections 4.6.6 and 4.9.7.

<sup>14</sup> For more details refer to 4.6.9.

<sup>15</sup> For more detail refer to Section 4.6.7.

<sup>16</sup> Areas that have been excluded from the 'Open Season Order' so that game birds can rest and feed undisturbed.

**There is one Wildfowl Sanctuary within or partially within the County: Marfield Lake (WFS-64).**

<sup>17</sup> The Flora (Protection) Order, 2015 (S.I. No. 356 of 2015) gives legal protection to 65 species of bryophytes in the Republic of Ireland (25 liverworts and 40 mosses). **There are five locations within the County with a number of species protected by the Order, including Coomasaharn, Coumanare Lakes, Mount Eagle, Stradbally Mountain and Mullaghanattin.** For more details refer to: <https://dahg.maps.arcgis.com/>.

<sup>18</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 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>19</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.



Other European sites shown on Figure 4.2 include sites connected to the County via hydrological links but beyond the 15 km buffer.

All European sites and their sensitive features are listed in the Appendix II of this report. For more detail on European sites please refer to the AA Natura Impact Report that accompanies the Plan and this SEA Environmental Report.

#### 4.6.4 Natural Heritage Sites and Proposed Natural Heritage Areas

Proposed NHAs (pNHAs) were published on a non-statutory basis in 1995, but have not since been statutorily proposed or designated. Natural Heritage Areas (NHAs) are designated due to their national conservation value for ecological and/or geological/geomorphological heritage. They cover nationally important semi-natural and natural habitats, landforms or geomorphological features, wildlife plant and animal species or a diversity of these natural attributes. NHAs are designated under the Wildlife (Amendment) Act 2000.

There are 12 NHAs and 63 pNHAs designated within or partially within the County. These sites are mapped<sup>20</sup> on Figure 4.3 and listed in Appendix II of this report.

#### 4.6.5 Land Cover Mapping

CORINE<sup>21</sup> land cover mapping for the County is shown on Figure 4.4. The most dominant land cover types are pastures and agricultural lands (occurring throughout the County).

Categories from CORINE mapping that may indicate areas with the potential for Annex I habitats (see Figure 4.7), include:

- Non-irrigated arable land;
- Fruit trees and berry plantations;
- Pastures;
- Annual crops associated with permanent crops;
- Land principally occupied by agriculture with significant areas of natural vegetation;

- Broad-leaved forest;
- Coniferous forest;
- Mixed forest;
- Natural grassland;
- Moors and heathland;
- Transitional woodland-shrub;
- Sparsely vegetated areas;
- Inland marshes;
- Peat bogs;
- Water courses; and
- Water bodies.

#### 4.6.6 Register of Protected Areas

In response to the requirements of the Water Framework Directive a number of water bodies or parts of water bodies that must have extra controls on their quality by virtue of how their waters are used by people and by wildlife have been listed on Registers of Protected Areas (RPAs). Entries to the RPAs within and adjacent to the County designated by virtue of their value to biodiversity are addressed in this section while RPAs designated by virtue of their value to humans are addressed under Section 4.9.7.

Water bodies designated by virtue of their value to biodiversity (mapped on Figure 4.5) include the Rivers Aherlow and Nore, which are surface waters listed on the European Communities (Quality of Salmonid) Regulations 1988 (S.I. 293) and intersecting surface and groundwaters.

There are also a number of water dependent habitats in the County that have been listed on RPAs relating to biodiversity but which are not mapped on Figure 4.5 – these relate to designated SACs and SPAs (see Section 4.6.3).

#### 4.6.7 Salmonid Waters

The Salmonid Regulations (S.I. 293/1988) designate the waters capable of supporting salmon (*Salmo salar*), trout (*Salmo trutta*), char (*Salvelinus*) and whitefish (*Coregonus*) as protected. 34 (no.) rivers, tributaries and lakes are listed and protected under these Regulations that prescribe quality standards for

<sup>20</sup> The closest sites in neighboring counties are also shown on Figure 4.3.

<sup>21</sup> The CORINE (Coordinated Information on the Environment) land cover data series was devised as a means of compiling geo-spatial environmental information in a standardised and comparable manner. CORINE has become a key data source for informing environmental and planning policy on a national and European level. The main

land cover type in Ireland is agricultural land including forestry, which accounts for two-thirds of the national landmass. Most of this is permanent grassland pastures. Peatlands and wetlands are the second most widespread land cover type, covering almost one-fifth of the country. While forested areas cover about one-tenth of the country. Despite rapid development in the past two decades, Ireland's landscape is predominantly rural and agricultural.

salmonid waters, the sampling programmes and the methods of analysis and inspection to be used by local authorities to determine compliance with the standards. Sections of the River Nore and River Aherlow are listed under the Regulations.

#### 4.6.8 Margaritifera Sensitive Areas

Freshwater pearl mussel is a globally threatened, long-lived and extremely sensitive species that can be impacted by many forms of pollution, particularly sediment and nutrient pollution and by hydrological and morphological changes, which may arise from developments, activities or changes in any part of the catchment. There are two species of freshwater pearl mussel in Ireland (*Margaritifera* and *Margaritifera durrovensis*) and both are protected under Annex II and Annex V of the EU Habitats Directive. In County Tipperary, the Margaritifera Sensitive Areas are found within the following river catchments (mapped on Figure 4.6):

- Nore Upper (catchments of SAC populations listed in S.I. 296 of 2009);
- Suir (previous record *Margaritifera*, current status unknown);
- Nore Lower (previous record *Margaritifera*, current status unknown);
- Suir - Clodiagh Tipperary (catchments of other extant populations);
- Munster Blackwater (catchments of SAC populations listed in S.I. 296 of 2009);
- Suir - Multeen (catchments of other extant populations);
- Suir - Aherlow (catchments of other extant populations);
- Suir - Thonoge (catchments of other extant populations); and
- Suir - Tar (catchments of other extant populations).

Twenty-seven Management Plans for the Freshwater Pearl Mussel have been published, the objective of which is to restore the freshwater pearl mussel populations in 27 rivers, or stretches of rivers that are within the boundaries of Special Areas of Conservation.

#### 4.6.9 Other Designations

Other designations within County Tipperary (mapped on Figure 4.7) include Nature Reserves.

Nature Reserves are areas of importance to wildlife, protected under Ministerial order. There are currently 78 Statutory Nature Reserves in Ireland. Most are owned by the State but some are owned by organisations or private landowners. There is one State owned Nature Reserve located within the County (mapped on Figure 4.7) Redwood Bog Nature Reserve (in the north of the County).

Nature Reserves closest to County Tipperary in neighbouring counties (also mapped on Figure 4.7) include: Kyledohir Wood (on the border of Counties Tipperary and Kilkenny); Ballykeeffe Wood and Garryricken Woods (within west parts of County Kilkenny); Derrycrag Wood, Rosturra Wood and Pollnacknockaun Wood (within County Galway); and Coolacurragh Wood and Grantsown Wood/Granston Lough (within County Laois).

There are no Ramsar Sites<sup>22</sup> designated within County Tipperary. Ramsar Sites closest to County Tipperary (mapped on Figure 4.7) include the Slieve Bloom Mountains Ramsar Site (no. 335), located approx. 10 km to the north of County Tipperary, within Counties Laois and Offaly.

#### 4.6.10 Other Sites of Ecological Importance

Within and surrounding the County, ecological networks are made up of components including lakes, wetlands, woodlands, trees and hedgerows. These components provide habitats for flora and fauna and facilitate linkages to the surrounding countryside for flora and fauna.

Hedgerows are valuable resource in the countryside, benefiting agriculture, wildlife, the environment, tourism, and the general

<sup>22</sup> Ramsar sites are wetlands designated to be of international importance under the Convention of Wetlands of International Importance (especially as Water Fowl Habitat), established at Ramsar in 1971 and ratified by Ireland in 1984. The main aim of the Convention is to secure the designation by each contracting state of wetlands in its territory for inclusion in a list of wetlands of international importance for waterfowl. This entails the

commitment of each contracting state to a policy of protection and management of the designated wetlands, and of formulating and implementing planning so as to promote the conservation of designated wetlands and, as far as possible, the wise use of wetlands in its territory. Ireland presently has 45 sites designated as Wetlands of International Importance, with surface areas of 66,994 hectares.

community. The network of hedges across the country provides links between surviving fragments of other wildlife habitats, thereby allowing the movement and dispersal of species through otherwise hostile agricultural landscapes.

Peatlands are unique systems comprising of peat soil providing as significant carbon stores and supporting a range of unique species. Active blanket bogs and active raised bogs are considered to be priority habitats, listed on Annex I of the EU Habitats Directive. Peatlands occurring in County Tipperary include raised bogs, blanket bogs, fens and cutover bogs. Cutover bog is a variable habitat, or complex of habitats, that can include mosaics of bare peat and re-vegetated areas with woodland, scrub, heath, fen and flush or grassland communities. It occurs where part or all of the original peat has been removed through turf cutting, by the traditional hand method or mechanically, for either domestic or commercial purposes. Active blanket bogs and active raised bogs are considered to be priority habitats, listed on Annex I of the EU Habitats Directive.

Important Bird Areas are a BirdLife International initiative aimed at identifying and protecting a network of critical sites for the conservation of the world's birds. BirdWatch Ireland Important Bird Areas (IBAs)<sup>23</sup> within or partially within County Tipperary include: Lough Derg (River Shannon), and River Little Brosna Callows: New Bridge - River Shannon.

Other sites of ecological importance include those used by pollinators. The Heritage Council's "All-Ireland Pollinator Plan" aims to manage roadside verges and green spaces in a way that allows us to maintain safe and accessible roadsides but also support pollinators, and to alter mowing regimes and reduce pesticide use. These areas can be used to create and enhance the ecological networks and wildlife corridors across the County by increasing connectivity and biodiversity. It is anticipated to prepare "Pollinator Action Plan" for County Tipperary over the lifetime of the Plan.

#### 4.6.11 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 include:

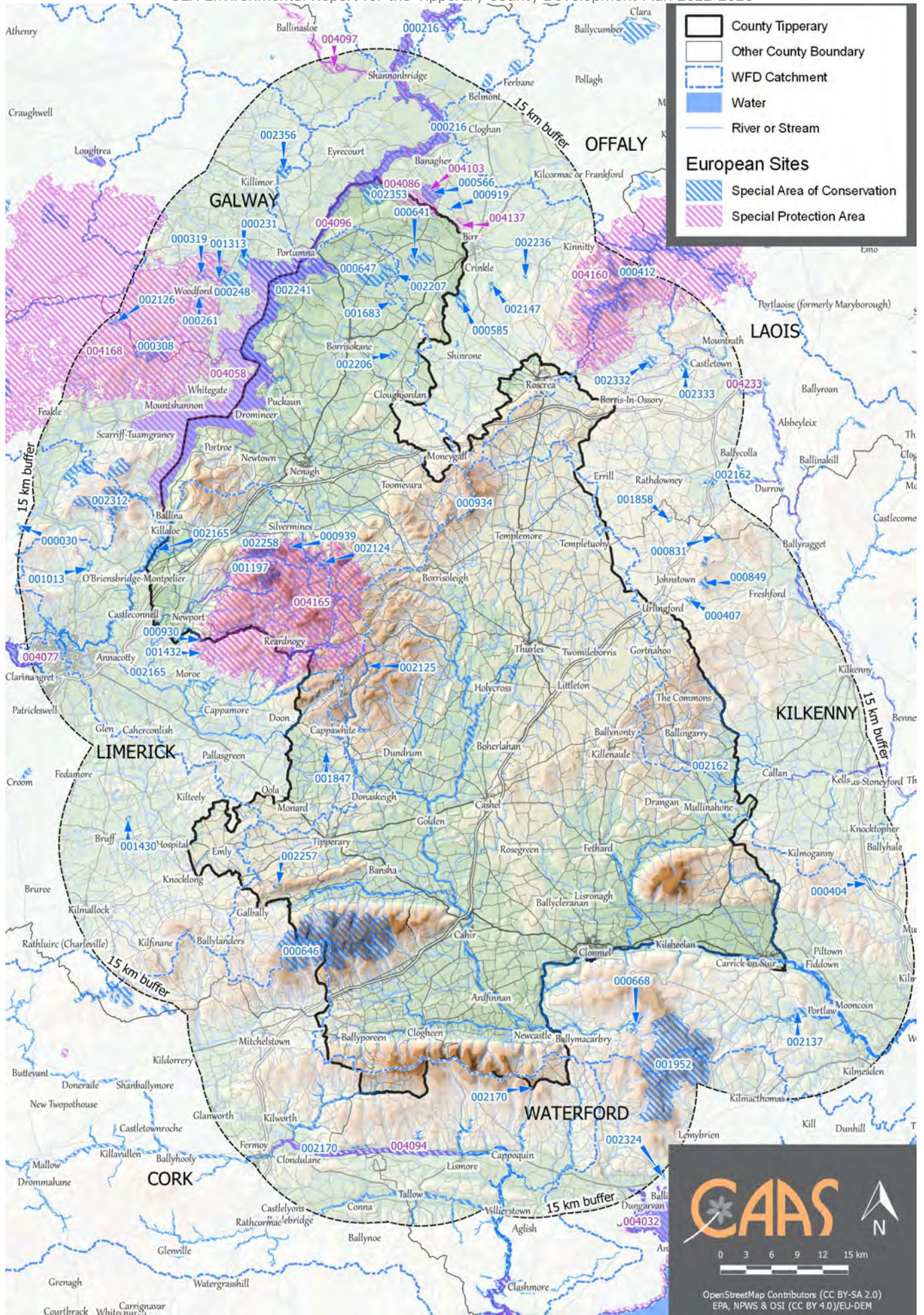
- Agriculture;
- Forestry;
- Extraction of resources (minerals, peat, non-renewable energy resources);
- Energy production processes and related infrastructure development;
- Development and operation of transport systems;
- Development, construction and use of residential, commercial, industrial and 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.

Ireland's Article 12 Birds Directive Reports and the 6<sup>th</sup> National Report under the Convention of Biological Diversity identify similar issues.

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

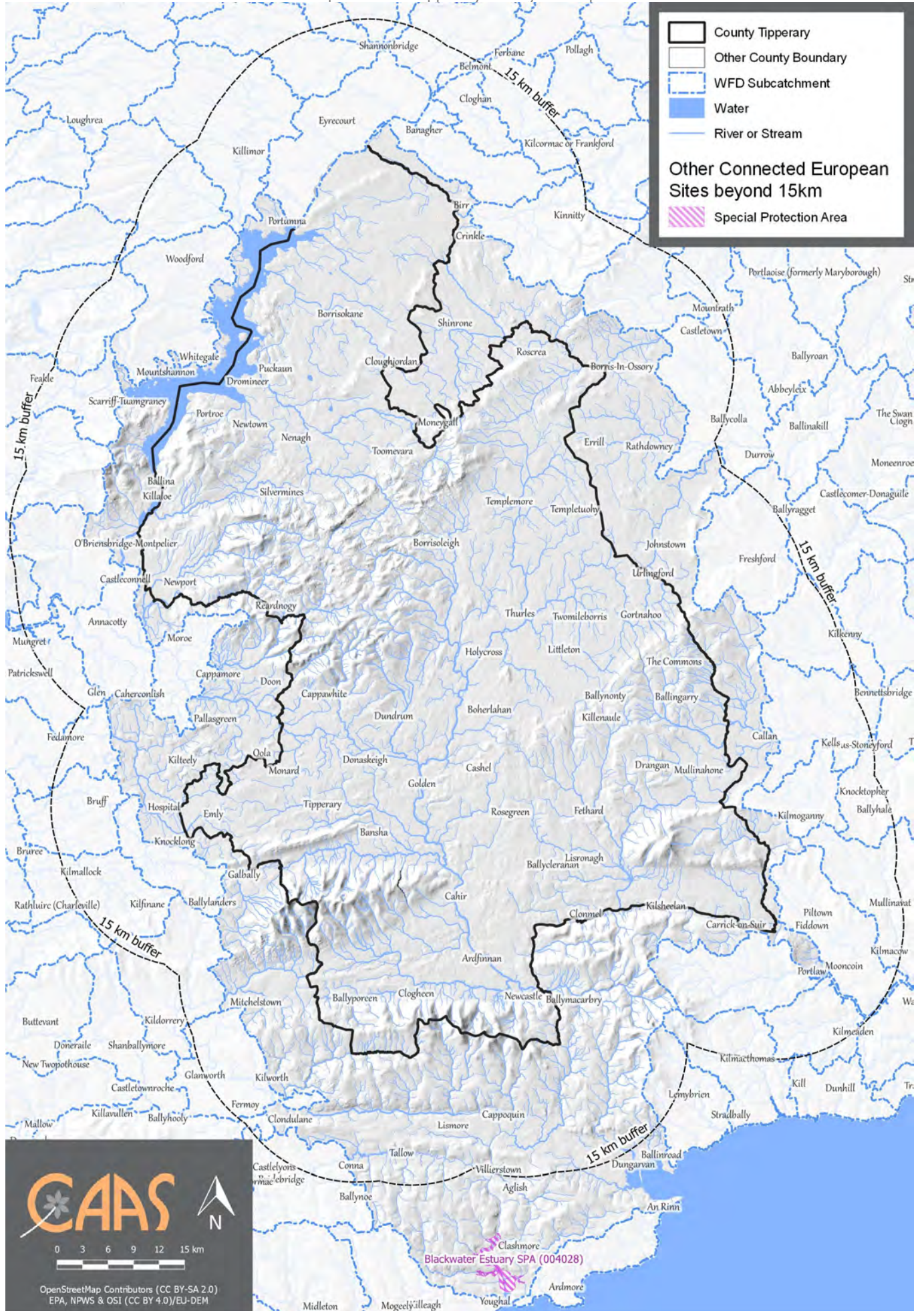
Previous changes in land uses arising from human development have resulted in a loss of biodiversity and flora and fauna however, legislative objectives governing biodiversity and fauna were not identified as being conflicted with.

<sup>23</sup> There are 105 Important Bird Areas in Ireland.



**Figure 4.1 European sites within and within 15 km of the County**

CAAS for Tipperary County Council



**Figure 4.2 Other connected European sites beyond 15 km of the County**

CAAS for Tipperary County Council

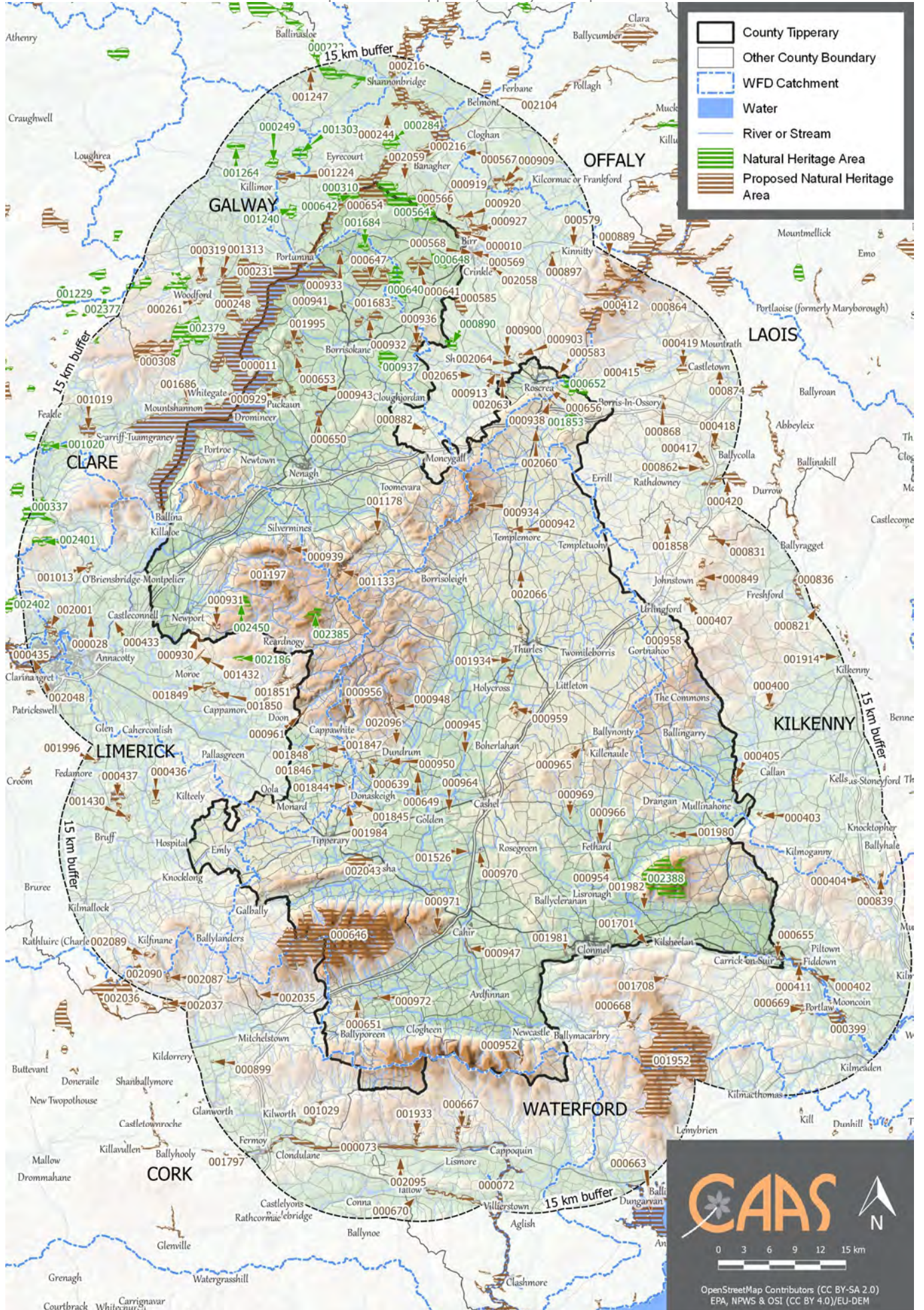
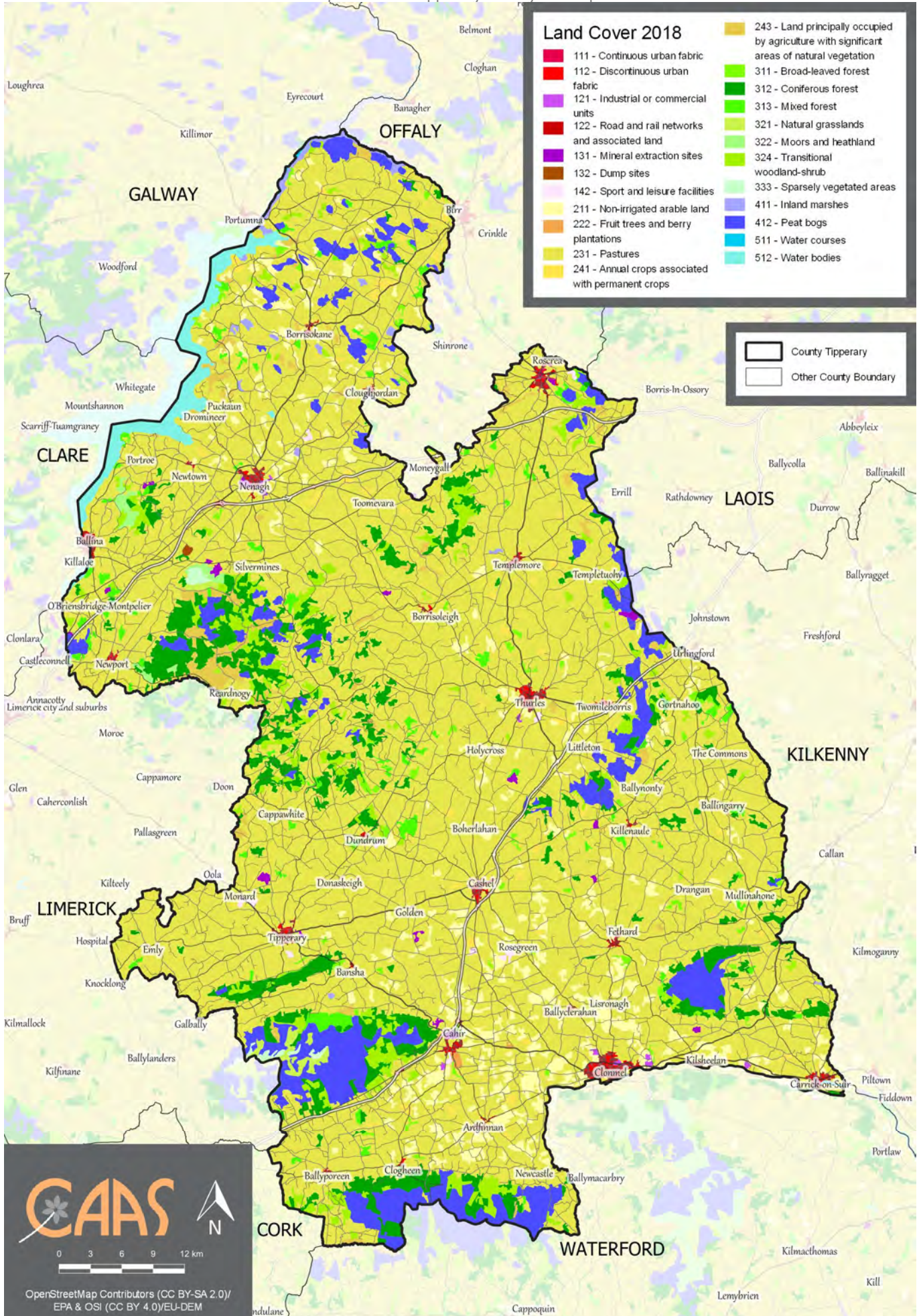


Figure 4.3 NHAs and pNHAs within and within 15 km of the County

CAAS for Tipperary County Council



**CAAS**

0 3 6 9 12 km

OpenStreetMap Contributors (CC BY-SA 2.0)/  
EPA & OSI (CC BY 4.0)/EU-DEM

**Figure 4.4 CORINE Land Cover 2018**

CAAS for Tipperary County Council

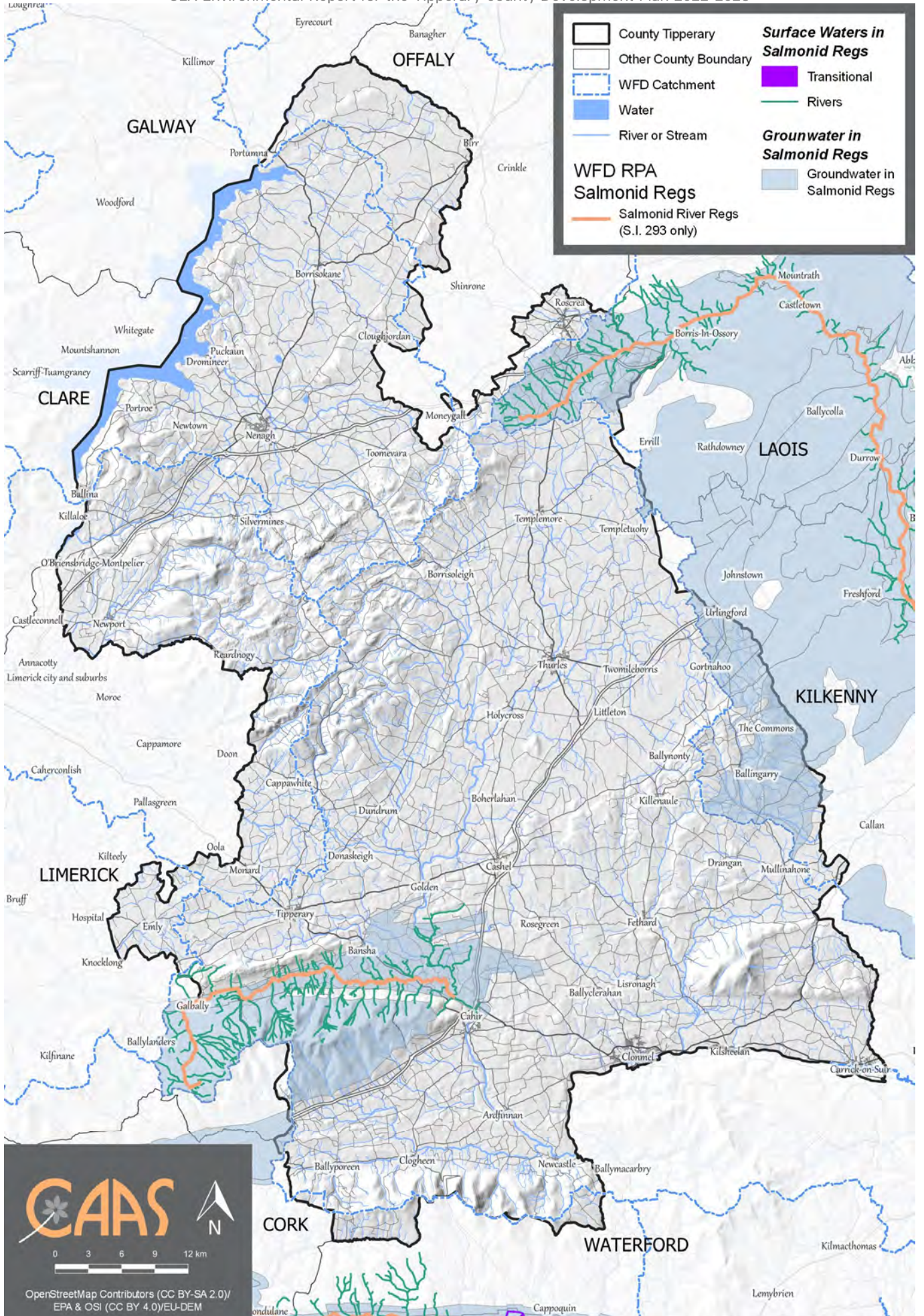
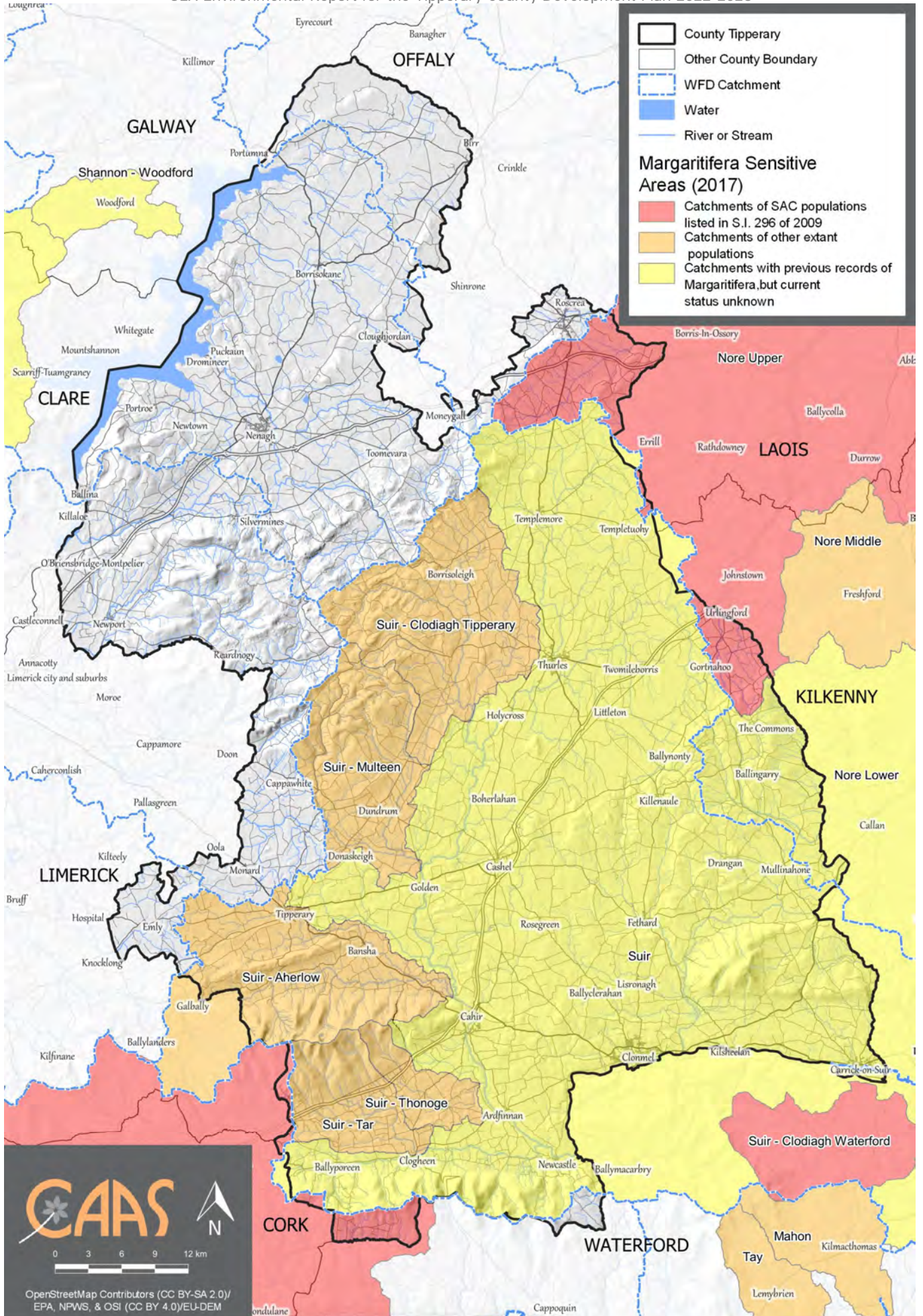


Figure 4.5 WFD Register of Protected Areas Salmonid Waters

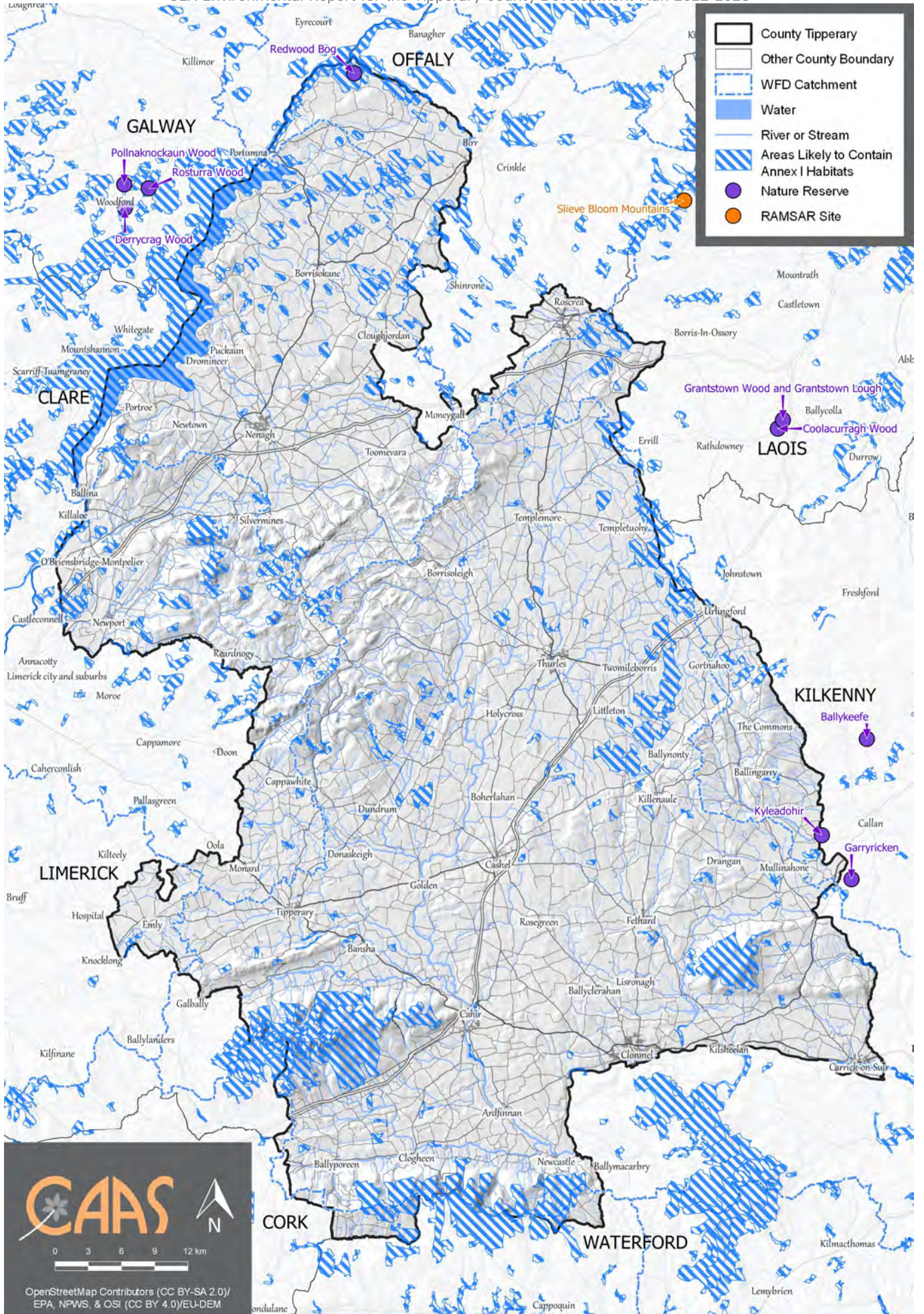
CAAS for Tipperary County Council





**Figure 4.6 Margaritifera Sensitive Areas**

CAAS for Tipperary County Council



**Figure 4.7 Other Ecological Designations**

CAAS for Tipperary County Council

## 4.7 Population and Human Health

### 4.7.1 Population

In the 2016 Census the total population of County Tipperary was identified as being of 159,553 persons, an increase in total population in the County by c. 0.5% (c. 799 persons) since the previous census. Tipperary has a targeted population growth of 24,500 additional persons by 2031<sup>24</sup>.

County Tipperary's Key Towns include: Clonmel, with population of 17,140 persons; Thurles, with population of 7,940 persons; and Nenagh, with population of 8,968 persons.<sup>25</sup> Clonmel is the largest town in the County and an important employment location, while Nenagh and Thurles are strategically located urban centres with accessibility and significant influence in a sub-regional context, as identified by the Southern Regional Spatial and Economic Strategy. Key Towns provide important connections with adjoining regions and have the capacity and future growth potential to accommodate above average growth in tandem with the requisite investment in employment creation, services, amenities and sustainable transport.

The Plan designates a hierarchy of the County's settlements as follows:

- **Key towns** (Clonmel, Nenagh, Thurles);
- **District Towns** (Carrick on Suir, Roscrea, Tipperary Town, Cashel, Cahir, Templemore);
- **Service Centres** (Ballina, Newport, Fethard, Borrisokane, Ardfinnan, Ballyclerihan, Kilsheelan, Holycross, Borrisoleigh, Killenaule, Cloughjordan, Mullinahone, Clogheen, Portroe, Two-Mile-Borris, Littleton, Limerick Junction, Newcastle, Cappawhite, Bansha, Ballyporeen, Silvermines, Newtown, Emly, Templetohy, Boherlahan, Gortnahoo, Toomevarra, Ballingarry (Carrick), Golden, Puckaun, Dundrum, Hollyford);
- **Local Service Centres** (Annacarty, Ardcroney, Ballinonty, Ballycommon, Ballypatrick, Burncourt, Cloneen, Clonmore, Clonoulty, Cullen, Donaskeagh, Donohill, Drangan, Dromineer, Dualla, Faugheen, Garrykennedy, Glengoole, Grangemockler, Kilcash, Kilfeakle, Lattin, Lisronagh, Lisvarrinane, Lorrha, Loughmore, Marfield, Monard, Newinn, Rathcabbinn, Rearcross, Riverstown, Rosegreen, Terryglass, The Commons, Upperchurch);

- **Settlement Nodes** (Aglish, Ahenny, Ballagh, Ballinahinch, Ballinderry, Ballingarry (Nenagh), Ballinree, Ballinure, Ballycahill, Ballylooby, Ballynacloogh, Ballyneill, Ballysloe, Birdhill, Boher, Carrig, Carrigahorig, Castleleiney, Clonakenny, Dolla, Drom, Drumbane, Goatenbridge, Gortagarry, Gouldscross, Grange, Grange (Clonmel), Horse & Jockey, Kilbarron, Kilcommon, Killea, Killeen (Templeberry), Kiloscully, Kilross, Kilusty, Knock, Knockavilla, Moycarky, Moyglass, Moyne, Ninemilehouse, Rossadrehid, Rossmore, Sologhead, Templeberry, The Ragg, Thomastown, Toem.); and
- **Open Countryside.**

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

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

### 4.7.2 Human Health

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.

### 4.7.3 Existing Problems

There is historic and predictive evidence of flooding in various locations across the County (see information on Strategic Flood Risk Assessment at Section 4.9.9).

The greatest health risk from radiation in Ireland is caused by radon. The presence of radon gas, a naturally occurring radioactive gas that originates from the decay of uranium in

<sup>24</sup> Tipperary County Development Plan 2022-2028

<sup>25</sup> Census 2016 (CSO)

rocks and soils, occurs across the country. It accounts for more than half of the total radiation dose received by the Irish population. As a known carcinogen, in the same category as tobacco smoke and asbestos it is a cause of lung cancer. Exposure to radon for long periods or at high concentrations can lead to lung cancer. The number of homes within the County with radon levels above the reference level is within the normal range experienced in other locations across the country<sup>26</sup>.

Information on the status of groundwaters and surface waters is provided under Section 4.9 while compliance issues in relation to water services are detailed under Section 4.11.9.

## 4.8 Soil

Soil is the top layer of the earth's crust. It is formed by mineral particles, organic matter, water, air and living organisms. Soil can be considered as a non-renewable natural resource because it develops over very long timescales. It is a complex, variable and living medium and performs many vital functions including: food and other biomass production, storage, filtration and transformation of many substances including water, carbon, and nitrogen. Soil has a role as a habitat and gene pool, serves as a platform for human activities, landscape and heritage and acts as a provider of raw materials. Such functions of soil are worthy of protection because of their socio-economic and environmental importance. Soils in any area are the result of the interaction of various factors, such as parent material, climate, vegetation and human action.

To date, there is no legislation which is specific to the protection of soil resources. Although a proposal for a Soil Framework Directive was withdrawn in 2014, the importance of sustainable soil management was recognised in the Seventh Environment Action Programme.

Luvissols<sup>27</sup> (occupying most of the northern, central and southern parts of the County) are the most dominant soil type in County Tipperary

<sup>26</sup> Mapping available at

<http://www.epa.ie/radiation/radonmap>

<sup>27</sup> Generally fertile, widely used for agriculture and associated with significant accumulation of clay.

<sup>28</sup> Associated with alluvial (clay, silt or sand) river deposits.

<sup>29</sup> Wetland soils with slowly permeable horizons resulting in seasonal waterlogging.

(shown on Figure 4.8). Peat soils are found mainly within the north, north-west, north-east and southern areas of the County.

Active blanket bogs and active raised bogs are considered to be priority habitats, listed on Annex I of the EU Habitats Directive. Ombrotrophic (rain-fed) and minerotrophic (groundwater fed) peat soils are often indicative of areas that are the most sensitive to development due to ecological sensitivities and impeded drainage issues. Many of these peat areas are also subject to ecological designations (Figure 4.1).

Other soil types (shown on Figure 4.8) identified within the County include:

- Alluvial soils<sup>28</sup> (in the flood plains of rivers and streams);
- Groundwater gleys<sup>29</sup> (mainly in the north and south-west of the County);
- Surface water gleys (mainly in the east and west of the County);
- Podzols<sup>30</sup> (mainly in western and southern areas of the County);
- Brown earths<sup>31</sup> (along the south, north-west north-east and south-east of the County);
- Brown podzol<sup>32</sup> (mainly in the south and north-west of the County); and
- Lithosol soils<sup>33</sup> (throughout the upland areas of the County).

The GSI (Geological Survey of Ireland) have a suite of data sources available that would be useful in planning and assessing individual projects with regard to the environmental topic(s) of soil and/or material assets. These include:

- Aggregate Potential Mapping;
- Bedrock mapping;
- GeoUrban Bedrock;
- Quaternary and Physiographic mapping;
- 3D Quaternary Models;
- National Aquifer and Recharge mapping; and
- Geochemistry and Geophysical datasets.

### 4.8.1 Geological Sites

Geological Survey of Ireland coordinates the Irish Geological Heritage Programme, which seeks to identify and select sites of geological

<sup>30</sup> Infertile acidic soils with an ash-like subsurface layer associated with acid leaching typically formed under coniferous forest.

<sup>31</sup> Well drained mineral soils, associated with high levels of natural fertility.

<sup>32</sup> Characterised by dark brown humus-mineral soil covered with a thin mat of partly decayed leaves.

<sup>33</sup> Shallow soils, consisting of partially weathered rock fragments.

interest within administrative areas across the country. The audit of County Geological Sites in County Tipperary was completed in 2019 and identified 69 County Geological Sites<sup>34</sup>. Concentrations of these designations can be found in the upland areas. Tipperary County Geological Sites<sup>35</sup> are mapped on Figure 4.9 and listed in Appendix II.

#### 4.8.2 Potentially contaminated lands and landfill sites

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 areas across the country, there is potential for contamination at sites within County Tipperary, especially where land uses occurred in the past in the absence of environmental protection legislation. Such contamination has the potential to affect water quality, biodiversity and flora and fauna and human health. Under the Plan (Chapter 12), where brownfield redevelopment is proposed, adequate and appropriate investigations are required to be carried out into the nature and extent of any soil and groundwater contamination and the risks associated with site development work.

#### 4.8.3 Source Protection Areas

Source Protection Area delineation provides an assessment of the land area that contributes groundwater to a borehole or spring. Source reports have been undertaken by the GSI on behalf of Local Authorities since the mid-1990s.

Public Supply Source Protection Areas comprise are managed by Irish Water to supply Public Water Supply Schemes across Ireland. Source Protection Areas provide protection by placing tighter controls on activities within all or part of the zone of contribution of the source.

Groundwater bodies are important water supply sources for private wells, group schemes and local authority supplies and for use in a range of commercial activities. This is particularly the case in rural areas that are not served by public

or group water schemes, with private bored wells being the only source of supply.

There are a number of Source Protection Areas in County Tipperary, including:

- Public Supply Source Protection Areas
  - Aglish PWS
  - Borrisokane PWS
  - Borrisoleigh PWS
  - Callan PWS
  - Dunkerrin Village PWS
  - Fethard RWS Coalbrook
  - Glenbeha Springs PWS
  - Ironmills PWS
  - Kilcoran GWS
  - Lisduff Dunkerrin Well PWS
  - Lorrha PWS
  - Moneygall - Busherstown PWS
  - Moyne GWS
  - Templederry PWS
  - Templemore PWS
  - Tobernaloo PWS
  - Toomyvara PWS
  - Two-Mile-Borris PWS
- Group Scheme Preliminary Source Protection Areas include those at:
  - Carigahorig
  - Fennor Inchorourke
  - Graigue Pouldine
  - Cunnahurt
  - Ash Hill
  - Elmhill
  - Frolic Carney
  - Ardcrone
  - Abbeyville
  - Patrickwell Knockmore
  - Frolic Carney
  - Clobanna
  - Tonagha Laharden
  - Shallee-Kiltyrome
  - Patrickwell Holy Well
  - Drombane
  - Newhill
  - Graigue Pouldine
  - Killeen
  - Garrynamona Cormackstown
  - Frolic Carney
  - Rahealty
  - Gurteenakilla
  - Mota Coolbaun
  - Barnane
  - Cunnahurt North Spring
  - Castleiney
  - Plunkett
  - Lish
  - Fantane
  - Frolic Carney
  - Leigh
  - Brittas
  - Kilriffith
  - Cunnahurt South Spring
  - Rathvalla
  - Curacuneen

<sup>34</sup> Geological Survey of Ireland (2019) *The Geological Heritage of County Tipperary. An audit of County Geological Sites in County Tipperary 2019.*

<sup>35</sup> County Geological Sites and Sites of Geological Interest in the neighboring counties, which straddle County Tipperary boundaries have been also considered by the assessment.

- Pike Knockshewona
- Frolic Carney
- Lacka

Public Supply Source Protection Areas (including Inner and Outer Protection Areas<sup>36</sup>) and Group Scheme Preliminary Source Protection Areas<sup>37</sup> are shown on Figure 4.10.

#### 4.8.4 Landslides

The term "landslide" describes a wide variety of processes that result in the downward and outward movement of materials such as rock, debris, earth, mud and peat under the force of gravity. Issues such as existing ground conditions, slope stability and storage of excavated material have the potential to influence susceptibility to landslides/bog bursts. The potential impacts of landslides include loss of human life/injury, flooding, pollution of watercourses and impacts upon aquatic biodiversity.

The County has numerous locations with a history of landslide events<sup>38</sup> (shown on Figure 4.11). Many of these events are associated with the upland peatland areas in the south and west of the County.

The GSI have identified that most of the County has relatively low levels of landslide susceptibility, with moderate to high susceptibility found in upland areas of the County (as mapped on Figure 4.11).

#### 4.8.5 Existing Problems

Legislative objectives governing soil were not identified as being conflicted with.

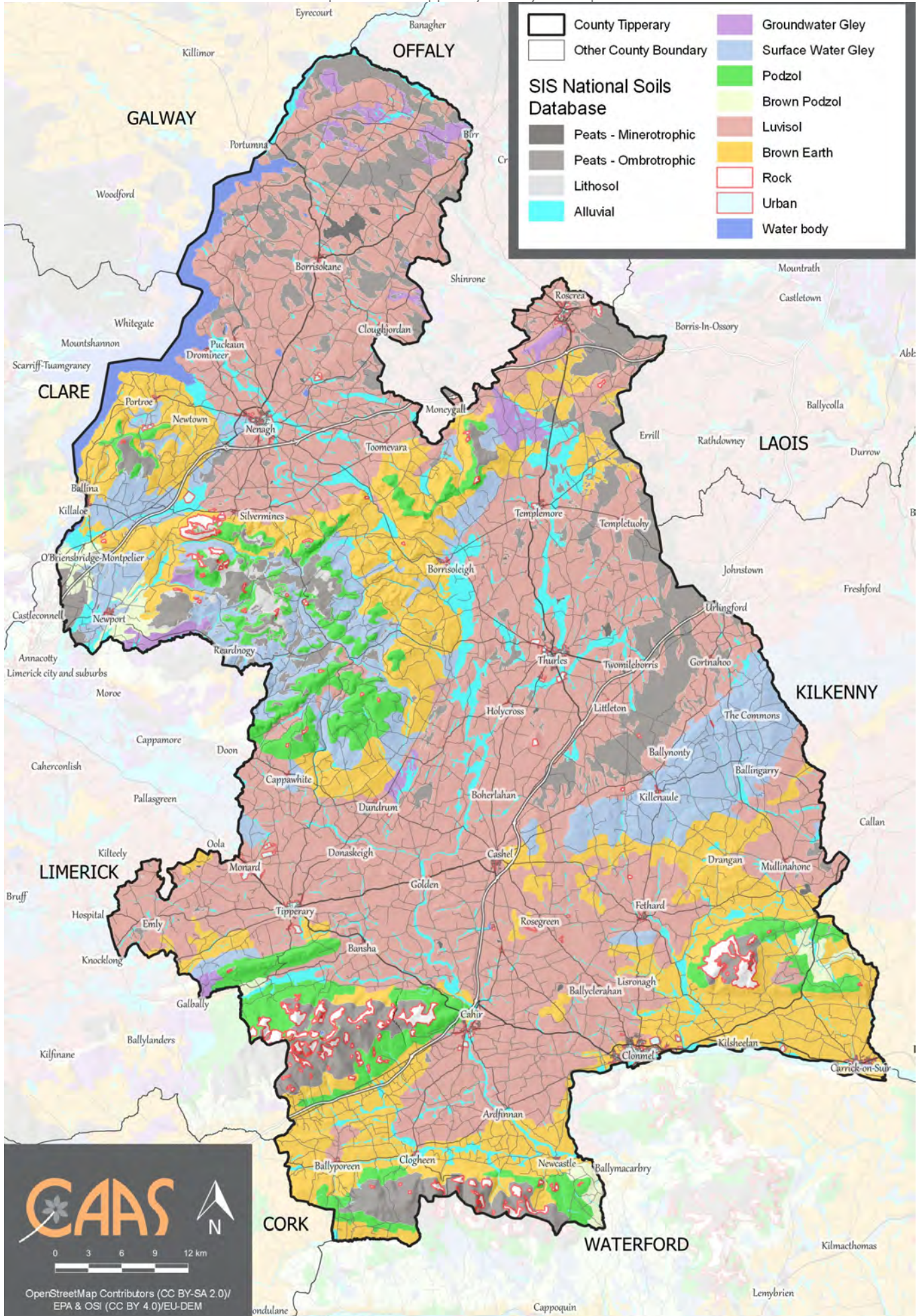
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<sup>36</sup> The Zone of Contribution is the land area that contributes water to the well or spring. The Inner Protection Area (SI) is designed to protect against the effects of human activities that might have an immediate effect on the source and, in particular, against microbial pollution. The Outer Protection Area (SO) is encompassing the remainder of the zone of contribution to the groundwater abstraction point (e.g. borehole or spring).

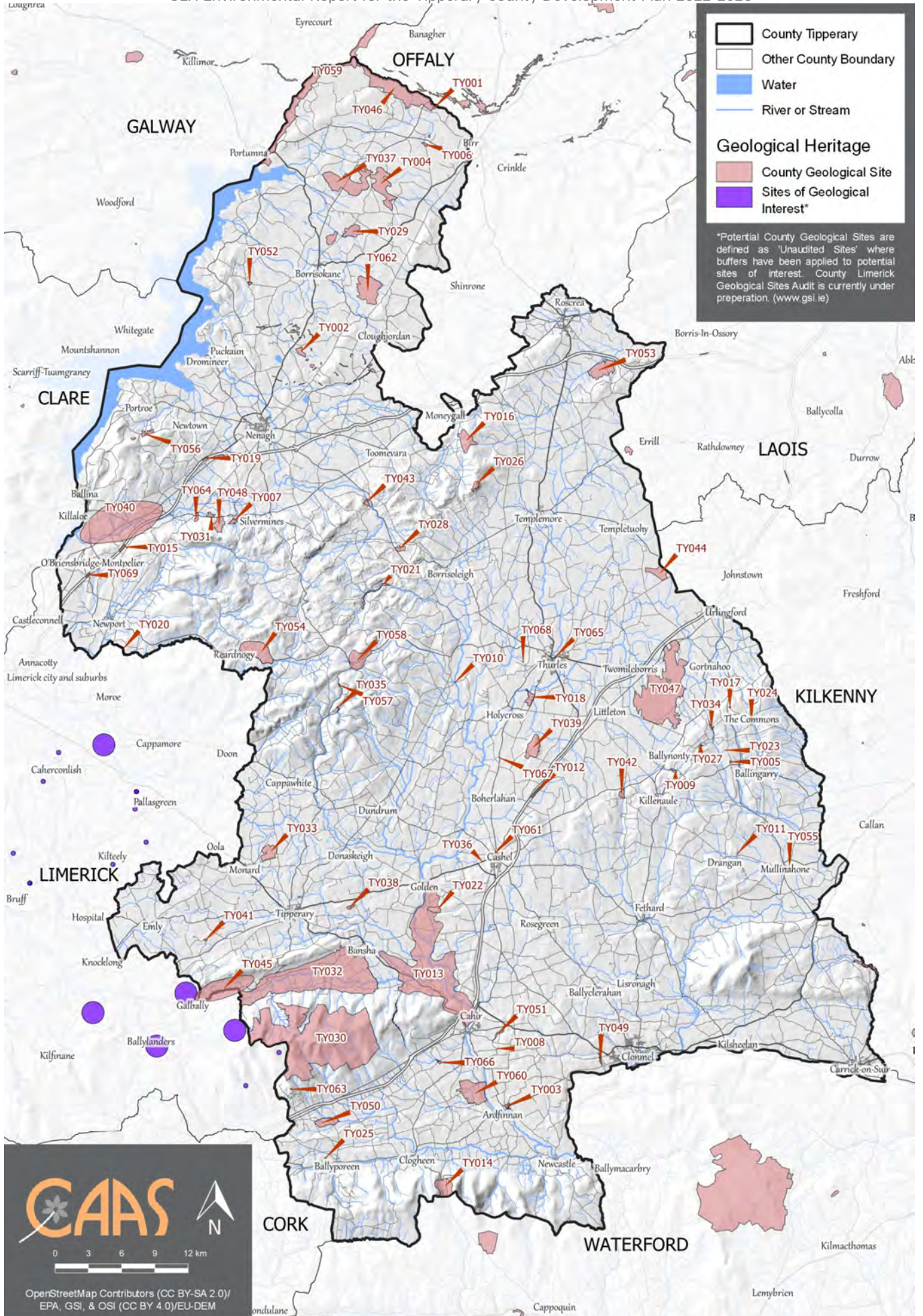
<sup>37</sup> The Group Scheme Preliminary Source Protection Areas comprises Zones of Contribution to groundwater

abstraction points that supply Group Water Schemes across Ireland that are affiliated to the National Federation of Group Water Schemes and that supply more than 15 people.

<sup>38</sup> Over 2,500 landslide events are recorded in the National Landslides Database available from GSI ([www.gsi.ie](http://www.gsi.ie)). This dataset also includes Landslide Susceptibility Mapping to assist in the identification of areas that are likely to experience landsliding.



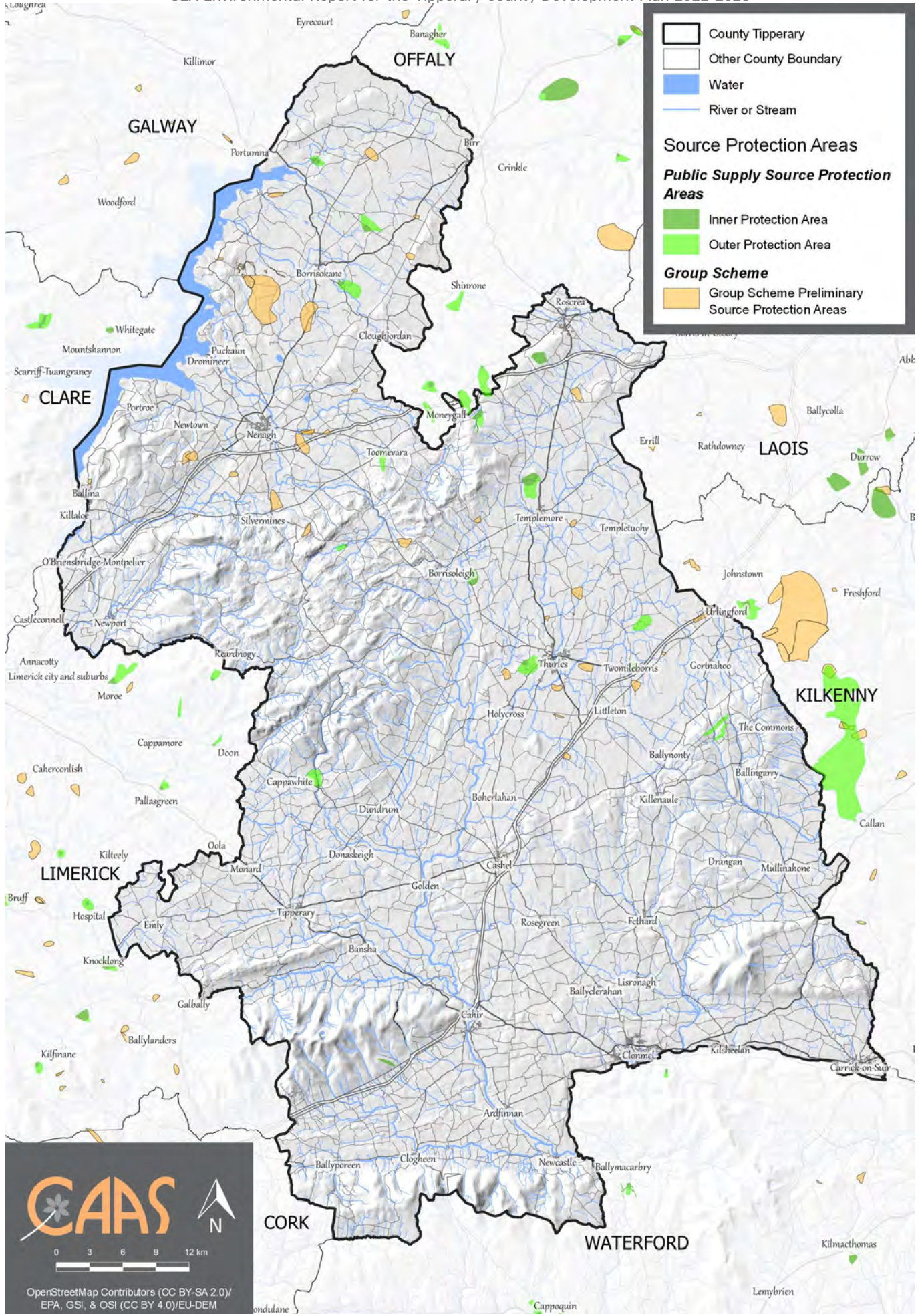
**Figure 4.8 Soil Type**  
CAAS for Tipperary County Council



**Figure 4.9 County Geological Sites**

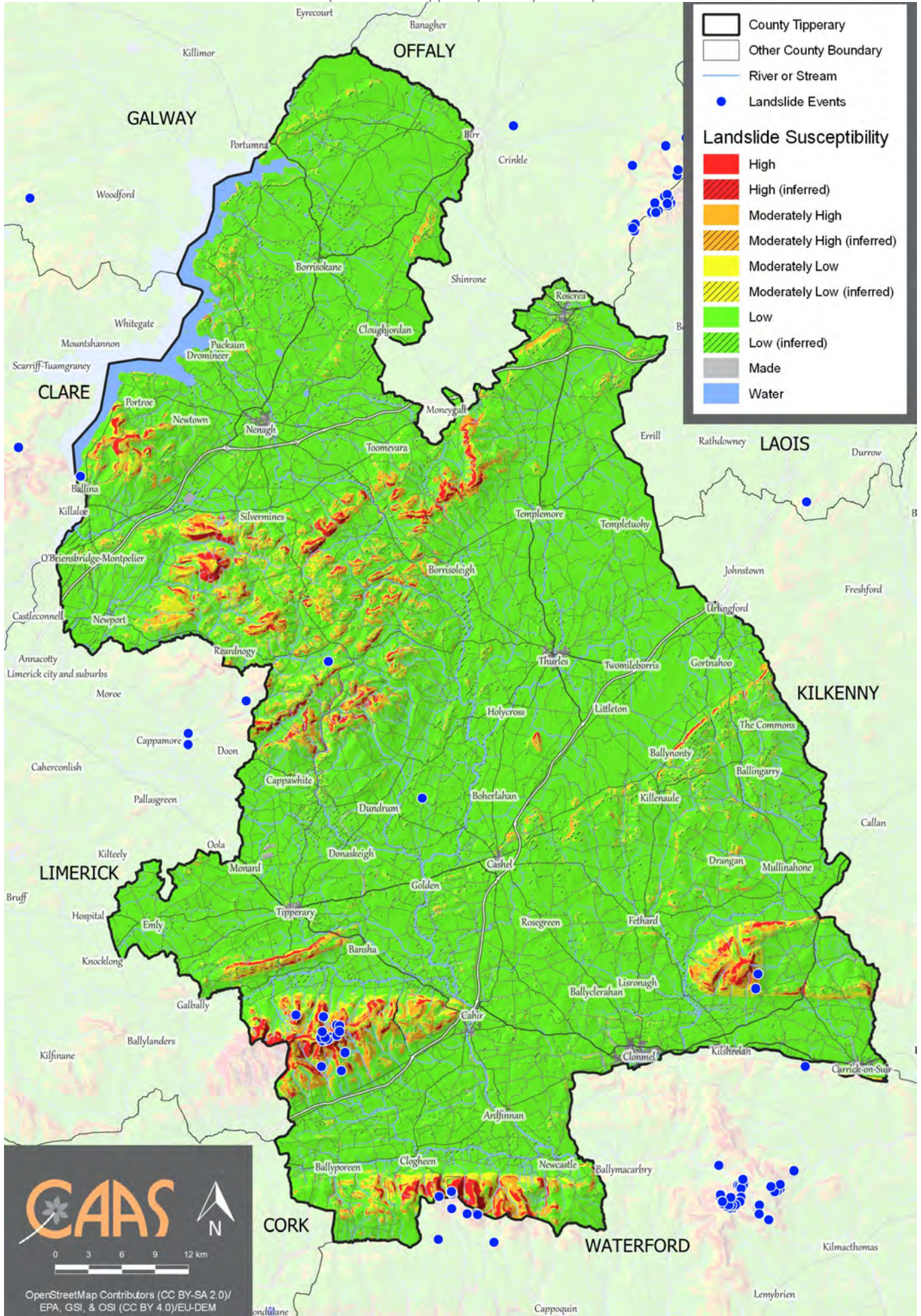
CAAS for Tipperary County Council





**Figure 4.10 Source Protection Areas**

CAAS for Tipperary County Council



**Figure 4.11 Landslide Susceptibility and Previous Landslide Events**

CAAS for Tipperary County Council

## 4.9 Water

### 4.9.1 The Water Framework Directive

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.

Article 4 of the WFD sets out various exemptions for deterioration in status caused as a result of certain physical modifications to water bodies. This is provided: all practicable mitigation measures are taken; there are reasons of overriding public interest or the benefits to human health, safety or sustainable development outweigh the benefits in achieving the WFD objective; there are no better alternatives; and the reasons for the physical modification are explained in the River Basin Management Plan.

The EU's Common Implementation Strategy Guidance Documents No. 20 and 36 provide guidance on exemptions to the environmental objectives of the WFD.

For the purpose of assessment, reporting and management, water is divided into groundwater, rivers, lakes, estuarine waters and coastal waters that are in turn divided into specific, clearly defined water bodies.

### 4.9.2 Zone of Influence

The zone of influence of the Plan beyond the County boundary, with respect to impacts upon waters can be estimated to be all bodies of groundwater and all surface waters downstream areas of catchments which drain the County.

### 4.9.3 Surface Water Drainage

A catchment is an area of land contributing to a waterbody, with all the water ultimately

running off to a single outlet. The WFD requires water quality management to be based on natural river catchments i.e. by reference to the natural, environmental unit rather than by reference to administrative or legal boundaries, which often fragment river catchments.

Most of the County is located within the sub-catchments of the Suir (this catchment includes the area drained by the River Suir and all streams entering tidal water between Drumdowney and Cheekpoint, County Waterford) and Lower Shannon (this catchment includes Lough Derg and its catchment) and partially within the catchments of the Nore, Shannon Estuary South and Blackwater (Munster).

The main rivers within the County include the Shannon, Suir and Nore. The main lake in the County is Lough Derg, situated in the north-west County, at the border with Counties Galway and Clare.

### 4.9.4 Surface Water Status

The WFD defines 'overall surface water status' as the general expression of the status of a body of surface water, determined by the poorer of its ecological status and its chemical status. Thus, in order to achieve 'good surface water status' both the ecological status and the chemical status of a surface water body need to be at least 'good'.

Ecological status is an expression of the structure and functioning of aquatic ecosystems associated with surface waters. Such waters are classified as of 'good ecological status' when they meet Directive requirements.

Chemical Status is a pass/fail assignment with a failure defined by a face-value exceedance of an Environmental Quality Standards (EQS) for one or more Priority Action Substances (PAS) listed in Annex X of the Water Framework Directive (WFD). The EQS values for individual PAS substances are set at European level. Good surface water chemical status means that concentrations of pollutants in the water body do not exceed the environmental limit values specified in the Directive.

The WFD surface water status (2013-2018), for rivers, lakes and transitional waters within and surrounding the County is shown on Figure 4.12 and on Table 4.1

The WFD status of most of the rivers and lakes within the County is classified as *moderate*, *good* and *high*, however some sections<sup>39</sup> of rivers and streams are identified as *poor*<sup>40</sup> due to unsatisfactory ecological/biological and/or physio-chemical status.

The WFD surface water status (2013-2018) of transitional waterbodies downstream of County Tipperary (Upper Suir Estuary) is identified as *poor* due to unsatisfactory ecological/biological and/or physio-chemical status.

Significant pressures, those pressures which need to be addressed in order to improve water quality, have been identified<sup>41</sup> for waterbodies that are 'At Risk' of not meeting their water quality objectives under the WFD. Significant pressures for surface water bodies within or adjacent to County Tipperary are identified on Table 4.1. There are various types of pressures identified, such as:

- **Agricultural pressures** - can include issues related to farming including loss of excess nutrients and sediment loss to surface waters from diffuse sources such as spreading of fertilisers and manures. Excess phosphorous and sediment are typically issues for rivers and lakes, and too much nitrogen is the main issue for estuaries and coastal waters.
- **Urban run-off pressures** - can include leaking sewers and run-off from paved and unpaved areas and misconnections where private foul connections are connected to storm sewers instead of the foul sewer network.
- **Urban wastewater pressures** - can include direct discharge of nutrients from urban wastewater treatment plants and discharge from combined storm overflows or storm water overflows. Discharges of elevated concentrations of phosphorus, ammonium and nitrogen impact on the ecology of surface waters.
- **Hydromorphological and anthropogenic pressures** are identified together in many instances. Hydromorphological pressures can include: modifications to the physical habitat conditions or the natural functioning of a waterbody which can impact on ecology, caused by dredging and straightening of rivers (channelisation), land drainage or hard infrastructure such as dams, weirs, culverts or other obstructions. Anthropogenic pressures can include: water abstractions; invasive species;

agriculture; use of fertilizers, manures and pesticides; animal husbandry activities; inefficient irrigation practices; deforestation of woods; aquaculture; pollution due to industrial effluents and domestic sewage; and recreational activities.

- **Industrial pressures** - can include discharges and emissions from industrial and commercial facilities.
- **Extractive industry related pressures** – can include different activities that lead to the extraction of raw materials from the earth, such as oil, metals, mineral and aggregates. Impacts from extractive sites include sediment/siltation pollution and alteration to the physical environment.
- **Forestry pressures** - can include poorly managed and inappropriately sited forest operations, negatively impact on water quality and aquatic habitats and species. The most common water quality problems arising from forestry relate to the release of sediment and nutrients and the impacts from acidification. Forestry may also give rise to changes in stream flow regimes caused by associated land drainage.
- **Domestic wastewater pressures** – can include septic-tank systems associated with one-off housing and small unlicensed private urban waste-water treatment plants. If not correctly installed and well maintained, these systems can result in leakage of untreated effluent to waters.
- **Other pressures** can include impacts from activities such as **historically polluted sites** and **aquaculture**. These activities each impact a relatively small number of water bodies so they have been grouped together.

A 'Blue Dot Catchments Programme' has been designed for the protection and improvement of high status waters. The Programme includes a monitoring and management system to trace investigative monitoring efforts, characterise pressures, document protection measures implemented, and/or restoration measures in high status catchments. County Tipperary has number of these 'Blue-Dots' - pristine waterbodies that are very sensitive to pollution or any changes in the catchment.

<sup>39</sup> As per EPA classification system ([gis.epa.ie/EPAMaps](https://gis.epa.ie/EPAMaps))

<sup>40</sup> Including rivers: Toem Stream, Suir, Shinrone Stream, Rossestown, Rossadrehid Stream, Ollatrim, Multeen, Mullinane Stream, Moyle, Lorrha Stream, Little Brosna, Kilmastulla, Kilcomin Stream, Fishmoynne, Fidaghta,

Farneybridge, Drish, Clover, Carrigahorig Stream, Cappawhite Stream, Borrisoleigh Stream, Black Stream (Cashel), Ballyfinboy, Ardgregane Stream, Ara and Anner.

<sup>41</sup> EPA (2019) Report on Water Quality in Ireland 2013-2018

Table 4.1 WFD River, Lake and Transitional Waterbodies Status<sup>42</sup>

Name <sup>43</sup>	Type	WFD Surface Waterbody Status (2013 -2018) <sup>44</sup>
Toem Stream_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from forestry and invasive species sources.
Suir_220	River	Poor - due to poor ecological/biological status. No pressures identified.
Shinrone Stream_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from hydromorphological/anthropogenic and forestry sources.
Rossetstown_030	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from extractive industry related sources.
Rossetstown_020	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from hydromorphological/anthropogenic and extractive industry related sources.
Rossetstown_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from extractive industry related sources.
Rossadrehid Stream_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from forestry sources.
Ollatrim_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural, forestry and extractive industry related sources.
Multeen_050	River	Poor - due to poor ecological/biological status. No pressures identified.
Multeen (East)_040	River	Poor - due to poor ecological/biological status. No pressures identified.
Mullinahone Stream_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from urban wastewater sources.
Moyle_030	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural sources.
Moyle_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from hydromorphological/anthropogenic sources.
Lorrha Stream_020	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural and extractive industry related sources.
Little Brosna_020	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from urban wastewater and industrial sources.
Kilmastulla_030	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from extractive industry related sources.
Kilcomin Stream_030	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from hydromorphological/anthropogenic sources.
Fishmoyne_030	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural and hydromorphological/anthropogenic sources.
Fishmoyne_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural, forestry and hydromorphological/anthropogenic sources.
Fidaghta_020	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural and domestic wastewater sources.
Fidaghta_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural and domestic wastewater sources.
Farneybridge_020	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from hydromorphological/anthropogenic sources.
Farneybridge_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from hydromorphological/anthropogenic sources.
Drish_050	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural, domestic wastewater and urban wastewater sources.
Drish_040	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from extractive industry related sources.
Drish_030	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from extractive industry related sources.
Drish_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from forestry sources.
Clover_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from forestry and industrial sources.
Carrigahorig Stream_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural sources.
Cappawhite Stream_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural sources.
Borrisoleigh Stream_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural, invasive species and urban run-off sources.
Black Stream (Cashel)_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural sources.
Ballyfinboy_020	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural sources.
Ardregane Stream_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural sources.
Ara_020	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural, industrial and urban run-off sources.
Ara_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural sources.
Anner_020	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural sources.
Anner_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural and urban wastewater sources.
Upper Suir Estuary	Trans	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural sources.
Youghal (Tipperary)_010	River	Moderate. This waterbody is identified as being under significant pressure from urban wastewater, forestry and agricultural sources.
Thonoge_010	River	Moderate. No pressures identified.
Suir_210	River	Moderate. No pressures identified.
Suir_200	River	Moderate. No pressures identified.
Suir_190	River	Moderate. No pressures identified.
Suir_150	River	Moderate. No pressures identified.
Suir_140	River	Moderate. No pressures identified.
Suir_130	River	Moderate. No pressures identified.
Suir_100	River	Moderate. No pressures identified.
Suir_090	River	Moderate. No pressures identified.
Suir_080	River	Moderate. No pressures identified.

<sup>42</sup> Source: <https://gis.epa.ie/EPAMaps/> and <https://gis.epa.ie/EPAMaps/Water>.

<sup>43</sup> EPA ID Code: The number at the end of each river water body name indicates where the waterbody is located along the main river channel. For example, the waterbody at the source is coded '\_010', the next waterbody downstream is coded '\_020' and the final waterbody before the river becomes transitional is '\_180'.

<sup>44</sup> There is a data gap relating to WFD surface water status data. There are a number of waterbodies within the Plan area with overall status currently not assigned to them and the term "unassigned status" applies in respect of these waterbodies. These are not included on this table.

SEA Environmental Report for the Tipperary County Development Plan 2022-2028

Name <sup>43</sup>	Type	WFD Surface Waterbody Status (2013 -2018) <sup>44</sup>
Suir_070	River	Moderate. No pressures identified.
Suir_060	River	Moderate. This waterbody is identified as being under pressure from hydromorphological/anthropogenic sources.
Suir_030	River	Moderate. This waterbody is identified as being under pressure from urban wastewater sources.
Suir_020	River	Moderate. This waterbody is identified as being under pressure from agricultural sources.
Shannon (Lower)_050	River	Moderate. This waterbody is identified as being under pressure from hydromorphological/anthropogenic and urban wastewater sources.
Pallas_010	River	Moderate. This waterbody is identified as being under pressure from agricultural sources.
Outeragh Stream_020	River	Moderate. This waterbody is identified as being under pressure from agricultural sources.
Ollatrim_050	River	Moderate. No pressures identified.
Ollatrim_020	River	Moderate. This waterbody is identified as being under pressure from forestry sources.
Nenagh_070	River	Moderate. This waterbody is identified as being under pressure from hydromorphological/anthropogenic sources.
Nenagh_060	River	Moderate. This waterbody is identified as being under pressure from industrial sources.
Nenagh_050	River	Moderate. No pressures identified.
Nenagh_030	River	Moderate. No pressures identified.
Multeen_030	River	Moderate. No pressures identified.
Multeen (East)_030	River	Moderate. This waterbody is identified as being under pressure from agricultural and forestry sources.
Mahore_020	River	Moderate. This waterbody is identified as being under pressure from urban wastewater sources.
Mahore_010	River	Moderate. No pressures identified.
Lorra Stream_010	River	Moderate. This waterbody is identified as being under significant pressure from agricultural sources.
Little Brosna_040	River	Moderate. This waterbody is identified as being under significant pressure from hydromorphological/anthropogenic, agricultural and extractive industry related sources.
Lingau_030	River	Moderate. No pressures identified.
Lingau_020	River	Moderate. This waterbody is identified as being under significant pressure from domestic wastewater and urban wastewater sources.
Lingau_010	River	Moderate. No pressures identified.
King's (Kilkenny)_040	River	Moderate. This waterbody is identified as being under significant pressure from agricultural and hydromorphological/anthropogenic sources.
King's (Kilkenny)_030	River	Moderate. This waterbody is identified as being under significant pressure from hydromorphological/anthropogenic, urban run-off and urban wastewater sources.
Kilmastulla_040	River	Moderate. This waterbody is identified as being under significant pressure from extractive industry related sources.
Kilmastulla_010	River	Moderate. This waterbody is identified as being under significant pressure from extractive industry related sources.
Killenaule Stream_010	River	Moderate. This waterbody is identified as being under significant pressure from agricultural sources.
Kilfadda Castle Stream_010	River	Moderate. This waterbody is identified as being under significant pressure from agricultural sources.
Kilcomin Stream_020	River	Moderate. This waterbody is identified as being under significant pressure from hydromorphological/anthropogenic sources.
Keeloge Stream_020	River	Moderate. This waterbody is identified as being under significant pressure from agricultural and sources.
Inch (Bilboa)_010	River	Moderate. This waterbody is identified as being under significant pressure from agricultural and forestry sources.
Golden Grove Stream_020	River	Moderate. This waterbody is identified as being under significant pressure from aquacultural and extractive industry related sources.
Fishmoyne_020	River	Moderate. This waterbody is identified as being under significant pressure from hydromorphological/anthropogenic sources.
Farneybridge_040	River	Moderate. This waterbody is identified as being under significant pressure from hydromorphological/anthropogenic sources.
Duag_020	River	Moderate. No pressures identified.
Duag_010	River	Moderate. This waterbody is identified as being under significant pressure from agricultural sources.
Drish_060	River	Moderate. This waterbody is identified as being under significant pressure from hydromorphological/anthropogenic sources.
Donaghmore Stream_010	River	Moderate. This waterbody is identified as being under significant pressure from agricultural sources.
Dead_020	River	Moderate. This waterbody is identified as being under significant pressure from urban wastewater sources.
Dead_010	River	Moderate. No pressures identified.
Clover_020	River	Moderate. No pressures identified.
Clonmore Stream (Suir)_010	River	Moderate. This waterbody is identified as being under significant pressure from extractive industry related sources.
Clodiagh (Tipperary)_020	River	Moderate. This waterbody is identified as being under significant pressure from forestry sources.
Clashawley_020	River	Moderate. No pressures identified.
Clashawley_010	River	Moderate. This waterbody is identified as being under significant pressure from agricultural sources.
Cauteen_010	River	Moderate. This waterbody is identified as being under significant pressure from agricultural sources.
Bunow_020	River	Moderate. This waterbody is identified as being under significant pressure from hydromorphological/anthropogenic, aquacultural, industrial and urban wastewater sources.
Black (Twomileborris)_010	River	Moderate. This waterbody is identified as being under significant pressure from extractive industry related sources.
Bilboa_010	River	Moderate. This waterbody is identified as being under significant pressure from forestry sources.
Ballyfinboy_070	River	Moderate. This waterbody is identified as being under significant pressure from agricultural and hydromorphological/anthropogenic sources.
Ballyfinboy_060	River	Moderate. This waterbody is identified as being under significant pressure from agricultural and extractive industry related sources.
Ballyfinboy_050	River	Moderate. This waterbody is identified as being under significant pressure from forestry, agricultural and urban wastewater sources.
Ballyfinboy_040	River	Moderate. This waterbody is identified as being under significant pressure from agricultural, urban run-off and hydromorphological/anthropogenic sources.
Ballyfinboy_030	River	Moderate. This waterbody is identified as being under significant pressure from agricultural, urban run-off and urban wastewater sources.
Ballyfinboy_010	River	Moderate. This waterbody is identified as being under significant pressure from agricultural, urban wastewater, extractive industry related and hydromorphological/anthropogenic sources.
Ballintotty_020	River	Moderate. No pressures identified.
Ballintemple Stream_010	River	Moderate. This waterbody is identified as being under significant pressure from agricultural and domestic wastewater sources.
Aughnaglanny_010	River	Moderate. No pressures identified.
Arglo_010	River	Moderate. This waterbody is identified as being under significant pressure from hydromorphological/anthropogenic sources.
Ardregane Stream_020	River	Moderate. This waterbody is identified as being under significant pressure from agricultural, urban run-off and hydromorphological/anthropogenic sources.
Ardcrony Stream_010	River	Moderate. This waterbody is identified as being under significant pressure from agricultural, extractive industry related and hydromorphological/anthropogenic sources.
Ara_040	River	Moderate. This waterbody is identified as being under significant pressure from hydromorphological/anthropogenic sources.
Ara_030	River	Moderate. This waterbody is identified as being under significant pressure from industrial and urban run-off sources.
Anner_050	River	Moderate. No pressures identified.
Aherlow_080	River	Moderate. This waterbody is identified as being under significant pressure from hydromorphological/anthropogenic sources.
Aherlow_060	River	Moderate. No pressures identified.
Aherlow_030	River	Moderate. This waterbody is identified as being under significant pressure from agricultural sources.
Aherlow_020	River	Moderate. This waterbody is identified as being under significant pressure from agricultural and urban wastewater sources.
Derg TN	Lake	Moderate. This waterbody is identified as being under significant pressure from hydromorphological/anthropogenic, agricultural, invasive species and urban wastewater sources.
Thonoge_030	River	Good. No pressures identified.
Thonoge_020	River	Good. No pressures identified.
Tar_030	River	Good. No pressures identified.
Tar_020	River	Good. No pressures identified.
Suir_180	River	Good. No pressures identified.
Suir_170	River	Good. No pressures identified.
Suir_160	River	Good. No pressures identified.
Suir_120	River	Good. No pressures identified.
Suir_110	River	Good. No pressures identified.
Suir_050	River	Good. No pressures identified.
Suir_010	River	Good. No pressures identified.

## SEA Environmental Report for the Tipperary County Development Plan 2022-2028

Name <sup>43</sup>	Type	WFD Surface Waterbody Status (2013 -2018) <sup>44</sup>
Small (Tipperary)_010	River	Good. No pressures identified.
Shanbally_010	River	Good. No pressures identified.
Owenbeg (Tipperary)_010	River	Good. No pressures identified.
Ollatrim_040	River	Good. No pressures identified.
Ollatrim_030	River	Good. No pressures identified.
Nore_040	River	Good. This waterbody is identified as being under pressure from forestry, agricultural and extractive industry related sources.
Nore_010	River	Good. This waterbody is identified as being under significant pressure from agricultural and urban wastewater sources.
Nier_030	River	Good. No pressures identified.
Newtown_010	River	Good. No pressures identified.
Newport (Tipperary)_030	River	Good. No pressures identified.
Newport (Tipperary)_010	River	Good. No pressures identified.
Nenagh_040	River	Good. No pressures identified.
Nenagh_020	River	Good. No pressures identified.
Munster_030	River	Good. No pressures identified.
Munster_020	River	Good. No pressures identified.
Munster_010	River	Good. No pressures identified.
Multeen_040	River	Good. No pressures identified.
Multeen_020	River	Good. No pressures identified.
Multeen_010	River	Good. No pressures identified.
Multeen (East)_020	River	Good. This waterbody is identified as being under pressure from agricultural and forestry sources.
Multeen (East)_010	River	Good. No pressures identified.
Little Brosna_060	River	Good. No pressures identified.
Little Brosna_050	River	Good. No pressures identified.
Little Brosna_010	River	Good. No pressures identified.
Lingaun_050	River	Good. No pressures identified.
Lingaun_040	River	Good. No pressures identified.
King's (Kilkenny)_010	River	Good. No pressures identified.
Kilmastulla_050	River	Good. No pressures identified.
Killenaule Stream_020	River	Good. No pressures identified.
Killeengarriff_010	River	Good. No pressures identified.
Keeloge Stream_010	River	Good. No pressures identified.
Gortnageragh_010	River	Good. No pressures identified.
Glennafallia_010	River	Good. This waterbody is identified as being under pressure from forestry sources.
Glengalla_010	River	Good. No pressures identified.
Glenboy_010	River	Good. No pressures identified.
Garranacool Stream_010	River	Good. No pressures identified.
Funshion_020	River	Good. No pressures identified.
Funshion_010	River	Good. No pressures identified.
Finisk_010	River	Good. No pressures identified.
Farneybridge_030	River	Good. No pressures identified.
Duag_030	River	Good. No pressures identified.
Doonane_010	River	Good. This waterbody is identified as being under pressure from hydromorphological/anthropogenic sources.
Dolla_010	River	Good. No pressures identified.
Crinnaghtane_010	River	Good. No pressures identified.
Coalbrook Stream_010	River	Good. No pressures identified.
Clodiagh (Tipperary)_040	River	Good. No pressures identified.
Clodiagh (Tipperary)_030	River	Good. No pressures identified.
Clodiagh (Tipperary)_010	River	Good. This waterbody is identified as being under pressure from forestry and hydromorphological/anthropogenic sources.
Clashawley_040	River	Good. No pressures identified.
Clashawley_030	River	Good. No pressures identified.
Cahernahallia_020	River	Good. No pressures identified.
Cahernahallia_010	River	Good. No pressures identified.
Burncourt_020	River	Good. No pressures identified.
Burncourt_010	River	Good. No pressures identified.
Ballintotty_010	River	Good. No pressures identified.
Arglo_020	River	Good. This waterbody is identified as being under pressure from agricultural sources.
Araglin (Blackwater)_020	River	Good. No pressures identified.
Araglin (Blackwater)_010	River	Good. No pressures identified.
Anner_060	River	Good. No pressures identified.
Anner_040	River	Good. This waterbody is identified as being under pressure from agricultural sources.
Annagh (Tipperary)_030	River	Good. No pressures identified.
Annagh (Tipperary)_020	River	Good. No pressures identified.
Annagh (Tipperary)_010	River	Good. No pressures identified.
Derg HMWB	Lake	Good. No pressures identified.
Tar_010	River	High. No pressures identified.
Newport (Tipperary)_040	River	High. No pressures identified.
Newport (Tipperary)_020	River	High. This waterbody is identified as being under pressure from hydromorphological/anthropogenic sources.
Nenagh_010	River	High. No pressures identified.
Glenshelane_010	River	High. No pressures identified.
Aherlow_070	River	High. No pressures identified.
Aherlow_040	River	High. This waterbody is identified as being under pressure from forestry sources.

### 4.9.5 Ground Water

Groundwater is stored in the void spaces in underground layers of rock, or aquifers. These aquifers are permeable, allowing both the infiltration of water from the soils above them and the yielding of water to surface and coastal waters. Groundwater is the part of the subsurface water that is in the saturated zone - the zone below the water table, the uppermost level of saturation in an aquifer at which the pressure is atmospheric, in which all pores and fissures are full of water.

For groundwater bodies, the approach to classification is different from that for surface water. For each body of groundwater, both the chemical status and the quantitative must be determined. Both have to be classed as either *good* or *poor*. The WFD sets out a series of criteria that must be met for a body to be classed as good chemical and quantitative status.

The WFD status (2013-2018) of groundwater underlying the County is mostly identified as being of *good* status, with some localised areas of *poor*<sup>45</sup> status to the north-west, west and south-west of the County and in the east of the County (as shown on Figure 4.13).

### 4.9.6 Aquifer Vulnerability and Productivity

The Geological Survey of Ireland (GSI) rates groundwaters according to both their productivity and vulnerability to pollution.

Aquifer vulnerability refers to the ease with which pollutants of various kinds can enter into groundwater. The vulnerability of aquifers underlying the County are mapped on Figure 4.14 and generally classified as being of High and moderate vulnerability throughout the County with areas of Extreme vulnerability and extreme (rock at or near surface or karst) found mainly in upland areas.

The GSI also rates aquifers based on the hydrogeological characteristics and on the value of the groundwater resource. This is referred to as aquifer productivity and is mapped on Figure 4.15. Productivity classifications within the County include:

- *Locally important aquifer karstified;*
- *Locally important aquifer bedrock which is moderately productive only in local zones;*
- *Locally important aquifer bedrock which is generally moderately productive;*
- *Poor aquifer bedrock which is generally unproductive except for local zones;*
- *Regionally important aquifer fissured bedrock;*
- *Regionally important aquifer karstified;*
- *Regionally important aquifer karstified (diffuse);*
- *Locally important gravel aquifer; and*
- *Regionally important gravel aquifer.*

### 4.9.7 WFD Registers of Protected Areas

The WFD requires that Registers of Protected Areas (RPAs) are compiled for a number of water bodies or part of water bodies which must have extra controls on their quality by virtue of how their waters are used by people and by wildlife.

The WFD requires that these RPAs contain: areas from which waters are taken for public or private water supply schemes; designated shellfish production areas; bathing waters; areas which are affected by high levels of substances most commonly found in fertilizers, animal and human wastes - these areas are considered nutrient sensitive; areas designated for the protection of habitats or species e.g. Salmonid areas; Special Areas of Conservation (SACs); and Special Protection Areas (SPAs).

Entries to the RPAs within and adjacent to the County designated by virtue of their value to humans comprise:

- Nutrient Sensitive Areas – including Lough Derg on the River Shannon, rivers Nenagh and Suir, and Suir Estuary (Upper);
- Surface Water and Groundwater<sup>46</sup> in Nutrient Sensitive Areas<sup>47</sup> - as shown on Figure 4.16;
- Drinking Water Surface Water Bodies<sup>48</sup> (shown on Figure 4.17). Groundwater beneath the entire County is also included; and

<sup>45</sup> Underlying: Historic Mine (Silvermines) in the north-west of the County; Industrial Facility (P0331-01) in the west of the County; Mitchelstown to the south-west of the County; and Durrow in the east of the County.

<sup>46</sup> Groundwater bodies that intersect with areas designated as sensitive.

<sup>47</sup> Areas designated as sensitive under the Urban Wastewater Treatment Directive (91/271/EEC) and transposing Regulations.

<sup>48</sup> Various water bodies are used for drinking water abstraction in accordance with European Communities



- Bathing Water Areas<sup>49</sup> including surface waters and groundwater in bathing areas (shown on Figure 4.18).

There are also a number of RPAs in the County designated by virtue of their value to biodiversity – these are addressed under Section 4.6 “Biodiversity and Flora and Fauna”.

#### 4.9.8 Bathing Waters

Bathing locations identified as ‘Bathing Waters’ under the Bathing Water Regulations 2008, as amended, are mapped on Figure 4.18. For bathing waters, Mandatory and Guide Values are set out for bathing waters in the 2006 EU Bathing Water Directive and transposing Regulations. Mandatory Values are values that must be observed if the bathing area is to be deemed compliant with the Directive. Compliance with Guide Values exceeds guidance with Mandatory Values and can be regarded as quality objectives which bathing sites should endeavour to achieve.

Bathing waters are now classified into four quality categories; ‘*excellent*’, ‘*good*’, ‘*sufficient*’, or ‘*poor*’ with a minimum target of ‘*sufficient*’ required to be achieved for all bathing waters.

The most recent available data from the EPA for 2020<sup>50</sup> shows that locations of designated bathing waters adjacent to the north-west of the County are classified as *excellent*<sup>51</sup> (Figure 4.12) at: Mountshannon at Lough Derg (County Clare); Ballycuggeran in Killaloe (County Clare); and Portumna (County Galway).

The Blue Flag award is given to beaches and marinas that have excellent water quality and maintain other standards including effective and appropriate management to ensure the protection of the natural environment and safety standards. Bathing locations at Portumna, Mountshannon and Ballycuggeran adjacent to the north-west of County Tipperary along the Lough Derg were awarded with the Blue Flag in 2021.

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(Drinking Water) (No. 2) Regulations 2007 (SI No. 278/2007).

<sup>49</sup> Bathing Waters are designated under the Bathing Water Quality Regulations 2008 S.I. No. 79 of 2008, as amended.

<sup>50</sup> EPA Report (2021) on *Bathing Water Quality in Ireland for the year 2020*

<sup>51</sup> The highest, cleanest class

<sup>52</sup> Resulting from high intensity rainfall events where run-off volume exceeds capacity of surface water network.

#### 4.9.9 Flooding

Certain areas across the County are at risk from flooding from sources including groundwater, pluvial<sup>52</sup> and fluvial<sup>53</sup>. There is historic evidence of flooding in various locations across the County, including along the rivers Shannon and Suir. Predictive OPW Preliminary Flood Risk Assessment mapping for the County is shown on Figure 4.19<sup>54</sup>, indicating areas likely to be at most risk of flooding.

Locations within and adjacent to the County that were identified by the Office of Public Works (OPW) in 2012 as requiring detailed assessment of flood risk (Areas for Further Assessment) include: Ardfinnan; Ballyporeen; Bansha; Borrisokane; Borrisoleigh; Caher; Carrick-on-Suir; Clonmel; Fethard; Golden; Marfield; Mullinahone; Nenagh; Newcastle; Newport; Roscrea; Templemore; Thurles; and Tipperary Town. Detailed predictive flood risk mapping is now available for these areas.

A Strategic Flood Risk Assessment (SFRA), as required by ‘The Planning System and Flood Risk Management Guidelines for Planning Authorities’ (DEHLG and OPW, 2009), has been undertaken alongside the preparation of the SEA and the preparation of the Plan. This assessment has considered available and emerging information on historical and predictive flood risk indicators.

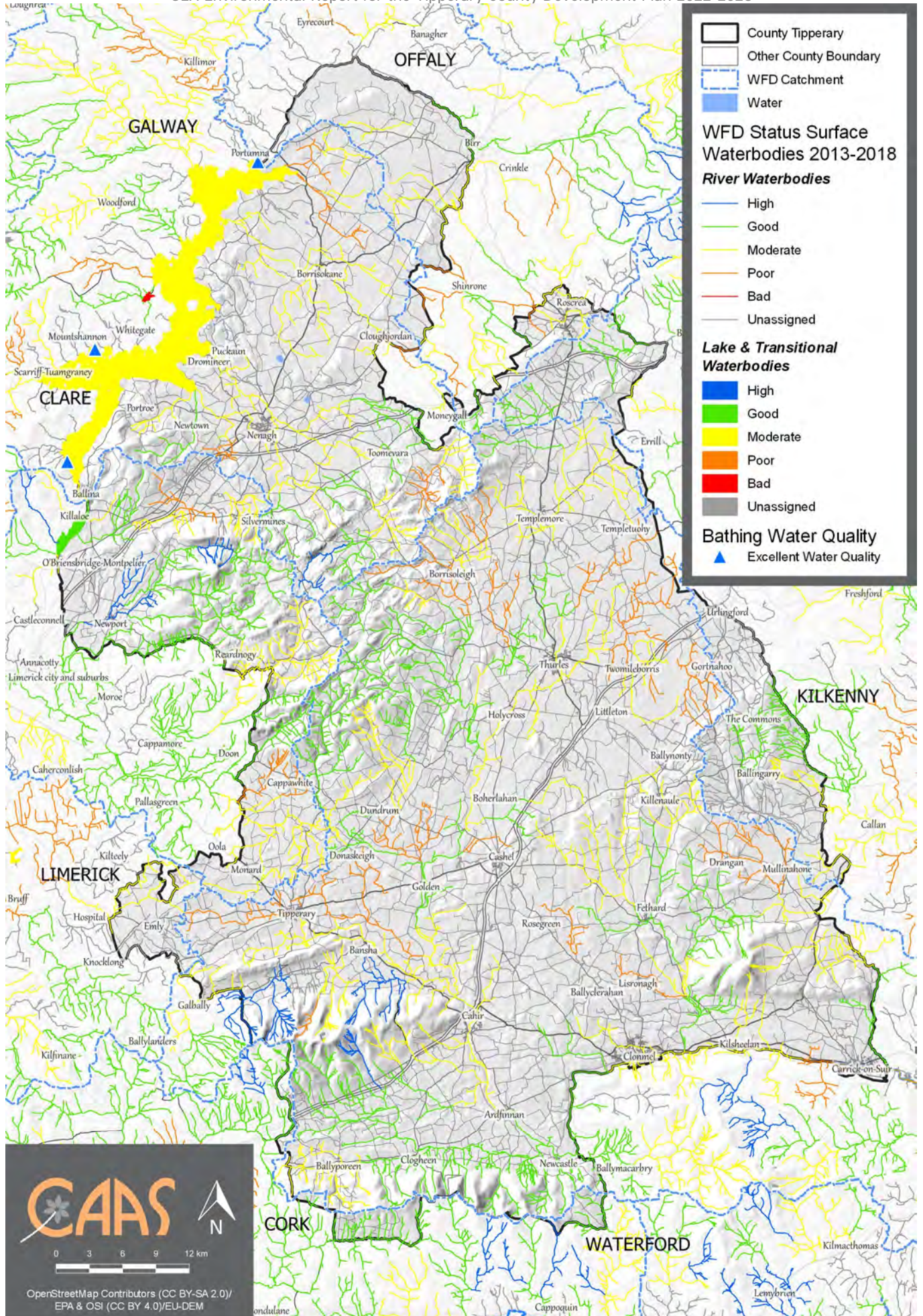
#### 4.9.10 Existing Problems

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

There is historic and predictive evidence of elevated levels of flood risk from fluvial sources at various locations across the County.

<sup>53</sup> Watercourse capacity is exceeded or the channel is blocked and excess water spills from the channel onto adjacent floodplains.

<sup>54</sup> This mapping shows the likelihood of flooding from a number of sources, defined as the percentage probability of a flood occurring in any given year. For example, a 1% Annual Exceedance Probability (AEP) indicates the severity of a flood that is expected to be exceeded on average once in 100 years, i.e. it has a 1 in 100 (1%) chance of occurring in any one year.



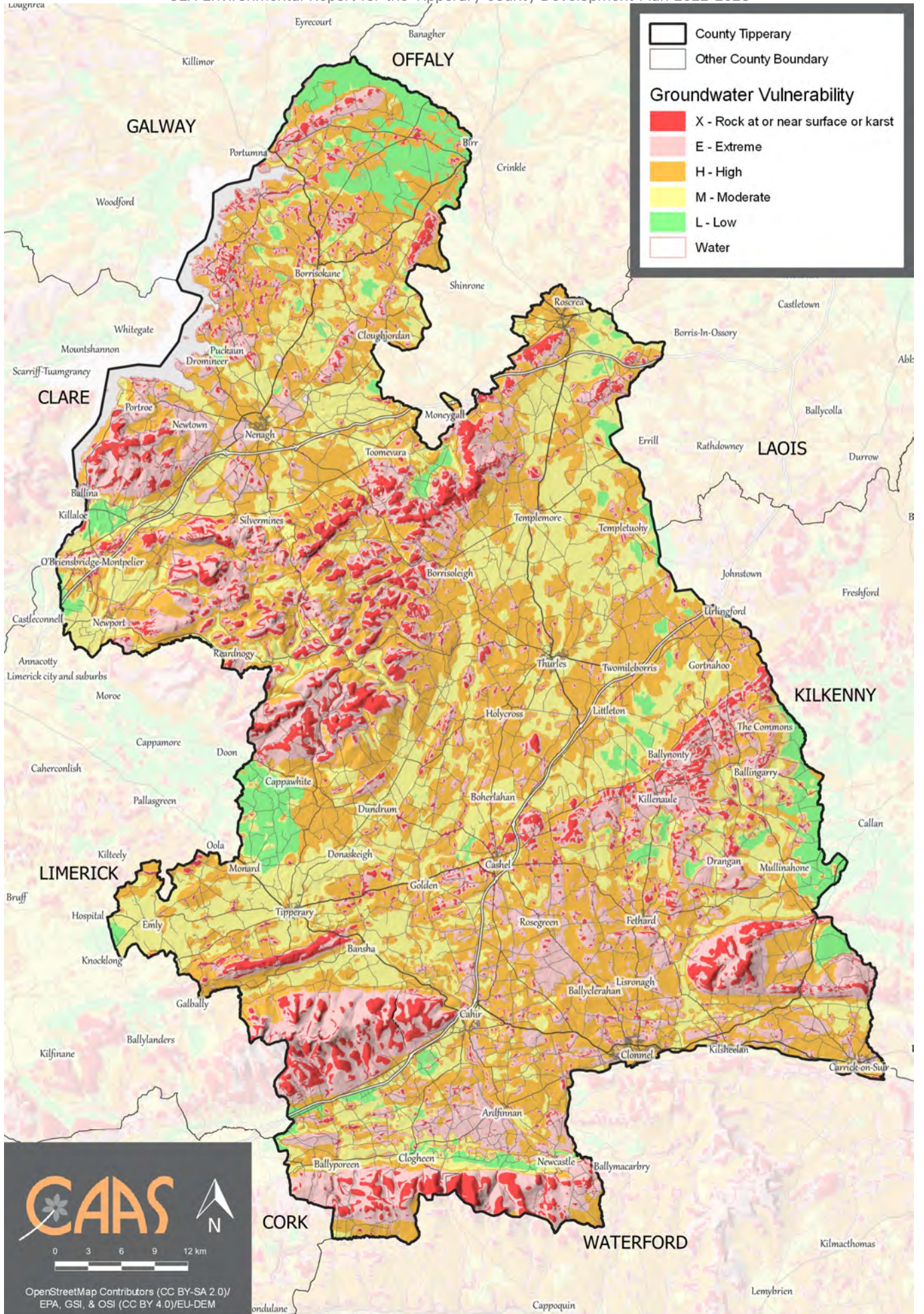
**Figure 4.12 WFD Surface Water Status (2013-2018)**

CAAS for Tipperary County Council



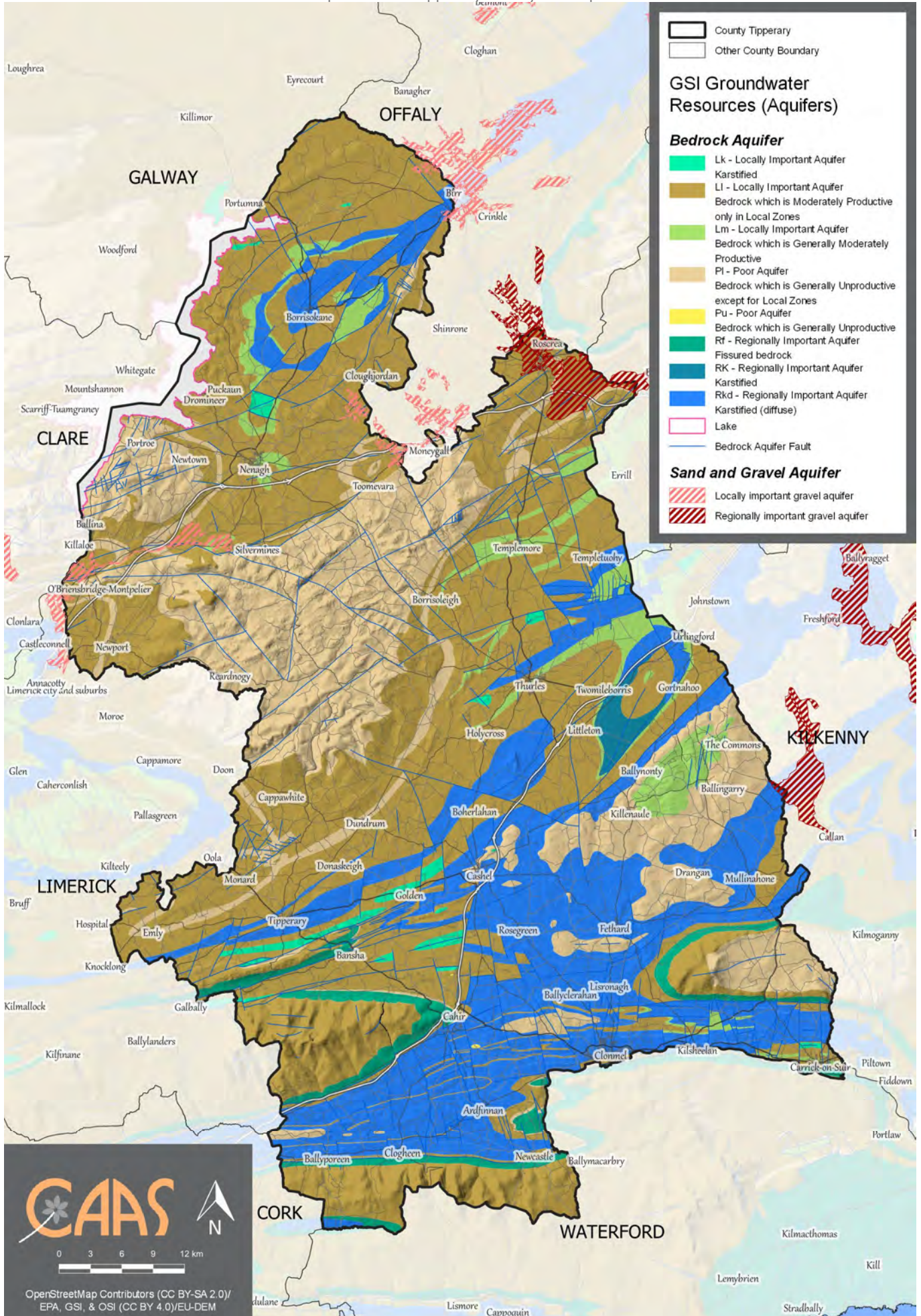
**Figure 4.13 WFD Groundwater Status (2013-2018)**

CAAS for Tipperary County Council



**Figure 4.14 Groundwater Vulnerability (GSI)**

CAAS for Tipperary County Council



**Figure 4.15 Groundwater Productivity (GSI)**

CAAS for Tipperary County Council

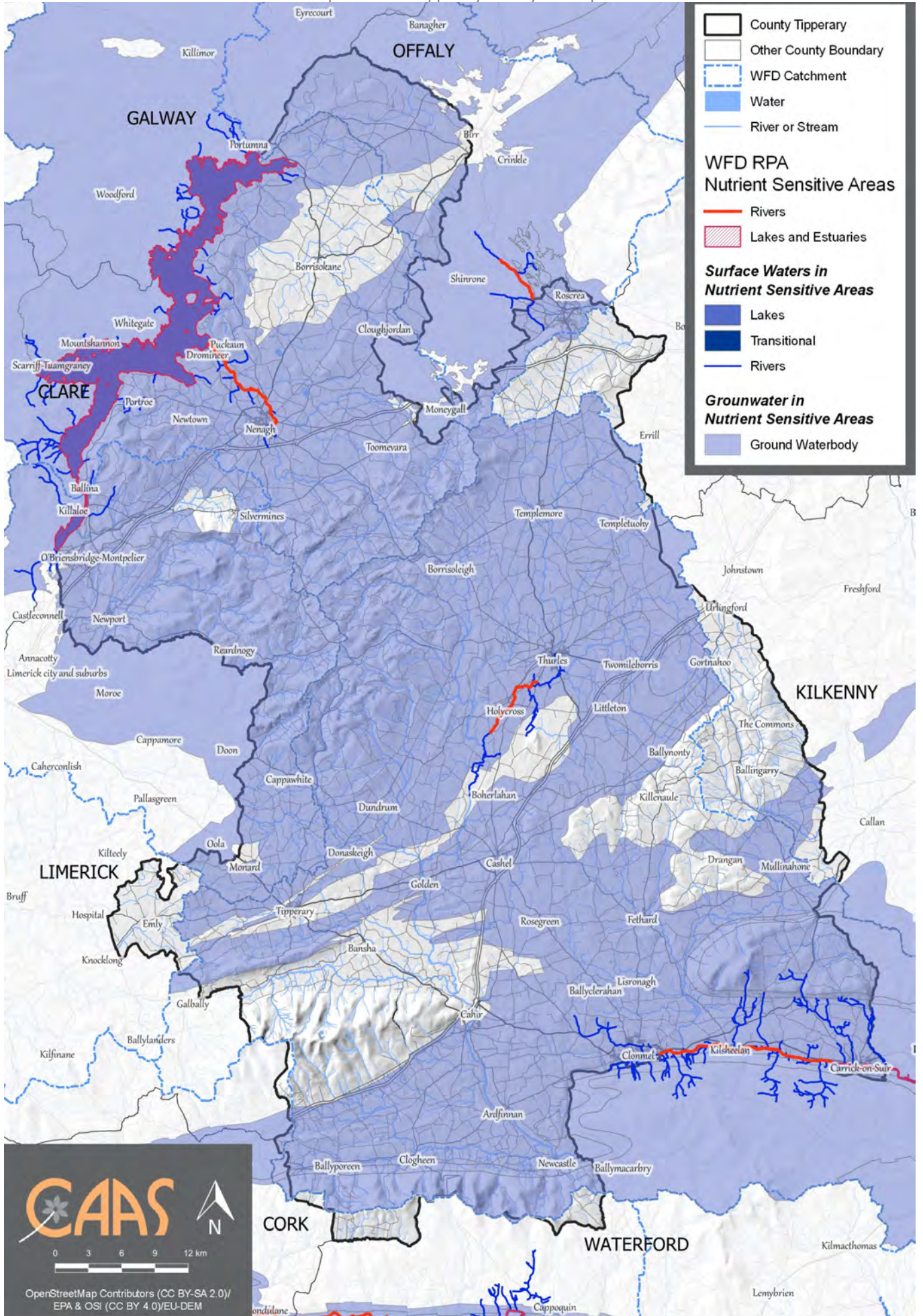
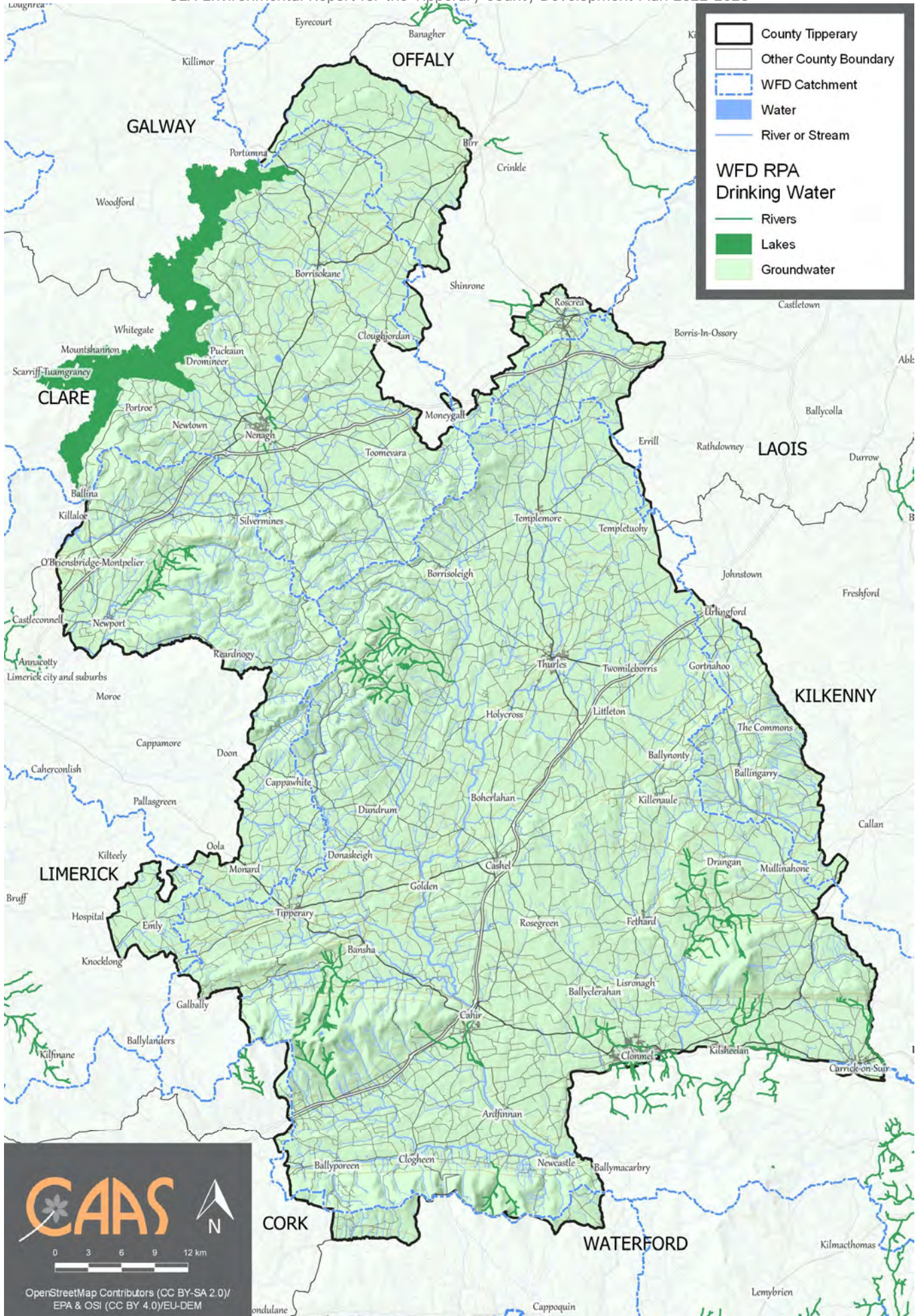


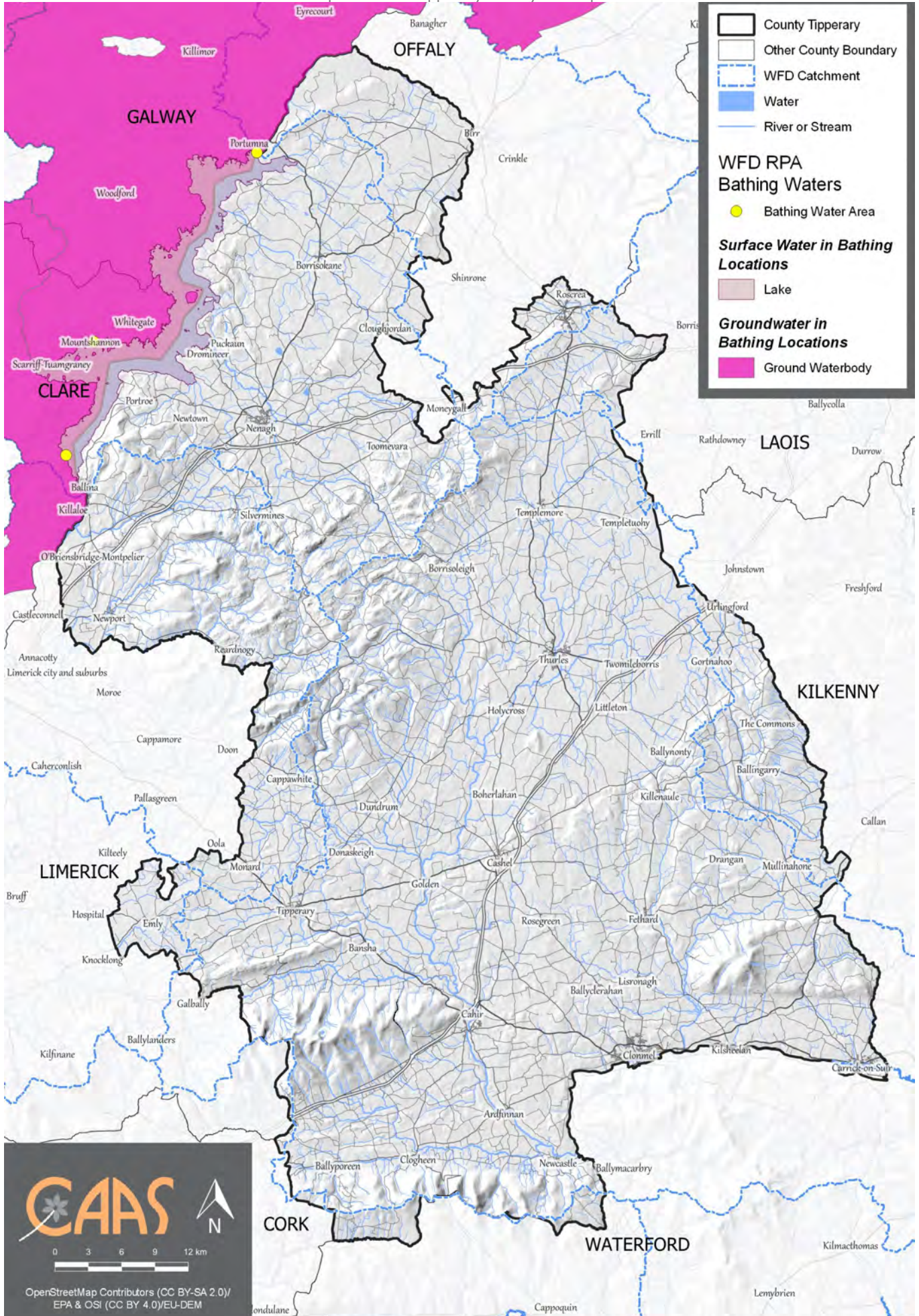
Figure 4.16 WFD Register of Protected Areas: Nutrient Sensitive Areas

CAAS for Tipperary County Council



**Figure 4.17 WFD Register of Protected Areas: Drinking Water**

CAAS for Tipperary County Council



**Figure 4.18 WFD Register of Protected Areas: Bathing Waters**



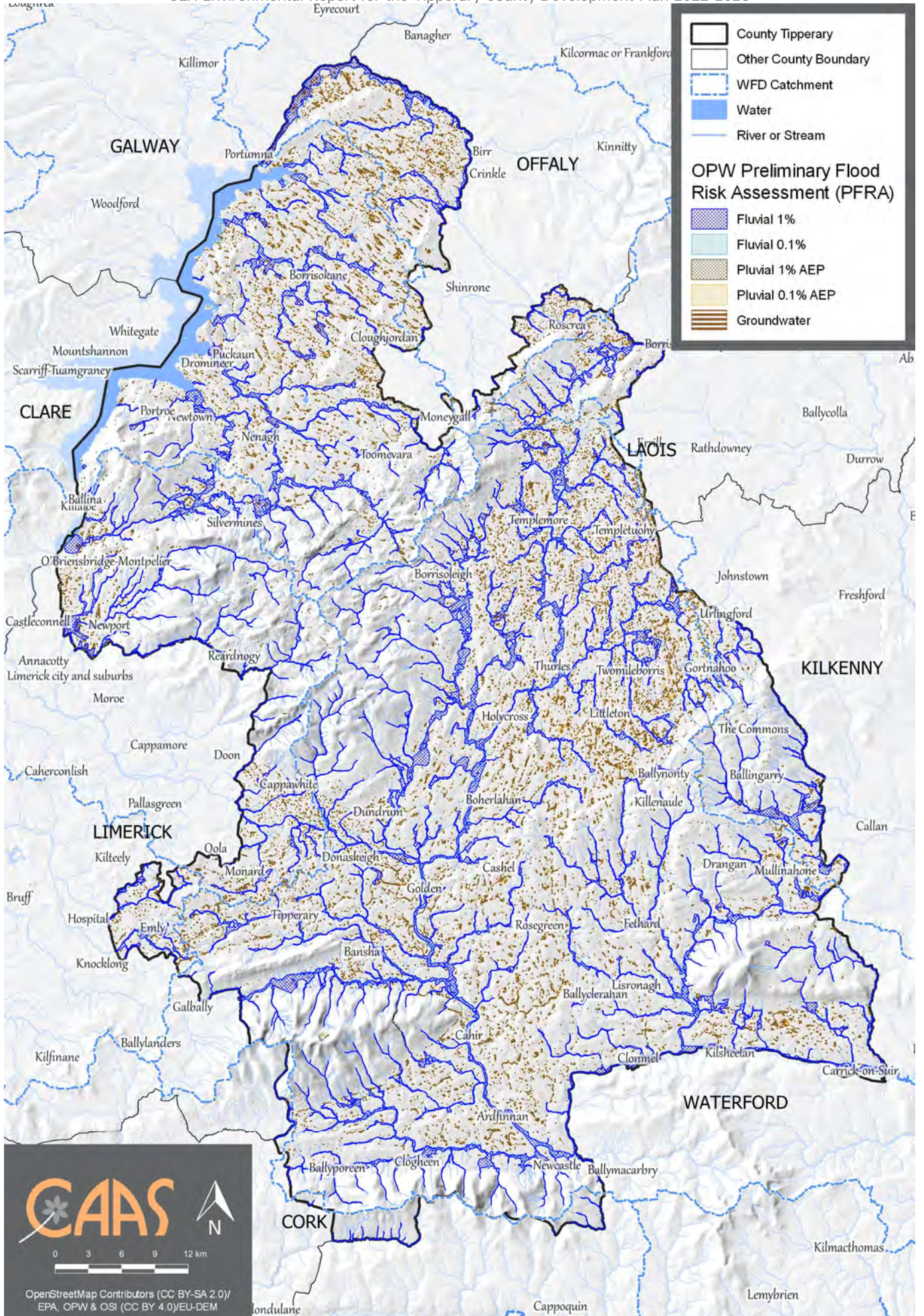


Figure 4.19 OPW Preliminary Flood Risk Assessment (PFRA) Mapping  
CAAS for Tipperary County Council

## 4.10 Air and Climatic Factors

### 4.10.1 Introduction

Total emissions of greenhouse gases by humans come from various sectors including transport, agriculture, energy industries, manufacturing combustion, industrial processes, residential developments, commercial services developments, waste management processes and fluorinated gases equipment (such as refrigeration and fire protection systems).

Ireland's Provisional Greenhouse Gas Emissions 1990-2017 (EPA, 2018) details provisional estimates of greenhouse gas emissions for the period 1990-2017. For 2017, total national greenhouse gas emissions are estimated to be 60.75 million tonnes carbon dioxide equivalent (Mt CO<sub>2</sub>eq). This is 0.9% lower (0.53 Mt CO<sub>2</sub>eq) than emissions in 2016.

The report on *Ireland's Final Greenhouse Gas Emissions 1990-2017* (EPA, 2019) identifies that:

- For 2017, the total national GHG emissions are estimated to be 60.74 million tonnes carbon dioxide equivalent (Mt CO<sub>2</sub>eq), 0.9% lower than 2016.
- In the last 3 years, national total emissions have increased by 6.4%. In the same period, emissions in the ETS<sup>55</sup> sector have increased by 5.9%.
- Agriculture emissions increased by 2.9% in 2017 (driven by higher dairy cow numbers and increases in milk production).
- GHG emissions from the Transport sector decreased by 2.4% in 2017. This is the first year of decreased emissions after four successive years of increases in transport emissions.
- Agriculture and Transport accounted for 73.5% of total ESD emissions in 2017.
- Emissions in the Energy Industries sector show a decrease of 6.9% which is attributable to a 5.9% decrease in fossil fuel consumption and an increase of 21.1% and 1.6% in electricity generated from wind and hydro, respectively, in 2017. Renewables now account for 30.1% of electricity generated in 2017, an increase of 3.3% from 2016 figures. Ireland continued to be a net exporter of electricity in 2017. However, exported electricity saw a 4.7% reduction in 2017 to previous 2016 figures.

- Emissions from the Manufacturing Combustion<sup>56</sup> sector increased by 3.1% in 2017.
- The Industrial Processes sector emissions increased by 4.1%, mainly from increased cement production. Cement process emissions increased by 2.6% in 2017.
- GHG emissions from the Residential sector decreased by 5.0%. This can be attributed to a milder winter.
- Emissions from the Waste sector decreased by 2.5% in 2017.

The EPA 2019 publication *Ireland's Greenhouse Gas Emission Projections 2018-2040* provides an assessment of Ireland's total projected greenhouse gas emissions out to 2040 which includes an assessment of progress towards achieving its emission reduction targets out to 2020 and 2030 set under the EU Effort Sharing Decision and Effort Sharing Regulation (Regulation (EU) 2018/842). Ireland's 2020 target is to achieve a 20% reduction of non-Emission Trading Scheme (non-ETS) sector emissions (i.e. agriculture, transport, the built environment, waste and non-energy intensive industry) on 2005 levels with annual limits set for each year over the period 2013-2020. Ireland's 2030 target under the Effort Sharing Regulation is a 30% reduction of emissions compared to 2005 levels by 2030. There will be binding annual limits over the 2021-2030 period to meet that target. Key insights identified as part of the report's package of documents are that:

- There is a long-term projected decrease in greenhouse gas emissions as a result of inclusion of new climate mitigation policies and measures that formed part of the 2018-2027 National Development Plan (updated in 2021). This is evident in the With Additional Measures scenario which assumes full implementation of the programmes, policies and measures included in the 2018 National Development Plan.
- Fossil fuels such as coal, peat and gas continue to be key contributors to emissions from the power generation sector. However, a significant reduction in emissions over the longer term is projected as a result of the expansion of renewables (e.g. wind), assumed to reach 41-54% by 2030, with a move away from coal and peat.
- A growth in emissions from the transport sector continues to be projected which is largely attributed to fuel consumption from diesel cars and diesel freight. A decrease in emissions over the longer term, most notably in the With Additional Measures scenario, is largely attributed to assumed accelerated deployment of

<sup>55</sup> The EU emissions trading system (EU ETS) was launched in 2005 as the world's first international company-level 'cap-and-trade' system for reducing emissions of greenhouse gases cost-effectively. The cap makes sure that CO<sub>2</sub> becomes a product and, thus, CO<sub>2</sub> is valued at a price,

which is determined by the supply and demand at the (trading) market.

<sup>56</sup> Manufacturing Combustion; includes combustion of fuels in Industry and Construction, both in ETS and non-ETS

500,000 electric vehicles and the impact of greater biofuel uptake.

Agriculture emissions are projected to continue to grow steadily over the period which is mainly a result of an increase in animal numbers particularly for the dairy herd.

- The implementation of additional energy efficiency measures included in the 2018 National Development Plan will see a significant reduction in emissions in the residential, commercial/public services and manufacturing sectors over the projected period.

#### 4.10.2 Climate Action

The National Climate Action Plan 2021 is an all of Government plan to tackle climate change and bring about a step change in Ireland's climate ambition over the coming years. The Action Plan sets out an ambitious course of action over the coming years to address the diverse and wide-ranging impacts climate disruption is having on Ireland's environment, society, economic and natural resources. The Climate Action Plan sets out clear 2030 targets for each sector with the ultimate objective of achieving a transition to a competitive, low-carbon, climate-resilient, and environmentally sustainable society and economy by 2050. The Action Plan deals with both mitigation and adaptation.

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

The use of alternative fuels, including electricity, forms a significant part of government policy to reduce emissions, including from transport. Greater use of alternative fuels, including renewable energy, has the potential to further contribute towards energy security.

The 2019 emission projections do not consider the impact of new policies and measures that are included in the Action Plan. It is anticipated that future emission projections will include the additional impact of the Government Climate Plan.

The Climate Change Advisory Council's Annual Review 2020 identifies that the most recent projections demonstrate that, under different assumptions, Ireland will not meet its emissions reduction targets, even with the additional policies and measures included in the National

Development Plan. The projections also show that progress on reducing emissions is sensitive to the future path of fuel prices. A significant and sustained rate of emissions reduction of approximately -2.5% per year is required to meet our objectives for 2050. However, it must be noted that additional measures within the recent Climate Action Plan are not included in the analysis to date.

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

The National Adaptation Framework (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, a number of Government Departments will be required to prepare sectoral adaptation plans in relation to a priority area that they are responsible for.

The Tipperary County Council Climate Change Adaptation Strategy 2019-2024 seeks to:

- Ensure a proper understanding of the key risks and vulnerabilities of climate change;
- Advance the implementation of climate resilient actions in a planned and proactive manner;
- Ensure that climate adaptation considerations are mainstreamed into all plans and policies; and
- integrated into all operations and functions of the local authority.

#### 4.10.3 Ambient Air Quality

In order to protect human health, vegetation and ecosystems, EU Directives set down air quality standards in Ireland and the other Member States for a wide variety of pollutants. These pollutants are generated through fuel combustion, in space heating, traffic, electricity generation and industry and, in sufficient amounts, could affect the well-being of the areas inhabitants. The EU Directives include details regarding how ambient air quality should be monitored, assessed and managed.

The principles to this European approach are set out in the Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive (2008/50/EC) (which replaces the earlier Air Quality

Framework Directive 1996 and the first, second and third *Daughter Directives*; the fourth *Daughter Directive* will be included in CAFE at a later stage).

In order to comply with the directives mentioned above, the EPA measures the levels of a number of atmospheric pollutants. For the purposes of monitoring in Ireland, four zones are defined in the Air Quality Standards Regulations 2002 (S.I. No. 271 of 2002).

The EPA's (2020) *Air Quality in Ireland 2019* identifies that:

- Air quality in Ireland is generally good however there are localised issues;
- Nitrogen dioxide (NO<sub>2</sub>) from transport emissions is polluting urban areas; and
- Ireland was above World Health Organization air quality guideline value levels at 33 monitoring sites – mostly due to the burning of solid fuel within settlements across the country.

Problem pollutants identified by the EPA include particulate matter from burning of solid fuel and nitrogen dioxide from transport emissions in urban areas. Indications that Ireland will exceed EU limit values for nitrogen dioxide in the near future.

With regards to solutions, the report identifies that:

- To tackle the problem of particulate matter, clean ways of heating homes and improve energy efficiency of homes can be progressed; and
- To reduce the impact of nitrogen dioxide, transport options in the Government's Climate Action Plan can be implemented and transport choices can be considered by individuals.

In order to apply with European Directives relating to air quality, the EPA manages the National Ambient Air Quality Network and measures the levels of a number of atmospheric pollutants at locations across the country. The current<sup>57</sup> air quality within the County is identified by the EPA as being *good*.

#### 4.10.4 Noise

Tipperary County Council has prepared a Noise Action Plan 2018-2023 in accordance with the requirements of the Environmental Noise Regulations 2006. The purpose of the Noise Action Plan is to avoid, prevent and reduce, on a prioritised basis the harmful effects, including

annoyance due to the long-term exposure to environmental noise.

#### 4.10.5 Existing Problems

Legislative objectives governing air and climatic factors in County Tipperary were not identified as being conflicted with.

### 4.11 Material Assets

Other material assets, in addition to those detailed below, covered by the SEA include archaeological and architectural heritage (see Section 4.12) natural resources of economic value, such as water and air (see Sections 4.9 and 4.10).

#### 4.11.1 Public Assets and Infrastructure

Public assets and infrastructure that have the potential to be impacted upon by the Plan, if unmitigated, include; settlements; resources such as public open spaces, parks and recreational areas; public buildings and services; transport and utility infrastructure (electricity, gas, telecommunications, water supply, wastewater infrastructure etc.); forestry; and natural resources that are covered under other topics such as water and soil.

#### 4.11.2 Green Infrastructure

Parks and open space promote health and well-being, provide recreational facilities and range of habitats for various species. Green infrastructure is also a crucial component in building resilient communities capable of adapting to the consequences of climate change with trees, woodlands and wetlands providing carbon capture and slowing water flows while improving air quality.

#### 4.11.3 Land

The Plan seeks to assist with the reuse and regeneration of brownfield sites thereby contributing towards sustainable mobility and reducing the need to develop greenfield lands and associated potential adverse environmental effects. Brownfield lands are generally located within urban/suburban areas.

<sup>57</sup> 26/05/2021 (<http://www.epa.ie/air/quality/>)

#### 4.11.4 Forestry

Tipperary has a total forest area of around 11% of the land area of the County<sup>58</sup>, much of which is owned by Coillte<sup>59</sup>. Coillte forests within the County include Gortavoher/Glen of Aherlow, Greenfield, Knockanree Woods, and Step/Knockanroe. Woodlands provide recreational opportunities in addition to their heritage and economic benefits. They are a valuable resource in terms of biodiversity, recreation and tourism, and also important as links in the county's green infrastructure network. Forestry across the County is indicated on Figure 4.4.

#### 4.11.5 Peatlands

Peatlands provide a valuable natural and archaeological resource. Peatlands are also important controllers of water levels in river catchments, providing a source of water in dry conditions and soaking up excess water during wetter periods; they actively capture and hold carbon and are an important natural resource in combatting climate change. Cutaway bogs have the potential to facilitate land uses such as employment, renewable energy generation, waste management, industrial, and tourism and recreation. Peat soils are often indicative of areas that are the most sensitive to development due to ecological sensitivities and impeded drainage issues; various peatland areas are subject to ecological designations (see Section 4.6).

#### 4.11.6 Renewable Energy Potential

Under EU Directive 2001/77/EC Renewable Energy, renewable energy sources are defined as renewable non-fossil energy sources such as, but not limited to wind, solar, geothermal, wave, tidal, hydropower, biomass, landfill gas, sewage treatment plant gas, bio-gases and bio-char (i.e. the thermal treatment of natural organic materials in an oxygen-limited environment).

Tipperary Renewable Energy Strategy included within the Plan is the foundation of the renewable energy planning policy for the County and will be maintained and updated over time lifetime of the Plan.

<sup>58</sup> National Forestry Inventory, 2017.

<sup>59</sup> Coillte Teoranta, the State Forestry Board, was established to manage the public forest built up since the

#### 4.11.7 Minerals and Aggregates

Minerals such as iron and copper and aggregates such as sand and gravel can occur throughout the country. Minerals and aggregates are essential to manufacturing and construction.

Minerals localities within County Tipperary are shown on Figure 4.20. The GSI have a suite of data sources available that would be useful in planning and assessing individual projects with regard to the environmental topic(s) of soil and/or material assets. These include:

- Aggregate Potential Mapping;
- Bedrock mapping;
- GeoUrban Bedrock;
- Quaternary and Physiographic mapping;
- 3D Quaternary Models;
- National Aquifer and Recharge mapping; and
- Geochemistry and Geophysical datasets.

#### 4.11.8 Transport

Transport infrastructure in the County has the potential to support reductions in energy demand from the transport sector, including through electrification of modes.

The County is well served by public transport and road links. The M7/M8 motorways and a network of national routes traverse the County. Irish Rail operate along three interregional rail lines: Waterford – Limerick, Limerick – Ballybrophy and Dublin - Cork.

There are a number of public and private bus operators linking settlements within the County. This includes NTA's Local Link Rural Transport programme, providing sustainable transport links for those living in rural communities within the County. In addition, Bus Éireann and private operators service the number of long distance routes to and from the County several times daily.

There are a number of airports located adjacent to the County, including: Cork Airport to the south and Shannon Airport to the west. In addition Port of Waterford is located adjacent to the east of the County.

commencement of State planting and is the largest provider of forest recreation in Ireland.

## 4.11.9 Water Services

improvements are required to resolve urgent environmental issues with respect to wastewater treatment.

### 4.11.9.1 Wastewater

From January 2014, Irish Water became responsible for all public water services, involving the supply of drinking water and the collection, treatment and disposal of wastewater. Irish Water is also responsible for the treatment and disposal of the sludge that is generated from both its water and wastewater treatment plants. The Council is an agent of Irish Water for operations and remains the designated Water Authority for the assessment and approval of on-site wastewater treatment systems and is responsible for surface water drainage in the County.

The County is served by 90 Wastewater Treatment Plants (WWTPs)<sup>60</sup>. In unserved areas and outside the main settlements, the main method of sewage disposal is by individual septic tanks and other types of wastewater treatment.

The provision of well-maintained quality wastewater treatment infrastructure is essential to facilitate sustainable development of the County in line with the Settlement and Core Strategy while also protecting the environment and public health. Irish Water is now responsible for the collection, treatment and disposal of wastewater where public wastewater facilities exist in towns and villages. In unserved areas and outside the main towns and villages, the main method of sewage disposal is by means of individual septic tanks and proprietary wastewater treatment systems.

Irish Water has provided information on wastewater treatment capacity, constraints and projects planned within the County to improve the existing network, to assist the Council in the preparation of the new County Development Plan (shown on Table 4.2). This information indicates where there may be wastewater treatment capacity available to accommodate growth ("headroom") in terms of population equivalent<sup>61</sup> (PE) in areas serviced by a public wastewater treatment plant. Spare treatment capacity is identified as being available in all of these settlements, except for: Ballina and Killaloe, Newport, Fethard, Cloughjordan, Golden, Lisvarrinane, Newcastle and Silvermines. The highest levels of headroom (PE) are available at Clonmel WWTP (51,026 PE), Thurles WWTP (4,811 PE) and Carrick-On-Suir WWTP (3,803 PE) and Templemore (3,530 PE).

The EPA's 2020 report '*Urban Wastewater Treatment in 2019*' identified that:

Table 4.3 provides information on wastewater treatment plant performance sourced from the EPA's 2019 Annual Environmental Reports (AERs). These 'Wastewater Agglomerations' are subject to Wastewater Discharge Licences issued by the Environmental Protection Agency. WWTPs non-compliant with the Emission Limit Values (ELVs) set in the Discharge Licences include:

- Wastewater treatment at 19 towns and cities did not meet European standards for the treatment of urban wastewater in 2018;
- Raw sewage is released into the environment from 35 urban areas;
- Wastewater from 48 areas (including **Mullinahone**) is the main significant pressure on waters at risk of pollution;
- Wastewater contributed to poor quality bathing waters at three beaches in 2019;
- Discharges from 13 areas must improve to protect freshwater pearl mussels;
- Irish Water must complete assessments of the impacts of wastewater discharges on 26 shellfish waters to inform the need for any improvements; and
- Seven wastewater collection systems have been found non-compliant with European Union requirements.
- There is one urban area in County Tipperary that is listed as Priority Areas (**Mullinahone**), where

- Newport WWTP (D0325-01);
- Borrisokane WWTP (D0326-01);
- Cloughjordan WWTP (D0475-01);
- Mullinahone WWTP (D0456-01)
- Thurles WWTP (D0026-01);
- Cahir WWTP (D0167-01);
- Cappawhite WWTP (D0440-01);
- Clogheen WWTP (D0453-01); and
- Limerick Junction WWTP (D0457-01).

Tipperary County Council will work alongside and facilitate the delivery of Irish Water's Water

<sup>60</sup> Irish Water (2020)

<sup>61</sup> WWTPs are described in terms of their designed treatment capacity, which is generally expressed as population equivalent (PE). This is a measurement of total organic biodegradable load, including industrial, institutional, commercial and domestic organic load, on a

wastewater treatment plant, converted to the equivalent number of PEs. One person is considered to generate 60g of five-day Biochemical Oxygen Demand (BOD) per day. 1 PE is defined as being equivalent to 60g of BOD per day.

Investment Plan to support and facilitate the delivery of new or improved wastewater treatment plants in the County.

Irish Water is responsible for the treatment and disposal of the sludge that is generated from both its water and wastewater treatment plants. Irish Water has prepared a National Wastewater Sludge Management Plan 2016-2021 that outlines Irish Water's strategy to ensure a nationwide standardised approach for managing wastewater sludge over a 25-year period. A separate plan will be prepared in relation to sludge produced at drinking water plants.

#### 4.11.9.2 Water Supply

Irish Water is responsible for providing and maintaining adequate public water supply infrastructure throughout the County.

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).

The EPA publishes their results in annual reports that are supported by Remedial Action Lists (RALs). The RAL identifies water supplies that are not in compliance with the Regulations mentioned above. The most recent available RAL (Q1 of 2021) identifies three County Tipperary drinking water supplies:

- **The Borriskane Water Supply** is listed on the most recent EPA RAL due to inadequate treatment for cryptosporidium. This Water Supply Scheme has a supply volume of 670 m<sup>3</sup>/day, serving a population of 1,752 people. The proposed plan of action to remedy this issue is an installation of UV disinfection;
- **The Clonmel Poulavanogue Water Supply** is listed on the most recent EPA RAL due to inadequate treatment for cryptosporidium. This Water Supply Scheme has a supply volume of 1,840 m<sup>3</sup>/day, serving a population of 2,596 people. The proposed plan of action to remedy this issue is to be submitted by Irish Water; and
- **The Galtee Regional Water Supply** is listed on the most recent EPA RAL due to excessive levels of aluminium in the treated water, poor turbidity removal and EPA audit observation - treatment and management issues. This Water Supply Scheme has a supply volume of 8,095 m<sup>3</sup>/day, serving a population of 11,436 people. The proposed plan of action to remedy this issue is an upgrade of coagulation control at water treatment plant by June 2021.

Currently, Irish Water is developing the National Water Resource Plan outlining how to move to a sustainable, secure and reliable public drinking water supply over a 25-year period while safeguarding the environment. It will outline how Irish Water intends to maintain a balance between supply from water sources around the country and demand for drinking water over the short, medium and long term. This will facilitate future planning and ensure provision of sufficient, safe, clean drinking water to facilitate the social and economic growth of the County.

It is the policy of the Council to work in conjunction with Irish Water to protect existing water infrastructure, to maximise the potential of existing capacity and to facilitate the timely delivery of new wastewater services infrastructure to facilitate future growth.

#### 4.11.9.3 Surface Water Drainage

Sustainable Urban Drainage systems (SUDS) can minimise the quantity and increase the quality of surface water runoff as well as mitigating adverse impacts of climate change. SUDS can also provide amenity and biodiversity benefits. The Council seeks to ensure the sustainable management of surface water discharges in urban areas through the use of SUDS.

### 4.11.10 Waste Management

The Southern Waste Region comprises ten local authority areas of: Limerick; Tipperary; Wexford; Carlow; Kilkenny; Waterford; Cork City; Cork County; Kerry; and Clare.

The Southern Waste Management Plan 2015-2021 provides the framework for solid waste management in the region and sets out a range of policies and actions to meet specified mandatory and performance-based targets. It is underpinned by National and European waste legislation and the work carried out will ensure the continued management of waste in a safe and sustainable manner. The plan includes eight Strategic Objectives and three overarching targets:

- 1% reduction per annum in the quality of household waste generated per capita over the period of the Plan;
- Achieve a recycling rate of 50% of managed municipal waste by 2020; and
- Reduce to 0% the direct disposal of unprocessed municipal waste to landfill (from 2016 onwards) in favour of higher value pre-treatment processes and indigenous recovery practices.

The Southern Waste Management Plan states that the future role of local authorities in waste management will be focused on education, prevention, and resource efficiency activities as well as regulating householders, businesses and waste operators and enforcing waste legislation. Waste infrastructure provided by local authorities will mainly include bring banks and civic amenities.

#### **4.11.11 Existing Problems**

There are a number of challenges with respect to the provision of water services infrastructure that are described under Section 4.11 above.

The Water Services Section of Tipperary County Council will co-operate with Irish Water in providing and maintaining adequate public water supply and wastewater collection and treatment infrastructure throughout the County for the period of the plan and beyond. In conjunction with Irish Water, the Water Services Section of Tipperary County Council will endeavour to ensure the continued investment in and delivery of improvements to water infrastructure over the Plan period through the implementation of the Capital Investment Plan.

The provisions of the new County Development Plan will contribute towards protection of the environment with regard to impacts arising from material assets.



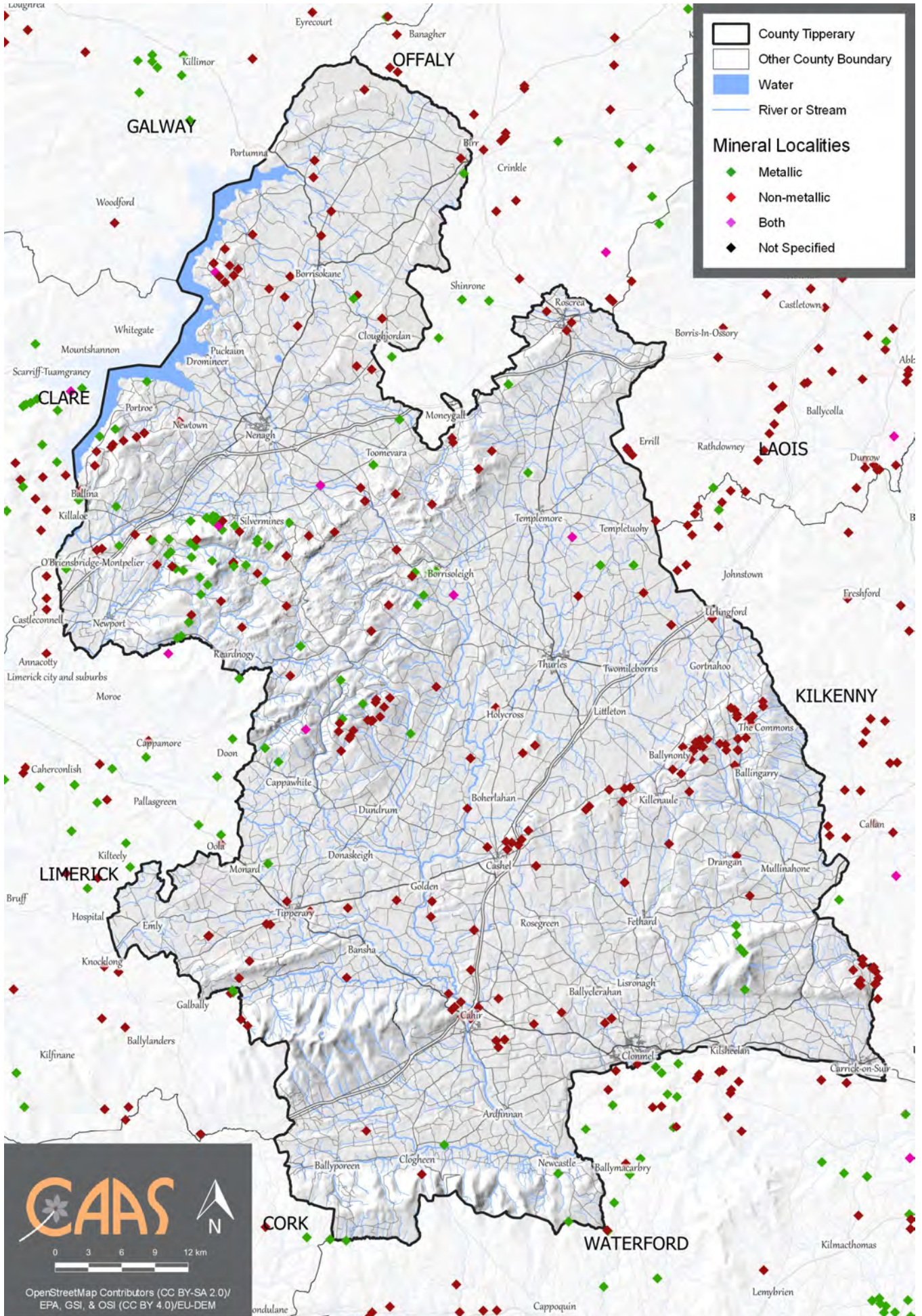


Figure 4.20 Minerals Localities

**Table 4.2 Wastewater Constraints in County Tipperary (Irish Water, April 2020)**

Region	Settlement	Census pop. (2016)	WWTP	Reg #	Serves other areas?	WWTP Capacity (PE)		Load (PE) 2019	Headroom (PE)			Current project completion year
						Today	Upon works Completion		WWDL Capability	ELV	UWW Standards Capability (not WWDL ELVs)	
S	Clonmel	17,140	Clonmel WWTP	D0035	No	80,000	=	28,974	51,026			
S	Nenagh	8,968	Nenagh New WWTP	D0027	No	15,300	19,800	12,773	0	2,527		2024
S	Thurles	7,940	Thurles WWTP	D0026	No	15,000	=	10,189	4,811			
S	Carrick-on-Suir	5,771	Carrick-On-Suir WWTP	D0148	No	11,000	=	7,197	3,803			
S	Roscrea	5,446	Roscrea WWTP	D0025	No	26,000	=	6,703	0	19,297		
S	Tipperary	4,979	Tipperary Town WWTP	D0146	No	9,800	8,000	6,800	0	3,000		2024
S	Cashel	4,422	Cashel WWTP	D0171	No	7,000	7,900	5,004	0	1,996		Post 2024
S	Ballina and Killaloe	4,116	Ballina (North Tipperary) WWTP	D0189	Yes	4,500	8,000	5,243				2024
S	Cahir	3,593	Cahir WWTP	D0167	No	5,000	5,500	4,483	517			2024
S	Newport	1,995	Newport (North Tipperary) WWTP	D0325	No	1,900	3,600	2,472				2024
S	Templemore	1,939	Templemore WWTP	D0190	No	6,000	=	2,470	3,530			
S	Fethard	1,545	Fethard WWTP	D0164	No	3,000	4,100	3,482				2024
S	Borrisokane	942	Borrisokane WWTP	D0326	No	1,500	=	1,343	157			
S	Ardfinnan	899	Ardfinnan WWTP	D0311	No	1,100	=	933	167			
S	Ballyclerahan	862	Ballyclerahan WWTP	D0455	No	2,000	=	1,016	984			
S	Kilsheelan	812	Kilsheelan WWTP	D0452	No	1,000	=	975	25			
S	Holycross	715	Holycross WWTP	D0478	No	600	=	556	44			
S	Borrisoleigh	679	Borrisoleigh WWTP	D0323	No	1,550	=	900	650			
S	Killenaule	652	Killenaule WWTP	D0443	No	1,200	=	892	308			
S	Cloughjordan	612	Cloughjordan WWTP	D0475	No	650	=	659				
S	Twomileborris	572	Twomileborris WWTP	D0474	No	800	=	585	215			
S	Mullinahone	499	Mullinahone WWTP	D0456	No	500	900	498	0	402		2021
S	Clogheen	478	Clogheen WWTP	D0453	No	1,000	=	484	516			
S	Littleton	394	Littleton WWTP	D0480	No	1,000	=	434	566			
S	Cappawhite	343	Cappawhite WWTP	D0440	No	1,750	=	451	1,299			
S	Limerick Junction	No data	Limerick Junction WWTP	D0457	No	500	=	178	322			
S	Aglis	Unavailable	Aglis WWTP	A0192	No	24	=	9	15			
S	Annacathy	Unavailable	Annacathy WWTP	A0510	No	120	=	31	89			
S	Ardcroney	Unavailable	Ardcroney WWTP	A0184	No	84	=	23	61			
S	Ballinaclogh	Unavailable	Ballinaclogh WWTP	A0179	No	30	=	13	17			
S	Ballingarry	269	Ballingarry (TN) WWTP	A0183	No	50	=	35	15			
S	Ballingarry	Unavailable	Ballingarry (TS) WWTP	A0407	No	400	=	298	102			
S	Ballylooby	Unavailable	Ballylooby WWTP	A0426	No	36	=	24	12			
S	Ballyneill	Unavailable	Ballyneill WWTP	A0504	No	17	=	15	2			
S	Ballynonty	152	Ballynonty WWTP	A0430	No	323	=	154	169			
S	Ballyporeen	318	Ballyporeen WWTP	A0497	No	1,000	=	332	668			
S	Ballysloe	Unavailable	Ballysloe WWTP	A0512	No	48	=	21	27			
S	Bansha	333	Bansha WWTP	A0428	No	500	=	357	143			
S	Boherlahan	Unavailable	Boherlahan WWTP	A0429	No	400	=	322	78			
S	Bouladuff	Unavailable	Bouladuff WWTP	A0202	No	50	=	41	9			
S	Burncourt	Unavailable	Burncourt WWTP	A0408	No	280	=	162	118			
S	Clonakenny	Unavailable	Clonakenny WWTP	A0185	No	50	=	22	28			
S	Clonee	Unavailable	Clonee WWTP	A0507	No	50	=	45	5			
S	Clonmore	Unavailable	Clonmore WWTP	A0193	No	300	=	126	174			
S	Clonoulty	Unavailable	Clonoulty WWTP	A0415	No	444	=	146	298			
S	Coalbrook	Unavailable	Coalbrook WWTP	A0513	No	24	=	15	9			
S	Commons	Unavailable	Commons WWTP	A0427	No	456	=	140	316			
S	Cullen	Unavailable	Cullen WWTP	A0417	No	300	=	73	227			
S	Donohill	Unavailable	Donohill WWTP	A0514	No	72	=	21	51			
S	Drangan	145	Drangan WWTP	A0412	No	456	=	166	290			
S	Drom	Unavailable	Drom WWTP	A0190	No	20	=	9	11			

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Region	Settlement	Census pop. (2016)	WWTP	Reg #	Serves other areas?	WWTP Capacity (PE)		Load (PE) 2019	Headroom (PE)			Current project completion year
						Today	Upon works Completion		WWDL Capability	ELV	UWW Standards Capability (not WWDL ELVs)	
S	Dromineer	102	Dromineer WWTP	A0186	No	500	=	238	262			
S	Dundrum	165	Dundrum WWTP	A0410	No	300	=	183	117			
S	Emly	302	Emly WWTP	A0409	No	1,500	=	340	1,160			
S	Faugheen	Unavailable	Faugheen WWTP	A0420	No	189	=	85	104			
S	Glengoole	Unavailable	Glengoole WWTP	A0422	No	400	=	121	279			
S	Golden	267	Golden WWTP *	A0421	No	160	=	289				
S	Gortnahoe	Unavailable	Gortnahoe WWTP	A0423	No	492	=	336	156			
S	Grange	Unavailable	Grange WWTP	A0511	No	60	=	31	29			
S	Grangemockler	Unavailable	Grangemockler WWTP *	A0416	No	129	=	103	26			
S	Hollyford	Unavailable	Hollyford WWTP	A041	No	100	=	93	7			
S	Kilcash	Unavailable	Kilcash WWTP	A0509	No	300	=	108	192			
S	Kilross	Unavailable	Kilross WWTP	A0515	No	300	=	29	271			
S	Kiltillane	Unavailable	Kiltillane WWTP	A0198	No	100	=	70	30			
S	Knockavilla	Unavailable	Knockavilla WWTP	A0505	No	72	=	52	20			
S	Lachtacarn	Unavailable	Lachtacarn WWTP	A0199	No	40	=	29	11			
S	Lattin	Unavailable	Lattin WWTP	A0506	No	48	=	23	25			
S	Lisronagh	184	Lisronagh WWTP	A0406	No	457	=	228	229			
S	Lisvarrinane	Unavailable	Lisvarrinane WWTP	A0419	No	60	=	94				
S	Lorrha	Unavailable	Lorrha WWTP	A0191	No	300	=	122	178			
S	Loughmore	Unavailable	Loughmore WWTP	A0201	No	300	=	91	209			
S	Middlequarter	Unavailable	Middlequarter WWTP	A0521	No	50	=	25	25			
S	Monard	212	Monard WWTP	A0508	No	30	=	8	22			
S	Moyglass	Unavailable	Moyglass WWTP	A0413	No	150	=	29	121			
S	Moynes	Unavailable	Moynes WWTP	A0188	No	20	=	10	10			
S	New Inn	Unavailable	New Inn WWTP	A0424	No	450	=	130	320			
S	Newcastle	352	Newcastle WWTP	A0418	No	300	=	394				
S	Newtown	309	Newtown WWTP	A0195	No	450	=	332	118			
S	Portroe	461	Portroe WWTP	A0182	No	600	=	454	146			
S	Puckane	Unavailable	Puckane WWTP	A0200	No	375	=	234	141			
S	Rathcabbin	Unavailable	Rathcabbin WWTP	A0203	No	300	=	214	86			
S	Rearcross	Unavailable	Rearcross WWTP	A0180	No	200	=	113	87			
S	Redmonstown	Unavailable	Redmonstown WWTP	A0411	No	54	=	49	5			
S	Rosegreen	171	Rosegreen WWTP	A0425	No	475	=	232	243			
S	Rossadrehid	Unavailable	Rossadrehid WWTP	A0520	No	120	=	13	107			
S	Silvermines	310	Silvermines WWTP	A0178	No	250	=	329				
S	Templetuohy	282	Templetuohy WWTP	A0189	No	400	=	268	132			
S	Terryglass	Unavailable	Terryglass WWTP	A0194	No	400	=	148	252			
S	Toomevara	280	Toomevara WWTP	A0187	No	500	=	321	179			
S	Upperchurch	Unavailable	Upperchurch WWTP	A0181	No	350	=	58	292			

Notes: <sup>62,63,64,65,66,67,68</sup>

<sup>62</sup> Wastewater Discharge Licences (WWDL) and Certificates of Authorisation (CoA)

<sup>63</sup> WWTP Capacity (PE) Today = Overall design capacity of the wastewater treatment plant (WWTP) in population equivalents (PE) today (the date at the top of this table).

<sup>64</sup> WWTP Capacity (PE) Upon works completion = Overall design capacity of the WWTP in population equivalents (PE) upon completion of a relevant project delivering additional capacity. Note that 'WWDL' or 'UWW' following the capacity value indicates that the upgraded WWTP will have capability to achieve the full Wastewater Discharge Licence (WWDL) emission limit values (ELVs) in the former case, or at least the Urban Wastewater (UWW) Treatment Directive parametric values in the latter case.

<sup>65</sup> Load (PE) 2019 = Wastewater load arising from the settlement(s) being served entering the WWTP in 2019.

<sup>66</sup> Headroom (PE) = Headroom available at the WWTP in 2019 in terms of population equivalents based on available capacity now or by completion of a project by 2022 (where relevant). Green = spare capacity available. Amber = potential spare capacity. WWTP currently not compliant with Wastewater Discharge Licence emission limit values but is capable of achieving at least UWW standards. Potential availability of capacity in this case would be dependent on any additional load not resulting in a significant breach of the combined approach as set out in Regulation 43 of the Wastewater Discharge (Authorisation) Regulations 2007. Red = no spare capacity available

<sup>67</sup> Current project completion year = This is the current forecasted completion year as of date of this table and is subject to change. 'Post 2024' indicates that the project is proposed to be completed within the next investment period (2025-2029), subject to the planning and approval of the next capital investment plan. Note, there is no guarantee that this capacity will be delivered if the current Investment Plan is amended due to emerging needs or changes due to exchequer funding.

<sup>68</sup> General notes (i) The headroom figure stated is based on available information on the date of issue of this table and is subject to change. (ii) The indication of spare treatment capacity has been determined based on a standardised national review of the available information. (iii) A Pre-Connection Enquiry should be submitted to Irish Water to determine the feasibility of connecting any particular site to the Irish Water network, feasibility should not be inferred from this register

**Table 4.3 Wastewater Treatment Plant Performance**

Plant name and Reference	Treatment Provided	Overall Compliance	Parameter Failed	Cause of Exceedances and Significance of Results (Water Quality)	Organic Capacities (PE)		
					As Constructed	Collected	Remaining
<b>Templemore D0190-01</b>	Tertiary	Pass	N/A	The WWTP is compliant with the Emission Limit Values set in the Wastewater Discharge Licence.	6000	2470	3530
<b>Borrisoleigh D0323-01</b>	Tertiary	Pass	N/A	The WWTP is compliant with the Emission Limit Values set in the Wastewater Discharge Licence.	2000	900	1100
<b>Newport D0325-01</b>	Secondary	Fail	ortho-Phosphate (as P) - unspecified mg/l	<p>Cause: no phosphorus removal facilities.</p> <ul style="list-style-type: none"> <li>The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence.</li> <li>The ambient monitoring results does not meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009.</li> <li>Based on ambient monitoring results a deterioration in BOD, concentrations downstream of the effluent discharge is noted.</li> <li>A deterioration in water quality has been identified, however it is not known if it or is not caused by the WWTP.</li> <li>Other causes of deterioration in water quality in the area are unknown.</li> <li>The discharge from the wastewater treatment plant does not have an observable negative impact on the WFD status</li> </ul>	1900	2472	0
<b>Borrisokane D0326-01</b>	Tertiary	Fail	Ammonia-Total (as N) mg/l	<p>Cause: WWTP biological sludge issue.</p> <ul style="list-style-type: none"> <li>The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence.</li> <li>The ambient monitoring results meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009.</li> <li>The discharge from the wastewater treatment plant does not have an observable impact on the water quality.</li> <li>The discharge from the wastewater treatment plant does have an observable negative impact on the WFD status.</li> </ul>	1500	1343	157
<b>Twomileborris D0474-01</b>	Tertiary	Pass	N/A	The WWTP is compliant with the Emission Limit Values set in the Wastewater Discharge Licence.	800	585	215
<b>Holycross D0478-01</b>	Tertiary	Pass	N/A	The WWTP is compliant with the Emission Limit Values set in the Wastewater Discharge Licence.	600	556	44
<b>Littleton D0480-01</b>	Tertiary	Pass	N/A	The WWTP is compliant with the Emission Limit Values set in the Wastewater Discharge Licence.	1000	434	566
<b>Cloughjordan D0475-01</b>	Tertiary	Fail	Ammonia-Total (as N) mg/l BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l COD-Cr mg/l Suspended Solids mg/l	<p>Cause: Inadequate plant infrastructure.</p> <ul style="list-style-type: none"> <li>The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence.</li> <li>The ambient monitoring results does not meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009.</li> <li>Based on ambient monitoring results a deterioration in BOD, ammonia, concentrations downstream of the effluent discharge is noted.</li> <li>A deterioration in water quality has been identified, however it is not known if it or is not caused by the WWTP.</li> <li>Other causes of deterioration in water quality in the area are unknown.</li> <li>The discharge from the wastewater treatment plant does not have an observable negative impact on the WFD status.</li> </ul>	650	659	0
<b>Ballina D0189-01</b>	Tertiary	Pass	N/A	The WWTP is compliant with the Emission Limit Values set in the Wastewater Discharge Licence.	4500	5243	0
<b>Mullinahone D0456-01</b>	Secondary	Fail	Ammonia-Total (as N) mg/l BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l COD-Cr mg/l ortho-Phosphate (as P) - unspecified mg/l Suspended Solids mg/l	<p>Cause: Upgrade of the WWTP required - Upgrade works in progress in this reporting period.</p> <ul style="list-style-type: none"> <li>The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence.</li> <li>The ambient monitoring results does not meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009.</li> <li>Based on ambient monitoring results a deterioration in BOD, Ammonia, concentrations downstream of the effluent discharge is noted.</li> <li>A deterioration in water quality has been identified, however it is not known if it or is not caused by the WWTP.</li> <li>Other causes of deterioration in water quality in the area are unknown.</li> <li>The discharge from the wastewater treatment plant does not have an observable negative impact on the WFD status.</li> </ul>	500	498	2
<b>Roscrea D0025-01</b>	Tertiary	Fail	Ammonia-Total (as N) mg/l BOD, 5 days with Inhibition mg/l	<p>Cause: inadequate operational procedures/training.</p> <ul style="list-style-type: none"> <li>The WWTP is non-compliant with the ELVs set in the Wastewater Discharge Licence.</li> </ul>	26000	6703	19297

## SEA Environmental Report for the Tipperary County Development Plan 2022-2028

Plant name and Reference	Treatment Provided	Overall Compliance	Parameter Failed	Cause of Exceedances and Significance of Results (Water Quality)	Organic Capacities (PE)		
					As Constructed	Collected	Remaining
<b>Thurles D0026-01</b>	Tertiary	Fail	Ammonia-Total (as N) mg/l	Cause: Plant or equipment breakdown <ul style="list-style-type: none"> <li>The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence.</li> <li>The ambient monitoring results meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009.</li> <li>The discharge from the wastewater treatment plant does not have an observable impact on the water quality.</li> <li>The discharge from the wastewater treatment plant does not have an observable negative impact on the WFD status.</li> </ul>	15000	10189	4811
<b>Clonmel D0035-01</b>	Tertiary	Pass	N/A	The WWTP is compliant with the Emission Limit Values set in the Wastewater Discharge Licence.	80000	28974	51026
<b>Tipperary Town D0146-01</b>	Tertiary	Pass	N/A	The WWTP is compliant with the Emission Limit Values set in the Wastewater Discharge Licence.	9800	9725	75
<b>Carrick-On-Suir D0148-01</b>	Tertiary	Pass	N/A	The WWTP is compliant with the Emission Limit Values set in the Wastewater Discharge Licence.	11000	7197	3803
<b>Fethard D0164-01</b>	Tertiary	Pass	N/A	The WWTP is compliant with the Emission Limit Values set in the Wastewater Discharge Licence.	3000	3482	0
<b>Cahir D0167-01</b>	Tertiary	Fail	Ammonia-Total (as N) mg/l	Cause: Shock load to the WWTP and equipment breakdown causing two failures in Ammonia. <ul style="list-style-type: none"> <li>The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence.</li> <li>The ambient monitoring results does not meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009.</li> <li>The discharge from the wastewater treatment plant does not have an observable impact on the water quality.</li> <li>The discharge from the wastewater treatment plant does not have an observable negative impact on the WFD status.</li> </ul>	5000	4483	517
<b>Cashel D0171-01</b>	Tertiary	Pass	N/A	The WWTP is compliant with the Emission Limit Values set in the Wastewater Discharge Licence.	9000	5004	3996
<b>Ardfinnan D0311-01</b>	Tertiary	Pass	N/A	The WWTP is compliant with the Emission Limit Values set in the Wastewater Discharge Licence.	1100	933	167
<b>Cappawhite D0440-01</b>	Tertiary	Fail	ortho-Phosphate (as P) - unspecified mg/l	Cause: dosing rate adjustment and service required for Ferric Dosing at the WWTP site. <ul style="list-style-type: none"> <li>The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence.</li> <li>The ambient monitoring results does not meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009.</li> <li>Based on ambient monitoring results a deterioration in OrthoPhosphate, concentrations downstream of the effluent discharge is noted.</li> <li>A deterioration in water quality has been identified, however it is not known if it or is not caused by the WWTP.</li> <li>Other causes of deterioration in water quality in the area are unknown.</li> <li>The discharge from the wastewater treatment plant does not have an observable negative impact on the WFD status.</li> </ul>	1750	451	1299
<b>Killenaule D0443-01</b>	Tertiary	Pass	N/A	The WWTP is compliant with the Emission Limit Values set in the Wastewater Discharge Licence.	1200	892	308
<b>Clogheen D0453-01</b>	Tertiary	Fail	ortho-Phosphate (as P) - unspecified mg/l	Cause: Ortho P exceedance due to dosing pump failure. <ul style="list-style-type: none"> <li>The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence.</li> <li>The ambient monitoring results meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009.</li> <li>The discharge from the wastewater treatment plant does not have an observable impact on the water quality.</li> <li>The discharge from the wastewater treatment plant does not have an observable negative impact on the WFD status.</li> </ul>	1000	484	516
<b>Ballyclerihan D0455-01</b>	Tertiary	Pass	N/A	The WWTP is compliant with the Emission Limit Values set in the Wastewater Discharge Licence.	2000	1016	984
<b>Limerick Junction D0457-01</b>	Secondary	Fail	Ammonia-Total (as N) mg/l	<ul style="list-style-type: none"> <li>The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence.</li> <li>The ambient monitoring results does not meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009.</li> <li>Based on ambient monitoring results a slight deterioration in Ammonia and Ortho P concentrations downstream of the effluent discharge is noted.</li> <li>The discharge from the wastewater treatment plant does not have an observable negative impact on the WFD status.</li> </ul>	500	178	322
<b>Kilsheelan D0452-01</b>	Tertiary	Pass	N/A	The WWTP is compliant with the Emission Limit Values set in the Wastewater Discharge Licence.	1000	975	25

## 4.12 Cultural Heritage

### 4.12.1 Archaeological Heritage

Archaeology is the study of past societies through the material remains left by those societies and the evidence of their environment. Archaeological sites and monuments vary greatly in form and date; examples include earthworks of different types and periods, (e.g. early historic ringforts and prehistoric burial mounds), megalithic tombs from the Prehistoric period, medieval buildings, urban archaeological deposits and underwater features.

The Cashel area of County Tipperary is the location of a complex of archaeological monuments historically used for royal inauguration, ceremony and assembly. The Rock of Cashel consists of a stone fort on a large rock outcrop and was the site of inauguration of the overkings of Munster, known as 'Kings of Cashel'. The group of buildings at the site includes 12<sup>th</sup> century round tower, Cormac's Chapel (a Romanesque church) and a 13<sup>th</sup> century cruciform cathedral. Cashel is nominated to a Tentative UNESCO World Heritage Site List (as part of the 'Royal Sites of Ireland'), for future designation as UNESCO World Heritage Sites (shown on Figure 4.21).

Archaeological heritage is protected under the National Monuments Acts (1930-2004), Natural Cultural Institutions Act 1997 and the Planning Acts.

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).

The term 'monument' includes all man-made structures of whatever form or date except

buildings habitually used for ecclesiastical purposes. All monuments in existence before 1700 A.D. are automatically considered to be historic monuments within the meaning of the Acts. Monuments of architectural and historical interest also come within the scope of the Acts. Monuments include: any artificial or partly artificial building, structure or erection or group of such buildings, structures or erections; any cave, stone or other natural product, whether or not forming part of the ground, that has been artificially carved, sculptured or worked upon or which (where it does not form part of the place where it is) appears to have been purposely put or arranged in position; any, or any part of any, prehistoric or ancient tomb, grave or burial deposit, or, ritual, industrial or habitation site; and any place comprising the remains or traces of any such building, structure or erection, any such cave, stone or natural product or any such tomb, grave, burial deposit or ritual, industrial or habitation site, situated on land or in the territorial waters of the State', but excludes 'any building or part of any building, that is habitually used for ecclesiastical purposes' (National Monuments Acts 1930-2004).

A recorded monument is a monument included in the list and marked on the map, which comprises the RMP set out county by county under Section 12 of the National Monuments (Amendment) Act, 1994 by the Archaeological Survey of Ireland. The definition includes Zones of Notification within which requirements for notifications of proposed works apply.

A Sites and Monuments Record (SMR)<sup>69</sup> is a manual containing a numbered list of all certain and possible monuments accompanied. An Urban Archaeology Survey was completed in 1995 and contained reports on historic towns dating to before 1700 A.D. with a view to delineating zones of archaeological potential (SMR Zones of Notification). The SMR formed the basis for issuing the RMP.

Figure 4.21 shows the spatial distribution of recorded monuments and associated SMR Zones of Notification in the County<sup>70</sup>. There are hundreds of Recorded Monuments within the

<sup>69</sup> The RMP was issued for each county between 1995 and 1998 in a similar format to the existing SMR. However, the RMP differs from the earlier lists in that, as defined in the Act, only monuments with known locations or places where there are believed to be monuments are included. The large archive and supporting database are managed by the National Monuments Service and the records are continually

updated and supplemented as additional monuments are discovered. (<https://data.gov.ie/dataset/national-monuments-service-archaeological-survey-of-ireland>).

<sup>70</sup> Archaeological monuments in the neighboring counties and monuments, which straddle County Tipperary boundaries have been also considered by the assessment.

County, including graveyards, castles, forts and tombs.

Clusters of archaeological heritage are identified: along river and lake banks including Lough Derg and the River Suir; surrounding settlements (such as the medieval walled towns of Clonmel, Fethard, Cashel and Carrick on Suir and the historical towns of Nenagh, Roscrea and Thurles); and in lowland rural areas. There are lower concentrations of protected monuments in the upland areas.

There are 48 Monuments in State Care (35 in State Ownership and 13 in State Guardianship)<sup>71</sup> within the County (mapped on Figure 4.21), including: Swiss Cottage (Cahir); Cahir Castle; Roscrea; Timoney Hills; Holycross Abbey; Rock of Cashel; and Derrynaflan.

The Underwater Archaeology Unit was established within the National Monuments Service to manage and protect Ireland's underwater cultural heritage, including the quantification of the underwater resource and assessing development impacts in order to manage and protect this aspect of Ireland's heritage. The Shipwreck Inventory is principally a desktop survey with information gathered from a broad range of cartographic, archaeological and historical sources, both documentary and pictorial. Wrecks over 100 years old and archaeological objects found underwater are protected under the National Monuments (Amendment) Acts 1987 and 1994. Significant wrecks less than 100 years old can be designated by Underwater Heritage Order on account of their historical, archaeological or artistic importance. Such Orders can also be used to designate areas of seabed or land covered by water to more clearly define and protect wreck sites and archaeological objects. Under the legislation all diving on known protected wreck sites or with the intention of searching for underwater cultural heritage is subject to licensing requirements.

Rivers, estuaries and lakes within and adjacent to the County may contain many features and finds associated with riverine heritage such as

shipwrecks, piers, quay walls, stepping stones and associated archaeological objects and features.

#### 4.12.2 Architectural Heritage

The term architectural heritage is defined in the Architectural Heritage (National Inventory) and Historic Monuments Act 1999 as meaning all: structures and buildings together with their settings and attendant grounds, fixtures and fittings; groups of structures and buildings; and, sites which are of technical, historical, archaeological, artistic, cultural, scientific, social, or technical interest.

Records of Protected Structures are legislated for under Section 12 and Section 51 of the Planning and Development Act 2000 as amended. Protected structures are defined in the Planning and Development Act 2000 as amended as structures, or parts of structures that are of special interest from an architectural, historical, archaeological, artistic, cultural, scientific, social or technical point of view.

Similar to the general spatial spread of archaeological heritage, clusters of architectural heritage are indicated within the County's settlements as shown on Figure 4.22, including examples of country houses, churches, bridges and mills. Notable protected structures in County Tipperary include: Farney Castle, Lisheen Castle, Ballyartella Bridge and Gortkelly Castle.

In relation to a protected structure or proposed protected structure, the following are encompassed:

- The interior of the structure;
- The land lying within the curtilage<sup>72</sup> of the structure;
- Any other structures lying within that curtilage and their interiors; and
- All fixtures and features that form part of the interior or exterior of any structure or structures referred to in subparagraph (i) or (iii).

County Tipperary has an important vernacular and industrial heritage with many important

curtilage sometimes coincides with the present property boundary, it can originally have included lands, features or even buildings now in separate ownership, e.g. the lodge of a former country house, or the garden features located in land subsequently sold off. Such lands are described as being attendant grounds, and the protection extends to them just as if they were still within the curtilage of the Protected Structure.

<sup>71</sup> This list of National Monuments in State care includes those which are in the ownership and guardianship of the Minister for the Environment, Heritage and Local Government.

<sup>72</sup> Curtilage is normally taken to be the parcel of ground immediately associated with the Protected Structure, or in use for the purposes of the structure. Protection extends to the buildings and land lying within the curtilage. While the

historic buildings and structures associated with agriculture, transportation, stone cutting processes and mining including examples of cottages, houses, shops, farm complexes, outbuildings, bridges, mills, factories and forges.

In addition to Protected Structures, the Planning and Development Act, 2000 provides the legislative basis for the protection of Architectural Conservation Areas (ACAs). An ACA is a place, area or group of structures or townscape that is of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest or value, or contributes to the appreciation of protected structures, whose character it is an objective to preserve in a development plan. The ACA designation requires that planning permission must be obtained before significant works can be carried out to the exterior of a structure in the ACA that might alter the character of the structure or the ACA. There are 33 ACAs designated in the County (mapped on Figure 4.22) and listed below:

- Ahenny ACA
- Ballinure ACA
- Borrisokane ACA
- Borrisoleigh ACA
- Cahir ACA
- Cappawhite ACA
- Carrick on Suir ACA
- Cashel ACA
- Clogheen ACA
- Clonmel – O'Connell Street ACA
- Clonmel – Old St Mary's ACA
- Cloughjordan ACA
- Emly ACA
- Fethard ACA
- Killenaule ACA
- Marlfield ACA
- Nenagh ACA
- Newcastle ACA
- Newport ACA
- Nine-Mile-House ACA
- Riverstown ACA
- Roscrea – Bunkers Hill ACA
- Roscrea – Burgoo ACA
- Roscrea – Main Street ACA
- Roscrea – Rosemary Street ACA
- Silvermines ACA
- Templemore – Garda College ACA
- Templemore - Main Street ACA
- Templemore - St Mary's Church ACA
- Thurles – Liberty Square and Friar Street ACA
- Thurles - Mathew and Castle Avenue ACA
- Thurles – Mitchell Street ACA
- Tipperary Town ACA

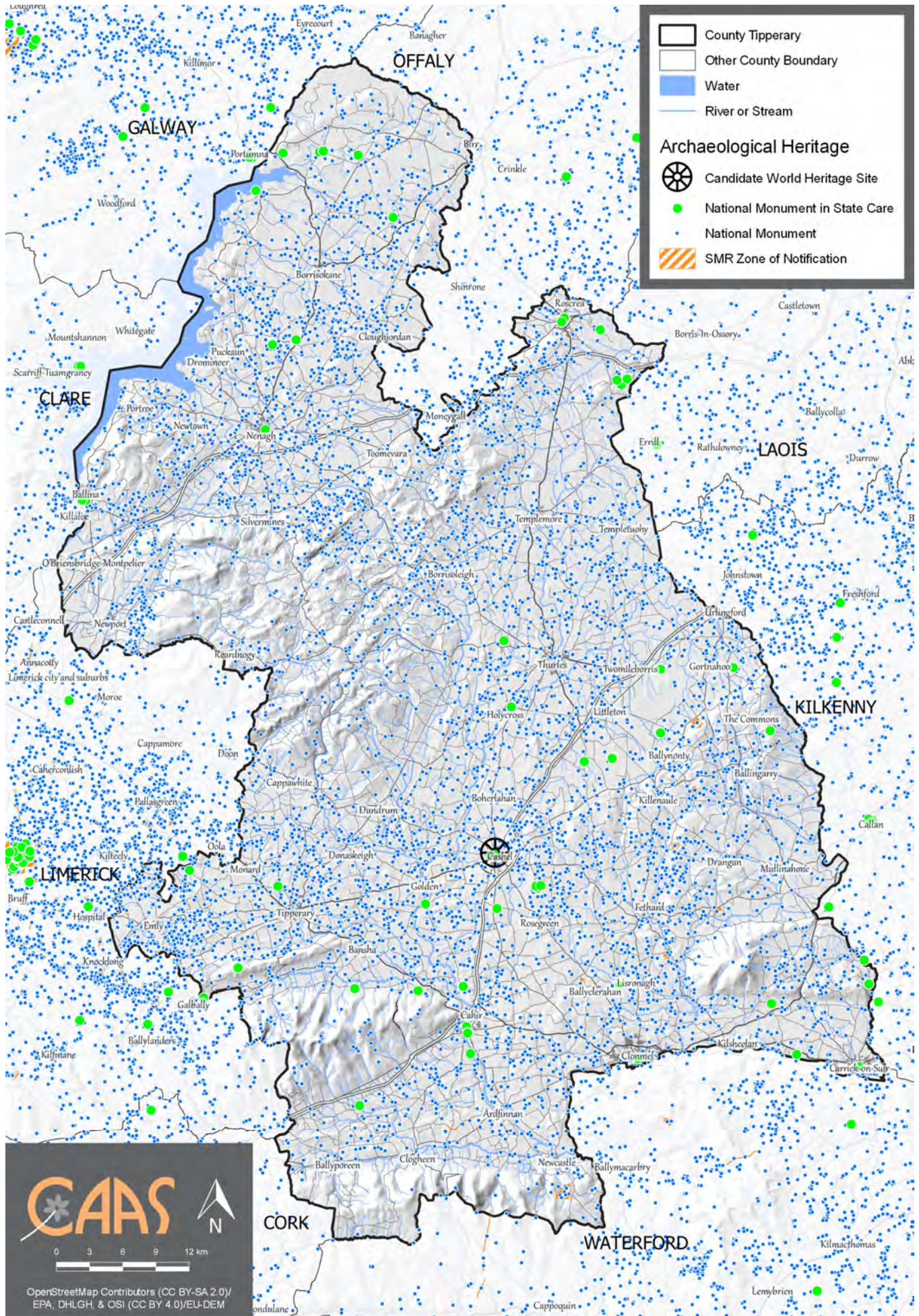
The National Inventory of Architectural Heritage (NIAH) is a State initiative under the administration of the Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media and was established on a statutory basis under the

provisions of the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999. The purpose of the NIAH is to identify, record, and evaluate the post-1700 architectural heritage of Ireland, uniformly and consistently as an aid in the protection and conservation of the built heritage. NIAH surveys provide the basis for the recommendations of the Minister of Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media to the local authorities for the inclusion of particular structures in their Record of Protected Structures. The NIAH includes historic gardens and designed landscapes. Figure 4.22 shows entries to NIAH within the County and beyond.

### 4.12.3 Existing Problems

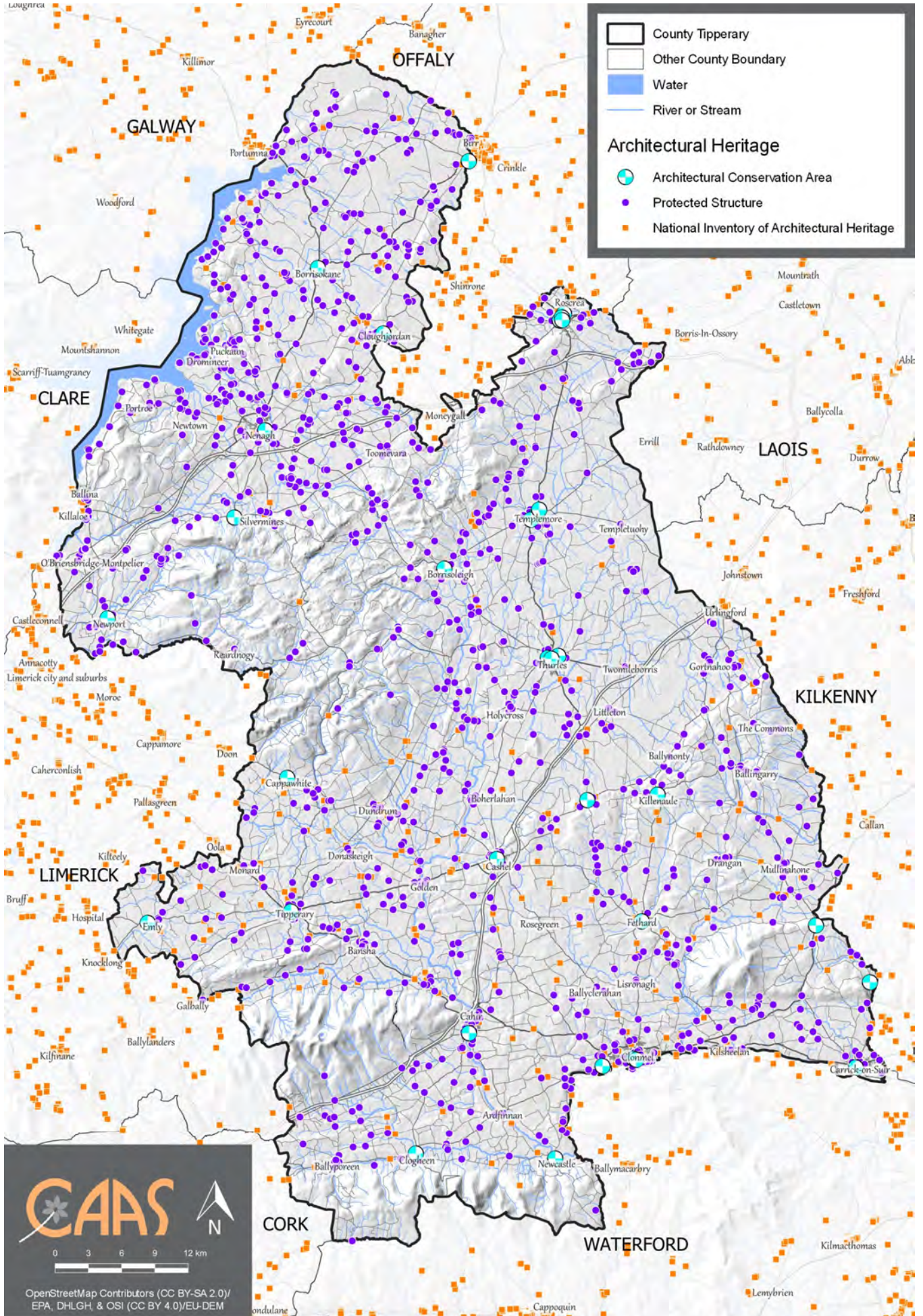
The context of archaeological and architectural heritage has changed over time within the County, however no existing conflicts with legislative objectives governing archaeological and architectural heritage have been identified.





**Figure 4.21 Archaeological Heritage**

CAAS for Tipperary County Council



**Figure 4.22 Architectural Heritage**

CAAS for Tipperary County Council

## 4.13 Landscape

### 4.13.1 Introduction

Article 1 (a) of the European Landscape Convention provides a definition of landscape as follows; "Landscape means an area, as perceived by people whose character is the result of the action and interaction of natural/or human factors". The importance of landscape and visual amenity and the role of its protection are recognised in the Planning and Development Act 2000 as amended, which requires that Development Plans include objectives for the preservation of the landscape, views and the amenities of places and features of natural beauty.

County Tipperary is characterised by a rich and diverse landscape types, including: large lowland plains, uplands, mountain ranges, valleys and variety of wetlands. Upland areas include the Silvermines, Arra, Galtee and Knockmealdown Mountains, the Slieveardagh Hills, the Devil's Bit and Slievenamon. The Shannon wetlands and Lough Derg are situated in the north-west of the County.

### 4.13.2 Landscape Character Assessment

The European Landscape Convention was ratified in Ireland in 2002, this required EU Member States to adopt national measures to promote landscape, planning, protection and management.

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

The Tipperary County Council Landscape Character Assessment identifies four **Universal Landscape Architypes**, subdivided into seven **Landscape Character Types** and 23 **Landscape Character Areas** as shown on Figure 4.23 and listed below:

#### A. The Plains

- A1. Lowland Pasture and Arable
  1. Urban and Fringe Areas
  2. Thurles Hinterland
  3. Nenagh Corridor
  4. River Suir Central Plain /Nenagh Corridor
  5. Templemore Plains
  6. West Tipperary Farmland Mosaic

- A2. Peatlands and Wet Mixed Farmland
  7. Borrisokane Lowlands
  8. Littleton Raised Bog
  9. Littleton Farmland Mosaic and Marginal Peatland

#### B. The Lakelands

- B1. Watersides
  10. Upper Lough Derg
  11. The Shannon Callows
- B2. Lakeland Enclosures
  12. River Shannon – Newport
  13. Arra Mountains – Lower Lough Derg

#### C. The Foothills

- C1. Farmed
  14. Slieveardagh Hills Farmland mosaic
  15. Linguan Valley Marginal and Farmland Mosaic
- C2. Forested
  16. Slievenamuck Marginal Mosaic
  17. Upperchurch – Kilcomommon/Hollyford Hills Mountain Mosaic

#### D. The Uplands

- D1. Mountain and Upland
  18. Silvermines – Rearcross
  19. Slievenamon Mountain Mosaic
  20. Glen of Aherlow Uplands
  21. Galtee Mountain Mosaic
  22. Devilsbit Uplands
  23. Knockmealdown Mountain Mosaic

The landscape's capacity to absorb new development, without exhibiting a significant loss of character or change of appearance is referred to as its 'sensitivity'. The sensitivity of the landscape depends on factors including elevation, slope, land-cover and soil. The most sensitive landscapes in County Tipperary occur in wetland and upland areas in the north, west and south-west of the County.

The Landscape Character Areas in County Tipperary are classified according to their level of sensitivity, ranging from: 'Vulnerable'; 'Transitional Vulnerability'; 'Sensitive'; 'Transitional Sensitivity'; 'Normal'; and 'Robust'. The 'Vulnerable' areas are the most sensitive to development; developments that are likely to create a significant visual impact will best be absorbed in areas where the landscape is most robust, i.e. where the landscape has the capacity to absorb development without significantly changing its character. Landscape Character Areas in the County that are classified as 'Vulnerable' include: Upper Lough Derg; The Shannon Callows; River Shannon – Newport; Arra Mountains – Lower Lough Derg; Upperchurch – Kilcomommon/Hollyford Hills Mountain Mosaic; Silvermines – Rearcross; Slievenamon Mountain Mosaic; Glen of Aherlow Uplands; Galtee Mountain Mosaic; Devilsbit Uplands; and Knockmealdown Mountain Mosaic.

### 4.13.3 Other Landscape Designations

The Plan area encompasses many sites and vantage points from which views over areas of great natural beauty, local landmarks, historic landscapes, adjoining counties may be obtained. The Tipperary Landscape Character Assessment identifies 63 **Scenic Routes and Views** within the County. These are listed in Appendix II. **Primary and Secondary Amenity Areas**, which include, amongst others, Lough Derg and the Glen of Aherlow/Galtee Mountains are particularly notable by virtue of their scenic and visual quality and offer significant opportunities for tourism development and rural recreational activities.

### 4.13.4 Landscape Designations in Adjacent Counties

County Limerick borders County Tipperary to the west. There are 10 Landscape Character Areas identified in County Limerick, including: Agricultural Lowlands; Ballyhoura /Slieve Reagh; Galtee Uplands; Knockfierna Hill; Lough Gur; Shannon Integrated Coastal Management Zone; Southern Uplands; Tory Hill; Slieve Felim Uplands; and Western Hills/Barnagh Gap/Sugar Hill. Other landscape designations include Scenic Views and Prospects.

County Clare borders County Tipperary to the north-west. There are 26 Landscape Character Types and 21 Landscape Character Areas identified in County Clare. Lough Fringe Farmland and River Valley Farmland Landscape Character Types and Lough Derg Basin and River Shannon Farmland Landscape Character Areas are adjacent to County Tipperary. Other landscape designations include scenic routes, affording views and prospects.

County Galway borders County Tipperary to the north-west. There are 10 Landscape Character Types within County Galway: Central Galway Complex; Coastal; Island; Karst; Lake Environs; North Galway Complex; Slieve Aughty; Uplands and Bog; Urban Environs; and Shannon Environs which is adjacent to County Tipperary and of 'Special Sensitivity'. Other landscape designations in County Galway include Scenic Routes and View Points.

County Offaly borders County Tipperary to the north. Landscape Character Areas within

County Offaly include: Rural and Agricultural Areas; Cutaway Bog; The River Shannon and Callows; The Grand Canal Corridor; Wetlands; Slieve Bloom Upland Area; Croghan Hill and its Environs; Bogland Areas; The Esker Landscape; and Archaeological and Historical Landscapes. These areas are also the most sensitive to development within the County. Landscape designations within County Offaly also include Areas of High Amenity, Protected View Points and Amenity Value Roads.

County Laois borders County Tipperary to the north-east. The County Laois Landscape Character Assessment has identified the following seven Landscape Character Areas: Hills and Upland Areas; Lowland Agricultural Areas; River Corridors and Lakes; Mountain Areas; Peatland Areas; Urban Fringe Areas; and Rolling Hill Areas. Landscape designations within County Laois also include Views and Prospects.

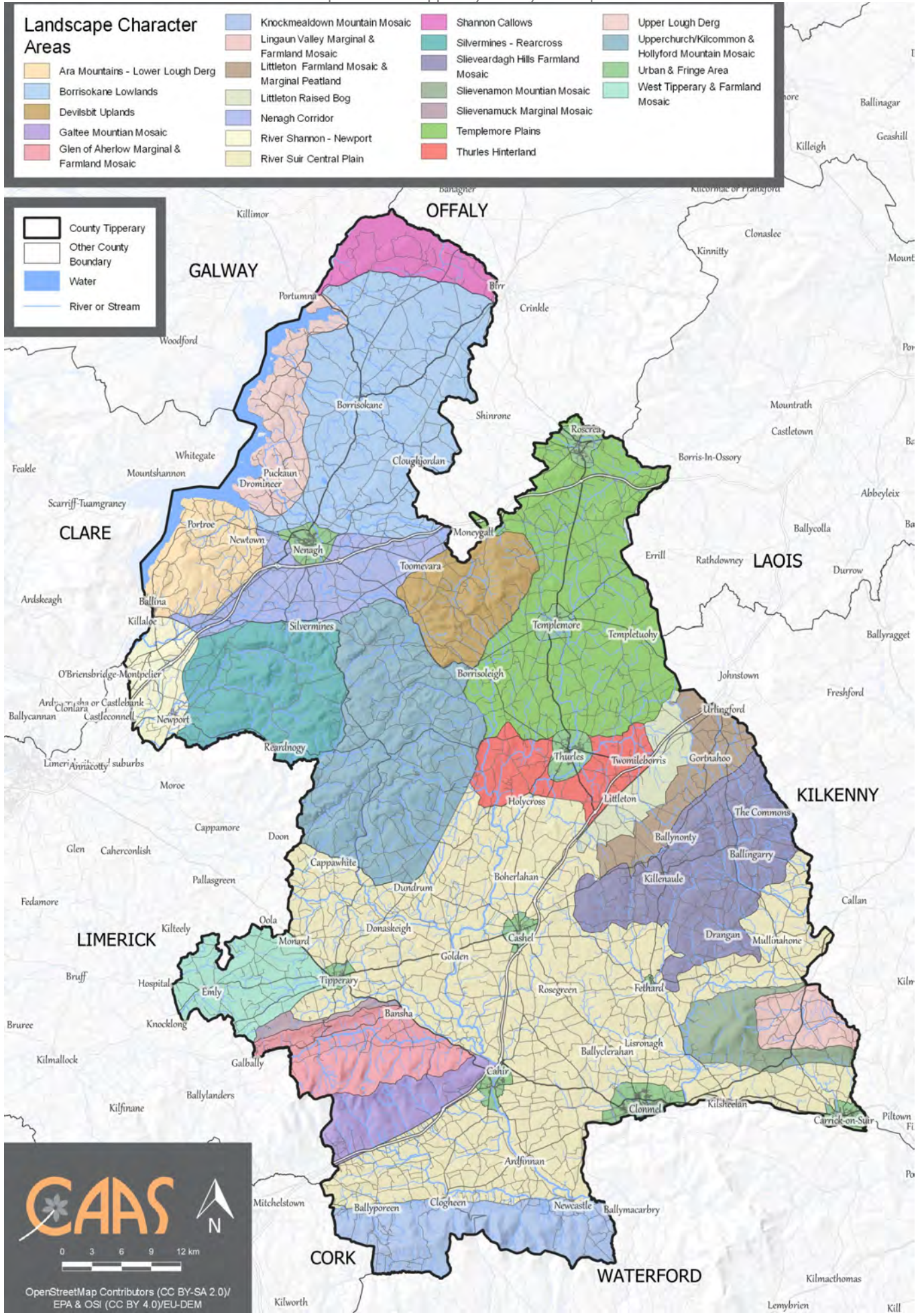
County Kilkenny borders County Tipperary to the east. There are four Landscape Character Types designated in County Kilkenny: Upland Areas; Lowland Areas; River Valleys; and Transitional Areas. Other landscape designations within County Kilkenny include Scenic Routes and Scenic Views.

Waterford borders County Tipperary to the south. Waterford City and County identifies six landscape types: Coastal; River Corridor and Estuary; Farmed Lowland; Foothill; Upland; and Urbanised. Other landscape designations include Scenic Views and Prospects.

County Cork borders County Tipperary to the south-west. Landscape of County Cork is divided into 16 Landscape Character Types. Landscape Character Types are sub-divided into 76 Landscape Character Areas. Landscape types are evaluated in terms of Landscape Value, Landscape Sensitivity and Landscape Importance.

### 4.13.5 Existing Environmental Problems

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



**Figure 4.23 Landscape Character Areas**

CAAS for Tipperary County Council

## 4.14 Overlay of Environmental Sensitivity Mapping

In order to identify where most sensitivities within the County occur, a number of the environmental sensitivities described above were weighted and mapped overlapping each other.

Figure 4.24 provides an Overlay of Environmental Sensitivities in the County. Environmental sensitivities are indicated by colours which range from higher to lower sensitivity. The map was prepared using Geographical Information System (GIS) software that allowed for a weighting system to be applied with differentiation in certain layers as follows:

- European Sites – SACs and SPAs (10 points);
- Other Ecological designations – NHAs and pNHAs (5 points);
- Sensitive Landcover Categories (10 points);
- Margaritifera Sensitive Areas (5 points);
- WFD Status of Surface poor (10 points), moderate and unassigned ecological status (5 points);
- WFD Status of Surface water poor ecological status (10 points);
- Groundwater vulnerability (aquifers which are extremely vulnerable - 10 points; and highly vulnerable - 5 points);
- Source Protection Areas (Inner Protection Area and Group Scheme Preliminary Source Protection Area - 10 points; Outer Protection Area - 5 points);
- WFD RPA Nutrient Sensitive Rivers and Lakes and Estuaries (10 points) and Rivers in Nutrient Sensitive Areas (5 points);
- GSI Landslide Susceptibility (High or High Inferred – 10 points; Moderately High or Moderately High Inferred – 5 points);
- County Geological Sites (10 points);
- Cultural Heritage including: Architectural Conservation Areas, entries to the Record of Protected Structures, entries to the Record of Monuments and Places, SMR and RMP Zones of Notification, National Monuments in State Care and entire to the National Inventory of Architectural Heritage (10 points);
- WFD RPA Rivers for Drinking Water (10 points);
- WFD RPA Salmonid River Regs (S.I. 293 only) (10 points) and Rivers in Salmonid Regs and Surface Waters in Salmonid Regs (5 points);
- Preliminary Flood Risk Assessment Fluvial Flood Zone A (10 points) and Flood Zone B (5 points);
- Scenic Views and Routes (10 points);
- Landscape Sensitivity (highest rating 10 points, second highest 5 points).

Where the mapping shows a concentration of environmental sensitivities there is an increased likelihood that development will conflict with these sensitivities and cause environmental

deterioration. However, the occurrence of environmental sensitivities does not preclude development; rather it flags at a strategic level that the mitigation measures - which have been integrated into the Plan - will need to be complied with in order to ensure that the implementation of the Plan contributes towards environmental protection.

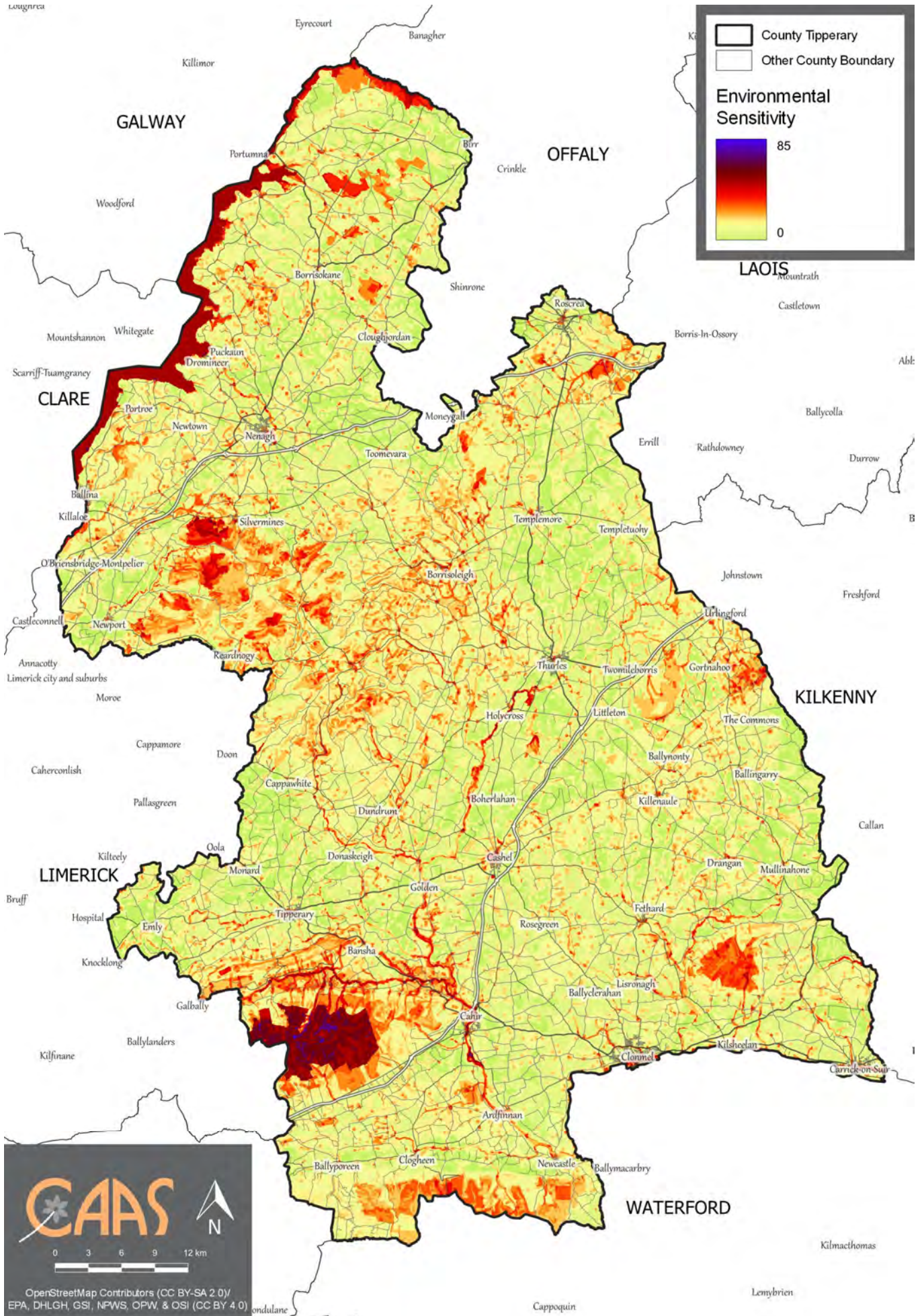
The overlay mapping shows that environmental sensitivities are not evenly distributed throughout the County. Much of the County is identified as having low to moderate levels of sensitivity.

Higher levels of environmental sensitivities are found in upland and foothill areas and foothills due to ecological designations (including SAC, NHA and pNHA), water sensitivities (extremely and highly vulnerable aquifers), sensitive landcover (peat bogs) and landscape designations (the highest level of landscape sensitivity).

Water bodies throughout the County, including Lough Derg and the River Shannon along the County's northern and western boundary, due to sensitivities such as: ecological designations; nutrient sensitivity; and flood risk.

Areas within the County's settlements, on account of sensitivities including those related to architectural and archaeological heritage.

The EPA-funded Environmental Sensitivity Mapping Web Tool could assist in lower-tier consideration of plans and projects.



**Figure 4.24 Overlay of Environmental Sensitivities in County Tipperary**  
 CAAS for Tipperary County Council

## Section 5 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 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.

The SEOs are linked to indicators which can facilitate monitoring the environmental effects of the Plan as well as identifying targets which the Plan can help work towards.

All SEOs, indicators and targets are provided on Table 5.1 overleaf.

Further detail on legislation, plans and programmes are provided under Section 2 (and associated Appendix I “Relationship with Legislation and Other Policies, Plans, and Programmes”) and Section 4.

Given the position of the Development Plan in the land use planning hierarchy beneath RSES, the measures identified in the RSES SEAs, including the Southern RSES 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.



Table 5.1 Strategic Environmental Objectives (SEOs), Indicators and Targets

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives	Indicators	Targets
<b>Biodiversity, Flora and Fauna</b>	<b>BFF</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>	<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>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>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>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>Compliance of planning permissions with Plan measures providing for the protection of Biodiversity and flora and fauna – see Chapter 11 “Environment and Natural Heritage”</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 – see Chapter 11 “Environment and Natural Heritage”</li> </ul>
<b>Population and Human Health</b>	<b>PHH</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>	<ul style="list-style-type: none"> <li>Implementation of Plan measures relating to the promotion of economic growth as provided for by Chapter 8 “Enterprise and Rural Employment”</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 Chapter 8 “Enterprise and Rural Employment”</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>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>Proportion of people reporting regular cycling / walking to school and work above 2016 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 2016 CSO figures</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>

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Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives	Indicators	Targets
<b>Soil (and Land)</b>	<b>S</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>	<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 County's settlements</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>• 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>
<b>Water</b>	<b>W</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>	<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>• 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>
<b>Material Assets</b>	<b>MA</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> </ul>	<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>

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Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives	Indicators	Targets
			<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>Proportion of people reporting regular cycling / walking to school and work above 2016 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 2016 CSO figures</li> </ul>
<b>Air</b>	<b>A</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 by 2020 and move closer to WHO recommended levels</li> </ul>	<ul style="list-style-type: none"> <li>Proportion of journeys made by private fossil fuel-based car compared to 2016 National Travel Survey levels of 74%</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 2016 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>
<b>Climatic Factors</b> <sup>73</sup>	<b>C</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 gases</li> <li>Integrate sustainable design solutions into the County's infrastructure (e.g. energy efficient buildings; green infrastructure)</li> </ul>	<ul style="list-style-type: none"> <li>Implementation of Plan measures relating to climate reduction targets</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 climate reduction targets, including renewable energy production</li> </ul>
			<ul style="list-style-type: none"> <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> </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>Promote the use of renewable energy, energy efficient development and increased use of public transport</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>

<sup>73</sup> Please also refer to relevant legislation and requirements under Section 4.10, Section 8.6, Section 8.8.2 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.

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Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives	Indicators	Targets
				<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 target of aggregate reduction in carbon dioxide (CO<sub>2</sub>) emissions of at least 80% (compared to 1990 levels) by 2050 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 2016 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 2016 levels</li> </ul>
				<ul style="list-style-type: none"> <li>Proportion of people reporting regular cycling / walking to school and work above 2016 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 2016 CSO figures</li> </ul>
<b>Cultural Heritage</b>	<b>CH</b>	Safeguard cultural heritage features and their settings through responsible design and positioning of development	Protect places, features, buildings and landscapes of cultural, archaeological or architectural heritage	<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>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>
<b>Landscape</b>	<b>L</b>	Protect and enhance the landscape character	To implement the Plan's framework for identification, assessment, protection, management and planning of landscapes having regard to the European Landscape Convention	<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>

## Section 6 Description of Alternatives

### 6.1 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.

Whether or not alternatives for the Plan are available has been identified by Tipperary County Council under Types 1 to 4 detailed below. These alternatives are assessed in Section 7.

### 6.2 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 limited by the provisions of higher-level planning objectives, including those of the National Planning Framework (NPF) and the Regional Spatial and Economic Strategy (RSES) for the Southern Region. These documents set out various requirements for the content of the Plan including on topics such as settlement typology, land use zoning and the sustainable development of rural areas.

### 6.3 Type 1: Alternatives for an Environmental Approach to the Plan

Although many environmental (including infrastructure, natural capital<sup>74</sup> and ecosystem<sup>75</sup> service and climate action issues) have been considered over previous Plan periods, the importance of these in fulfilling environmental obligations has increasingly emerged as a key focus of the NPF, the RSES and new and emerging planning legislation.

In addition, the protection and promotion of biodiversity, ecosystems services and natural amenities was a key concern of people and communities in pre-draft consultation for the Plan. In this respect, the Chief Executive Report sets out details of the 190 (no.) submissions received at [www.tipperarycoco.ie/cdp](http://www.tipperarycoco.ie/cdp).

Three pillars in terms of the overall environmental approach to the Plan are set out:

1. An Infrastructural capacity led approach would primarily use strategic Infrastructural Assessment and Serviced Land Assessment to provide an evidence base to inform future development to be provided for by the Plan.
2. An Ecosystems-Services Approach supporting the integrated management of land, water and living resources that promotes conservation Nature-Based Solutions and sustainable landuse.
3. Support for a move to a low-carbon and climate resilient economy and society incorporating stronger responses in how the population of the County lives, travels and works to contribute towards the achievement of a low-carbon Tipperary.

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<sup>74</sup> Renewable and non-renewable resources (e.g. plants, animals, air, water, soils, minerals)

<sup>75</sup> Ecosystems are multifunctional communities of living organisms interacting with each other and their environment. Ecosystems provide a series of services for human well-being (ecosystem services) either directly or indirectly contributing towards human wellbeing

Having considered the above, two alternative approaches to the overall approach of the Plan have been considered:

#### **Type 1 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. Action led approaches, throughout in the planning and sustainable development of Tipperary.

#### **Type 1 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.

## **6.4 Type 2: Alternatives for Settlement Hierarchy Positioning and Growth**

In considering significant realistic alternatives for placing of individual settlements under alternative typologies, or in other words the development of a Settlement Hierarchy, the planning authority has taken into account the objectives of the NPF and the Southern RSES. It is noted that the RSES has designated the Towns of Clonmel, Nenagh and Thurles as Key Towns with the remaining towns and villages to be designated by the Planning Authority having consideration to a sustainable infrastructure-led approach. In this respect, alternative approaches to how these lower tier settlements could be set out in a settlement strategy are outlined below:

#### **Type 2 Alternative A - Plan for Settlement growth based on urban capacity and compact growth**

Noting the function of the Key towns of Clonmel, Nenagh and Thurles, set out set out typologies for the smaller settlements taking into account factors such as population, infrastructural availability and capacity assessment.

#### **Type 2 Alternative B - Strong support for Key Towns with flexible and organic growth enabled in all other settlements**

Support the growth of the Key Towns, planning for 30% of new population in these settlements, and plan for the equal growth and expansion of all the other towns and villages in the County.

#### **Type 2 Alternative C - New settlement favour in urban and rural areas on an equal basis=**

Support the development of urban towns (i.e. towns >1,500 persons) and rural settlements (settlements <1,500 persons) equally. This would provide for 50% of population growth to occur in the 12 urban towns and 50% of population growth to occur in the 114 rural villages and open countryside.

## **6.5 Type 3: Alternatives for Rural Tipperary**

NPO 19 of the NPF sets out provisions for the designation of 'Areas under Urban Influence' based on the core consideration of commuter patterns to key employment centres. The objective being to limit applications for rural housing in these areas to those with a social and economic need to reside in the open countryside and to direct urban generated rural housing demand to smaller settlements and serviced sites.

#### **Rural Areas under 'Strong Urban Influence'**

- **Type 3 (i) Alternative A:** Designate Rural Areas under 'Strong Urban Influence' that require various criteria, including social and economic need, to be demonstrated in advance of planning permission being granted for a single dwelling for permanent occupation. Also designate primary amenity areas and strategic roads, whereby housing will be similarly assessed. This would support the provisions of the NPF, limit housing in areas demonstrated to be under pressure, and protect sensitive areas and infrastructure.

- **Type 3 (i) Alternative B:** Do not designate Rural Areas under Strong Urban Influence, with all areas, including rural areas near large employment centres, designated in the same way, with planning applications assessed on their own merits. Designate primary amenity areas and strategic roads that require various criteria to be demonstrated in advance of planning permission being granted for a single dwelling for permanent occupation. This would protect sensitive areas and infrastructure, however, all areas outside of these would be treated the same and there would be continued pressure for rural housing in close proximity to large towns.

### Smaller settlements and Serviced Sites

- **Type 3 (ii) Alternative A:** Provide focus to, support and deliver targeted policies/objectives for smaller settlements to act as a viable alternative to one-off housing in the open countryside through serviced sites. This would be an important alternative in terms of encouraging development in rural settlements and would provide an alternative for those seeking to live in the rural area.
- **Type 3 (ii) Alternative B:** Smaller settlements are included, but no focus or incentive for these locations to act as a viable alternative to one-off housing in the open countryside. The current patterns would continue with little development in rural villages.

## 6.6 Type 4: Alternatives for Settlement Plans

Land-use zoning has been applied in a way that primarily seeks to achieve sustainable and compact growth, considering the various requirements set out in the higher-level NPF and Southern RSES.

It should be noted that a detailed rationalisation of land zoning under the current County Development Plan area (with SEA, AA and SRFA) was carried out in 2017 and informed a Variation to the current County Development Plan. Therefore, all lands zoned in the County Development Plan are already based on a detailed SLA and environmental assessment.

The NPF further emphasises the requirement to provide a linkage between the zoning of land for development, and the availability of infrastructure required to facilitate development, implemented through a tiered approach to land use zoning<sup>76</sup>.

To address this requirement, the Settlement Hierarchy is underpinned by a Serviced Land Assessment (SLA) which applies a standardised and tiered approach to residential land zoning, identifying lands within the settlements that are fully serviced by available infrastructure (Tier 1) and lands which will be serviced within the lifetime of the Plan (Tier 2). The SLA provides an evidence base for the zoning of lands, by assessing the infrastructural capacity of land coupled with the principles set out in the NPF to promote compact sustainable growth.

- **Type 4: Alternative A**  
Identify and zone Tier 1 and Tier 2 lands for residential use across the Service Centres in accordance with the NPF Methodology. Having consideration to the amounts of land required for new residential development in each settlement, identify and zone all Tier 1 lands, and those Tier 2 lands most suitable for development over the lifetime of the Plan, based on the principle of sequential development.
- **Type 4: Alternative B**  
Identify Tier 1 and Tier 2 lands for residential use across the Service Centres in accordance with the NPF Methodology, however, only zone Tier 1 lands for new development. This alternative would significantly reduce the availability of lands for new residential development and would not meet the targets of the Core Strategy in terms of sustainable settlement growth.

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<sup>76</sup> NPO 72a, 72b & 72c

## Section 7 Evaluation of Alternatives

### 7.1 Introduction

This section provides a comparative evaluation of the likely significant environmental effects<sup>77</sup> of implementing available alternatives that are described in Section 6. This determination sought to understand whether each alternative was likely to improve conflict with or have a neutral interaction with the receiving environment.

### 7.2 Methodology

The relevant aspects of the current state of the environment (see Section 4) and the Strategic Environmental Objectives (see Section 5 and Table 7.1) are used in the assessment of alternatives.

The degree to which effects can be determined is limited as implementation of the Plan will involve assessment, consideration and decision-making associated with lower tier plans and individual projects. Nonetheless a comparative evaluation of the various alternatives can be provided.

**Table 7.1 Strategic Environmental Objectives<sup>78</sup>**

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
<b>Biodiversity, Flora and Fauna</b>	<b>BFF</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>	<b>PHH</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>	<b>S</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>

<sup>77</sup> These effects include secondary, cumulative (see also Section 8.2), synergistic, short, medium and long-term permanent and temporary, positive and negative effects.

<sup>78</sup> See also Section 5



Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
<b>Water</b>	<b>W</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>	<b>MA</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>	<b>A</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 by 2020 and move closer to WHO recommended levels</li> </ul>
<b>Climatic Factors</b>	<b>C</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>	<b>CH</b>	Safeguard cultural heritage features and their settings through responsible design and positioning of development	Protect places, features, buildings and landscapes of cultural, archaeological or architectural heritage
<b>Landscape</b>	<b>L</b>	Protect and enhance the landscape character	To implement the Plan's framework for identification, assessment, protection, management and planning of landscapes having regard to the European Landscape Convention

## 7.3 Detailed Assessment of Alternatives

### 7.3.1 Effects Common to all Alternatives

Each of the alternatives would be part of a wider Plan envisaging – in compliance with the robust policy framework in place at national, regional and local level – sustainable development and compact growth in County Tipperary generally. As such, common environmental effects (as detailed on Table 7.2) would be present under Plans adopting each of the different alternatives, though to varying degrees.

**Table 7.2 Effects common to Plans adopting each of the different alternatives**

Environmental Component	Significant Positive Effect, likely to occur	Potentially Significant Adverse Environmental Effects, if unmitigated
<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 County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond.</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>
<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 County's settlements) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the County and beyond</li> <li>Contribution towards the protection of human health by facilitating development of lands (including those within and adjacent to the County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond.</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>
<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 County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond.</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>
<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 County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond.</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>

Environmental Component	• Significant Positive Effect, likely to occur	• Potentially Significant Adverse Environmental Effects, if unmitigated
<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 County's settlements) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the County and beyond.</li> <li>• Contribution towards limits in increases in energy demand from the transport sector by facilitating sustainable compact growth.</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>
<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 County's settlements) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the County and beyond.</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>
<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 existing settlements.</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>
<b>Landscape</b>	<ul style="list-style-type: none"> <li>• Contributes towards protection of wider landscape and landscape designations by facilitating development within existing settlements.</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>

### 7.3.2 Assessment of Type 1 Alternatives: Environmental Approach to the Plan

#### Alternative A

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 for 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<sup>79</sup> and ecosystem service issues, such as the management of air quality, noise pollution, light pollution, pollination, flood risk, water bodies and river basins and natural resources supporting energy production and recreation; and
- A decreased likelihood in the extent, magnitude and frequency of adverse effects on natural capital and ecosystem services.
- Active support for the provisions of the National Climate Action Plan and the national targets for GHG emissions as set out.

Furthermore, 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 in all settlements, contribute to carbon reduction targets and achieve environmental enhancement and economic growth.

Alternative A would ensure that the sustainable development of settlements 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. This approach would also contribute towards compliance with the objectives of the RSES and NPF.

Under **Alternative B**, “A Plan that supports to a lesser degree, infrastructural capacity assessment, and the integration of ecosystems services and climate action led approaches”, as has been the case over previous plan periods, 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 the national targets for GHG emissions as set out.

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<sup>79</sup> Renewable and non-renewable resources (e.g. plants, animals, air, water, soils, minerals)

Furthermore, this alternative 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.

This alternative 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.

**Selected Type 1 Alternative for the Plan: Alternative A.** Under Alternative A, the County Development Plan enshrines a move to a low-carbon and climate resilient economy and society in its Core Strategy and other Plan provisions.

Type 1 alternatives are assessed against Strategic Environmental Objectives on Table 7.3.

**Table 7.3 Assessment<sup>80</sup> of Type 1 Alternatives against Strategic Environmental Objectives**

Alternative (selected alternative in bold)	Likely to <b>Improve</b> status of SEOs		<b>Potential Conflict</b> with status of SEOs – likely to be mitigated	
	to a <b>Greater</b> degree	to a <b>Lesser</b> degree	to a <b>Lesser</b> degree	to a <b>Greater</b> degree
<b>Alternative A, “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”</b>	<b>BFF PHH S W MA A C CH L</b>		<b>BFF PHH S W MA A C CH L</b>	
Under Alternative B, “A Plan that supports to a lesser degree, infrastructural capacity assessment, and the integration of ecosystems services and climate action led approaches”		<b>BFF PHH S W MA A C CH L</b>		<b>BFF PHH S W MA A C CH L</b>

### 7.3.3 Assessment of Type 2 Alternatives: Settlement Hierarchy Positioning and Growth

**Alternative A** would support the function of the Key towns of Clonmel, Nenagh and Thurles and set out set out typologies for the smaller settlements taking into account factors such as population, infrastructural availability and capacity assessment. Based on this, a Settlement Hierarchy could be devised with appropriate population projections across the tiers and land development policies appropriate to the tiers. This would enable structured and plan-led growth of towns and rural areas.

<sup>80</sup> The alternatives are evaluated using compatibility criteria in order to determine how they would be likely to affect the status of the existing environment and the SEOs. The SEOs and the alternatives are arrayed against each other to demonstrate which interactions would cause effects on specific components of the environment. Where the appraisal identifies an interaction with the status of an SEO the relevant SEO code is entered into the relevant column.

The interactions identified are reflective of likely significant environmental effects:

1. Interactions that would be likely to improve the status of a particular SEO would be likely to result in a significant positive effect on the protection/management of the environmental component/issues to which the SEO relates.
2. Interactions that would potentially conflict with the status of an SEO and would be likely to be mitigated would be likely to result in a potential significant negative effect however these effects would be likely to be mitigated by measures which have been integrated into the Plan.

These effects include secondary, cumulative (see also Section 8.2), synergistic, short, medium and long-term permanent and temporary, positive and negative effects.

Growth would be guided by an infrastructural assessment, with growth allocated within existing or planned capacity of infrastructure. Positive environmental effects and compact growth would be maximised and negative environmental effects minimised.

**Alternative B** would support the growth of the Key Towns, planning for 30% of new population in these settlements, and planning for the development of all smaller towns and smaller settlements in the County equally. While this option would support the Key Towns it would result in a poor settlement structure among the other settlements that would not support the sustainable delivery of services and facilities in line with a strong settlement hierarchy. There is also the risk that development would occur in settlements that would not be of a nature and scale appropriate to individual settlements. Infrastructural capacity would be exceeded within settlements and compact growth would not be maximised, with unnecessary levels of greenfield development in areas outside of built development envelopes occurring. This would present potential significant adverse environmental effects that would be challenging to fully mitigate.

**Alternative C** would support the development of towns designated as urban areas >1,500 persons and rural areas villages <1,500 persons equally. This would provide for 50% of population growth across the 12 urban towns and 50% of population growth across the 114 rural villages and open countryside on an equal basis. This would result in a poor settlement structure and a lack of critical mass that would not support the sustainable delivery of services and facilities in line with a strong settlement hierarchy. Development would be likely to occur in settlements that would not be of a nature and scale appropriate to individual settlements. This alternative would be likely propagate decline of rural settlements and increase demand for one-off rural housing. This alternative would not be sustainable and would conflict with environmental protection and management the most.

**Selected Type 2 Alternative for the Plan: Alternative A** was chosen as the most appropriate response to the sustainable development of the County and the achievement of the provisions of the NPF and RSES. The function of the Key towns of Clonmel, Nenagh and Thurles is provided for in the development of the County and the Region, with a 30% growth allocation and ensuring delivery of critical mass in terms of population and services. In addition, ensuring the competitiveness of Tipperary in the region. The other urban towns will each grow strongly each by at least 10% and by 15% where they are over 4,000 persons. Typologies for the smaller settlements have been set out taking into account factors such as population, infrastructural availability and capacity assessment.

Type 2 alternatives are assessed against Strategic Environmental Objectives on Table 7.3.

**Table 7.4 Assessment of Type 2 Alternatives against Strategic Environmental Objectives**

Alternative (selected alternative in bold)	Likely to <b>Improve</b> status of SEOs		<b>Potential Conflict</b> with status of SEOs – likely to be mitigated	
	to a <b>Greater</b> degree	to a <b>Lesser</b> degree	to a <b>Lesser</b> degree	to a <b>Greater</b> degree
<b>Alternative A – support key towns and set out set out typologies for the smaller settlements taking into account factors such as population, infrastructural availability and capacity assessment</b>	<b>BFF PHH S W MA A C CH L</b>		<b>BFF PHH S W MA A C CH L</b>	
Alternative B - support key towns, planning for 30% of new population in these settlements and planning for the development of all smaller towns and smaller settlements in the County equally		<b>BFF PHH S W MA A C CH L</b>		<b>BFF PHH S W MA A C CH L</b>
Alternative C - support the development of towns designated as urban areas >1,500 persons and rural areas villages <1,500 persons equally		<b>BFF PHH S W MA A C CH L</b>		<b>BFF PHH S W MA A C CH L</b>

### 7.3.4 Assessment of Type 3: Alternatives for Rural Tipperary

#### Rural Areas under 'Strong Urban Influence'

- **Type 3 (i) Alternative A:** Designate Rural Areas under 'Strong Urban Influence' that require various criteria to be demonstrated in advance of planning permission being granted for a single dwelling for permanent occupation. Also designate primary amenity areas and strategic roads, whereby housing will be similarly assessed. This would support the provisions of the NPF, limit housing in areas demonstrated to be under pressure, and protect sensitive areas and infrastructure.

**Alternative A** provides for a robust and transparent policy approach to manage rural housing.

Restricting the development of single dwellings in rural areas that are under strong urban influence/pressure would positively impact upon the protection and management of the environment and sustainable development. The restrictions would help to both reduce levels of greenfield development in areas immediately surrounding existing centres and encourage brownfield development within existing centres.

Single dwellings in rural areas would be facilitated as appropriate, taking into account primary amenity areas and strategic roads, and urban development would be directed towards established settlements. This alternative would help to prevent low density urban sprawl and associated adverse effects upon sustainable mobility, climate emission reduction targets and various environmental components.

- **Type 3 (i) Alternative B:** Do not designate Rural Areas under Strong Urban Influence, with all areas, including rural areas near large employment centres, designated in the same way, with planning applications assessed on their own merits. Designate primary amenity areas and strategic roads that require various criteria to be demonstrated in advance of planning permission being granted for a single dwelling for permanent occupation. This would protect sensitive areas and infrastructure, however, all areas outside of these would be treated the same and there would be continued pressure for rural housing in close proximity to large towns.

**Alternative B** Provides a vague and unclear policy approach to rural housing and risks facilitating a significant increase in urban-generated one-off housing in the open countryside which will undermine the role of small towns and villages and have consequences for the environment, including primary amenity areas, and the function of strategic roads.

Not restricting the development of single dwellings in rural areas that are under strong urban influence/pressure would adversely impact upon the protection and management of the environment and sustainable development. The absence of restrictions would result in increased levels of greenfield development in areas immediately surrounding existing centres and less demand for brownfield development within existing centres.

Urban generated housing development would occur within rural areas outside of established settlements. This alternative would result in low density urban sprawl and associated adverse effects upon sustainable mobility, climate emission reduction targets and various environmental components.

**Selected Type 3 (i) Alternative for the Plan: Alternative A.** Under Alternative Type 3 (i) A, the Core Strategy, in line with the provisions of the NPF has designated 'Rural Areas under Strong Urban Influence' that require various criteria to be demonstrated in advance of planning permission being granted for a single dwelling for permanent occupation. Primary Amenity Areas and Strategic Roads also designated whereby housing will be similarly assessed. This will respect those areas most at risk of urban generated housing and where the impacts of uncontrolled housing would be most significant. This approach will also support social and economic need for rural housing in line with the provisions of the Core Strategy. (Refer to Chapters 2 and 3).

Type 3 (i) alternatives are assessed against Strategic Environmental Objectives on Table 7.5.

**Table 7.5 Assessment of Type 3 (i) Alternatives against Strategic Environmental Objectives**

Alternative (selected alternative for the Plan in <b>bold</b> )	Likely to <b>Improve</b> status of SEOs		<b>Potential Conflict</b> with status of SEOs – likely to be mitigated	
	to a <b>Greater</b> degree	to a <b>Lesser</b> degree	to a <b>Lesser</b> degree	to a <b>Greater</b> degree
<b>A. Designate Rural Areas under Strong Urban Influence</b>	<b>PHH MA A C BFF S W CH L</b>		<b>PHH MA A C BFF S W CH L</b>	
B. Do not designate Rural Areas under Strong Urban Influence		<b>PHH MA A C BFF S W CH L</b>		<b>PHH MA A C BFF S W CH L</b>

### Type 3 (ii) Smaller settlements and Serviced Sites

- **Type 3 (ii) Alternative A:** Provide focus to, and targeted policies/objectives for smaller settlements to act as a viable alternative to one-off housing in the open countryside through serviced sites. This would be an important alternative in terms of encouraging development in rural settlements and would provide an alternative for those seeking to live in the rural area.

Serviced sites would be served by infrastructure (including water services infrastructure) and more likely to protect the environment including the status of ground and surface waters, water used for drinking water, human health, biodiversity and flora and fauna and the landscape. Development would be required to be subject to siting, design, protection of residential amenities and normal development management criteria, subject to the satisfactory provision of infrastructure and services and in keeping with the character of the settlement. The Tipperary County Council Design Guidelines for Cluster Housing in Rural Villages 2019 would apply.

- **Type 3 (ii) Alternative B:** Smaller settlements are included, but no focus or incentive for these locations to act as a viable alternative to one-off housing in the open countryside. The current patterns would continue with little development in rural villages.

Alternative B would be less likely to provide a viable alternative to one-off housing in the open countryside. Development within the open countryside would be less likely to be served by infrastructure (including water services infrastructure) and less likely to protect the environment including the status of ground and surface waters, water used for drinking water, human health, biodiversity and flora and fauna and the landscape. Alternative B would be the least sustainable of these two alternatives and would be most harmful to the environment.

**Selected Type 3 (ii) Alternative for the Plan: Alternative A.** This approach will also support social and economic need for rural housing in line with the provisions of the Core Strategy. The Council will actively support regeneration and land use in settlements to support the development of cluster housing and accommodate rural housing demand in settlements (Chapters 4 and 6).

Type 3 (ii) alternatives are assessed against Strategic Environmental Objectives on Table 7.6.



**Table 7.6 Assessment of Type 3 (ii) Alternatives against Strategic Environmental Objectives**

Alternative  (selected alternative for the Plan in <b>bold</b> )	Likely to <b>Improve</b> status of SEOs		<b>Potential Conflict</b> with status of SEOs – likely to be mitigated	
	to a <b>Greater</b> degree	to a <b>Lesser</b> degree	to a <b>Lesser</b> degree	to a <b>Greater</b> degree
<b>Alternative A: Provide focus to, and targeted policies/objectives for smaller settlements to act as a viable alternative to one-off housing in the open countryside through serviced sites.</b>	<b>PHH MA A C BFF S W CH L</b>		<b>PHH MA A C BFF S W CH L</b>	
Alternative B: Smaller settlements are included, but no focus or incentive for these locations to act as a viable alternative to one-off housing in the open countryside.		<b>PHH MA A C BFF S W CH L</b>		<b>PHH MA A C BFF S W CH L</b>

### 7.3.5 Assessment of Type 4: Alternatives for Settlement Plans

- **Alternative A** identifies and zones Tier 1 lands (within the settlements that are fully serviced by available infrastructure) and Tier 2 lands (which will be serviced within the lifetime of the Plan) for residential use across the Service Centres in accordance with the NPF Methodology, including based on the principle of sequential development. Landowning is applied to settlements >400 persons.

Alternative A would both ensure that the most suitable lands are designated for development and that sufficient lands are zoned to enable variety and choice in terms of land availability, with a greater extent of new development located on zoned lands that are less environmentally sensitive, better-serviced and better connected.

The supply of zoned land would meet the projected demand for new housing in line with the Core Strategy. This would be more likely to ensure alignment between new development and essential services provision with associated positive effects on the protection of environmental components.

Alternative A would help to ensure compact, sustainable development within and adjacent to the existing built-up footprint and would conflict with the protection and management of environmental components the least. A more compact form of development would help to:

- Avoid potential adverse environmental effects on unzoned lands that are more environmentally sensitive, less well-serviced and less well-connected
  - Maximise benefits from infrastructural investment
  - Contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health).
  - Deliver population growth targets and housing choice in liner with the Core Strategy
- **Alternative B** identifies Tier 1 and Tier 2 lands for residential use across the Service Centres in accordance with the NPF Methodology, however; Alternative B would only zone Tier 1 lands for new development.

This alternative would significantly reduce the availability of lands for new residential development and would not meet the targets of the Core Strategy in terms of sustainable settlement growth.

Alternative B would restrict choice, variety and land availability and would have the potential to push new development towards more environmentally sensitive lands that are less well-serviced and less well-connected, resulting in unnecessary potentially significant adverse effects on all environmental components.

The zoning of only Tier 1 lands could result in a mis-alignment between the supply of zoned land to meet the projected demand for new housing with associated consequences for compact development and essential services provision. A less compact form of development would:

- Increase potential adverse environmental effects on unzoned lands that are more environmentally sensitive, less well-serviced and less well-connected;
- Increase inefficiencies in infrastructural investment; and
- Hinder efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health).

**Selected Type 4 Alternative for the Plan: Alternative A.** Alternative A was chosen - identify all Tier 1 lands, and those Tier 2 lands most suitable for development over the lifetime of the Plan, based on the principle of sequential development and in line with the provisions of the Core Strategy. This alternative will both ensure that the most suitable lands are designated for development and that sufficient lands are zoned to enable variety and choice in terms of land availability.

Type 4 alternatives are assessed against Strategic Environmental Objectives on Table 7.7.

**Table 7.7 Assessment of Type 4 Alternatives against Strategic Environmental Objectives**

Alternative (selected alternative in <b>bold</b> )	Likely to <b>Improve</b> status of SEOs		<b>Potential Conflict</b> with status of SEOs – likely to be mitigated	
	to a <b>Greater</b> degree	to a <b>Lesser</b> degree	to a <b>Lesser</b> degree	to a <b>Greater</b> degree
A. Identify and zone Tier 1 and Tier 2 lands	<b>BFF PHH S W MA A C CH L</b>		<b>BFF PHH S W MA A C CH L</b>	
B. Identify but do not zone Tier 1 and Tier 2 lands		<b>BFF PHH S W MA A C CH L</b>		<b>BFF PHH S W MA A C CH L</b>

## 7.4 Reasons for Selecting Chosen Alternatives

The selected alternatives for the Plan are indicated above.

These alternatives have been incorporated into the Plan having regard to both:

1. The environmental effects which are identified by the SEA and are detailed above; and
2. Planning - including social and economic - effects.

## Section 8 Evaluation of Plan Provisions

### 8.1 Introduction

This section provides an assessment of environmental effects using the information on the current state of the environment (provided in Section 4) and the Strategic Environmental Objectives (see Table 8.1) from implementation of the Plan.

The degree of significance of effects occurring cannot be fully determined at this level of decision making due to the lack of exact detail available with regard to the type or scale of development that will be permitted under the Plan. However, a strategic assessment can be undertaken.

**Table 8.1 Strategic Environmental Objectives<sup>81</sup>**

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
<b>Biodiversity, Flora and Fauna</b>	<b>BFF</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>	<b>PHH</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>	<b>S</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>	<b>W</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>

<sup>81</sup> See also Section 5

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
<b>Material Assets</b>	<b>MA</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>	<b>A</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 by 2020 and move closer to WHO recommended levels</li> </ul>
<b>Climatic Factors</b>	<b>C</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>	<b>CH</b>	Safeguard cultural heritage features and their settings through responsible design and positioning of development	Protect places, features, buildings and landscapes of cultural, archaeological or architectural heritage
<b>Landscape</b>	<b>L</b>	Protect and enhance the landscape character	To implement the Plan's framework for identification, assessment, protection, management and planning of landscapes having regard to the European Landscape Convention

## 8.2 Cumulative Effects

Cumulative effects are one of the types of effects which have been considered by the assessment of the alternatives. Cumulative effects can be described as the addition of many small impacts to create one larger, more significant, impact.

There are two types of potential cumulative effects that have been considered, namely:

- Potential *intra-Plan* cumulative effects - these arise from the interactions between different types of potential environmental effects resulting from a plan, programme, etc. Where there are elevated levels of environmental sensitivities (such as those identified under Section 4), future development could result in environmental conflicts and lead to a deterioration in environmental integrity. The interrelationships between environmental components that help determine these potential effects are identified on Table 8.4 e.g. interrelationships between: human health and water quality; human health and air quality; human health and flood risk; and ecology and water quality.
- Potential *inter-Plan* cumulative effects - these arise when the effects of the implementation of one plan occur in combination with those of other plans, programmes, developments, etc.

Effects that may arise as a result of implementing the Plan have been mitigated to the extent that the only residual adverse effects likely to occur as a result of implementation of the Plan are those which are identified under Table 8.2.

Other policies, plans and programmes that have been considered by the assessment of effects include those which are detailed under Section 2.5 (and associated Appendix I “Relationship with Legislation, Plans and Programmes”), Section 4 and Section 5. Plans and programmes from various sectors will interact with the Plan, including those relating to land use planning. These plans and programmes are subject to their own environmental assessment requirements as relevant. Examples include:

- Land use policy, plans and programmes (e.g. the National Planning Framework, the Southern Regional Spatial and Economic Strategy, adjoining County Development Plans and Local Area Plans);
- Tipperary Local Economic and Community Plan and the Local Economic and Community Plans of adjoining counties;
- Energy policy, plans and programmes (e.g. Grid25 and associated Implementation Programme, Ireland’s National Renewable Energy Action Plan 2010, Strategy for Renewable Energy 2012-2020, Draft National Energy and Climate Plan 2021-2030 and the Renewable Electricity Policy and Development Framework);
- Climate related policy, plans and programmes (e.g. the National Climate Policy Position and Climate Action 2014, Climate Action and Low Carbon Development Act 2015, as amended, and White Paper Ireland’s Transition to a Low Carbon Energy Future 2015, Climate Action Plan, the National Adaptation Framework 2018, and the Tipperary Climate Change Adaptation Strategy 2019 and Climate Action Charter 2019);
- Water services, waste management, transport and energy infrastructure plans (e.g. Irish Water’s Water Services Strategic Plan and associated Capital Investment Plan, Southern Regional Waste Management Plan and Transportation Policies and Strategies); and
- Environmental protection and management plans (e.g. River Basin Management Plan and Flood Risk Management Plans).

Potential cumulative/in combination effects include:

- Contributions towards reductions in travel related greenhouse gas and other emissions to air, reductions in consumption from non-renewables and associated achievement of legally binding targets (in combination with plans and programmes from all sectors, including energy, transport and land use planning) as a result of facilitating:
  - Sustainable compact growth;
  - Sustainable mobility, including walking, cycling and public transport;
  - Drainage, flood risk management and resilience;

- Renewable energy; and
- Sustainable design, energy efficiency and green and blue infrastructure.
- Contributions towards travel related greenhouse gas and other emissions to air (in combination with plans and programmes from all sectors, including transport and land use planning) as a result of facilitating development which must be accompanied by road capacity;
- Facilitation of new development that is accompanied by appropriate levels of water services thereby contributing towards environmental protection;
- Need for and use of water and waste water treatment capacity arising from new developments and associated potential adverse effects;
- Potential cumulative effects upon surface and ground water status as a result of, for example, housing, employment, agricultural and forestry – loadings and abstractions;
- Potential cumulative effects (habitat damage, enhancing ecological connectivity, contributing towards sustainable mobility) arising from linear developments, such as those relating to green and blue infrastructure, including beyond the County border;
- Potential cumulative effects on flood risk by, for example, development of greenfield lands or obstruction of flood paths; and
- In combination with plans and programmes from all sectors potential adverse effects on all environmental components arising from all development in greenfield and brownfield areas (e.g. infrastructural, residential, economic, agricultural etc.). The type of these effects is consistent with those described on Table 8.2. These plans and programmes are required to comply with environmental legislation and undergo SEA and AA as relevant comply with environmental legislation while projects are subject to EIA and AA, as relevant.

These effects would have the potential, if unmitigated, if they occurred, to result in changes in the environment within and beyond County Tipperary.

A variety of the issues covered by the Plan provisions are regional issues which are considered: at Regional Assembly level, in the Southern RSES and by planning authorities across the Region. The solutions to these issues are often regional solutions which are subject their own consenting procedures. Works arising outside of the Plan as a result of providing for new development within the County including those arising as a result of the cumulative provision of development in the wider Southern region would potentially conflict with a number of environmental components, across the wider Southern region and beyond, including: ecology, soil function, the status of water bodies and the landscape. Some of these conflicts would be mitigated by measures which will be integrated into the Plan while some will be mitigated by measures arising out of separate consent procedures.

### 8.3 Overall Evaluation

Tipperary County Council have integrated various recommendations arising from the SEA, AA and SFRA processes into the Plan (see Section 9). Table 8.2 provides a detailed overall evaluation of the environmental effects arising from the Plan. 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, considering mitigation through both provisions integrated into the Plan – see Section 9.

Considering, *inter alia*, the detailed mitigation which has been integrated into the Plan (including that which is identified at Section 9), it has been determined that significant residual adverse environmental effects will not occur.

Environmental impacts which occur will be determined by the nature and extent of multiple or individual projects and site-specific environmental factors. Strategic Environmental Objective (SEO) codes are taken from Table 8.1.

**Table 8.2 Overall Evaluation – Effects arising from the Plan**

Environmental Component	Environmental Effects, in combination with the wider planning framework Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP, the Southern RSES, adjacent Development Plans and lower-tier land use plans.			SEO Codes
	Significant Positive Effect, likely to occur	Potentially Significant Adverse Environmental Effects, if unmitigated	Likely Residual Adverse Non-Significant Effects	
<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 County's settlements) 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>BFF</b>

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, adjacent Development Plans and lower-tier land use plans.			SEO Codes
	Significant Positive Effect, likely to occur	Potentially Significant Adverse Environmental Effects, if unmitigated	Likely Residual Adverse Non-Significant Effects	
<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 County's settlements) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the County and beyond.</li> <li>Contribution towards the protection of human health by facilitating development of lands (including those within and adjacent to the County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the 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>	<b>PHH</b>
<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 County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the 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>S</b>



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Environmental Component	Environmental Effects, in combination with the wider planning framework			SEO Codes
	Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP 2018, the Southern RSES, 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>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 County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the 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>W</b>
<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 County's settlements) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the 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>	<b>MA</b>

Environmental Component	Environmental Effects, in combination with the wider planning framework			SEO Codes
	Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP 2018, the Southern RSES, 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 County's settlements) 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 noting the Plan will be supported by a Sustainable Transport Strategy and Local Transport Plans/Active travel plans at the LAP level.</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>AC</b>
<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 existing settlements.</li> <li>Contributes towards protection of cultural heritage within existing settlements 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>CH</b>
<b>Landscape</b>	<ul style="list-style-type: none"> <li>Contributes towards protection of wider landscape and landscape designations by facilitating development within existing settlements.</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>	<b>L</b>

## 8.4 Informing the Plan-Preparation Process

All parts of the Plan-preparation process were informed by the SEA, AA and SFRA processes - this includes the preparation of the Chief Executive's Draft Plan, Members' Amendments to that Plan in advance of public display, Proposed Material Alterations and Further Modifications. The mitigation integrated into the final, adopted Plan includes that identified in Section 9 of this report. There were no Material Alterations to the Draft Plan, modified or otherwise, that were advised against by the SEA and adopted as part of the final Plan.

## 8.5 Appropriate Assessment and Strategic Flood Risk Assessment

Stage 2 Appropriate Assessment (AA) and Strategic Flood Risk Assessment (SFRA) have been undertaken alongside the preparation of the Plan.

The requirement for AA is provided under the EU Habitats Directive (Directive 1992/43/EEC). The AA assesses the effects of the Plan on European Sites designated for certain habitats and species. The conclusion of the AA is that the Plan will not affect the integrity of the Natura 2000 network<sup>82</sup>.

SFRA is required by '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. Recommendations from the SFRA have been integrated into the Plan.

Various policies and objectives have been integrated into the Plan through the SEA, SFRA and AA processes. The preparation of the Plan, SEA, AA and SFRA has taken place concurrently and the findings of the AA and SFRA have informed both the Plan and the SEA.

## 8.6 Integration of Climate Action into the Plan

The Plan will strongly contribute towards positive climate action in Tipperary in combination with:

- The Climate Action Plan that identifies 493 climate mitigation and/or adaptation actions, including: Action 214 Rollout of Social Housing National Retrofitting Programme in 2021 with retrofitted properties required to reach BER B2 or equivalent; Action 190 Ensure national, regional, and local planning frameworks encourage and facilitate the development of district heating where appropriate to facilitating compact urban development; and Action 78 Implement the National Planning Framework.
- The National Planning Framework, which has identified National Strategic Outcome Objectives 8 "Build Climate Resilience" and 9 "Support the transition to low carbon and clean energy" under National Strategic Outcome 8 "Transition to a Low Carbon and Climate Resilient Society".
- The Southern Regional Spatial and Economic Strategy that has identified various Regional Policy Objectives relating to climate action, including RPOs 87-107 under "Climate action and transition to a low carbon economy".
- The Climate Action and Low Carbon Development (Amendment) Act 2021 to support Ireland's transition to a Net Zero and climate neutral economy by 2050, aligned with national targets for GHG reductions. The Act introduces a requirement for the Council to prepare a 5-year Climate Action Plan to incorporate the provisions of the Climate Adaption Strategy, along with the mitigation measures set out in the spatial planning framework of the Plan.

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<sup>82</sup> Except as provided for in Article 6(4) of the Habitats Directive, viz. There must be:

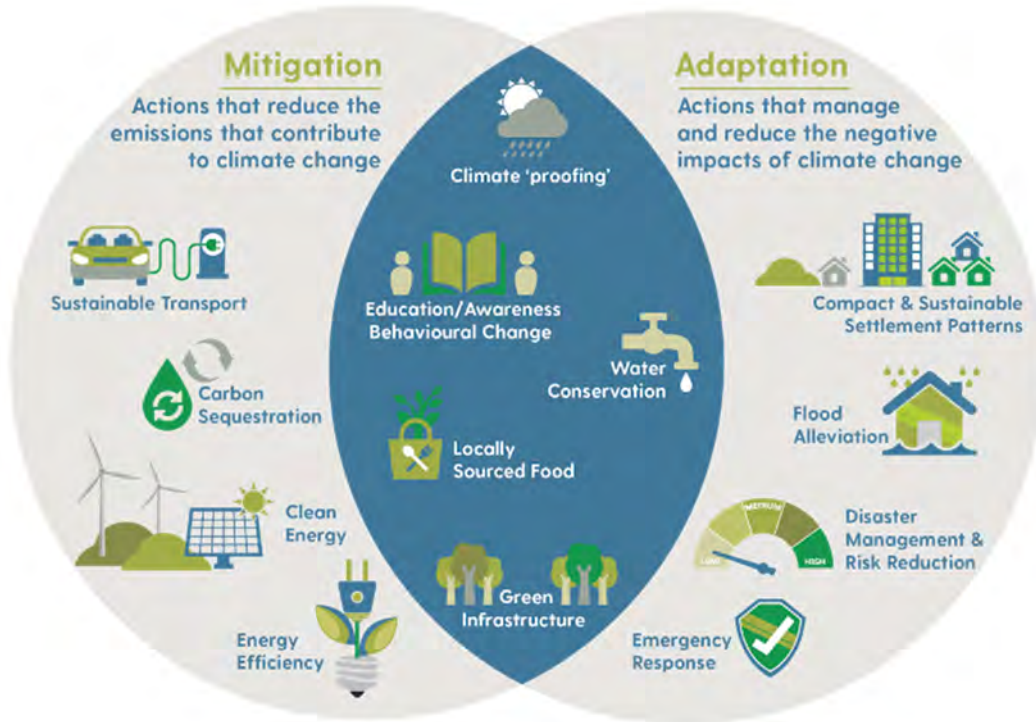
(a) no alternative solution available;

(b) imperative reasons of overriding public interest for the plan/programme/project to proceed; and

(c) adequate compensatory measures in place.

- The current Programme for Government under its 'Green New Deal' has committed to a 7% per annum reduction in overall GHGs from 2021 to 2030, which equates to a 51% reduction.

Climate Action is strongly embedded throughout the Plan, and is focused upon at Chapter 3 "Low-Carbon Society & Climate Action". The Climate Action Regional Office (CARO) has identified the key measures that will contribute to climate mitigation and adaptation and the achievement of GHG emission reductions targets of 7% per annum, as summarised in Figure 8.1 below. How these adaptation and mitigation actions have been integrated into the Plan is shown on Table 8.3.



**Figure 8.1 Climate change mitigation and adaptation (CARO)**

**Table 8.3 How Climate Adaptation and Mitigation considerations have been integrated into the Plan**

Chapter	Integration of Climate Adaptation and Mitigation considerations
<b>1 Introduction</b>	<ul style="list-style-type: none"> <li>• Consideration of the UN SDGs</li> <li>• Integration of SEA, NIA and SFRA</li> </ul>
<b>2 Core Strategy</b>	<ul style="list-style-type: none"> <li>• Core Ambition – Enable a 'Just Transition' to a climate resilient, biodiversity-rich, environmentally-sustainable and climate-neutral economy.</li> <li>• Strategic Objectives compliance with the UN SDG relating to Climate Action.</li> </ul>
<b>3 Low-Carbon Society and Climate Action</b>	<ul style="list-style-type: none"> <li>• Dedicated to Low-Carbon Society and Climate Action. Targets for a 7% reduction in GHG emissions each year over the lifetime of the Plan.</li> <li>• Energy and Climate Action Committee, partnerships i.e. TEA, LIT and membership of the Covenant of Mayors.</li> <li>• Key areas for Change are listed: Bioeconomy and Agriculture - National Bio-economy Campus in Lisheen. Disruptive Technologies innovation and Renewable Energy – Centre of Excellence, Nenagh, proposed review of RES and the TUS centre at Thurles. Sustainable Settlements and SEDA. Sustainable Transport and Active travel – LPTs for Key Towns. Energy Efficiency in Built Fabric and Micro-generation. Nature-based Solutions and SUDS. Circular economy – DZ at Littleton. Climate Active Communities and SECS</li> </ul>
<b>4 Settlement Strategy</b>	<ul style="list-style-type: none"> <li>• New development to be focused on existing settlements in line with a sustainable settlement hierarchy with consideration to environmental and infrastructural capacity.</li> <li>• 59% of future population growth to Urban Towns, and 41% to rural villages and areas (supported by framework for regeneration to make towns and villages better places to live)</li> <li>• Sustainable connectivity through integrated land use and spatial planning at settlement level.</li> <li>• SLA with sequential approach ensuring connectivity and optimal use of infrastructure</li> </ul>
<b>5 Housing</b>	<ul style="list-style-type: none"> <li>• Support compact residential development in central sites in line where connectivity and accessibility are delivered through quality design.</li> <li>• County Housing Strategy to enable tailored delivery of housing according to population needs.</li> </ul>
<b>6 Supporting Sustainable Communities</b>	<ul style="list-style-type: none"> <li>• 'Sustainable Communities' addressed in areas including; accessibility and active travel, local food production, local services and amenities and digital connectivity.</li> <li>• 'Just Transition'. The role of the PPN and other community initiatives is supported.</li> <li>• Community energy and investment as important in a transition to a low-carbon society</li> </ul>
<b>7 Town Centres and Placemaking</b>	<ul style="list-style-type: none"> <li>• Place-making/revitalisation of towns/villages as a cornerstone of low-carbon development.</li> <li>• Key areas for focus are listed: Town Centres First Principle – Strategic Regeneration programme in Place. Streets as places for people. Greening of our urban areas. Achieving Urban Infill;/brownfield and town centre development. Diversity of uses. Vacant property strategy</li> </ul>
<b>8 Enterprise and Rural Development</b>	<ul style="list-style-type: none"> <li>• Enable sustainable enterprise development with focus on Green and Digital economy.</li> <li>• Rural enterprise to balance economic growth with the protection of rural resources.</li> <li>• Support for remote working, flexible working and reuse of buildings for enterprise.</li> </ul>
<b>9 Tourism Strategy</b>	<ul style="list-style-type: none"> <li>• Vision for sustainable tourism set out in line with 'Tipperary Transforming'.</li> <li>• Tourism accommodation and facilities to be supported in a manner that is compatible with the protection of the environment.</li> </ul>
<b>10 Renewable Energy and Bioeconomy</b>	<ul style="list-style-type: none"> <li>• The Plan is supported by a RES enabling renewable generation at appropriate locations.</li> <li>• New Focus on the Bio-economy, Decarbonisation Zones, Disruptive technologies and Energy Storage and Sustainable Waste Management/Circular Economy.</li> </ul>
<b>11 Environment and Natural Assets</b>	<ul style="list-style-type: none"> <li>• Support for role of natural environmental services in climate action, biodiversity, water quality.</li> <li>• Flood risk management is addressed both here, in the SLA process in terms of zoning and in the SEA and SFRA where climate change impacts on flood risk has been considered.</li> <li>• It is an objective of the Council to prepare the following over the lifetime of the Plan:</li> <li>• Survey of Wetlands, Pollinator Action Plan, Biodiversity and Heritage Plan.</li> </ul>
<b>12 Sustainable Transport</b>	<ul style="list-style-type: none"> <li>• New development to demonstrate that land-use, connectivity and transportation are integrated in a manner which reduces reliance on car-based travel, promoting sustainable transport.</li> <li>• The Integration of land use and transport is supported by the following principles: Sustainable Mobility and active travel and the 10-minute town concept. Preparation of LTPs for the Key Towns and Active travel plans for the smaller towns. Rural transport strategy. Alternative Fuels Infrastructure. Support for investment in Rail Transport</li> </ul>
<b>13 Built Heritage</b>	<ul style="list-style-type: none"> <li>• The Plan seeks the sympathetic restoration, appropriate re-use and maintenance of buildings/features which are considered to be of local and vernacular architectural importance.</li> </ul>
<b>14 Green and Blue Infrastructure</b>	<ul style="list-style-type: none"> <li>• Green and Blue Infrastructure approach in the planning framework. Key headings are:</li> <li>• A new roadmap for green infrastructure to support investment and connectivity with other assets and to coordinate protection of biodiversity and habitats.</li> <li>• Tourism and recreation potential</li> <li>• Role in Sustainable Mobility</li> </ul>
<b>15 Water and Energy Utilities</b>	<ul style="list-style-type: none"> <li>• Support for water and services utilities such as Irish Water as part of new development.</li> <li>• Measures and nature-based solution to surface water management with the integration of innovative approaches to sustainable water management solutions.</li> <li>• Electricity and Gas networks as an important part of the role of renewable energy development.</li> <li>• The impact of future climate change on our water and energy infrastructure is recognised.</li> </ul>
<b>16 Monitoring &amp; Evaluation</b>	<ul style="list-style-type: none"> <li>• Monitoring of the progress of the Plan implementation will be co-ordinated with environmental monitoring as an important part of sustainable development management.</li> </ul>

## 8.7 Interrelationship between Environmental Components

The SEA Directive requires the Environmental Report to include information on the likely significant effects on the environment, including on issues such as biodiversity, fauna, flora, population, human health, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors. Likely significant effects on environmental components which are identified include those which are interrelated; implementation of the Plan will not affect the interrelationships between these components. The presence of significant interrelationships between environmental components is identified on Table 8.4.

**Table 8.4 Presence of Interrelationships between Environmental Components**

<b>Component</b>	<b>Biodiversity, flora and fauna</b>	<b>Population and human health</b>	<b>Soil</b>	<b>Water</b>	<b>Air and Climatic factors</b>	<b>Material assets</b>	<b>Cultural heritage</b>	<b>Landscape</b>
<b>Biodiversity, flora and fauna</b>		Yes	Yes	Yes	Yes	Yes	No	Yes
<b>Population and Human Health</b>			Yes	Yes	Yes	Yes	No	No
<b>Soil</b>				Yes	No	Yes	No	No
<b>Water</b>					No	Yes	No	No
<b>Air and Climatic Factors</b>						Yes	No	No
<b>Material Assets</b>							Yes	Yes
<b>Cultural Heritage</b>								Yes
<b>Landscape</b>								

## 8.8 Detailed Evaluation<sup>83</sup>

For an explanation of SEO codes e.g. **BFF**, **PHH**, **S**, **W**, etc. refer to Table 8.1 on page 91.

The following applies to each of the sub-sections 8.8.1 to 8.8.15 below:

The Plan is situated in a hierarchy of documents setting out public policy for, among other things, land use planning, infrastructure, sustainable development, tourism, environmental protection and environmental management, such as the National Planning Framework, the National Development Plan, the National Adaptation Framework, the Climate Action Plan and the Regional Spatial and Economic Strategy for the Southern Region (for additional detail please refer to Section 2.5 *“Relationship with other relevant Plans and Programmes”* in this report).

These other existing policies, plans etc. have been subject to their own environmental assessment processes, as relevant, and already provide for various measures that have been compiled into the Plan. The Plan aligns with these documents and will be incorporated into the review and preparation of these documents.

Lower tier plans and projects must be consistent and comply with the provisions of the Plan and of these other policies, plans etc. and will be subject to their own project level EIA and AA requirements as relevant. An assessment of cumulative effects is provided at Section 8.2 of this report.

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<sup>83</sup> The Plan's provisions are evaluated using compatibility criteria in order to determine how they would be likely to affect the status of the existing environment and the SEOs. The SEOs and the Plan provisions are arrayed against each other in order to demonstrate which interactions would cause effects on specific components of the environment. Where the appraisal identifies an interaction with the status of an SEO the relevant SEO code is entered into the relevant column.

The interactions identified are reflective of likely significant environmental effects:

1. Interactions that would be likely to improve the status of a particular SEO (“Likely to Improve status of SEOs”) would be likely to result in a significant positive effect on the protection/management of the environmental component/issues to which the SEO relates.
2. Interactions that would potentially conflict with the status of an SEO and would be likely to be mitigated (“Mitigated Conflicts”) would be likely to result in a potential significant negative effect however these effects would be likely to be mitigated by measures which have been integrated into the Plan.
3. Interactions with SEOs, the negative effects of which would be unlikely to be mitigated are identified as “Probable Conflict with status of SEOs – unlikely to be mitigated”.

These effects include secondary, cumulative (see also Section 8.2), synergistic, short, medium and long-term permanent and temporary, positive and negative effects.

## 8.8.1 Chapter 2: Core Strategy

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs – unlikely to be mitigated	Mitigated Conflicts	No Likely interaction with status of SEOs
Provisions of this Chapter include those relating to the Plan's Vision, Core Ambitions and Strategic Objectives. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p><b>Commentary</b></p> <p>The assessment of the Plan's Core Strategy provisions, including the Plan's Vision, Ambitions and Strategic Objectives, against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> <li>• Environmental effects detailed under subsections 8.2 to 8.7 of this report; and</li> <li>• Assessments of the selected alternatives for the Plan provided at Section 7 of this report.</li> </ul> <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the County's settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the County's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.</p> <p>The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.</p> <p>The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Tipperary County Council is helping to ensure that:</p> <ul style="list-style-type: none"> <li>• The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and</li> <li>• The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.</li> </ul> <p>The Plan's Vision, Ambitions and Strategic Objectives would contribute towards sustainable development and the protection and management of the environment, for example:</p> <ul style="list-style-type: none"> <li>• Vision "sustainable towns and rural areas, and for self-sustaining and inclusive communities"</li> <li>• Core Ambitions for Tipperary "A healthy natural environment, working landscapes, supporting infrastructure", "A valued built and cultural heritage"</li> <li>• SO – 1 "just transition to a climate resilient, biodiversity-rich, environmentally-sustainable and climate-neutral economy"</li> <li>• SO – 6 "integrating the sustainable management of land and natural resources"</li> <li>• SO – 7 "To protect, enhance and connect areas of natural heritage, blue and green infrastructure and waterbodies, for quality of life, biodiversity, species and habitats, while having regard to climate change adaptation and flood risk management measures"</li> <li>• SO – 9 "To enhance connectivity and promote sustainable transport, through the integration of land-use and transport planning and promotion of and prioritisation of public transport and walking cycling"</li> <li>• SO – 10 "To protect existing infrastructural assets and utilities, and the strategic function of the existing national road and rail network, and associated junctions and support investment in strategic infrastructure both at the county, and the regional level thereby ensuring Tipperary's access to key services for economic growth and resilience"</li> </ul>				



## 8.8.2 Chapter 3: Low-Carbon Society and Climate Action

	Likely to <b>Improve</b> status of SEOs	Probable <b>Conflict</b> with status of SEOs – unlikely to be mitigated	<b>Mitigated Conflicts</b>	<b>No Likely</b> interaction with status of SEOs
Provisions of this Chapter include those relating to a Low-Carbon Society and Climate Action. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p><b>Commentary</b></p> <p>The assessment of the Plan's Low-Carbon Society and Climate Action provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> <li>Environmental effects detailed under subsections 8.2 to 8.7 of this report; and</li> <li>Assessments of the selected alternatives for the Plan provided at Section 7 of this report.</li> </ul> <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the County's settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the County's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.</p> <p>The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.</p> <p>The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Tipperary County Council is helping to ensure that:</p> <ul style="list-style-type: none"> <li>The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and</li> <li>The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.</li> </ul> <p>Low-Carbon Society and Climate Action provisions would contribute towards sustainable development and the protection and management of the environment.</p> <p>Various provisions in this Chapter contribute towards the framework for the development of energy. These provisions would contribute towards achieving various government objectives and targets including those relating to climate mitigation and reducing greenhouse gas emissions and increasing the amount of energy to be consumed from renewable sources. The development of renewable energy would have the potential to adversely impact upon the environment, if unmitigated. Further general commentary on the types of potential effects arising from a range of renewable energy types is provided under Section 8.8.9.</p> <p>Please also refer to Section 8.6 "Integration of Climate Action into the Plan".</p>				

## 8.8.3 Chapter 4: Settlement Strategy

	Likely to <b>Improve</b> status of SEOs	Probable <b>Conflict</b> with status of SEOs – unlikely to be mitigated	<b>Mitigated Conflicts</b>	<b>No Likely</b> interaction with status of SEOs
Provisions of this Chapter include those relating to the Plan's Settlement Strategy. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p><b>Commentary</b></p> <p>The assessment of the Plan's Settlement Strategy provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> <li>Environmental effects detailed under subsections 8.2 to 8.7 of this report; and</li> <li>Assessments of the selected alternatives for the Plan provided at Section 7 of this report.</li> </ul> <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the County's</p>				

settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the County's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.

The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.

The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Tipperary County Council is helping to ensure that:

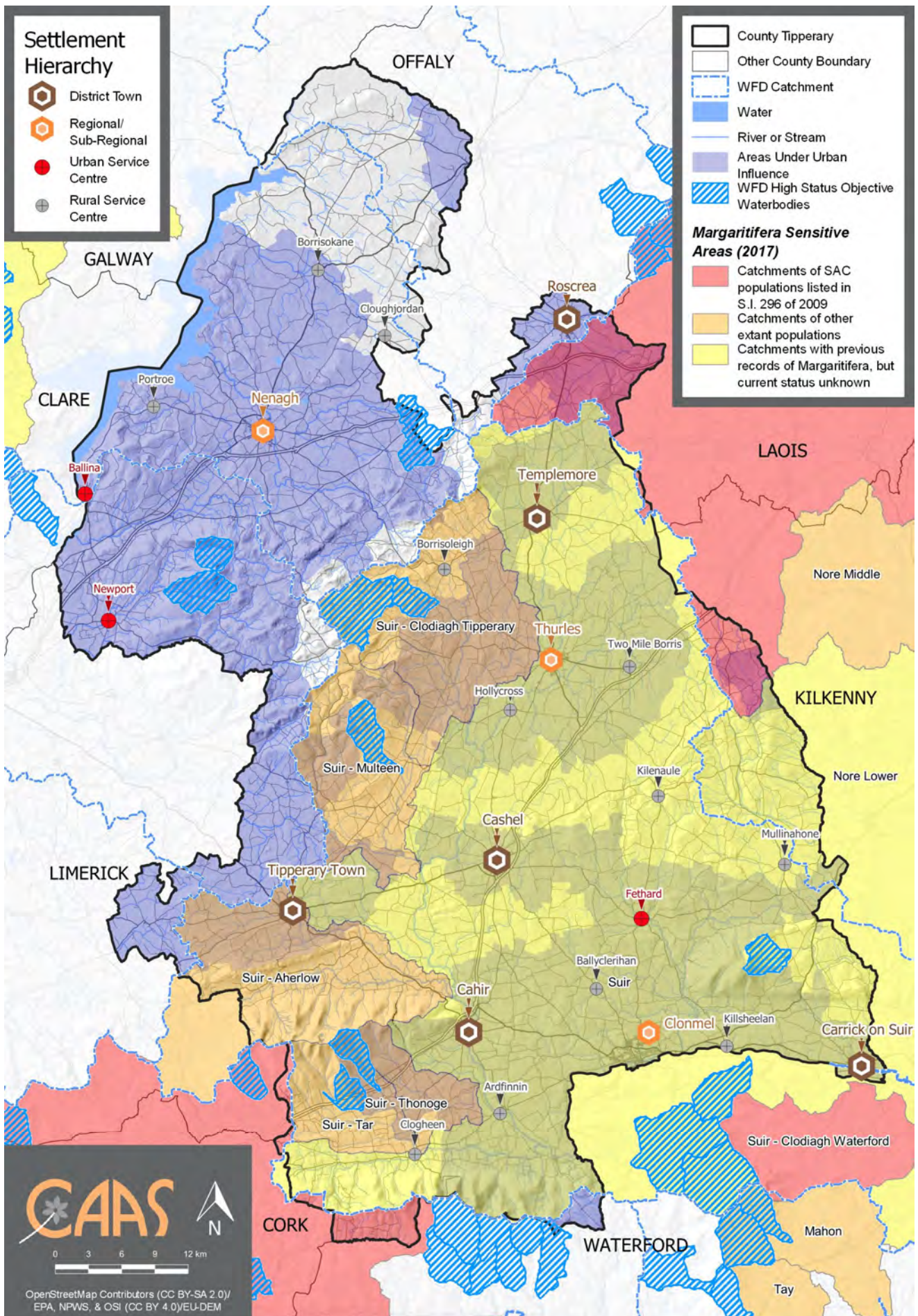
- The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and
- The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.

The Settlement Strategy provisions in this Chapter of the Plan would contribute towards sustainable development and the protection and management of the environment, for example:

- The Core Strategy and resulting tailored framework for settlement growth, has been prepared by the Council using evidence-based approach, considering the capacity and character of each town and village under various headings;
- 4 – 1 "Support and facilitate the sustainable growth of the county's towns and villages as outlined in the Settlement Strategy Chapter 4, thereby promoting balanced development and competitiveness, and a network of viable and vibrant settlements to support the needs of local communities....."
- 4 – 2 "Ensure, in providing for the development of rural housing, that a distinction is made between 'Areas under Urban Influence', i.e. within the commuter catchment of cities and large towns and centres of employment, and other areas in the open countryside."
- 4 - A "Identify strategic sites suitable for collaborative regeneration, and to actively seek, the regeneration of sites, infrastructure and the built environment..."
- 4 - B "deliver investment in the sustainable development of water, wastewater and other infrastructure for towns and villages, in line with their role in the Settlement Hierarchy".

Areas under Urban Influence have been considered as part of the alternatives – see Sections 6 and 7.

There are significant areas of the County both within and outside of the Areas under Urban Influence. Compliance of all types of developments, in all areas, with the mitigation included in the Plan is essential in order to protect and manage all environmental components. To illustrate this importance, with regard to certain sensitive water resources and designations, Figure 8.2 shows Areas Under Urban Influence, Freshwater Pearl Mussel Catchments and WFD High Status Waterbody/Blue Dot Catchments and Figure 8.3 shows Areas Under Urban Influence and Source Protection Areas – for more information on all of these areas and their value to people and biodiversity refer to the baseline in Section 4 of this report.



**Figure 8.2 Areas Under Urban Influence, Freshwater Pearl Mussel Catchments and WFD High Status Waterbody/Blue Dot Catchments**

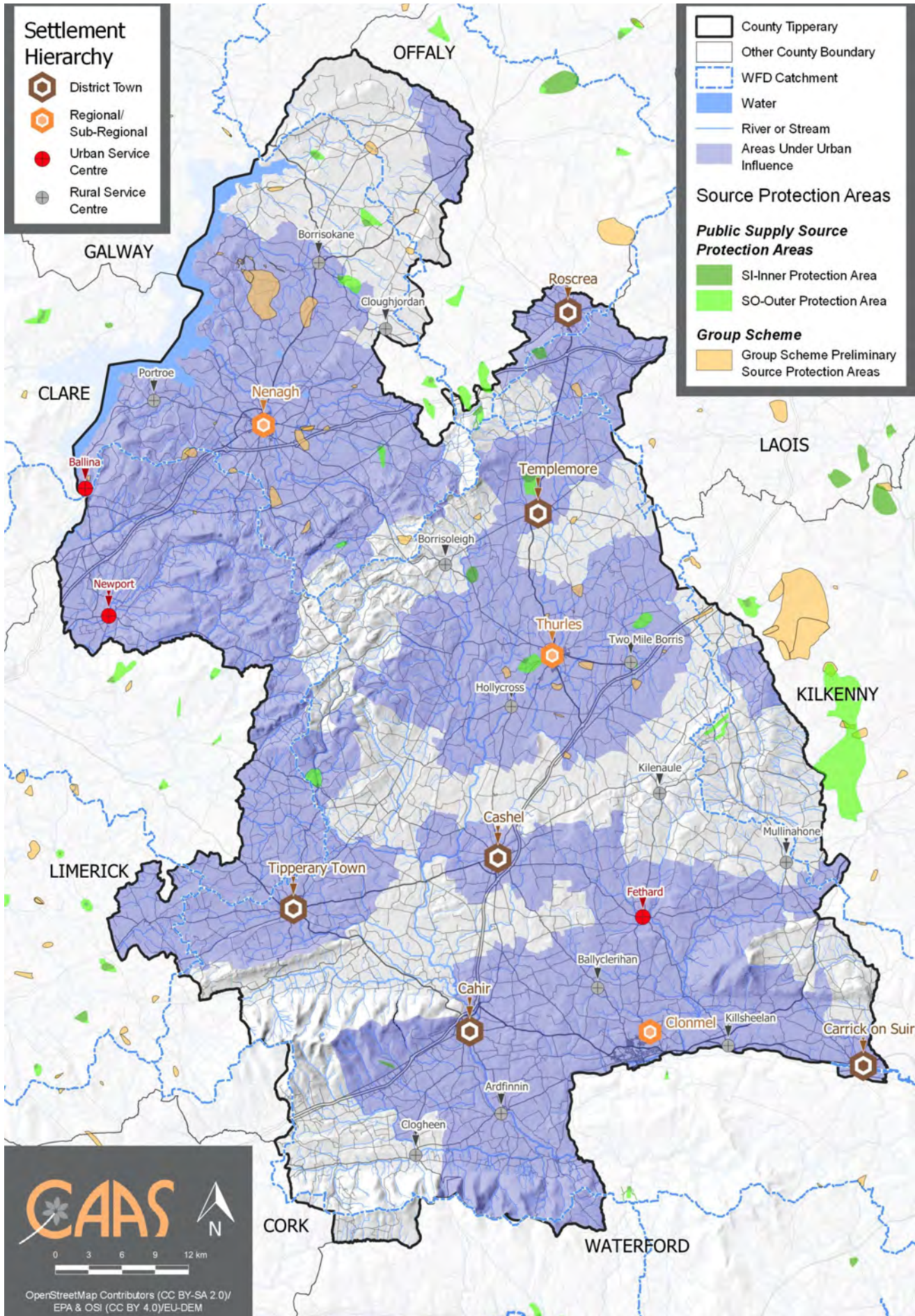


Figure 8.3 Areas Under Urban Influence and Source Protection Areas

## 8.8.4 Chapter 5: Housing

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs – unlikely to be mitigated	Mitigated Conflicts	No Likely interaction with status of SEOs
Provisions of this Chapter include those relating to Housing. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p><b>Commentary</b></p> <p>The assessment of the Plan's Housing provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> <li>Environmental effects detailed under subsections 8.2 to 8.7 of this report; and</li> <li>Assessments of the selected alternatives for the Plan provided at Section 7 of this report.</li> </ul> <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the County's settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the County's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.</p> <p>The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.</p> <p>The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Tipperary County Council is helping to ensure that:</p> <ul style="list-style-type: none"> <li>The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and</li> <li>The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.</li> </ul> <p>The Housing provisions in this Chapter of the Plan would contribute towards sustainable development and the protection and management of the environment, for example:</p> <ul style="list-style-type: none"> <li>5 – 4 "Support and encourage proposals for public and private sector housing involving the reuse and refurbishment of disused and derelict buildings in Towns and Villages"</li> <li>5 – 5 "Support the delivery of new residential development in towns and villages..."</li> <li>5 - 9 "Climate change actions and measures will be incorporated in new residential development of all scales to demonstrate how the development will minimise energy use, enhance accessibility, manage waste and support biodiversity."</li> <li>5 – 11 "Proposals for new dwellings in the countryside outside of settlements will be assessed, in accordance with the principles of the NPF Policy NPO 19 for new Housing in the Open Countryside..."</li> </ul>				

## 8.8.5 Chapter 6: Supporting Sustainable Communities

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs – unlikely to be mitigated	Mitigated Conflicts	No Likely interaction with status of SEOs
Provisions of this Chapter include those relating to Sustainable Communities. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p><b>Commentary</b></p> <p>The assessment of the Plan's Sustainable Communities provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> <li>Environmental effects detailed under subsections 8.2 to 8.7 of this report; and</li> <li>Assessments of the selected alternatives for the Plan provided at Section 7 of this report.</li> </ul>				

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Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the County's settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the County's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.

The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.

The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Tipperary County Council is helping to ensure that:

- The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and
- The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.

The Sustainable Communities provisions in this Chapter of the Plan would contribute towards sustainable development and the protection and management of the environment, for example:

- 6 - 1 "...ensure that the location and scale of the development is compatible with the availability of adequate and safe amenity and recreational facilities, including community facilities..."
- 6 - 2 "...multi-use community facilities and amenities which would facilitate co-location and sharing of facilities and match the needs of as many persons and community groups as possible."
- 6 - 3 "...new healthcare facilities to locate on suitably zoned land in settlements in close proximity to public transport services, amenities and facilities."
- 6 - 4 "...major housing proposals to be accompanied by assessments of the capacity of local schools to accommodate the proposed development."
- 6 - 5 "Facilitate new childcare facilities in settlements..."
- 6 - 6 "...where it can be established that there will be no significant adverse impact on the surrounding areas and the receiving environment..."

### 8.8.6 Chapter 7: Town Centres and Placemaking

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs – unlikely to be mitigated	Mitigated Conflicts	No Likely interaction with status of SEOs
Provisions of this Chapter include those relating to Town Centres and Placemaking. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p><b>Commentary</b></p> <p>The assessment of the Plan's Town Centres and Placemaking provisions against Strategic Environmental Objectives (SEO's BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> <li>• Environmental effects detailed under subsections 8.2 to 8.7 of this report; and</li> <li>• Assessments of the selected alternatives for the Plan provided at Section 7 of this report.</li> </ul> <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the County's settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the County's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.</p> <p>The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.</p> <p>The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Tipperary County Council is helping to ensure that:</p> <ul style="list-style-type: none"> <li>• The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and</li> <li>• The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.</li> </ul> <p>The Town Centres and Placemaking provisions in this Chapter of the Plan would contribute towards sustainable development and the protection and management of the environment. Urban regeneration, for example, will contribute towards sustainable mobility, minimising increases in energy usage and emissions to air, including greenhouse gas emissions and other emissions. Such development would also avoid the need to develop more sensitive greenfield lands elsewhere in the County and beyond, thereby avoiding potential adverse effects on various environmental components.</p>				

## 8.8.7 Chapter 8: Enterprise and Rural Employment

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs – unlikely to be mitigated	Mitigated Conflicts	No Likely interaction with status of SEOs
Provisions of this Chapter include those relating to Enterprise and Rural Employment. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p><b>Commentary</b></p> <p>The assessment of the Plan's Enterprise and Rural Employment provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> <li>• Environmental effects detailed under subsections 8.2 to 8.7 of this report; and</li> <li>• Assessments of the selected alternatives for the Plan provided at Section 7 of this report.</li> </ul> <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the County's settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the County's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.</p> <p>The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.</p> <p>The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Tipperary County Council is helping to ensure that:</p> <ul style="list-style-type: none"> <li>• The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and</li> <li>• The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.</li> </ul> <p>Various Enterprise and Rural Employment provisions in this Chapter of the Plan would contribute towards sustainable development and the protection and management of the environment.</p> <p>Mitigation has been integrated into these provisions, including 8 – 1 ("relevant environmental protection standards"), 8 – 2 ("normal planning and environmental criteria, and must demonstrate that they would not compromise the capacity of strategic road corridors in line with the Spatial Planning and National Roads, Guidelines for Planning Authorities"), 8- 3 ("whilst balancing the need for a proposed rural based activity with the need to protect, promote and enhance the viability and environmental quality") and 8 – 4 ("environmental and rural amenity of the area").</p> <p>Agriculture and forestry are essential to the sustenance of rural populations and associated existing sustainable rural management practices, which can often sustain biodiversity.</p> <p>Agriculture is essential to the sustenance of rural populations and associated existing sustainable rural management practices which can often sustain biodiversity. Agriculture is however a source of waste and emissions of ammonia from agricultural activities (e.g. manure handling, storage and spreading) and the production of secondary inorganic particulate matter can have significant effects on water, soil, water, biodiversity and human health.</p> <p>Forestry and access to forestry for amenity would contribute towards the sustenance of rural populations and can improve the biodiversity value of the countryside. Depending on how it is developed, forestry has the potential to adversely affect various environmental components including biodiversity and flora and fauna, water and human health, the landscape.</p> <p>An extractive industry is essential for sustainable development however it presents the potential for significant adverse environmental effects to arise with regard to all environmental components, if unmitigated.</p>				

## 8.8.8 Chapter 9: Tourism

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs – unlikely to be mitigated	Mitigated Conflicts	No Likely interaction with status of SEOs
Provisions of this Chapter include those relating to Tourism. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p><b>Commentary</b></p> <p>The assessment of the Plan's Tourism and Recreation provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> <li>• Environmental effects detailed under subsections 8.2 to 8.7 of this report; and</li> <li>• Assessments of the selected alternatives for the Plan provided at Section 7 of this report.</li> </ul> <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the County's settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the County's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.</p> <p>This Chapter contributes towards the provision of land use activities and developments relating to tourism – and would be likely to contribute towards an increase in the number and dwell time of visitors and associated potential adverse effects. Such effects would include in-combination effects arising from services and infrastructure to service development, including tourism. Examples may include developments/operation of developments relating to water services, transport, energy, access or accommodation. The mitigation of potential adverse effects arising would be contributed towards by Plan provisions including those relating to infrastructure capacity, visitor management, green infrastructure and ecosystem services – including those at section 16.15.4 "Tourism Activities / Developments Based on Natural Features":</p> <ul style="list-style-type: none"> <li>• "All planning applications for these adventure / recreational activities involving special natural features should be accompanied by a management plan indicating projected numbers of users, hours of operation, seasons of operation, and an undertaking to protect the natural environment in the form of a risk assessment with proposed amelioration measures in respect of flora, fauna, hydrology, geology and soils.</li> <li>• Proposals should seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that any new projects are a suitable distance from ecological sensitivities. Where relevant, the Council and those receiving permission for development under the Plan shall seek to manage any increase in visitor numbers and/or any change in visitor behaviour in order to avoid significant effects, including loss of habitat and disturbance. Management measures may include ensuring that new projects and activities are a suitable distance from ecological sensitivities. Visitor/Habitat Management Plans will be required for proposed projects as relevant and appropriate.</li> <li>• All proposals should be accessible insofar as possible by sustainable means of transport including public transport and by modes other than the car.</li> <li>• Where the traffic generated is likely to exceed the capacity of the local road network or require changes to the road network that would adversely affect the character of the area, these will not be permitted.</li> <li>• Where the activity is likely to be noise generating, a noise assessment will be required in connection with the application, measuring likely noise levels at the nearest noise sensitive recipients. Measures to mitigate and adverse impacts shall be identified."</li> </ul> <p>The development of new greenways, blueways and walking and cycling routes, including those between County Tipperary, adjoining counties and beyond has the potential to contribute towards sustainable mobility and a better management of movements in sensitive areas, thereby benefitting various environmental components including habitats at certain locations. The development of these projects, however, presents a variety of potentially adverse environmental effects that would, if unmitigated, have the potential to arise from both the construction and operation of such developments and/or their ancillary infrastructure. These types of infrastructure are often constructed in ecologically and visually sensitive areas adjacent to the banks of rivers and streams. Potential adverse effects would be mitigated both by measures which have been integrated into the Plan which provide for and contribute towards environmental protection, environmental management and sustainable development (including those identified at Section 9 of this report) and by measures arising from lower tier assessments (including those for the preparation of lower tier plans and projects). Projects would need to be subject to normal planning and environmental assessment processes, as well as complying with the Corridor and Route Selection Process under section 5.9 of the Plan. The development of green infrastructure can achieve synergies with regard to the provision of open space amenities, sustainable mobility, the sustainable management of water, the protection and management of biodiversity, the protection of cultural heritage and the protection of protected landscape sensitivities.</p> <p>The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.</p> <p>The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Tipperary County Council is helping to ensure that:</p> <ul style="list-style-type: none"> <li>• The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and</li> <li>• The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.</li> </ul>				



## 8.8.9 Chapter 10: Renewable Energy and Bio-Economy

	Likely to <b>Improve</b> status of SEOs	Probable <b>Conflict</b> with status of SEOs – unlikely to be mitigated	<b>Mitigated Conflicts</b>	<b>No Likely</b> interaction with status of SEOs
Provisions of this Chapter include those relating to Renewable Energy and Bio-Economy. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p><b>Commentary</b></p> <p>The assessment of the Plan's Renewable Energy and Bio-Economy provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> <li>• Environmental effects detailed under subsections 8.2 to 8.7 of this report; and</li> <li>• Assessments of the selected alternatives for the Plan provided at Section 7 of this report.</li> </ul> <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the County's settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the County's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.</p> <p>The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.</p> <p>The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Tipperary County Council is helping to ensure that:</p> <ul style="list-style-type: none"> <li>• The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and</li> <li>• The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.</li> </ul> <p>Renewable Energy and Bio-Economy provisions would contribute towards sustainable development and the protection and management of the environment. Various provisions in this Chapter contribute towards the framework for the development of energy, including those relating to the Renewable Energy Strategy. These provisions would contribute towards achieving various government objectives and targets including those relating to climate mitigation and reducing greenhouse gas emissions and increasing the amount of energy to be consumed from renewable sources. The development of renewable energy would have the potential to adversely impact upon the environment, if unmitigated. Further general commentary on the types of potential effects arising from a range of renewable energy types is provided below.</p> <p><b>Hydro-Energy</b> Positive Effects: Contribution towards renewable energy and minimisation of greenhouse gases targets Potential Negative Effects, if unmitigated:</p> <ul style="list-style-type: none"> <li>• Depending on the scale and location of the development there is potential for impacts to occur on biodiversity, in particular aquatic biodiversity</li> <li>• Potential to impact upon the morphological, biological and chemical status of waters - this could interact with drinking water sources (in freshwater) and biodiversity</li> <li>• Potential interactions leading to change in structure of soil and geology and sediment regimes in rivers</li> <li>• Operation could impact upon flood risk elsewhere</li> <li>• Potential impacts upon archaeological heritage or nearby architectural heritage, including context</li> <li>• Changes to the character of locations may occur however visual impacts would depend upon, inter alia, the size of the installation, ancillary facilities and the perception and visibility of the relevant area</li> </ul> <p><b>Bio-Energy</b> Positive Effects: Contribution towards renewable energy and minimisation of greenhouse gases targets. Can provide for the use of agricultural and other wastes Potential Negative Effects, if unmitigated:</p> <ul style="list-style-type: none"> <li>• Potential impact upon designated and non-designated biodiversity and flora and fauna arising from changes in vegetation. Soil structure may also be impacted upon.</li> <li>• Changes in farming practices may lead to changes in drainage and runoff which could impact upon biological and chemical status of waters - this could interact with drinking water sources and biodiversity</li> <li>• Potential human health impact: odour and noise from operation of plants</li> <li>• Potential impacts upon traffic during operation due to transportation of fuel to plants</li> <li>• Fuels derived from bio-mass still produce emissions however these are less than those derived from fossil fuels</li> <li>• Changes to the land cover of areas could occur however visual impacts would depend on perception of the relevant area;</li> <li>• Biomass plants may have visual impacts - these would depend on perception of the relevant area</li> </ul> <p><b>Wind Energy</b> Positive Effects: Contribution towards renewable energy and minimisation of greenhouse gases targets Potential Negative Effects, if unmitigated:</p> <ul style="list-style-type: none"> <li>• Potential impacts include those associated with construction and operation of the turbines and ancillary facilities and infrastructure (including roads and electrical infrastructure)</li> <li>• Potential human health impact: shadow flicker, noise, and impacts arising from landslides</li> </ul>				

- Potential impact upon designated and non-designated biodiversity and flora and fauna including birdlife and marine habitats
- Potential interactions leading to change in structure of soil and geology and changes to drainage
- Potential impacts on water status during construction – this could interact with drinking water sources and biodiversity
- Potential impacts upon the context of protected archaeological and architectural heritage – including the context of this heritage – as well as unknown archaeological heritage
- Potential impacts upon traffic during construction due to transportation of turbine components
- Changes to the character of areas would be likely to occur however visual impacts would depend on various factors including the size, number and spacing of the turbines, perception of the relevant areas and any cumulative effect arising from multiple wind farms

**Solar Energy**

Positive Effects: Contribution towards renewable energy and minimisation of greenhouse gases targets

Potential Negative Effects, if unmitigated:

- Potential impacts on architectural heritage – including the context of this heritage – at micro scale
- Potential impacts on habitats and species and micro scale
- Large scale installations may have visual impacts – these would depend on perception of the relevant area

**Geothermal Energy**

Positive Effects: Contribution towards renewable energy and minimisation of greenhouse gases targets.

Potential Negative Effects, if unmitigated:

- Potential impacts upon the status of waters and ecology contained within, especially arising from changes in the temperature of groundwater which can impact upon the structure and ecology of the aquifer and any dependent surface waters - this could interact with drinking water sources
- Potential interactions leading to change in structure of soil and geology
- Potential impacts upon archaeology, including unknown underground archaeology
- Potential impacts upon on site water services
- Potential impacts upon context of archaeological and architectural heritage arising from surface installation

Decarbonisation Zones (DZs) can provide a wide range of benefits in addition to climate mitigation and adaptation, such as those relating to air quality, health, biodiversity, embodied carbon, agricultural practices, sustainable land management, lower noise levels, waste, water, circular economy etc. The Council has identified the regionally important Lisheen Mine and Lisheen Bog area, centred on the National Bioeconomy Campus, as the first DZ in the county, with co-benefits in terms of tourism and amenity (Littleton Labyrinth and Bushcraft Survival destination) Plan. This DZ designation recognises the importance of the bio-economy in Tipperary and the potential for synergies with other areas including wind energy and tourism and amenity.

Waste Management provisions incorporate circular economy principles that are supported in the RSES.

## 8.8.10 Chapter 11: Environment and Natural Assets

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs – unlikely to be mitigated	Mitigated Conflicts	No Likely interaction with status of SEOs
Provisions of this Chapter include those relating to Environment and Natural Assets. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	

**Commentary**

The assessment of the Plan's Environment and Natural Assets provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:

- Environmental effects detailed under subsections 8.2 to 8.7 of this report; and
- Assessments of the selected alternatives for the Plan provided at Section 7 of this report.

Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the County's settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the County's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.

The focus of the provisions in this Chapter is the protection and management of the County's environment and natural heritage (including biodiversity, water, geological heritage and landscape).

Fishing and aquaculture together with related development (such as infrastructure and buildings in riverbank locations) has the potential to adversely affect various environmental components including biodiversity and flora and fauna; mitigation has been integrated into this Chapter, including under Policy 11 – 8.

Flood risk management provisions would contribute towards the protection and management of human health, biodiversity, flora and fauna, cultural heritage, water status and existing infrastructure and services. These measures have been informed by the accompanying Strategic Flood Risk Assessment (SFRA). Flood risk management infrastructure (if required) has the potential to result in significant adverse environmental effects during construction and operation on most

environmental components. These types of infrastructure are often constructed in ecologically and visually sensitive areas and adjacent to the banks of rivers and streams. Potential adverse effects will be mitigated both by measures which have been integrated into the Plan (including those identified at Section 9 of this report) and by measures arising from lower tier assessments.

The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.

The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Tipperary County Council is helping to ensure that:

- The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and
- The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.

## 8.8.11 Chapter 12: Sustainable Transport

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs – unlikely to be mitigated	Mitigated Conflicts	No Likely interaction with status of SEOs
Provisions of this Chapter include those relating to Sustainable Transport. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<b>Commentary</b>				
<p>The assessment of the Plan's Sustainable Transport provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> <li>• Environmental effects detailed under subsections 8.2 to 8.7 of this report; and</li> <li>• Assessments of the selected alternatives for the Plan provided at Section 7 of this report.</li> </ul> <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the County's settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the County's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.</p> <p>The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.</p> <p>Many of the provisions in this Chapter primarily contribute towards maximising sustainable mobility and associated interactions with emissions to air (including noise and greenhouse gas emissions), energy usage, air quality and human health. The facilitation of journeys by car, in particular, would give rise to emissions to air. The Plan references various projects that are provided for by higher level plans and programmes. As identified in Chapter 12 under "Feasibility", "New transport infrastructure projects, including greenways and blueways, that are not already provided for by existing plans/ programmes or are not already permitted, will be subject to feasibility assessment, considering need, environmental sensitivities as identified in the SEA Environmental Report, and objectives relating to sustainable mobility. Where feasibility is established, a Corridor and Route Selection Process will be undertaken, where appropriate, in two stages: Stage 1 – Route Corridor Identification, Evaluation and Selection; and Stage 2 – Route Identification, Evaluation and Selection."</p> <p>The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Tipperary County Council is helping to ensure that:</p> <ul style="list-style-type: none"> <li>• The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and</li> <li>• The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.</li> </ul>				

## 8.8.12 Chapter 13: Built Heritage

	Likely to <b>Improve</b> status of SEOs	Probable <b>Conflict</b> with status of SEOs – unlikely to be mitigated	<b>Mitigated Conflicts</b>	<b>No Likely</b> interaction with status of SEOs
Provisions of this Chapter include those relating to Built Heritage. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p><b>Commentary</b></p> <p>The assessment of the Plan's Built Heritage provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> <li>Environmental effects detailed under subsections 8.2 to 8.7 of this report; and</li> <li>Assessments of the selected alternatives for the Plan provided at Section 7 of this report.</li> </ul> <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the County's settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the County's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.</p> <p>The focus of the provisions in this Chapter is the protection and management of the County's built heritage (including archaeological and architectural heritage) as well as its landscape.</p> <p>The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.</p> <p>The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Tipperary County Council is helping to ensure that:</p> <ul style="list-style-type: none"> <li>The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and</li> <li>The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.</li> </ul>				

## 8.8.13 Chapter 14: Green and Blue Infrastructure

	Likely to <b>Improve</b> status of SEOs	Probable <b>Conflict</b> with status of SEOs – unlikely to be mitigated	<b>Mitigated Conflicts</b>	<b>No Likely</b> interaction with status of SEOs
Provisions of this Chapter include those relating to Green and Blue Infrastructure. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p><b>Commentary</b></p> <p>The assessment of the Plan's Green and Blue Infrastructure provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> <li>Environmental effects detailed under subsections 8.2 to 8.7 of this report; and</li> <li>Assessments of the selected alternatives for the Plan provided at Section 7 of this report.</li> </ul> <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the County's settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the County's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.</p> <p>The focus of many of the provisions in this Chapter is the protection and management of the County's natural heritage (including the County's natural assets, the landscape and sustainability).</p>				

The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.

The development of new greenways, blueways and walking and cycling routes, including those between County Tipperary, adjoining counties and beyond has the potential to contribute towards sustainable mobility and a better management of movements in sensitive areas, thereby benefitting various environmental components including habitats at certain locations. The development of these projects, however, presents a variety of potentially adverse environmental effects that would, if unmitigated, have the potential to arise from both the construction and operation of such developments and/or their ancillary infrastructure. These types of infrastructure are often constructed in ecologically and visually sensitive areas adjacent to the banks of rivers and streams. Potential adverse effects would be mitigated both by measures which have been integrated into the Plan which provide for and contribute towards environmental protection, environmental management and sustainable development (including those identified at Section 9 of this report) and by measures arising from lower tier assessments (including those for the preparation of lower tier plans and projects). Projects would need to be subject to normal planning and environmental assessment processes, as well as complying with the Corridor and Route Selection Process under section 5.9 of the Plan. The development of green infrastructure can achieve synergies with regard to the provision of open space amenities, sustainable mobility, the sustainable management of water, the protection and management of biodiversity, the protection of cultural heritage and the protection of protected landscape sensitivities.

The development of new greenways, blueways and walking and cycling routes, including those between County Tipperary, adjoining counties and beyond has the potential to contribute towards sustainable mobility and a better management of movements in sensitive areas, thereby benefitting various environmental components including habitats at certain locations. The development of these projects, however, presents a variety of potentially adverse environmental effects that would, if unmitigated, have the potential to arise from both the construction and operation of such developments and/or their ancillary infrastructure. These types of infrastructure are often constructed in ecologically and visually sensitive areas adjacent to the banks of rivers and streams. Potential adverse effects would be mitigated both by measures which have been integrated into the Plan which provide for and contribute towards environmental protection, environmental management and sustainable development (including those identified at Section 9 of this report) and by measures arising from lower tier assessments (including those for the preparation of lower tier plans and projects). Projects would need to be subject to normal planning and environmental assessment processes, as well as complying with the feasibility and Corridor/Route Selection requirements outlined in Chapter 12 under “Feasibility”<sup>84</sup>. The development of green infrastructure can achieve synergies with regard to the provision of open space amenities, sustainable mobility, the sustainable management of water, the protection and management of biodiversity, the protection of cultural heritage and the protection of protected landscape sensitivities.

The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 “Mitigation Measures” of this report. By integrating SEA recommendations into the Plan, Tipperary County Council is helping to ensure that:

- The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and
- The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.

### 8.8.14 Chapter 15: Water and Energy Utilities

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs – unlikely to be mitigated	Mitigated Conflicts	No Likely interaction with status of SEOs
Provisions of this Chapter include those relating to Water and Energy Utilities. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	

#### Commentary

The assessment of the Plan’s Water and Energy Utilities provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:

- Environmental effects detailed under subsections 8.2 to 8.7 of this report; and
- Assessments of the selected alternatives for the Plan provided at Section 7 of this report.

Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County’s towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the County’s settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the County’s sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.

<sup>84</sup> “New transport infrastructure projects, including greenways and blueways, that are not already provided for by existing plans/ programmes or are not already permitted, will be subject to feasibility assessment, considering need, environmental sensitivities as identified in the SEA Environmental Report, and objectives relating to sustainable mobility. Where feasibility is established, a Corridor and Route Selection Process will be undertaken, where appropriate, in two stages: Stage 1 – Route Corridor Identification, Evaluation and Selection; and Stage 2 – Route Identification, Evaluation and Selection.”

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The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.

Provisions relating to water supply and wastewater and surface water drainage would, by protecting water resources, providing safe drinking water and appropriately treating waste water, contribute towards the protection of various environmental components including: human health, biodiversity and flora and fauna, the status of waters, flood risk management and soil. There would be potential for significant adverse environmental effects upon various environmental components to arise during construction of water services infrastructure. Such potential significant adverse effects could also arise during operation: the protection of human health, biodiversity and flora and fauna and the status of waters, could all be conflicted with by outflows and abstractions.

In certain locations, due to the soils and drainage, certain waste water treatment systems do not provide the necessary level of treatment and other options should be investigated such as wetland systems or clusters of rural serviced sites. In other areas various systems will work subject to the relevant requirements.

SUDS can contribute towards the maintenance and improvement in the status of water bodies and flood risk management.

Supporting the sustainable development, maintenance and upgrading of electricity and gas infrastructure contributes towards the framework for the development of energy. This objective would contribute towards achieving various government objectives and targets including those relating to climate mitigation and reducing greenhouse gas emissions and increasing the amount of energy to be consumed from renewable sources (see also Section 8.8.9).

The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Tipperary County Council is helping to ensure that:

- The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and
- The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.

### 8.8.15 Chapter 16: Monitoring and Evaluation

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs – unlikely to be mitigated	Mitigated Conflicts	No Likely interaction with status of SEOs
Provisions of this Chapter include those relating to Monitoring and Evaluation. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<b>Commentary</b>				
These provisions will help to ensure effective implementation of other Plan provisions. Policy 16 – 1 was integrated into the Plan through the SEA process. For more detail on SEA Monitoring refer to Section 10 of this SEA Environmental Report.				

## 8.8.16 Volume 2: Settlement Statements and Maps, and Serviced Land Assessment

	Likely to <b>Improve</b> status of SEOs	Probable <b>Conflict</b> with status of SEOs – unlikely to be mitigated	<b>Mitigated Conflicts</b>	<b>No Likely</b> interaction with status of SEOs
<p>The Settlement Strategy for the county as set out in Chapter 4 of the Plan (see Section 8.8.3 of this report) sets out a framework for the development of the county's towns and villages. The Strategy recognises that each town and village has an important role in providing services, employment opportunities, social and recreational facilities for the communities of Tipperary.</p> <p>Within the Settlement Plan, Service Centres - Urban and Service Centres - Rural (Population over 400) are each provided with a detailed written statement, objectives and land use zoning maps for all areas within the settlement boundary. Opportunity sites are also identified for a number of settlements and provide a strategy for the development of each of these sites. Service Centres – Rural (Population under 400), Local Service Centres and Settlement Nodes are each provided with a detailed written statement, specific objectives and a Settlement Map indicating areas zoned for 'Social and Public' and 'Amenity' uses. All settlements are defined by a settlement boundary. The plans provide specific objectives which will support appropriate development and community projects as opportunities arise, consistent with the objectives of the NPF and RSES to strengthen rural economies and communities.</p> <p>Volume 2 provides a land use zoning framework is to indicate the objectives of the Council for lands within the Settlement Centres identified. This will guide development to the right location and ensure that the development takes places in a coordinated and coherent way, while protecting the built and natural environment of the settlement. The land use planning framework is underpinned by a detailed 'Serviced Land Assessment' which considers the development capacity of each of the Service Centres. The SLA applies a Tiered Approach to Zoning in accordance with the methodology set out in Appendix 3 of the NPF.</p> <p>Volume 2 also addresses Local Service Centres and Settlement Nodes – refer to the Plan for more detail.</p>	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p><b>Commentary</b></p> <p>The assessment of the Settlement Statements and Maps against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> <li>• Environmental effects detailed under subsections 8.2 to 8.7 of this report; and</li> <li>• Assessments of the selected alternatives for the Plan provided at Section 7 of this report.</li> </ul> <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the County's settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the County's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.</p> <p>The provisions from this chapter would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.</p> <p>Environmental considerations were integrated into the land use zoning through an interdisciplinary approach involving Planners and environmental specialists. Zoning has been applied in a way that primarily seeks to achieve sustainable and compact growth, taking into account the various requirements set out in the higher-level NPF and Southern RSES. The detailed Plan preparation process undertaken by the Planning Department combined with specialist input seeks to facilitate zoning that will help to avoid inappropriate development being permitted in areas of elevated sensitivity, such as in areas at risk of flooding or ecological sensitivity;</p> <ul style="list-style-type: none"> <li>• The detailed Plan preparation process undertaken by the Planning Department combined with specialist input from the SEA and AA process facilitated zoning that avoids impacts upon sensitive ecology and European Sites. The AA concludes that the Plan, including Town and Village Plans will not affect the integrity of the Natura 2000 network of European Sites<sup>85</sup>.</li> <li>• The detailed Plan preparation process undertaken by the Planning Department combined with specialist input from the SFRA process facilitated zoning that avoids inappropriate development being permitted in areas of elevated flood risk.</li> <li>• The planning team also took into account other environmental considerations including sustainable mobility and sensitivities relating to cultural heritage, landscape and water as detailed in Section 4 of this report.</li> </ul> <p>Reasonable alternatives in relation to Settlement Plans - 'Serviced land Assessment' and Residential Zoning were considered by the iterative Plan-preparation/SEA process (see Sections 6 and 7 of this report).</p> <p>There are a wide range of land use types identified under most of the Land Use Zoning Objectives. Proposals for development will need to demonstrate compliance with the various written provisions of the Plan, as relevant, including those relating to environmental protection and management. Environmental considerations, such as those related to elevated levels of flood risk or ecological sensitivities may limit the types of uses that may be possible at certain sites. Many of the written provisions in Volume 2 would contribute towards the protection and management of the environment.</p>				

<sup>85</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.

The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 “Mitigation Measures” of this report. By integrating SEA recommendations into the Plan, Tipperary County Council is helping to ensure that:

- The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and
- The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.

### 8.8.17 Volume 3: Including Development Management Standards

	Likely to <b>Improve</b> status of SEOs	Probable <b>Conflict</b> with status of SEOs – unlikely to be mitigated	<b>Mitigated Conflicts</b>	<b>No Likely</b> interaction with status of SEOs
<p>Volume 3 sets out the appendices that inform the Plan as follows:</p> <ol style="list-style-type: none"> <li>1) County Housing Strategy</li> <li>2) Renewable Energy Strategy</li> <li>3) Landscape Character Assessment and schedule of scenic Views and Routes</li> <li>4) Rural Housing Design Guide</li> <li>5) Cluster Housing Design Guide</li> <li>6) Development Management Standards</li> <li>7) Statement of Compliance with Ministerial Guidelines</li> </ol> <p>Development Management Standards exist under the following headings:</p> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Land Use Zoning and Settlement Plans</li> <li>• Low Carbon and Climate Resilient Development</li> <li>• Residential Development</li> <li>• Commercial &amp; Employment Development</li> <li>• Parking, Traffic and Road Safety</li> </ul>	<p><b>BFF PHH S W MA A C CH L</b></p>		<p><b>BFF PHH S W MA A C CH L</b></p>	
<p><b>Commentary</b></p> <p>The assessment of the Plan's Volume 3 including Development Management Standards against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> <li>• Environmental effects detailed under subsections 8.2 to 8.7 of this report; and</li> <li>• Assessments of the selected alternatives for the Plan provided at Section 7 of this report.</li> </ul> <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the County's settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the County's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.</p> <p>The focus of most of the provisions in this Chapter is the protection and management of the County's environment and the achievement of proper planning and sustainable development.</p> <p>The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.</p> <p>The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 “Mitigation Measures” of this report. By integrating SEA recommendations into the Plan, Tipperary County Council is helping to ensure that:</p> <ul style="list-style-type: none"> <li>• The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and</li> <li>• The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.</li> </ul>				



## **Section 9 Mitigation Measures**

### **9.1 Introduction**

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 the:

- Strategic work undertaken by the Council to ensure contribution towards environmental protection and sustainable development;
- Considering alternatives for the Plan;
- Integration of environmental considerations into zoning provisions of the Plan; and
- Integration of individual SEA, AA and SFRA provisions into the text of the Plan.

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

Far in advance of both the submission of the pre-Draft Plan to the Elected Members for approval, the placing of the Draft Plan on public display and the adoption of the Plan, Tipperary County Council carried out research and data analysis, including the preparation of a Strategic Issues Paper and Background papers in order to inform the preparation of the 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 within the County.

Strategic work undertaken by the Council includes background work in relation to Plan Strategies and other provisions for a variety of sectors.

### **9.3 Consideration of Alternatives**

Although strategic alternatives in relation to the content of the Plan were significantly limited for the Plan (see Section 6), 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 (see Section 7) 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.

## **9.4 Integration of environmental considerations into Zoning of the Plan**

Environmental considerations were integrated into the Plan's zoning through an interdisciplinary approach.

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

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

Also considered were environmental sensitivities relating to ecology, cultural heritage, landscape and water, as well as the overlay mapping of environmental sensitivities.

## **9.5 Integration of individual SEA, AA and SFRA provisions into the text of the Plan**

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

Table 9.1 links key mitigation measure(s) to the likely significant effects of implementing the Plan, if unmitigated. The measures generally benefit multiple environmental components i.e. a measure providing for the protection of biodiversity, flora and fauna could help to minimise flood risk and the protection of human health, for example.

**Table 9.1 Integration of Environmental Considerations into the Plan**

Topic	Potentially Adverse Effect, if Unmitigated	Significant Effect, if	Recommendations integrated into the Plan, included in:
<p><b>Various see below</b></p>	<p>Various – see below</p>	<p>Chapter 9 under “Supporting Tourism product development”  The Council will facilitate opportunities for harnessing the potential of scenic areas, trails, uplands, lakes and waterways in a manner that is compatible with the natural heritage and environment of the area. Development proposals outside of settlement centres, including those associated with agri-tourism and eco-tourism, wellness facilities, adventure sports, outdoor recreational installations and water-based tourism activities, (including water side interpretive/ activity centres and jetties), will be required to demonstrate a clear need to locate in the area, and to ensure that the development is compatible with the protection of the environment, including lakeshore and riparian habitats. Proposals for new tourism or recreation projects will be required to demonstrate adequate mitigation of potential environmental effects, including: • Management any increase in visitor numbers and/or any change in visitor behaviour, including through visitor/habitat management plans, in order to avoid significant effects including loss of habitat and disturbance; and • Ensuring provision of infrastructure with adequate capacity and performance.</p> <p>8 - J In conjunction with Coillte and other stakeholders to support the development of forestry resources with a number of functions including, flood retention, biodiversity, water quality/catchment management and tourism and recreation.</p> <p>8- 3 In assessing applications for new development in the open-countryside, to facilitate the development of alternative farm enterprises, whilst balancing the need for a proposed rural based activity with the need to protect, promote and enhance the viability and environmental quality of the existing rural economy and agricultural land.</p> <p>8 - 6 Support new forestry plantation and works related to forestry including works relating to tree-felling, subject to the protection of visually sensitive areas, ecology (both terrestrial and aquatic), water resources and abstractions, and compliance with national regulations with respect to protection of the environment.</p> <p>8 - 7 Support the extraction of minerals and aggregates, and to have regard to:</p> <p>a) Quarries and Ancillary Activities, Guidelines for Planning Authorities, (DEHLG 2004), where such activities do not have a significant impact on the environment, landscape or residential amenities of the area.</p> <p>b) In considering new development, to have regard to potential adverse impacts on sites of geological importance or known high quality aggregate reserves as set out in the County Geological Sites record (and any review thereof) as maintained by the GSI.</p> <p>c) Where development proposals involve the redevelopment, rehabilitation or reuse of historic mining sites in the county, the Council may seek the preparation of a Master Plan for the entire landholding of the former mine to ensure the appropriate level of co-ordination of the entire landholding and protection of the environment.</p> <p>11 - A Support education and awareness programmes related to protection and promotion of the environment, biodiversity and our natural systems i.e. through membership of the All-Ireland Pollinators Plan, Tidy Towns, Green Schools etc.</p> <p>Chapter 12 under “Feasibility”  New transport infrastructure projects, including greenways and blueways, that are not already provided for by existing plans/ programmes or are not already permitted, will be subject to feasibility assessment, considering need, environmental sensitivities as identified in the SEA Environmental Report, and objectives relating to sustainable mobility. Where feasibility is established, a Corridor and Route Selection Process will be undertaken, where appropriate, in two stages: Stage 1 – Route Corridor Identification, Evaluation and Selection; and Stage 2 – Route Identification, Evaluation and Selection.</p> <p>14 - 1 (a) Require new development proposals to incorporate a Green Infrastructure approach to the planning, design and management of built form/public realm and green and blue spaces, (where feasible), and to consider all opportunities for synergies and linkages with existing Blue and Green infrastructure in both urban and rural areas, in line with the Development Management Standards set out in Volume 3.</p> <p>(b) Ensure that proposals for greenway/blueway development contribute towards the protection or enhancement of existing green infrastructure and have regard to the “Connecting with nature for health and wellbeing” EPA Research Report 2020 and the Development Management Standards 1.1 Habitats Directive Assessment and 1.2 Environmental Assessment.</p> <p>(c) Where new development is required to prepare a ‘Sustainability Statement’, they must demonstrate compliance with this policy to the satisfaction of the Council.</p> <p>16 - 1 Undertake a programme of monitoring and evaluation of the County Development Plan over its lifetime, as follows and to align these monitoring protocols with each other as part of an overall monitoring framework:</p> <p>a) Prepare a 2 Year Progress Report of the County Development Plan (as required under Section 15(2) of The Act), having consideration to any regional monitoring programme in place.</p> <p>b) Prepare a Report to the Regional Assembly setting out progress made in supporting objectives of the RSES (as required under Section 25A(1) of The Act).</p> <p>c) SEA Monitoring as detailed in the Environmental Report.</p>	
<p><b>Biodiversity and flora and fauna</b></p>	<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> </ul>	<p>Chapter 9 under “Supporting Tourism product development”  The Council will facilitate opportunities for harnessing the potential of scenic areas, trails, uplands, lakes and waterways in a manner that is compatible with the natural heritage and environment of the area. Development proposals outside of settlement centres, including those associated with agri-tourism and eco-tourism, wellness facilities, adventure sports, outdoor recreational installations and water-based tourism activities, (including water side interpretive/ activity centres and jetties), will be required to demonstrate a clear need to locate in the area, and to ensure that the development is compatible with the protection of the environment, including lakeshore and riparian habitats. Proposals for new tourism or recreation projects will be required to demonstrate adequate mitigation of potential environmental effects, including: • Management any increase in visitor numbers and/or any change in visitor behaviour, including through visitor/habitat management plans, in order to avoid significant effects including loss of habitat and disturbance; and • Ensuring provision of infrastructure with adequate capacity and performance.</p> <p>Chapter 11.3 under “Conservation and Protection of Sites”  The main threats and pressures on the natural environment including habitats and species, are from works associated with development including agriculture, forestry and fisheries, natural system modifications (including drainage), tourism, mining and quarrying (including peat extraction) and issues such as climate change, pollution, and invasive and problematic species. Habitat loss is also recognised as an ongoing pressure. Proposals for new development, will be required to demonstrate adequate mitigation of potential environmental effects, including ensuring provision of infrastructure with adequate capacity and performance. The Council in accordance with the Core Strategy objective of the Plan, will seek to ensure the protection the natural habitats and species as part of the management of new development and through its enforcement procedures.</p>	

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Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
	<ul style="list-style-type: none"> <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>	<p>11 - 1 In assessing proposals for new development to balance the need for new development with the protection and enhancement of the natural environment and human health. In line with the provisions of Article 6(3) and Article 6 (4) of the Habitats Directive no plans, programmes, etc. or projects giving rise to significant cumulative, direct, indirect or secondary impacts on European sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall be permitted on the basis of this Plan (either individually or in combination with other plans, programmes, etc. or projects<sup>86</sup>).</p> <p>11 - 2 Ensure the protection, integrity and conservation of European Sites and Annex I and II species listed in EU Directives. Where it is determined that a development may individually, or cumulatively, impact on the integrity of European sites, the Council will require planning applications to be accompanied by a NIS in accordance with the Habitats Directive and transposing Regulations, 'Appropriate Assessment of Plans and Projects, Guidelines for Planning Authorities', (DEHLG 2009) or any amendment thereof and relevant EPA and European Commission guidance documents.</p> <p>11 - 3 Ensure the conservation and protection of existing, and proposed NHAs, and to ensure that proposed developments within or in close proximity to an existing or proposed NHA would not have a significant adverse impact on the status of the site as described.</p> <p>11 - 4 (a) Conserve, protect and enhance areas of local biodiversity value, habitats, ecosystems and ecological corridors, in both urban and rural areas, including rivers, lakes, streams and ponds, peatland and other wetland habitats, woodlands, hedgerows, tree lines, veteran trees, natural and semi-natural grasslands in accordance with the objectives of the National Biodiversity Plan (DCHG 2017) and any review thereof.</p> <p>(b) Safeguard, enhance and protect water bodies (rivers/canals/lakes) and river walks and to provide links, where possible, to wider Green Infrastructure networks as an essential part of the design process.</p> <p>(c) Require an 'Ecosystems Services' approach for new development to incorporate nature-based solutions, in so far as practical, as part of water management systems, public realm design and landscaping, in line with best practice.</p> <p>(d) Seek the retention of trees and hedgerows of particular local value, or where retention is not feasible, require their replacement, and seek a proactive focus on new tree-planting as part of new development.</p> <p>11 - 6 Ensure the integration of river corridors with green infrastructure in settlements in line with the 'Planning for Watercourses in the Urban Environment' (Inland Fisheries Ireland, 2020).</p> <p>11 - 8 Provide for the sustainable development of fisheries, in compliance with the Habitats and Birds Directives, and other ecological protection objectives. New infrastructure should be positioned at already modified locations where feasible; and sedimentation and siltation issues should be considered, with floating infrastructure used where feasible. Fishery related developments may necessitate the preparation of a Visitor/Habitat Management Plan that includes requirements in relation to: sustainable fishing practices that would not affect the ecological site integrity; and invasive species.</p> <p>11 - 12 Seek to control the spread of invasive plant and animal species, including consideration of potential pathways for invasive species spread, i.e. watercourses.</p> <p>11 - 14 Support the diversification of peatlands, whilst ensuring the protection of their ecological, archaeological, cultural and educational significance in line with the National Peatlands Strategy (DAHG 2015). The Council may request landowners to prepare a 'Peatland Master Plan', especially for areas of industrial cut-over peatland, and will work with all stakeholders involved in the process in this regard. Any Masterplan should identify any significant tourism, amenity and recreation potential of these lands.</p> <p>11 -18 Ensure that new development does not result in significant disturbance as a result of light pollution and to ensure that all new developments are designed and constructed to minimise the impact of light pollution on the visual, environmental and residential amenities of surrounding areas.</p> <p>11 - B Undertake a survey of non-designated wetlands as defined by the Ramsar Convention (2010) in the county over the lifetime of the County Development Plan.</p> <p>11 - C (a) Support and facilitate the implementation of the objectives of the Tipperary Heritage Plan 2017- 2021, and,</p> <p>(b) Prepare a 'Biodiversity and Heritage Plan' for County Tipperary over the lifetime of the County Development Plan.</p> <p>11 - D (a) Support the objectives of the All Ireland Pollinator Plan 2021-2025 by incorporating pollinator friendly native trees and plants within grass verges along public roads and existing and future greenways, new hedgerows, public parks and public open spaces in towns and villages, including part of mixed use and residential developments.</p> <p>(b) Prepare a 'Pollinator Action Plan' for County Tipperary over the lifetime of the County Development Plan, having consideration to the All-Ireland Pollinator Plan, 2021 -2025.</p> <p>11 - G Apply best practice in sustainable environmental standards in the design and development of collaborative and/or public sector development in Tipperary, including:</p> <p>(a) Ensure that biodiversity issues are considered at the earliest possible stages of plan making;</p> <p>(b) Ensure that plans and strategies comply with nature conservation legislation and policy as required (fulfil SEA and AA requirements); and</p> <p>(c) Carry out ecological impact assessment of plans and strategies as appropriate.</p>
<p><b>Population and human health</b></p>	<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>	<p>Also refer to measures under other environmental components including Soil, Water and Air and Climatic Factors.</p> <p>8 - 8 Implement the requirement of the Seveso III Directive, and any regulations giving effect to this Directive, with regard to the following:</p> <p>a) The siting of Major Accidents Sites;</p> <p>b) The modification of development on an existing, or within the vicinity of a Major Accident Hazard Site.</p> <p>11 - 1 In assessing proposals for new development to balance the need for new development with the protection and enhancement of the natural environment and human health. In line with the provisions of Article 6(3) and Article 6 (4) of the Habitats Directive no plans, programmes, etc. or projects giving rise to significant cumulative, direct, indirect or secondary impacts on European sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall be permitted on the basis of this Plan (either individually or in combination with other plans, programmes, etc. or projects<sup>87</sup>).</p> <p>11 - 17 Ensure that new development does not result in significant noise disturbance and to ensure that all new developments are designed and constructed to minimise noise disturbance in accordance with the provisions of the Noise Action Plan 2018 and relevant standards and guidance that refer to noise management.</p>

<sup>86</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.

<sup>87</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.

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Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
		<p>11 -18 Ensure that new development does not result in significant disturbance as a result of light pollution and to ensure that all new developments are designed and constructed to minimise the impact of light pollution on the visual, environmental and residential amenities of surrounding areas.</p> <p>11 – H Apply the provisions of the Tipperary County Council Noise Action Plan 2018 – 2023 as it relates to Noise Action Areas in order to reduce disturbance from noise.</p>
<b>Soil</b>	<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>	<p>Also refer to measures under other environmental components including Water.</p> <p>8 - 7 Support the extraction of minerals and aggregates, and to have regard to:</p> <p>a) Quarries and Ancillary Activities, Guidelines for Planning Authorities, (DEHLG 2004), where such activities do not have a significant impact on the environment, landscape or residential amenities of the area.</p> <p>b) In considering new development, to have regard to potential adverse impacts on sites of geological importance or known high quality aggregate reserves as set out in the County Geological Sites record (and any review thereof) as maintained by the GSI.</p> <p>c) Where development proposals involve the redevelopment, rehabilitation or reuse of historic mining sites in the county, the Council may seek the preparation of a Master Plan for the entire landholding of the former mine to ensure the appropriate level of co-ordination of the entire landholding and protection of the environment.</p> <p>11 - 11 In assessing proposals for new development to protect, support and conserve the geological heritage sites of Tipperary and their value as outlined in the Tipperary Audit of Geological Heritage Sites, (GSI/TCC, 2019).</p>
<b>Water</b>	<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>	<p>Also refer to measures under other environmental components including Soil and Material Assets.</p> <p>11 - 5 Ensure that new developments proposed in or near 'Ground Water Protection Schemes' and 'Zones of Contribution' which contribute to public water supplies, do not result in a significant negative impact on the integrity, function and management of these important assets.</p> <p>11 - 6 Ensure the integration of river corridors with green infrastructure in settlements in line with the 'Planning for Watercourses in the Urban Environment' (Inland Fisheries Ireland, 2020).</p> <p>11 - 7 a) Ensure the protection of water quality in accordance with the EU WFD, and support the objectives and facilitate the implementation of the associated Programme of Measures of the River Basin Management Plan 2018-2021 and any successor. This includes contributing towards the protection of blue-dot catchments and drinking water resources. Also, have cognisance of the EU's Common Implementation Strategy Guidance Document No. 20 and 36 which provide guidance on exemptions to the environmental objectives of the WFD.</p> <p>b) Support an integrated, and collaborative approach to catchment management in accordance with the River Basin Management Plan 2018-2021 and any successor.</p> <p>c) Require an undisturbed edge or buffer zone to be maintained, where appropriate, between new developments and riparian zones of water bodies to maintain the natural function of existing ecosystems associated with water courses and their riparian zones, and to enable sustainable public access.</p> <p>11 - 9 Assess all new developments (both within and without designated Flood Risk Zones) in line with the 'Staged Approach' and pre-cautionary principle set out in the Planning System and Flood Risk Management Guidelines for Planning Authorities, (DEHLG, 2009) and any amendment thereof, and the following:</p> <p>(a) Require the submission of site-specific Flood Risk Assessments for developments undertaken within Flood Zones A &amp; B and on lands subject to the mid-range future scenario floods extents, as published by the OPW. These Flood Risk Assessments shall consider climate change impacts and adaptation measures including details of structural and non-structural flood risk management measures, such as those relating to floor levels, internal layout, flood-resistant construction, flood-resilient construction, emergency response planning and access and egress during flood events.</p> <p>(b) SFRAs and site-specific flood risk assessments shall provide information on the implications of climate change with regard to flood risk in relevant locations. The 2009 OPW Draft Guidance on Assessment of Potential Future Scenarios for Flood Risk Management (or any superseding document) shall be consulted with to this effect.</p> <p>(c) Ensure each flood risk management activity is examined to determine actions required to embed and provide for effective climate change adaptation as set out in the OPW Climate Change Sectoral Adaptation Plan for Flood Risk Management applicable at the time.</p> <p>(d) Applications for development on land identified as 'benefitting land' may be prone to flooding, and as such site-specific flood risk assessments may be required in these areas.</p> <p>(e) Require applications for new development, or for an extension to an existing development on land zoned for 'Social and Public' or 'Amenity' use and where a potential flood risk is identified, and where the proposed use might be vulnerable, to be subject to site-specific flood risk assessment to the satisfaction of the Council.</p> <p>11 - 10 (a) Ensure that new developments proposed in Arterial Drainage Schemes and Drainage Districts do not result in a significant negative impact on the integrity, function and management of these areas.</p> <p>(b) Consult with the OPW in relation to proposed developments in the vicinity of Flood Relief Schemes and drainage channels and rivers for which the OPW are responsible, and to retain a strip on either side of such channels, where required, to facilitate maintenance access thereto.</p> <p>(c) Protect the integrity of any formal flood risk management infrastructure (see key flood risk infrastructure identified in Section 2.2 "Drainage, Key Flood Risk Infrastructure and Early Warning Systems" of the SFRA), thereby ensuring that any new development does not negatively impact any existing defence infrastructure or compromise any proposed new defence infrastructure</p> <p>11 - E Require an integrated, and collaborative approach to local catchment management to assist in the effective implementation of the RBMP (and any review thereof) and to support the activities LAWPRO in rolling out the local Authorities Waters Programme.</p> <p>11 - F (a) To support and facilitate the CFRAM Programme, and to support the OPW in the development and implementation of sustainable flood risk management plans and actions.</p> <p>(b) To consider, as appropriate any new and/or emerging data, including, when available, any relevant information contained in the CFRAM Flood Risk Management Plans.</p> <p>11 - I Comply with the Arterial Drainage Act 1945 (as amended) prior to the carrying out of construction/ alteration works, or drainage works etc on water channels.</p>
<b>Air and Climatic Factors</b>	<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> </ul>	<p>Also refer to Plan's various sustainable transport provisions and detailed measures for Climate Action to <b>Section 8.6</b> of this SEA Environmental Report "<b>Integration of Climate Action into the Plan</b>".</p> <p>11 - 17 Ensure that new development does not result in significant noise disturbance and to ensure that all new developments are designed and constructed to minimise noise disturbance in accordance with the provisions of the Noise Action Plan 2018 and relevant standards and guidance that refer to noise management.</p>

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Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
	<ul style="list-style-type: none"> <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>	
<b>Material Assets</b>	<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>	<p>Also refer to measures under other environmental components including Population and Human Health, Cultural Heritage, Soil, Water, Air, various Land Use and Phasing provisions.</p> <p>8- 3 In assessing applications for new development in the open-countryside, to facilitate the development of alternative farm enterprises, whilst balancing the need for a proposed rural based activity with the need to protect, promote and enhance the viability and environmental quality of the existing rural economy and agricultural land.</p> <p>8 - 6 Support new forestry plantation and works related to forestry, subject to the protection of visually sensitive areas, ecology (both terrestrial and aquatic), water resources and abstractions, and compliance with national regulations with respect to protection of the environment.</p> <p>8 - 7 Support the extraction of minerals and aggregates, and to have regard to:</p> <p>a) Quarries and Ancillary Activities, Guidelines for Planning Authorities, (DEHLG 2004), where such activities do not have a significant impact on the environment, landscape or residential amenities of the area.</p> <p>b) In considering new development, to have regard to potential adverse impacts on sites of geological importance or known high quality aggregate reserves as set out in the County Geological Sites record (and any review thereof) as maintained by the GSI.</p> <p>Chapter 9 under "Supporting Tourism product development"</p> <p>The Council will facilitate opportunities for harnessing the potential of scenic areas, trails, uplands, lakes and waterways in a manner that is compatible with the natural heritage and environment of the area. Development proposals outside of settlement centres, including those associated with agri-tourism and eco-tourism, wellness facilities, adventure sports, outdoor recreational installations and water-based tourism activities, (including water side interpretive/ activity centres and jetties), will be required to demonstrate a clear need to locate in the area, and to ensure that the development is compatible with the protection of the environment, including lakeshore and riparian habitats. Proposals for new tourism or recreation projects will be required to demonstrate adequate mitigation of potential environmental effects, including: • Management any increase in visitor numbers and/or any change in visitor behaviour, including through visitor/habitat management plans, in order to avoid significant effects including loss of habitat and disturbance; and • Ensuring provision of infrastructure with adequate capacity and performance.</p> <p>10 - 1 Support and facilitate new development that will produce energy from local renewable sources such as hydro, bio-energy, wind, solar, geothermal and landfill gas, including renewable and non-renewable enabling plant, subject to compliance with normal planning and environmental criteria, in co-operation with statutory and other energy providers. The provisions of the Tipperary Renewable Energy Strategy (and any review thereof) as set out in Volume 3, will apply to new development.</p> <p>a) Quarries and Ancillary Activities, Guidelines for Planning Authorities, (DEHLG 2004), where such activities do not have a significant impact on the environment, landscape or residential amenities of the area.</p> <p>b) In considering new development, to have regard to potential adverse impacts on sites of geological importance as set out in the County Geological Sites record (and any review thereof) as maintained by the GSI.</p> <p>11 - 5 Ensure that new developments proposed in or near 'Ground Water Protection Schemes' and 'Zones of Contribution' which contribute to public water supplies, do not result in a significant negative impact on the integrity, function and management of these important assets.</p> <p>11 - 13 Ensure that proposals for agricultural developments, as appropriate, comply with the European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2010 or any amendment thereof.</p> <p>15 - 1 Implement the provisions of the Water Services Guidelines for Planning Authorities (DHLGH, 2018) (and any amendment) in assessing applications for new development.</p> <p>15 - 2 Require that all new septic tanks, proprietary effluent treatment systems and percolation areas to be located and constructed in accordance with the Water Services Guidelines for Planning Authorities (and any review thereof) and the Code of Practice for Domestic waste water treatment systems (EPA, 2021) (and any amendment) and the development management standards of this Plan as set out in Volume 3.</p> <p>15 - 3 In line with the provisions of Section 5.3.1 of the Draft Water Services Guidelines for Planning Authorities (or any review thereof) new development will connect to existing water infrastructure, where capacity exists, in order to maximise the use of existing infrastructure and reduce additional investment costs. There is a general presumption that development will be focused into areas that are serviced by public water supply and wastewater collection network.</p> <p>In settlement centres where, municipal treatment plants do not have the capacity to cater for additional development, the Council will facilitate development, where the developer has agreed proposals for the up-grade of the treatment plant and/or network, as may be necessary, with Irish Water in accordance with the Draft Water Services Guidelines for Planning Authorities and any amendment thereof and the Irish Water Connection Charges Policy. The Council will require that such infrastructure is in place, prior to the commencement of the development.</p> <p>15 - 4 Require development proposals to connect to the public water supply, where such facilities are available.</p> <p>15 - 5 Require all new development to provide a separate foul and surface water management system and to incorporate water sensitive urban design, where appropriate, in new development and the public realm. New developments or retrofit/upgrading works, including those contributing to combined drainage systems where streetscape enhancement programmes or resurfacing programmes are planned, will incorporate measures to reduce the generation of storm water run-off, and to ensure that all storm water generated is managed on-site, or is attenuated and treated prior to discharge to an approved storm water system, with consideration to the following:</p> <p>(a) Nature-Based Solutions to the Management of Rainwater and Surface Water Runoff in Urban Areas (water sensitive urban design) Best Practice Interim Guidance Document (DHLGH, 2001) and any review there off,</p>

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Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
		<p>(b) The infiltration into the ground through the development of porous pavement such as permeable paving, swales and detention basis,</p> <p>(c) The holding of water in storage areas through the construction of green roofs, rainwater harvesting, detention basis, ponds and wetlands etc.</p> <p>(d) The slow-down in the movement of water.</p> <p>15-6 Require all new development to provide a separate foul and surface water management system and to incorporate water sensitive urban design, where appropriate, in new development and the public realm. New developments or retrofit/upgrading works, including those contributing to combined drainage systems where streetscape enhancement programmes or resurfacing programmes are planned, will incorporate measures to reduce the generation of storm water run-off, and to ensure that all storm water generated is managed on-site, or is attenuated and treated prior to discharge to an approved storm water system, with consideration to the following:</p> <p>(a) Nature-Based Solutions to the Management of Rainwater and Surface Water Runoff in Urban Areas (water sensitive urban design) Best Practice Interim Guidance Document (DHLGH, 2001) and any review thereof,</p> <p>(b) The infiltration into the ground through the development of porous pavement such as permeable paving, swales and detention basis,</p> <p>(c) The holding of water in storage areas through the construction of green roofs, rainwater harvesting, detention basis, ponds and wetlands etc.</p> <p>(d) The slow-down in the movement of water.</p> <p>15 - A Work in partnership with Irish Water in the performance of its functions and in the implementation of the WSSP, Investment Plan and NWRP (and any amendment thereof), to ensure that water infrastructure complies with appropriate regulations and to ensure and support the sustainable development of the county.</p> <p>15 - B Provide additional and improved surface water networks to both reduce pollution and support sustainable development.</p> <p>15 - C Carry out on-going monitoring and registration of private septic tanks in the County in line with the EPAs National Inspection Plan.</p> <p>15 - D Support the sustainable development, maintenance and upgrading of electricity and gas infrastructure, by network providers, to enable the integration of renewable energy sources and enable an energy system that is safe, secure and adaptable.</p>
<p><b>Cultural Heritage</b></p>	<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>	<p>11 - C (a) Support and facilitate the implementation of the objectives of the Tipperary Heritage Plan 2017- 2021, and,</p> <p>(b) Prepare a 'Biodiversity and Heritage Plan' for County Tipperary over the lifetime of the County Development Plan.</p> <p>13 - 1 Encourage and support the sympathetic restoration, re-use and maintenance of protected structures thereby ensuring their conservation and protection. In considering proposals for development, the Council will have regard to the Architectural Heritage Protection Guidelines for Planning Authorities, (DAHG 2011) or any amendment thereof, and proposals that will have an unacceptable impact on the character and integrity of a protected structure or adjoining protected structure will not be permitted.</p> <p>13 - 2 Encourage and support the enhancement and management of Architectural Conservation Areas with regard to:</p> <p>a) The impact of development on the character, appearance and integrity of the Architectural Conservation Area in terms of compatibility in design, colour, finishes and massing of form;</p> <p>b) The impact of development on the existing amenities, character and heritage of the area;</p> <p>c) The need to retain important architectural and townscape elements such as shopfronts, sash windows, gutters and down pipes, plasterwork, etc</p> <p>d) The relevant Architectural Conservation Area Statement of Character, as set out in Volume 3.</p> <p>13 - 3 Seek the sympathetic restoration, appropriate re-use and maintenance of buildings/features which are considered to be of local and vernacular architectural importance.</p> <p>13 - 4 Safeguard sites, features and objects of archaeological interest, including Recorded monuments, National Monuments and Monuments on the Register of Historic Monuments, and archaeological remains found within Zones of Archaeological Potential located in historic towns and other urban and rural areas. In safeguarding such features of archaeological interest, the Council will seek to secure the preservation (i.e. preservation in situ or in exceptional circumstances preservation by record) and will have regard to the advice and recommendation of the DAHG. Where developments, due to their location, size or nature, may have implications for archaeological heritage, the Council may require archaeological assessment to be carried out. This may include for a requirement for a detailed Visual Impact Assessment of the proposal and how it will impact on the character or setting of adjoining archaeological features. Such developments include those that are located at, or close to an archaeological monument or site, those that are extensive in terms of area (1/2 ha or more) or length (1 kilometre or more), those that may impact on the underwater environment and developments requiring EIA.</p> <p>13 - 5 Respect and preserve the remains (both sub-surface and upstanding) of the medieval towns in line with the Conservation, Management and Interoperation Plans in place for each town, in line with the guidance of the Heritage Council and the National Policy on Town Defences (DEHLG, 2008).</p> <p>13 - 6 Consider landscapes of archaeological significance and, if considered necessary, require an impact assessment for proposed development which could have a significant impact on the identified landscape.</p> <p>13 - 7 Consider underwater archaeology and ensure that development to river banks edges within the vicinity of a site of archaeological interest shall not be detrimental to the character of the archaeological site or its setting.</p> <p>13 - A Support the owners of Protected Structures and structures in Architectural Conservation Areas through educational and information actions to assist in the conservation and active use of built heritage.</p> <p>13 - B Administer and manage built heritage funding schemes such as the 'Built Heritage Investment Scheme', 'Structures at Risk Scheme' etc and any review thereof, to support owners of built heritage in the county.</p> <p>13 - C Ensure that the towns of Cashel, Fethard, Carrick on Suir and Clonmel remain members of the Irish Walled Towns Network, and to carry out an annual maintenance, interpretation and conservation programme in respect of each of these towns</p> <p>13 - D Carry out an audit of archaeological landscapes in Tipperary over the lifetime of the County Development Plan, having consideration to landscapes that may extend into adjoining counties.</p> <p>13 - E Work closely with the relevant State bodies, ICOMOS, UNESCO, the relevant local authorities and local stakeholders to support the designation of the Royal Sites as a UNESCO World Heritage Site.</p> <p>13 - F Safeguard archaeological artefacts found on land or in rivers and, as appropriate, to file a 'Report of Discovery' with the National Museum of Ireland under Section 68 (2) of the National Cultural Institutions Act, 1997.</p>

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Topic	Potentially Adverse Effect, if Unmitigated	Significant if	Recommendations integrated into the Plan, included in:
Landscape	<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>	<p>Also refer to measures under Biodiversity and Flora and Fauna and Cultural Heritage.</p> <p>11 - 15 Facilitate new development which integrates and respects the character, sensitivity and value of the landscape in accordance with the designations of the LCA, and the schedule of Views and Scenic Routes (or any review thereof). Developments which would have a significant adverse material impact on visual amenities will not be supported.</p> <p>11 – 16 Ensure the protection of the visual amenity, landscape quality and character of designated Primary and Secondary Amenity Areas. Developments which would have a significant adverse material impact on the visual amenities of the area will not be supported. New development shall have regard to the following:</p> <p>a) Developments should avoid visually prominent locations and be designed to use existing topography to minimise adverse visual impact on the character of primary and secondary amenity areas.</p> <p>b) Buildings and structures shall integrate with the landscape through careful use of scale, form and finishes.</p> <p>c) Existing landscape features, including trees, hedgerows and distinctive boundary treatment shall be protected and integrated into the design proposal.</p> <p>11 -18 Ensure that new development does not result in significant disturbance as a result of light pollution and to ensure that all new developments are designed and constructed to minimise the impact of light pollution on the visual, environmental and residential amenities of surrounding areas.</p> <p>13 - 4 Safeguard sites, features and objects of archaeological interest, including Recorded monuments, National Monuments and Monuments on the Register of Historic Monuments, and archaeological remains found within Zones of Archaeological Potential located in historic towns and other urban and rural areas. In safeguarding such features of archaeological interest, the Council will seek to secure the preservation (i.e. preservation in situ or in exceptional circumstances preservation by record) and will have regard to the advice and recommendation of the DAHG. Where developments, due to their location, size or nature, may have implications for archaeological heritage, the Council may require archaeological assessment to be carried out. This may include for a requirement for a detailed Visual Impact Assessment of the proposal and how it will impact on the character or setting of adjoining archaeological features. Such developments include those that are located at, or close to an archaeological monument or site, those that are extensive in terms of area (1/2 ha or more) or length (1 kilometre or more), those that may impact on the underwater environment and developments requiring EIA.</p> <p>13 - E Work closely with the relevant State bodies, ICOMOS, UNESCO, the relevant local authorities and local stakeholders to support the designation of the Royal Sites as a UNESCO World Heritage Site.</p>	



## Section 10 Monitoring Measures

### 10.1 Introduction

The SEA Directive requires that the significant environmental effects of the implementation of plans and programmes are monitored. This section details the measures which will be used in order to monitor the likely significant effects of implementing the Plan.

Monitoring can both demonstrate the positive effects facilitated by the Plan and can enable, at an early stage, the identification of unforeseen adverse effects and the undertaking of appropriate remedial action.

The occurrence of significant adverse environmental effects not predicted and mitigated by this assessment, which are directly attributable to the implementation of the Plan, would necessitate consideration of these effects in the context of the Plan and potential remediation action(s) and/or review of part(s) of the Plan.

### 10.2 Indicators and Targets

Monitoring is based around indicators which allow quantitative measures of trends and progress over time relating to the Strategic Environmental Objectives identified in Section 5 and used in the evaluation. Each indicator to be monitored is accompanied by the target(s) which were identified with regard to the relevant strategic actions. Given the position of the Development Plan in the land use planning hierarchy beneath RSES, the measures identified in the RSES SEAs, including the Southern RSES 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.

Table 10.1 overleaf shows the indicators and targets which have been selected for monitoring the likely significant environmental effects of implementing the Plan, if unmitigated.

Monitoring is an ongoing process and the programme allows for flexibility and the further refinement of indicators and targets. The

Monitoring Programme may be updated to deal with specific environmental issues – including unforeseen effects – as they arise.

### 10.3 Sources

The Plan forms part of the wider land use planning framework comprising a hierarchy of policies, plans, programmes, etc. This wider framework, including the National Planning Framework and the Southern RSES, is subject to its own SEA (and associated monitoring) requirements. At lower tiers of the hierarchy, Local Area Plans and individual projects will be subject to their own monitoring requirements as relevant.

In implementing the Monitoring Programme the Council will take into account this hierarchy of planning and environmental monitoring. Sources for indicators may include existing monitoring databases (including those maintained by planning authorities and national/regional government departments and agencies) and the output of lower-tier environmental assessment and decision making (including a review of project approvals granted and associated documents and the output of any EIA monitoring programmes).

### 10.4 Reporting

As provided by Policy 16 – 1, the Council shall:  
*“Undertake a programme of monitoring and evaluation of the County Development Plan over its lifetime, as follows and to align these monitoring protocols with each other as part of an overall monitoring framework:*

- a) *Prepare a 2 Year Progress Report of the County Development Plan (as required under Section 15(2) of The Act), having consideration to any regional monitoring programme in place.*
- b) *Prepare a Report to the Regional Assembly setting out progress made in supporting objectives of the RSES (as required under Section 25A(1) of The Act).*
- c) *SEA Monitoring as detailed in the Environmental Report.”*

Reporting will address the indicators set out on Table 10.1. The Council is responsible for the ongoing review of indicators and targets, collating existing relevant monitored data, the preparation of monitoring evaluation report(s), the publication of these reports and, if necessary, the carrying out of remedial action.

**Table 10.1 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>88</sup></li> <li>DHLGH National Birds Directive Monitoring Report for the under Article 12 (every 3 years)<sup>89</sup></li> <li>Consultations with the NPWS (see Section 10.4)<sup>90</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 – see Chapter 11 “Environment and Natural Heritage”</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 – see Chapter 11 “Environment and Natural Heritage”</li> </ul>	<ul style="list-style-type: none"> <li>Internal monitoring of likely significant environmental effects of grants of permission<sup>91</sup></li> </ul>	<ul style="list-style-type: none"> <li>Review internal systems</li> </ul>

<sup>88</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>89</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>90</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>91</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.

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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 Chapter 8 "Enterprise and Rural Employment"</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 Chapter 8 "Enterprise and Rural Employment"</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 (see Section 10.4)</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 2016 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 2016 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 County's settlements</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>

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Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
Water	WV	<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>92</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>
Material Assets	MA	<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 (see Section 10.4)</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 2016 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 2016 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>92</sup> Including monitoring of water quality and nitrogen deposition due to bioenergy and agricultural projects where available.

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Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action		
<b>Air</b>	A	<ul style="list-style-type: none"> <li>Proportion of journeys made by private fossil fuel-based car compared to 2016 National Travel Survey levels of 74%</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 2016 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 (see Section 10.4)</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>93</sup>	C	<ul style="list-style-type: none"> <li>Implementation of Plan measures relating to climate reduction targets</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 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 - see Section 10.4)</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 target of aggregate reduction in carbon dioxide (CO<sub>2</sub>) emissions of at least 80% (compared to 1990 levels) by 2050 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 2016 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 2016 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 2016 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 2016 CSO figures</li> </ul>				

<sup>93</sup> Please also refer to relevant legislation and requirements under Section 4.10, Section 8.6, Section 8.8.2 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.

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Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
Cultural Heritage	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 (see Section 10.4).</li> </ul>	
Landscape	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>

# Appendix I Relationship with Legislation and Other Policies, Plans and Programmes

This appendix is not intended to be a full and comprehensive review of EU Directives, transposing regulations or the regulatory framework for environmental protection and management. The information is not exhaustive and it is recommended to consult the Directive, Regulation, Plan or Programme to become familiar with the full details of each.

Legislation, Plan, etc.	Summary of high-level aim/ purpose/ objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
<b>International/European Level</b>			
<b>SEA Directive (2001/42/EC)</b>	<ul style="list-style-type: none"> <li>Contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development.</li> <li>Provide for a high level of protection of the environment by carrying out an environmental assessment of plans and programmes which are likely to have significant effects on the environment.</li> </ul>	<ul style="list-style-type: none"> <li>Carry out an environmental assessment for plans or programmes referred to in Articles 2 to 4 of the Directive.</li> <li>Prepare an environmental report which identifies, describes and evaluates the likely significant effects on the environment of implementing the plan or programme and reasonable alternatives that consider the objectives and the geographical scope of the plan or programme.</li> <li>Consult with relevant authorities, stakeholders and public allowing sufficient time to make a submission.</li> <li>Consult other Member States where the implementation of a plan or programme is likely to have transboundary environmental effects.</li> <li>Inform relevant authorities and stakeholders on the decision to implement the plan or programme.</li> <li>Issue a statement to include requirements detailed in Article 9 of the Directive.</li> <li>Monitor and mitigate significant environmental effects identified by the assessment.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>EIA Directive (2011/92/EU as amended by 2014/52/EU)</b>	<ul style="list-style-type: none"> <li>Requires the assessment of the environmental effects of public and private projects which are likely to have significant effects on the environment.</li> <li>Aims to assess and implement avoidance or mitigation measures to eliminate environmental effects, before consent is given of projects likely to have significant effects on the environment by virtue, inter alia, of their nature, size or location are made subject to a requirement for development consent and an assessment with regard to their effects. Those projects are defined in Article 4.</li> </ul>	<ul style="list-style-type: none"> <li>All projects listed in Annex I are considered as having significant effects on the environment and require an EIA.</li> <li>For projects listed in Annex II, a “screening procedure” is required to determine the effects of projects on the basis of thresholds/criteria or a case by case examination. This should take into account Annex III.</li> <li>The environmental impact assessment shall identify, describe and assess in an appropriate manner, in the light of each individual case and in accordance with Articles 4 to 12, the direct and indirect effects of a project on the following factors: human beings, fauna and flora, soil, water, air, climate and the landscape, material assets and the cultural heritage, the interaction between each factor.</li> <li>Consult with relevant authorities, stakeholders and public allowing sufficient time to make a submission before a decision is made.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Habitats Directive (92/43/EEC)</b>	<ul style="list-style-type: none"> <li>Promote the preservation, protection and improvement of the quality of the environment, including the conservation of natural habitats and of wild fauna and flora.</li> <li>Contribute towards ensuring biodiversity through the conservation of natural habitats and of wild fauna and flora.</li> <li>Maintain or restore to favourable conservation status, natural habitats and species of wild fauna and flora of community interest.</li> <li>Promote the maintenance of biodiversity, taking account of economic, social, cultural and regional requirements.</li> </ul>	<ul style="list-style-type: none"> <li>Propose and protect sites of importance to habitats, plant and animal species.</li> <li>Establish a network of European sites hosting the natural habitat types listed in Annex I and habitats of the species listed in Annex II, to enable the natural habitat types and the species' habitats concerned to be maintained or, where appropriate, restored at a favourable conservation status in their natural range.</li> <li>Carry out comprehensive assessment of habitat types and species present.</li> <li>Establish a system of strict protection for the animal species and plant species listed in Annex IV.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Birds Directive (2009/147/EC)</b>	<ul style="list-style-type: none"> <li>Conserve all species of naturally occurring birds in the wild state including their eggs, nests and habitats.</li> <li>Protect, manage and control these species and comply with regulations relating to their exploitation.</li> <li>The species included in Annex I shall be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution.</li> </ul>	<ul style="list-style-type: none"> <li>Preserve, maintain or re-establish a sufficient diversity and area of habitats for all the species of birds referred to in Annex 1.</li> <li>Preserve, maintain and establish biotopes and habitats to include the creation of protected areas (Special Protection Areas).</li> <li>Ensure the upkeep and management in accordance with the ecological needs of habitats inside and outside the protected zones, re-establish destroyed biotopes and creation of biotopes.</li> <li>Measures for regularly occurring migratory species not listed in Annex I is required as regards their breeding, moulting and wintering areas and staging posts along their migration routes. The protection of wetlands and particularly wetlands of international importance.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>EU Nitrates Directive (91/676/EC)</b>	<ul style="list-style-type: none"> <li>Reducing water pollution caused or induced by nitrates from agricultural sources and – preventing further such pollution.</li> </ul>	<p>Ireland's Nitrates Action Programme is designed to prevent pollution of surface waters and ground water from agricultural sources and to protect and improve water quality. Ireland's third NAP came into operation in 2014. Each Member State's NAP must include:</p> <ul style="list-style-type: none"> <li>a limit on the amount of livestock manure applied to the land each year</li> <li>set periods when land spreading is prohibited due to risk</li> <li>set capacity levels for the storage of livestock manure</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the

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Legislation, Plan, etc.	Summary of high-level aim/ purpose/ objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
<b>EU Integrated Pollution Prevention Control Directive (2008/1/EC)</b>	<ul style="list-style-type: none"> <li>The purpose of this Directive is to achieve integrated prevention and control of pollution arising from the activities listed in Annex I. It lays down measures designed to prevent or, where that is not practicable, to reduce emissions in the air, water and land from the abovementioned activities, including measures concerning waste, in order to achieve a high level of protection of the environment taken as a whole, without prejudice to Directive 85/337/EEC and other relevant Community provisions.</li> </ul>	<p>The IPPC Directive is based on several principles:</p> <ul style="list-style-type: none"> <li>an integrated approach</li> <li>best available techniques,</li> <li>flexibility; and</li> <li>public participation</li> </ul>	<p>achievement of the objectives of the regulatory framework for environmental protection and management.</p> <p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>EU Plant Protection (products) Directive 2009/127/EC</b>	<ul style="list-style-type: none"> <li>The Directive aims at reducing the risks and impacts of pesticide use on human health and</li> <li>the environment by introducing different targets, tools and measures such as Integrated Pest Management (IPM) or National Action Plans (NAPs).</li> </ul>	<ul style="list-style-type: none"> <li>The Framework Directive applies to pesticides which are plant protection products.</li> <li>Regarding pesticide application equipment already in professional use, the Framework Directive introduces requirements for the inspection and maintenance to be carried out on such equipment.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>EU Renewables Directive (2009/28/EC)</b>	<ul style="list-style-type: none"> <li>The Renewable Energy Directive establishes an overall policy for the production and promotion of energy from renewable sources in the EU.</li> <li>It requires the EU to fulfil at least 20% of its total energy needs with renewables by 2020 – to be achieved through the attainment of individual national targets.</li> <li>All EU countries must also ensure that at least 10% of their transport fuels come from renewable sources by 2020.</li> </ul>	<ul style="list-style-type: none"> <li>The Directive promotes cooperation amongst EU countries (and with countries outside the EU) to help them meet their renewable energy targets.</li> <li>The Directive specifies national renewable energy targets for each country, taking into account its starting point and overall potential for renewables.</li> <li>EU countries set out how they plan to meet these targets and the general course of their renewable energy policy in national renewable energy action plans.</li> <li>Progress towards national targets is measured every two years when EU countries publish national renewable energy progress reports.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>Indirect Land Use Change Directive (2012/0288 (COD))</b>	<ul style="list-style-type: none"> <li>Article 3(4) of Directive 2009/28/EC of the European Parliament and of the Council (3) requires Member States to ensure that the share of energy from renewable energy sources in all forms of transport in 2020 is at least 10 % of their final energy consumption.</li> <li>The blending of biofuels is one of the methods available for Member States to meet this target, and is expected to be the main contributor.</li> <li>Other methods available to meet the target are the reduction of energy consumption, which is imperative because a mandatory percentage target for energy from renewable sources is likely to become increasingly difficult to achieve sustainably if overall demand for energy for transport continues to rise, and the use of electricity from renewable energy sources.</li> </ul>	<ul style="list-style-type: none"> <li>Limit the contribution that conventional biofuels (with a risk of ILUC emissions) make towards attainment of the targets in the Renewable Energy Directive;</li> <li>Improve the greenhouse gas performance of biofuel production processes (reducing associated emissions) by raising the greenhouse gas saving threshold for new installations subject to protecting installations already in operation on 1<sup>st</sup> July 2014;</li> <li>Encourage a greater market penetration of advanced (low-ILUC) biofuels by allowing such fuels to contribute more to the targets in the Renewable Energy Directive than conventional biofuels;</li> <li>Improve the reporting of greenhouse gas emissions by obliging Member States and fuel suppliers to report the estimated indirect land-use change emissions of biofuels.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>Alternative Fuels Infrastructure Directive (2014/94/EU)</b>	<ul style="list-style-type: none"> <li>This Directive establishes a common framework of measures for the deployment of alternative fuels infrastructure in the Union in order to minimise dependence on oil and to mitigate the environmental impact of transport.</li> </ul>	<ul style="list-style-type: none"> <li>This Directive sets out minimum requirements for the building-up of alternative fuels infrastructure, including recharging points for electric vehicles and refuelling points for natural gas (LNG and CNG) and hydrogen, to be implemented by means of Member States' national policy frameworks, as well as common technical specifications for such recharging and refuelling points, and user information requirements.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>EU Energy Efficiency Directive (2012/27/EU)</b>	<ul style="list-style-type: none"> <li>Establishes a set of binding measures to help the EU reach its 20% energy efficiency target by 2020.</li> <li>Under the Directive, all EU countries are required to use energy more efficiently at all stages of the energy chain, from production to final consumption.</li> </ul>	<ul style="list-style-type: none"> <li>Energy distributors or retail energy sales companies have to achieve 1.5% energy savings per year through the implementation of energy efficiency measures</li> <li>EU countries can opt to achieve the same level of savings through other means, such as improving the efficiency of heating systems, installing double glazed windows or insulating roofs</li> <li>The public sector in EU countries should purchase energy efficient buildings, products and services</li> <li>Every year, governments in EU countries must carry out energy efficient renovations on at least 3% (by floor area) of the buildings they own and occupy</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>



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		<ul style="list-style-type: none"> <li>Energy consumers should be empowered to better manage consumption. This includes easy and free access to data on consumption through individual metering</li> <li>National incentives for SMEs to undergo energy audits</li> <li>Large companies will make audits of their energy consumption to help them identify ways to reduce it</li> <li>Monitoring efficiency levels in new energy generation capacities.</li> </ul>	framework for environmental protection and management.
<b>EU Seveso Directive (2012/18/EU)</b>	<ul style="list-style-type: none"> <li>This Directive lays down rules for the prevention of major accidents which involve dangerous substances, and the limitation of their consequences for human health and the environment, with a view to ensuring a high level of protection throughout the Union in a consistent and effective manner.</li> </ul>	<p>The Seveso Directive is well integrated with other EU policies, thus avoiding double regulation or other administrative burden. This includes the following related policy areas:</p> <ul style="list-style-type: none"> <li>Classification, labelling and packaging of chemicals;</li> <li>The Union's Civil Protection Mechanism;</li> <li>The Security Union Agenda including CBRN-E and Protection of critical infrastructure;</li> <li>Policy on environmental liability and on the protection of the environment through criminal law;</li> <li>Safety of offshore oil and gas operations.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>European Union Biodiversity Strategy to 2020</b>	<ul style="list-style-type: none"> <li>Aims to halt or reverse biodiversity loss and speed up the EU's transition towards a resource efficient and green economy.</li> <li>Halting the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restoring them in so far as feasible.</li> </ul>	<ul style="list-style-type: none"> <li>Outlines six targets and twenty actions to aid European Union in halting the loss to biodiversity and eco-system services.</li> <li>The six targets cover: <ul style="list-style-type: none"> <li>Full implementation of EU nature legislation to protect biodiversity</li> <li>Maintaining, enhancing and protecting for ecosystems, and green infrastructure</li> <li>Ensuring sustainable agriculture, and forestry</li> <li>Sustainable management of fish stocks</li> <li>Reducing invasive alien species</li> <li>Addressing the global need to contribute towards averting global biodiversity loss</li> </ul> </li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Biodiversity Strategy for 2030 - Bringing nature back into our lives (European Commission, 2020)</b>	<ul style="list-style-type: none"> <li>The EU's biodiversity strategy for 2030 is a comprehensive, ambitious and long-term plan to protect nature and reverse the degradation of ecosystems. The strategy aims to put Europe's biodiversity on a path to recovery by 2030, and contains specific actions and commitments.</li> </ul>	<p>The Strategy contains specific commitments and actions to be delivered by 2030, including:</p> <ul style="list-style-type: none"> <li>Establishing a larger EU-wide network of protected areas on land and at sea, building upon existing Natura 2000 areas, with strict protection for areas of very high biodiversity and climate value.</li> <li>An EU Nature Restoration Plan - a series of concrete commitments and actions to restore degraded ecosystems across the EU by 2030, and manage them sustainably, addressing the key drivers of biodiversity loss.</li> <li>A set of measures to enable the necessary transformative change: setting in motion a new, strengthened governance framework to ensure better implementation and track progress, improving knowledge, financing and investments and better respecting nature in public and business decision-making.</li> <li>Measures to tackle the global biodiversity challenge, demonstrating that the EU is ready to lead by example towards the successful adoption of an ambitious global biodiversity framework under the Convention on Biological Diversity.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>EU Green Infrastructure Strategy</b>	Aims to create a robust enabling framework in order to promote and facilitate Green Infrastructure (GI) projects.	<ul style="list-style-type: none"> <li>Promoting GI in the main EU policy areas.</li> <li>Supporting EU-level GI projects.</li> <li>Improving access to finance for GI projects.</li> <li>Improving information and promoting innovation.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>UNESCO (1972) The Convention for the Protection of the World Cultural and Natural Heritage</b>	<ul style="list-style-type: none"> <li>links concepts of nature conservation and the preservation of cultural properties; and</li> <li>recognizes the way in which people interact with nature, and the fundamental need to preserve the balance between the two.</li> </ul>	<ul style="list-style-type: none"> <li>sets out the duties of States Parties in identifying potential sites and their role in protecting and preserving them;</li> <li>each country pledges to conserve not only the World Heritage sites situated on its territory, but also to protect its national heritage;</li> <li>encourages to integrate the protection of the cultural and natural heritage into regional planning programmes, set up staff and services at their sites, undertake scientific and technical conservation research and adopt measures which give this heritage a function in the day-to-day life of the community.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>UN (1992) The Convention on Biological Diversity</b>	An overall objective is to develop national strategies for the conservation and sustainable use of biological diversity.	<p>The Convention has three main goals:</p> <ul style="list-style-type: none"> <li>the conservation of biological diversity (or biodiversity);</li> <li>the sustainable use of its components; and</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-

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		<ul style="list-style-type: none"> <li>the fair and equitable sharing of benefits arising from genetic resources.</li> </ul>	combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>UN (1992) Framework Convention on Climate Change</b>	It is aimed at stabilising greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.	The Convention acknowledges the vulnerability of all countries to the effects of climate change and calls for special efforts to ease the consequences, especially in developing countries which lack the resources to do so on their own.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>UN Kyoto Protocol (2<sup>nd</sup> Kyoto Period), the Second European Climate Change Programme (ECCP II), Paris climate conference (COP21) 2015 (Paris Agreement)</b>	<p>The UN Kyoto Protocol set of policy measures to reduce greenhouse gas emissions.</p> <p>The Second European Climate Change Programme (ECCP II) aims to identify and develop all the necessary elements of an EU strategy to implement the Kyoto Protocol.</p> <p>At the Paris climate conference (COP21) in December 2015, 195 countries adopted the first-ever universal, legally binding global climate deal. The agreement sets out a global action plan to put the world on track to avoid dangerous climate change by limiting global warming to well below 2°C.</p>	<ul style="list-style-type: none"> <li>The Kyoto Protocol is implemented through the European Climate Change Programme (ECCP II).</li> <li>EU member states implement measures to improve on or compliment the specified measures and policies arising from the ECCP.</li> <li>Under COP21, governments agreed to come together every 5 years to set more ambitious targets as required by science; report to each other and the public on how well they are doing to implement their targets; track progress towards the long-term goal through a robust transparency and accountability system.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>EU 2020 Climate and Energy Package</b>	<ul style="list-style-type: none"> <li>Binding legislation which aims to ensure the European Union meets its climate and energy targets for 2020.</li> <li>Aims to achieve a 20% reduction in EU greenhouse gas emissions from 1990 levels.</li> <li>Aims to raise the share of EU energy consumption produced from renewable resources to 20%.</li> <li>Achieve a 20% improvement in the EU's energy efficiency.</li> </ul>	<p>Four pieces of complementary legislation:</p> <ul style="list-style-type: none"> <li>Reform of the EU Emissions Trading System (EU ETS) to include a cap on emission allowances in addition to existing system of national caps.</li> <li>Member States have agreed national targets for non-EU ETS emissions from countries outside the EU.</li> <li>Meet the national renewable energy targets of 16% for Ireland by 2020.</li> <li>Preparing a legal framework for technologies in carbon capture and storage.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>EU 2030 Framework for Climate and Energy</b>	<ul style="list-style-type: none"> <li>A 2030 Framework for climate and energy, including EU-wide targets and policy objectives for the period between 2020 and 2030 that has been agreed by European countries.</li> <li>Targets include a 40% cut in greenhouse gas emissions compared to 1990 levels, at least a 27% share of renewable energy consumption and at least 27% energy savings compared with the business-as-usual scenario.</li> </ul>	<p>To meet the targets, the European Commission has proposed the following policies for 2030:</p> <ul style="list-style-type: none"> <li>A reformed EU emissions trading scheme (ETS).</li> <li>New indicators for the competitiveness and security of the energy system, such as price differences with major trading partners, diversification of supply, and interconnection capacity between EU countries.</li> <li>First ideas for a new governance system based on national plans for competitive, secure, and sustainable energy. These plans will follow a common EU approach. They will ensure stronger investor certainty, greater transparency, enhanced policy coherence and improved coordination across the EU.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>The Clean Air for Europe Directive (2008/50/EC) (EU Air Framework Directive) Fourth Daughter Directive (2004/107/EC)</b>	<ul style="list-style-type: none"> <li>The CAFE Directive merges existing legislation into a single directive (except for the fourth daughter directive).</li> <li>Sets new air quality objectives for PM<sub>2.5</sub> (fine particles) including the limit value and exposure related objectives.</li> <li>Accounts for the possibility to discount natural sources of pollution when assessing compliance against limit values.</li> <li>Allows the possibility for time extensions of three years (PM<sub>10</sub>) or up to five years (NO<sub>2</sub>, benzene) for complying with limit values, based on conditions and the assessment by the European Commission.</li> <li>The Fourth Daughter Directive lists pollutants, target values and monitoring requirements for the following: arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air.</li> </ul>	<ul style="list-style-type: none"> <li>Sets objectives for ambient air quality designed to avoid, prevent or reduce harmful effects on human health and the environment as a whole.</li> <li>Aims to assess the ambient air quality in Member States on the basis of common methods and criteria.</li> <li>Obtains information on ambient air quality in order to help combat air pollution and nuisance and to monitor long-term trends and improvements resulting from national and community measures.</li> <li>Ensures that such information on ambient air quality is made available to the public.</li> <li>Aims to maintain air quality where it is good and improving it in other cases.</li> <li>Aims to promote increased cooperation between the Member States in reducing air pollution.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Noise Directive (2002/49/EC)</b>	The Noise Directive - Directive 2002/49/EC relating to the assessment and management of environmental noise - is part of an EU strategy setting out to reduce the number of people affected by noise in the longer term and to provide	The Directive requires competent authorities in Member States to:	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-

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	a framework for developing existing Community policy on noise reduction from source.	<ul style="list-style-type: none"> <li>• Draw up strategic noise maps for major roads, railways, airports and agglomerations, using harmonised noise indicators and use these maps to assess the number of people which may be impacted upon as a result of excessive noise levels;</li> <li>• Draw up action plans to reduce noise where necessary and maintain environmental noise quality where it is good; and</li> <li>• Inform and consult the public about noise exposure, its effects, and the measures considered to address noise.</li> </ul> <p>The Directive does not set any limit value, nor does it prescribe the measures to be used in the action plans, which remain at the discretion of the competent authorities.</p>	combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Floods Directive (2007/60/EC)</b>	<ul style="list-style-type: none"> <li>• Establishes a framework for the assessment and management of flood risks</li> <li>• Reduce adverse consequences for human health, the environment, cultural heritage and economic activity associated with floods in the Community</li> </ul>	<ul style="list-style-type: none"> <li>• Assess all water courses and coast lines at risk from flooding through Flood Risk Assessment</li> <li>• Prepare flood hazard maps and flood risk maps outlining the extent or potential of flooding and assets and humans at risk in these areas at River Basin District level (Article 3(2) (b)) and areas covered by Article 5(1) and Article 13(1) (b) in accordance with paragraphs 2 and 3.</li> <li>• Implement flood risk management plans and take adequate and coordinated measures to reduce flood risk for the areas covered by the Articles listed above.</li> <li>• Inform the public and allow the public to participate in planning process.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Water Framework Directive (2000/60/EC)</b>	<ul style="list-style-type: none"> <li>• Establish a framework for the protection of water bodies to include inland surface waters, transitional waters, coastal waters and groundwater and their dependent wildlife and habitats.</li> <li>• Preserve and prevent the deterioration of water status and where necessary improve and maintain "good status" of water bodies.</li> <li>• Promote sustainable water usage.</li> <li>• The Water Framework Directive repealed the following Directives: <ul style="list-style-type: none"> <li>○ The Drinking Water Abstraction Directive</li> <li>○ Sampling Drinking Water Directive</li> <li>○ Exchange of Information on Quality of Surface Freshwater Directive</li> <li>○ Shellfish Directive</li> <li>○ Freshwater Fish Directive</li> <li>○ Groundwater (Dangerous Substances) Directive</li> <li>○ Dangerous Substances Directive</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Protect, enhance and restore all water bodies and meet the environmental objectives outlined in Article 4 of the Directive.</li> <li>• Achieve "good status" for all waters.</li> <li>• Manage water bodies based on identifying and establishing river basins districts.</li> <li>• Involve the public and streamline legislation.</li> <li>• Prepare and implement a River Basin Management Plan for each river basin districts identified and a Register of Protected Areas.</li> <li>• Establish a programme of monitoring for surface water status, groundwater status and protected areas.</li> <li>• Recover costs for water services.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Groundwater Directive (2006/118/EC)</b>	<ul style="list-style-type: none"> <li>• Protect, control and conserve groundwater.</li> <li>• Prevent the deterioration of the status of all bodies of groundwater.</li> <li>• Implements measures to prevent and control groundwater pollution, including criteria for assessing good groundwater chemical status and criteria for the identification of significant and sustained upward trends and for the definition of starting points for trend reversals.</li> </ul>	<ul style="list-style-type: none"> <li>• Meet minimum groundwater standards listed in Annex 1 of Directive.</li> <li>• Meet threshold values adopted by national legislation for the pollutants, groups of pollutants and indicators of pollution which have been identified as contributing to the characterisation of bodies or groups of bodies of groundwater as being at risk, also taking into account Part B of Annex 11.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Drinking Water Directive (98/83/EC)</b>	<ul style="list-style-type: none"> <li>• Improve and maintain the quality of water intended for human consumption.</li> <li>• Protect human health from the adverse effects of any contamination of water intended for human consumption by ensuring that it is wholesome and clean.</li> </ul>	<ul style="list-style-type: none"> <li>• Set values applicable to water intended for human consumption for the parameters set out in Annex 1.</li> <li>• Set values for additional parameters not included in Annex 1, where the protection of human health within national territory or part of it so requires. The values set should, as a minimum, satisfy the requirements of Article 4(1) (a).</li> <li>• Implement all measures necessary to ensure that regular monitoring of the quality of water intended for human consumption is carried out, in order to check that the water available to consumers meets the requirements of this Directive and in particular the parametric values set in accordance with Article 5.</li> <li>• Ensure that any failure to meet the parametric values set in accordance with Article 5 is immediately investigated in order to identify the cause.</li> <li>• Ensure that the necessary remedial action is taken as soon as possible to restore its quality and shall give priority to their enforcement action.</li> <li>• Undertake remedial action to restore the quality of the water where necessary to protect human health.</li> <li>• Notify consumers when remedial action is being undertaken except where the competent authorities consider the non-compliance with the parametric value to be trivial.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Urban Waste Water Treatment Directive (91/271/EEC)</b>	<ul style="list-style-type: none"> <li>• This Directive concerns the collection, treatment and discharge of urban waste water and the treatment and discharge of waste water from certain industrial sectors.</li> </ul>	<ul style="list-style-type: none"> <li>• Urban waste water entering collecting systems shall before discharge, be subject to secondary treatment.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-

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	<ul style="list-style-type: none"> <li>The objective of the Directive is to protect the environment from the adverse effects of waste water discharges.</li> </ul>	<ul style="list-style-type: none"> <li>Annex II requires the designation of areas sensitive to eutrophication which receive water discharges.</li> <li>Establishes minimum requirements for urban waste water collection and treatment systems in specified agglomerations to include special requirements for sensitive areas and certain industrial sectors.</li> </ul>	<p>combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<p><b>Environmental Liability Directive (2004/35/EC) as amended by Directive 2006/21/EC, Directive 2009/31/EC and Directive 2013/30/EU</b></p>	<ul style="list-style-type: none"> <li>Establish a framework of environmental liability based on the 'polluter-pays' principle, to prevent and remedy environmental damage.</li> </ul>	<ul style="list-style-type: none"> <li>Relates to environmental damage caused by any of the occupational activities listed in Annex III, and to any imminent threat of such damage occurring by reason of any of those activities; damage to protected species and natural habitats caused by any occupational activities other than those listed in Annex III, and to any imminent threat of such damage occurring by reason of any of those activities, whenever the operator has been at fault or negligent.</li> <li>Where environmental damage has not yet occurred but there is an imminent threat of such damage occurring, the operator shall, without delay, take the necessary preventive measures.</li> <li>Where environmental damage has occurred the operator shall, without delay, inform the competent authority of all relevant aspects of the situation and take all practicable steps to immediately control, contain, remove or otherwise manage the relevant contaminants and/or any other damage factors in order to limit or to prevent further environmental damage and adverse effects on human health or further impairment of services and the necessary remedial measures, in accordance with Article 7.</li> <li>The operator shall bear the costs for the preventive and remedial actions taken pursuant to this Directive.</li> <li>The competent authority shall be entitled to initiate cost recovery proceedings against the operator.</li> <li>The operator may be required to provide financial security guarantees to ensure their responsibilities under the directive are met.</li> <li>The Environmental Liability Directive has been amended through a number of Directives. Implementation of the Environmental Liability Directive is contributed towards by a Multi-Annual Work Programme (MAWP) 'Making the Environmental Liability Directive more fit for purpose' that is updated annually to changing developments, growing knowledge and new needs.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<p><b>European Convention on the Protection of the Archaeological Heritage (Valletta 1992)</b></p>	<ul style="list-style-type: none"> <li>The aim of this (revised) Convention is to protect the archaeological heritage as a source of the European collective memory and as an instrument for historical and scientific study.</li> </ul>	<p>The Valletta Convention makes the conservation and enhancement of the archaeological heritage one of the goals of urban and regional planning policies. The Convention sets guidelines for the funding of excavation and research work and publication of research findings. It also deals with public access, in particular to archaeological sites, and educational actions to be undertaken to develop public awareness of the value of the archaeological heritage. It also constitutes an institutional framework for pan-European co-operation on the archaeological heritage, entailing a systematic exchange of experience and experts among the various States.</p>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<p><b>Convention of the Protection of the Architectural Heritage of Europe (Granada 1995)</b></p>	<ul style="list-style-type: none"> <li>The main purpose of the Convention is to reinforce and promote policies for the conservation and enhancement of Europe's heritage. It also affirms the need for European solidarity with regard to heritage conservation and is designed to foster practical co-operation among the Parties. It establishes the principles of "European co-ordination of conservation policies" including consultations regarding the thrust of the policies to be implemented.</li> </ul>	<ul style="list-style-type: none"> <li>The reinforcement and promotion of policies for protecting and enhancing the heritage within the territories of the parties.</li> <li>The affirmation of European solidarity with regard to the protection of the heritage and the fostering of practical co-operation between states and regions.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<p><b>ICOMOS (2011) Principles for the Conservation of Industrial Heritage Sites, Structures, Areas and Landscapes ('Dublin Principles')</b></p>	<ul style="list-style-type: none"> <li>It is aimed to assist in the documentation, protection, conservation and appreciation of industrial heritage as part of the heritage of human societies around the World.</li> </ul>	<ul style="list-style-type: none"> <li>(I) Document and understand industrial heritage structures, sites, areas and landscapes and their values;</li> <li>(II) Ensure effective protection and conservation of the industrial heritage structures, sites, areas and landscapes;</li> <li>(III) Conserve and maintain the industrial heritage structures, sites, areas and landscapes; and</li> <li>(IV) Present and communicate the heritage dimensions and values of industrial structures, sites, areas and landscapes to raise public and corporate awareness, and support training and research.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>

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<b>Council of Europe Framework Convention on the Value of Cultural Heritage for Society (Faro 2005)</b>	<ul style="list-style-type: none"> <li>Cultural heritage is a group of resources inherited from the past which people identify, independently of ownership, as a reflection and expression of their constantly evolving values, beliefs, knowledge and traditions. It includes all aspects of the environment resulting from the interaction between people and places through time.</li> <li>A heritage community consists of people who value specific aspects of cultural heritage which they wish, within the framework of public action, to sustain and transmit to future generations.</li> </ul>	<ul style="list-style-type: none"> <li>Recognise that rights relating to cultural heritage are inherent in the right to participate in cultural life, as defined in the Universal Declaration of Human Rights.</li> <li>Recognise individual and collective responsibility towards cultural heritage.</li> <li>Emphasise that the conservation of cultural heritage and its sustainable use have human development and quality of life as their goal.</li> <li>Take the necessary steps to apply the provisions of this Convention concerning the role of cultural heritage in the construction of a peaceful and democratic society.</li> <li>Greater synergy of competencies among all the public, institutional and private actors concerned.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>European Landscape Convention 2000</b>	<ul style="list-style-type: none"> <li>The developments in agriculture, forestry, industrial and mineral production techniques, together with the practices followed in town and country planning, transport, networks, tourism and recreation, and at a more general level, changes in the world economy, have in many cases accelerated the transformation of landscapes. The Convention expresses a concern to achieve sustainable development based on a balanced and harmonious relationship between social needs, economic activity and the environment. It aims to respond to the public's wish to enjoy high quality landscapes.</li> </ul>	<ul style="list-style-type: none"> <li>Promote protection, management and planning of landscapes.</li> <li>Organise European co-operation on landscape issues.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>The Seventh Environmental Action Programme (EAP) of the European Community (2013-2020)</b>	<p>It identifies three key objectives:</p> <ul style="list-style-type: none"> <li>to protect, conserve and enhance the Union's natural capital</li> <li>to turn the Union into a resource-efficient, green, and competitive low-carbon economy</li> <li>to safeguard the Union's citizens from environment-related pressures and risks to health and wellbeing</li> </ul>	<p>Four so called "enablers" will help Europe deliver on these objectives (goals):</p> <ul style="list-style-type: none"> <li>Better implementation of legislation.</li> <li>Better information by improving the knowledge base.</li> <li>More and wiser investment for environment and climate policy.</li> <li>Full integration of environmental requirements and considerations into other policies.</li> </ul> <p>Two additional horizontal priority objectives complete the programme:</p> <ul style="list-style-type: none"> <li>To make the Union's cities more sustainable.</li> <li>To help the Union address international environmental and climate challenges more effectively.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Bern Convention (Convention on the Conservation of European Wildlife and Natural Habitats)</b>	<p>The convention has three main aims:</p> <ul style="list-style-type: none"> <li>to conserve wild flora and fauna and their natural habitats</li> <li>to promote cooperation between states</li> <li>to give particular attention to endangered and vulnerable species including endangered and vulnerable migratory species</li> </ul>	<p>The Parties under the convention recognise the intrinsic value of nature, which needs to be preserved and passed to future generations, they also:</p> <ul style="list-style-type: none"> <li>Seek to ensure the conservation of nature in their countries, paying particular attention to planning and development policies and pollution control.</li> <li>Look at implementing the Bern Convention in central Eastern Europe and the Caucasus.</li> <li>Take account of the potential impact on natural heritage by other policies.</li> <li>Promote education and information of the public, ensuring the need to conserve species is understood and acted upon.</li> <li>Develop an extensive number of species action plans, codes of conducts, and guidelines, at their own initiative or in co-operation with other organisations.</li> <li>Created the Emerald Network, an ecological network made up of Areas of Special Conservation Interest.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Bali Road Map (2007)</b>	<p>The overall goals of the project are twofold:</p> <ul style="list-style-type: none"> <li>To increase national capacity to co-ordinate ministerial views, participate in the UNFCCC process, and negotiate positions within the timeframe of the Bali Action Plan; and</li> <li>To assess investment and financial flows to address climate change for up to three key sectors and/or economic activities.</li> </ul>	<p>The Bali Action Plan is centred on four main building Blocks:</p> <ul style="list-style-type: none"> <li>mitigation</li> <li>adaptation</li> <li>technology</li> <li>financing</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Cancun Agreements (2010)</b>	<p>Set of decisions taken at the COP 16 Conference in Cancun in 2010 which addresses a series of key issues in the fight against climate change. Cancun Agreements' main objectives cover:</p> <ul style="list-style-type: none"> <li>Mitigation</li> <li>Transparency of actions</li> <li>Technology</li> <li>Finance</li> <li>Adaptation</li> <li>Forests</li> <li>Capacity building</li> </ul>	<p>Among the most prominent agreements is the establishment of a Green Climate Fund to transfer money from the developed to developing world to tackle the impacts of climate change.</p>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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<b>Doha Climate Gateway (2012)</b>	Set of decisions taken at the COP 18 meeting in Doha in 2012 which pave the way for a new agreement in Paris in 2015.	<ul style="list-style-type: none"> <li>• Set out a timetable to adopt a universal climate agreement by 2015 (to come into effect in 2020);</li> <li>• Complete the work under Ball Action Plan and to focus on new completing new targets;</li> <li>• Strengthen the aim to cut greenhouse gases and help vulnerable countries to adapt;</li> <li>• Amend Kyoto Protocol to include a new commitment period for cutting down the greenhouse gases emissions; and</li> <li>• Provide the financial and technology support and new institutions to allow clean energy investment and sustainable growth in developing countries.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>EU Common Agricultural Policy</b>	<ul style="list-style-type: none"> <li>• To improve agricultural productivity, so that consumers have a stable supply of affordable food; and</li> <li>• To ensure that EU farmers can make a reasonable living.</li> </ul>	<ul style="list-style-type: none"> <li>• ensuring viable food production that will contribute to feeding the world's population, which is expected to rise considerably in the future;</li> <li>• Climate change and sustainable management of natural resources;</li> <li>• Looking after the countryside across the EU and keeping the rural economy alive.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>EU REACH Regulation (EC 1907/2006)</b>	<ul style="list-style-type: none"> <li>• Aims to improve the protection of human health and the environment through the better and earlier identification of the intrinsic properties of chemical substances.</li> </ul>	<p>The aims are achieved by applying REACH, namely:</p> <ul style="list-style-type: none"> <li>• Registration,</li> <li>• Evaluation,</li> <li>• Authorisation; and</li> <li>• Restriction of chemicals.</li> </ul> <p>REACH also aims to enhance innovation and competitiveness of the EU chemicals industry.</p>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Stockholm Convention</b>	<ul style="list-style-type: none"> <li>• The objective of the Stockholm Convention is to protect human health and the environment from persistent organic pollutants.</li> </ul>	<ul style="list-style-type: none"> <li>• Prohibit and/or eliminate the production and use, as well as the import and export, of the intentionally produced Persistent Organic Pollutants (POPs) that are listed in Annex A to the Convention</li> <li>• Restrict the production and use, as well as the import and export, of the intentionally produced POPs that are listed in Annex B to the Convention</li> <li>• Reduce or eliminate releases from unintentionally produced POPs that are listed in Annex C to the Convention</li> <li>• Ensure that stockpiles and wastes consisting of, containing or contaminated with POPs are managed safely and in an environmentally sound manner</li> <li>• To target additional POPs</li> <li>• Other provisions of the Convention relate to the development of implementation plans, information exchange, public information, awareness and education, research, development and monitoring, technical assistance, financial resources and mechanisms, reporting, effectiveness evaluation and non-compliance</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Ramsar Convention</b>	The Convention's mission is "the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world".	<p>Under the "three pillars" of the Convention, the Contracting Parties commit to:</p> <ul style="list-style-type: none"> <li>• Work towards the wise use of all their wetlands;</li> <li>• Designate suitable wetlands for the list of Wetlands of International Importance (the "Ramsar List") and ensure their effective management;</li> <li>• Cooperate internationally on transboundary wetlands, shared wetland systems and shared species.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>European 2020 Strategy for Growth</b>	<p>Europe 2020 sets out a vision of Europe's social market economy for the 21st century and puts forward three mutually reinforcing priorities:</p> <ul style="list-style-type: none"> <li>• Smart growth: developing an economy based on knowledge and innovation;</li> <li>• Sustainable growth: promoting a more resource efficient, greener and more competitive economy;</li> <li>• Inclusive growth: fostering a high-employment economy delivering social and territorial cohesion.</li> </ul>	<p>In order to reach these priorities, the Commission proposes five quantitative targets to fulfil by 2020:</p> <ol style="list-style-type: none"> <li>1. 75 % of the population aged 20-64 should be employed;</li> <li>2. 3% of the EU's GDP should be invested in R&amp;D;</li> <li>3. the "20/20/20" climate/energy targets should be met (including an increase to 30% of emissions reduction if the conditions are right);</li> <li>4. the share of early school leavers should be under 10% and at least 40% of the younger generation should have a tertiary degree;</li> <li>5. 20 million less people should be at risk of poverty.</li> </ol>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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<b>European Parliament resolutions, including the European Green Deal (EGD) 2020</b>	The deal sets out how to make Europe the first climate-neutral continent by 2050, boosting the economy, improving people's quality of life, caring for nature and leaving no one behind.	<ul style="list-style-type: none"> <li>It sets out a roadmap with actions to boost the efficient use of resources by moving to a clean, circular economy, restore biodiversity and cut pollution.</li> <li>It outlines investments required, financing tools available and explains how to ensure a just and inclusive transition.</li> <li>In order to meet the goal to become climate neutral by 2050 as part of the European Green Deal, the European Union (EU) Commission proposed on 4th March 2020 to bring about the first European Climate Law and legally bind the target of net zero greenhouse gas emissions by 2050.</li> </ul>	framework for environmental protection and management. Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>EU (2018) Clean Air Policy Package</b>	Aims to substantially reduce air pollution across the EU.	The proposed strategy sets out objectives for reducing the health and environmental impacts of air pollution by 2030, and contains legislative proposals to implement stricter standards for emissions and air pollution.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Leaders Pledge for Nature 2020</b>	Political leaders (including Taoiseach Michael Martin) participating in the United Nations Summit on Biodiversity in September 2020, representing 75 countries from all regions and the European Union, have committed to reversing biodiversity loss by 2030.	As part of the UN Decade of Action to achieve sustainable development, the leaders commit to achieve the vision of Living in Harmony with Nature by 2050 by undertaking ten actions, including: <ul style="list-style-type: none"> <li>Putting biodiversity, climate, and the environment at the heart of COVID-19 recovery strategies and investments as well as national and international development and cooperation;</li> <li>Developing and implementing an ambitious and transformational post-2020 global biodiversity framework for adoption at the 15th meeting of the Conference of the Parties (COP 15) to the UN Convention on Biological Diversity (CBD) in Kunming, China, as a key instrument to reach the SDGs;</li> <li>Raising ambition and aligning domestic climate policies with the Paris Agreement on climate change, with enhanced nationally determined contributions (NDCs) and long-term strategies consistent with the temperature goals of the Paris Agreement, and the objective of net zero greenhouse gas (GHG) emissions by mid-century, and strengthen climate resilience of economies and ecosystems; and</li> <li>Mainstream biodiversity into relevant sectoral and cross-sectoral policies at all levels, including in food production, agriculture, fisheries and forestry, energy, tourism, infrastructure and extractive industries, and trade and supply chains, as well as into key international agreements and processes.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>National Level</b>			
<b>Ireland 2040 - Our Plan, the National Planning Framework and the National Development Plan</b>	<ul style="list-style-type: none"> <li>The National Planning Framework is the Government's high-level strategic plan for shaping the future growth and development of to the year 2040. It is a framework to guide public and private investment, to create and promote opportunities for people, and to protect and enhance the environment - from villages to cities, and everything around and in between.</li> <li>The National Development Plan sets out the investment priorities that will underpin the successful implementation of the new National Planning Framework. This will guide national, regional and local planning and investment decisions in Ireland over the next two decades, to cater for an expected population increase of over 1 million people.</li> </ul>	National Strategic Outcomes as follows: <ol style="list-style-type: none"> <li>Compact Growth</li> <li>Enhanced Regional Accessibility</li> <li>Strengthened Rural Economies and Communities</li> <li>Sustainable Mobility</li> <li>A Strong Economy, supported by Enterprise, Innovation and Skills</li> <li>High-Quality International Connectivity</li> <li>Enhanced Amenities and Heritage</li> <li>Transition to a Low-Carbon and Climate-Resilient Society</li> <li>Sustainable Management of Water and other Environmental Resources</li> <li>Access to Quality Childcare, Education and Health Services</li> </ol>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Planning, Land Use and Transport Outlook 2040 [in preparation]</b>	The PLUTO will take account of forecasted future economic and demographic scenarios, affordability considerations and relevant Government policies and will: <ol style="list-style-type: none"> <li>Quantify in broad terms the appropriate scale of financial investment in land transport over the long term;</li> <li>Consider how fiscal, environmental and technological developments might impact on this investment; and,</li> <li>Identify strategic priorities for future investment to ensure land transport infrastructure provision facilitates the objectives of Project Ireland 2040.</li> </ol>	In preparation	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the

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<b>Planning and Development Act 2000 (as amended)</b>	<ul style="list-style-type: none"> <li>The core principal objectives of this Act are to amend the Planning Acts of 2000 – 2009 with specific regard given to supporting economic renewal and sustainable development.</li> </ul>	<ul style="list-style-type: none"> <li>Development, with certain exceptions, is subject to development control under the Planning Acts and the local authorities grant or refuse planning permission for development, including ones within protected areas.</li> <li>There are, however, a range of exemptions from the planning system. Use of land for agriculture, peat extraction and afforestation, subject to certain thresholds, is generally exempt from the requirement to obtain planning permission.</li> <li>Additionally, Environmental Impact Assessment (EIA) is required for a range of classes and large-scale projects.</li> <li>Under planning legislation, Development Plans must include mandatory objectives for the conservation of the natural heritage and for the conservation of European sites and any other sites which may be prescribed. There are also discretionary powers to set objectives for the conservation of a variety of other elements of the natural heritage.</li> </ul>	<p>achievement of the objectives of the regulatory framework for environmental protection and management.</p> <p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>European Communities (Environmental Assessment of Certain Plans and Programmes Regulations 2004 (S.I. 435 of 2004), as amended by S.I. 200 of 2011)</b>	<ul style="list-style-type: none"> <li>The purpose of these Regulations is to transpose into Irish law Directive 2001/42/EC of 27 June 2001 (O.J. No. L 197, 21 July 2001) on the assessment of the effects of certain plans and programmes on the environment – commonly known as the Strategic Environmental Assessment (SEA) Directive.</li> </ul>	<ul style="list-style-type: none"> <li>The Regulations cover plans and programmes in all of the sectors listed in article 3(2) of the Directive except land-use planning.</li> <li>These Regulations also amend certain provisions of the Planning and Development Act 2000 to provide the statutory basis for the transposition of the Directive in respect of land-use planning.</li> <li>Transposition in respect of the land-use planning sector is contained in the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. No. 436 of 2004).</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011, as amended)</b>	<ul style="list-style-type: none"> <li>These Regulations provide a new for the implementation in Ireland of Council Directive 92/43/EEC on habitats and protection of wild fauna and flora (as amended) and for the implementation of Directive 2009/147/EC of the European Parliament and of the Council on the protection of wild birds.</li> </ul>	<ul style="list-style-type: none"> <li>They provide, among other things, for: the appointment and functions of authorized officers; identification, classification and other procedures relative to the designation of Community sites.</li> <li>The Regulations have been prepared to address several judgments of the 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.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>Waste Management Act 1996, as amended</b>	<ul style="list-style-type: none"> <li>To make provision in relation to the prevention, management and control of waste; to give effect to provisions of certain acts adopted by institutions of the European communities in respect of those matters; to amend the Environmental Protection Agency Act, 1992, and to repeal certain enactments and to provide for related matters.</li> </ul>	<ul style="list-style-type: none"> <li>The Waste Management Act contains a number of key legal obligations, including requirements for waste management planning, waste collection and movement, the authorisation of waste facilities, measures to reduce the production of waste and/or promote its recovery.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>European Communities Environmental Objectives Regulations 2009 (S.I. 296 of 2009)</b>	<ul style="list-style-type: none"> <li>The purpose of these Regulations is to support the achievement of favourable conservation status for freshwater pearl mussels</li> </ul>	<ul style="list-style-type: none"> <li>Set environmental quality objectives for the habitats of the freshwater pearl mussel populations named in the First Schedule to these Regulations that are within the boundaries of a site notified in a candidate list of European sites, or designated as a Special Area of Conservation, under the European Communities (Natural Habitats) Regulations, 1997 (S.I. No. 94/1997).</li> <li>Require the production of sub-basin management plans with programmes of measures to achieve these objectives.</li> <li>Set out the duties of public authorities in respect of the sub-basin management plans and programmes of measure.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>European Communities Environmental Objectives (Groundwater) Regulations 2010 (S.I. 9 of 2010), as amended (S.I. No. 366 of 2016)</b>	<ul style="list-style-type: none"> <li>To amend the European Communities Environmental Objectives (Groundwater) Regulations 2010 (S.I. No. 9 of 2010) to make further provision to implement Commission Directive 2014/80/EU of 20 June 2014 amending Annex II to Directive 2006/118/EC of the European Parliament and of the Council on the protection of groundwater against pollution and deterioration.</li> </ul>	<p>The substances and threshold values set out in Schedule 5 to S.I. No. 9 of 2010 have been reviewed and amended where necessary, based on existing monitoring information and international guidelines on appropriate threshold values.</p> <ul style="list-style-type: none"> <li>Part A of Schedule 6 has been amended to include changes to the rules governing the determination of background levels for the purposes of establishing threshold values for groundwater pollutants and indicators of pollution.</li> <li>Part B of Schedule 6 has been amended to include nitrites and phosphorus (total) / phosphates among the minimum list of pollutants and their indicators which the</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the</p>



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		Environmental Protection Agency (EPA) must consider when establishing threshold values. <ul style="list-style-type: none"> <li>Part C of Schedule 6 amends the information to be provided to the Minister by the EPA with regard to the pollutants and their indicators for which threshold values have been established.</li> </ul>	achievement of the objectives of the regulatory framework for environmental protection and management.
<b>European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2014 (S.I. No. 31 of 2014)</b>	<ul style="list-style-type: none"> <li>These Regulations, which give effect to Ireland's 3<sup>rd</sup> Nitrates Action Programme, provide statutory support for good agricultural practice to protect waters against pollution from agricultural sources</li> </ul>	The Regulations include measures such as: <ul style="list-style-type: none"> <li>Periods when land application of fertilisers is prohibited</li> <li>Limits on the land application of fertilisers</li> <li>Storage requirements for livestock manure; and</li> <li>Monitoring of the effectiveness of the measures in terms of agricultural practice and impact on water quality.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Climate Action and Low Carbon Development Act 2015, as amended</b>	<ul style="list-style-type: none"> <li>An Act to provide for the approval of plans by the Government in relation to climate change for the purpose of pursuing the transition to a low carbon, climate resilient and environmentally sustainable economy.</li> </ul>	When considering a plan or framework, for approval, the Government shall endeavour to achieve the national transition objective within the period to which the objective relates and shall, in endeavouring to achieve that objective, ensure that such objective is achieved by the implementation of measures that are cost effective and shall, for that purpose, have regard to: <ul style="list-style-type: none"> <li>The ultimate objective specified in Article 2 of the United Nations Framework Convention on Climate Change done at New York on 9 May 1992 and any mitigation commitment entered into by the European Union in response or otherwise in relation to that objective,</li> <li>The policy of the Government on climate change,</li> <li>Climate justice,</li> <li>Any existing obligation of the State under the law of the European Union or any international agreement referred to in section 2; and</li> <li>The most recent national greenhouse gas emissions inventory and projection of future greenhouse gas emissions, prepared by the Agency.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Climate Action Plan</b>	<ul style="list-style-type: none"> <li>The Climate Action Plan 2021 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 committed to in the Programme for Government and set out in the Climate Act 2021.</li> </ul>	The Plan lists the actions needed to deliver on our climate targets and sets indicative ranges of emissions reductions for each sector of the economy. It will be updated annually, including in 2022, to ensure alignment with Ireland's legally binding economy-wide carbon budgets and sectoral ceilings.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>The Sustainable Development Goals National Implementation Plan (2018 – 2020)</b>	<ul style="list-style-type: none"> <li>National Implementation Plan 2018 - 2020 is in direct response to the 2030 Agenda for Sustainable Development and provides a whole-of-government approach to implement the 17 Sustainable Development Goals (SDGs).</li> <li>The Plan provides an 'SDG Matrix' which identifies the responsible Government Departments for each of the 169 targets. It also includes an 'SDG Policy Map' indicating the relevant national policies for each of the targets.</li> </ul>	The Plan identifies four strategic priorities to guide implementation: <ul style="list-style-type: none"> <li>Awareness: raise public awareness of the SDGs;</li> <li>Participation: provide stakeholders opportunities to engage and contribute to follow-up and review processes, and further develop national implementation of the Goals;</li> <li>Support: encourage and support efforts of communities and organisations to contribute towards meeting the SDGs, and foster public participation; and</li> <li>Policy alignment: develop alignment of national policy with the SDGs and identify opportunities for policy coherence.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Infrastructure and Capital Investment Plan (2016-2021)</b>	<ul style="list-style-type: none"> <li>€27 billion multi-annual Exchequer Capital Investment Plan, which is supported by a programme of capital investment in the wider State sector, and which over the period 2016 to 2021 will help to lay the foundations for continued growth in Ireland.</li> </ul>	<ul style="list-style-type: none"> <li>This Capital Plan reflects the Government's commitment to supporting strong and sustainable economic growth and raising welfare and living standards for all.</li> <li>It includes allocations for new projects across a number of key areas and funding to ensure that the present stock of national infrastructure is refreshed and maintained.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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<p><b>European Union (Birds and Natural Habitats) (Sea-Fisheries) Regulations 2013 (S.I. 290 of 2013)</b></p>	<p>These regulations have been drafted to implement the responsibilities of the Minister for Agriculture Food and the Marine in relation to sea fisheries in European sites, in accordance with the Habitats and Birds Directives as transposed by the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011).</p>	<ul style="list-style-type: none"> <li>Regulation 3 provides for the submission of a Fisheries Natura Plan in relation to planned fisheries;</li> <li>Regulation 4 provides for a screening of a Fisheries Natura Plan to determine whether or not an appropriate assessment is required;</li> <li>Regulation 5 provides for an appropriate assessment of a Fisheries Natura Plan and also provides for public and statutory consultation;</li> <li>Regulation 6 provides for the Minister to make a determination to adopt a Fisheries Natura Plan. The Minister may amend, withdraw or revoke a plan;</li> <li>Regulation 7 provides for publication of the adopted Fisheries Natura Plan;</li> <li>Regulation 8 provides for a Risk Assessment of unplanned fisheries and also provides for public and statutory consultation on the assessment;</li> <li>Regulation 9 provides for the issue of a Natura Declaration to prohibit, restrict including restricting by permit, control, etc. of sea fishing activities;</li> <li>Regulation 10 provides for Natura Permits to be issued where required by Natura Declarations; and</li> <li>Regulations 11 to 31 deal with functions of authorised officers and related matters, offences, etc.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<p><b>Ireland's National Renewable Energy Action Plan 2010 (Irish Government submission to the European Commission)</b></p>	<ul style="list-style-type: none"> <li>The National Renewable Energy Action Plan (NREAP) sets out the Government's strategic approach and concrete measures to deliver on Ireland's 16% target under Directive 2009/28/EC.</li> </ul>	<ul style="list-style-type: none"> <li>The NREAP sets out the Member State's national targets for the share of energy from renewable sources to be consumed in transport, electricity and heating and cooling in 2020, and demonstrates how the Member State will meet its overall national target established under the Directive.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<p><b>Strategy for Renewable Energy (2012-2020)</b></p>	<ul style="list-style-type: none"> <li>The Government's overarching strategic objective is to make renewable energy an increasingly significant component of Ireland's energy supply by 2020, so that at a minimum it will achieve its legally binding 2020 target in the most cost-efficient manner for consumers.</li> <li>Of critical importance is the role which the renewable energy sector plays in job creation and economic activity as part of the Government's action plan for jobs.</li> </ul>	<p>This document sets out five strategic goals, reflecting the key dimensions of the renewable energy challenge to 2020:</p> <ul style="list-style-type: none"> <li>Increasing on and offshore wind,</li> <li>Building a sustainable bioenergy sector,</li> <li>Fostering R&amp;D in renewables such as wave &amp; tidal,</li> <li>Growing sustainable transport; and</li> <li>Building out robust and efficient networks.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<p><b>Governments White Paper 'Ireland's Transition to a Low Carbon Energy Future' (2015 – 2030)</b></p>	<p>The White Paper sets out a vision and a framework to guide Irish energy policy between now and 2030. A complete energy policy update informed by the vision to transform Ireland into a low carbon society and economy by 2050.</p>	<p>2030 will represent a significant milestone, meaning:</p> <p>Reduced GHG emissions from the energy sector by between 80% and 95% Ensuring that secure supplies of competitive and affordable energy remain available to citizens and businesses.</p>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<p><b>National Policy Position on Climate Action and Low Carbon Development (2014)</b></p>	<ul style="list-style-type: none"> <li>The National Policy Position provides a high-level policy direction for the adoption and implementation by Government of plans to enable the State to move to a low carbon economy by 2050.</li> <li>Statutory authority for the plans is set out in the Climate Action and Low Carbon Development Act 2015.</li> </ul>	<p>National climate policy in Ireland:</p> <ul style="list-style-type: none"> <li>Recognises the threat of climate change for humanity;</li> <li>Anticipates and supports mobilisation of a comprehensive international response to climate change, and global transition to a low-carbon future;</li> <li>Recognises the challenges and opportunities of the broad transition agenda for society; and</li> <li>Aims, as a fundamental national objective, to achieve transition to a competitive, low carbon, climate-resilient and environmentally sustainable economy by 2050.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<p><b>National Clean Air Strategy [in preparation]</b></p>	<p>The Clean Air Strategy will provide the strategic policy framework necessary to identify and promote integrated measures across government policy that are required to reduce air pollution and promote cleaner air while delivering on wider national objectives.</p>	<ul style="list-style-type: none"> <li>Having a National Strategy will provide a policy framework by which Ireland can develop the necessary policies and measures to comply with new and emerging EU legislation.</li> <li>The Strategy should also help tackle climate change.</li> <li>The Strategy will consider a wider range of national policies that are relevant to clean air policy such as transport, energy, home heating and agriculture.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and</p>

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		<ul style="list-style-type: none"> <li>In any discussion relating to clean air policy, the issue of people's health is paramount and this will be a strong theme of the Strategy.</li> </ul>	<p>cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<p><b>EirGrid's Grid25 Strategy and associated Grid25 Implementation Programme 2017-2022</b></p>	<p>EirGrid's mission is to develop, maintain and operate a safe, secure, reliable, economical and efficient transmission system for Ireland; <i>"Our vision is of a grid developed to match future needs, so it can safely and reliably carry power all over the country to the major towns and cities and onwards to every home, farm and business where the electricity is consumed and so it can meet the needs of consumers and generators in a sustainable way."</i></p>	<ul style="list-style-type: none"> <li>Grid25, EirGrid's roadmap to uprate the electricity transmission grid by 2025, continues to be implemented so as to increase the capacity of the grid, to satisfy future demand, and to help Ireland meet its target of 40 per cent of electricity from renewable energy by 2020.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<p><b>All Island Grid Study 2008</b></p>	<ul style="list-style-type: none"> <li>The All Island Grid Study is the first comprehensive assessment of the ability of the electrical power system and, as part of that, the transmission network ("the grid") on the island of Ireland to absorb large amounts of electricity produced from renewable energy sources.</li> <li>The objective of this five-part study is to assess the technical feasibility and the relative costs and benefits associated with various scenarios for increased shares of electricity sourced from renewable energy in the all island power system.</li> </ul>	<p>Key conclusions of the study:</p> <ul style="list-style-type: none"> <li>The presented results indicate that the differences in cost between the highest cost and the lowest cost portfolios are low (7%), given the assumptions made and costs included in the Study.</li> <li>All but the high coal-based portfolio lead to significant reductions of CO<sub>2</sub> emissions compared to portfolio 1</li> <li>All but the high coal-based portfolio lead to reductions on the dependency of the all island system on fuel and electricity imports.</li> <li>The limitations of the study may overstate the technical feasibility of the portfolios analysed and could impact the costs and benefits resulting. Further work is required to understand the extent of such impact.</li> <li>Timely development of the transmission networks, requiring means to address the planning challenge, is a precondition for implementation of the portfolios considered.</li> <li>Market mechanisms must facilitate the installation of complementary, i.e. flexible, dispatchable plant, so as to maintain adequate levels of system security.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<p><b>Strategy for the Future Development of National and Regional Greenways (2018)</b></p>	<ul style="list-style-type: none"> <li>The objective of this Strategy is to assist in the strategic development of nationally and regionally significant Greenways in appropriate locations constructed to an appropriate standard in order to deliver a quality experience for all Greenways users.</li> <li>It also aims to increase the number and geographical spread of Greenways of scale and quality around the country over the next 10 years with a consequent significant increase in the number of people using Greenways as a visitor experience and as a recreational amenity.</li> </ul>	<ul style="list-style-type: none"> <li>A Strategic Greenway network of national and regional routes, with a number of high capacity flagship routes that can be extended and/or link with local Greenways and other cycling and walking infrastructure;</li> <li>Greenways of scale and appropriate standard that have significant potential to deliver an increase in activity tourism to Ireland and are regularly used by overseas visitors, domestic visitors and locals thereby contributing to a healthier society through increased physical activity;</li> <li>Greenways that provide a substantially segregated off road experience linking places of interest, recreation and leisure in areas with beautiful scenery of different types with plenty to see and do; and</li> <li>Greenways that provide opportunities for the development of local businesses and economies, and</li> <li>Greenways that are developed with all relevant stakeholders in line with an agreed code of practice.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<p><b>National Water Resources Plan [in preparation]</b></p>	<ul style="list-style-type: none"> <li>The NWRP is a plan on how to provide a safe, secure and reliable water supply to customers for the next 25 years, without causing adverse impact on the environment.</li> <li>The objective of the NWRP is to set out how we intend to maintain the supply and demand for drinking water over the short, medium and long term whilst minimising the impact on the environment.</li> </ul>	<p>The key objectives of the Plan are to:</p> <ul style="list-style-type: none"> <li>Identify areas where there are current and future potential water supply shortfalls, taking into account normal and extreme weather conditions</li> <li>Assess the current and future water demand from homes, businesses, farms, and industry</li> <li>Consider the impacts of climate change on Ireland's water resources</li> <li>Develop a drought plan advising measures to be taken before and during drought events</li> <li>Develop a plan detailing how we deal with the material that is produced as a result of treating drinking water</li> <li>Identify, develop and assess options to help meet potential shortfalls in water supplies</li> <li>Assess the water resources available at a national level including lakes, rivers and groundwater</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<p><b>National Strategic Plan for Aquaculture Development (2014-2020)</b></p>	<p>Vision: <i>"Aquaculture in RC is economically, socially and ecologically sustainable, with a developed infrastructure, strong human potentials and an organized market. The consumption of aquaculture products is equal or above EU average, while the technological development of the sector is among the best in the EU."</i></p>	<p>General development and growth objectives of marine and freshwater aquaculture (2014 – 2020):</p> <ul style="list-style-type: none"> <li>Strengthen the social, business and administrative environment for aquaculture development</li> <li>Increase in the total production to 24,050 tonnes while adhering to the principles of economic, social and ecological sustainability</li> <li>Improvement of the perception and increase in the national consumption of National products</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory</p>

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<b>Construction 2020, A Strategy for a Renewed Construction Sector</b>	<ul style="list-style-type: none"> <li>Construction 2020 sets out a package of measures agreed by the Government and is aimed at stimulating activity in the building industry.</li> <li>The Strategy aims both to increase the capacity of the sector to create and maintain jobs, and to deliver a sustainable sector, operating at an appropriate level. It seeks to learn the lessons of the past and to ensure that the right structures and mechanisms are in place so that they are not repeated.</li> </ul>	<p>This Strategy therefore addresses issues including:</p> <ul style="list-style-type: none"> <li>A strategic approach to the provision of housing, based on real and measured needs, with mechanisms in place to detect and act when things are going wrong;</li> <li>Continuing improvement of the planning process, striking the right balance between current and future requirements;</li> <li>The availability of financing for viable and worthwhile projects;</li> <li>Access to mortgage finance on reasonable and sustainable terms;</li> <li>Ensuring we have the tools we need to monitor and regulate the sector in a way that underpins public confidence and worker safety;</li> <li>Ensuring a fit for purpose sector supported by a highly skilled workforce achieving high quality and standards; and</li> <li>Ensuring opportunities are provided to unemployed former construction workers to contribute to the recovery of the sector.</li> </ul>	<p>framework for environmental protection and management.</p> <p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>Sustainable Development: A Strategy for Ireland (1997)</b>	<ul style="list-style-type: none"> <li>The overall aim of this Strategy is to ensure that economy and society in Ireland can develop to their full potential within a well-protected environment, without compromising the quality of that environment, and with responsibility towards present and future generations and the wider international community.</li> </ul>	<ul style="list-style-type: none"> <li>The Strategy addresses all areas of Government policy, and of economic and societal activity, which impact on the environment. It seeks to re-orientate policies as necessary to ensure that the strong growth Ireland enjoys and seeks to maintain will be environmentally sustainable.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>National Landscape Strategy for Ireland 2015-2025 and National Landscape Character Assessment (pending preparation)</b>	<ul style="list-style-type: none"> <li>The National Landscape Strategy will be used to ensure compliance with the European Landscape Convention and to establish principles for protecting and enhancing the landscape while positively managing its change. It will provide a high-level policy framework to achieve balance between the protection, management and planning of the landscape by way of supporting actions.</li> <li>Landscape Strategy Vision: <i>“Our landscape reflects and embodies our cultural values and our shared natural heritage and contributes to the well-being of our society, environment and economy. We have an obligation to ourselves and to future generations to promote its sustainable protection, management and planning.”</i></li> </ul>	<p>The objectives of the National Landscape Strategy are to:</p> <ul style="list-style-type: none"> <li>Implement the European Landscape Convention by integrating landscape into the approach to sustainable development;</li> <li>Establish and embed a public process of gathering, sharing and interpreting scientific, technical and cultural information in order to carry out evidence-based identification and description of the character, resources and processes of the landscape;</li> <li>Provide a policy framework, which will put in place measures at national, sectoral - including agriculture, tourism, energy, transport and marine - and local level, together with civil society, to protect, manage and properly plan through high quality design for the sustainable stewardship of the landscape;</li> <li>Ensure that we take advantage of opportunities to implement policies relating to landscape use that are complementary and mutually reinforcing and that conflicting policy objectives are avoided in as far as possible.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>Ireland’s National Waste Policy 2020 – 2025</b>	<p>The Policy sets out new targets to tackle waste and move towards a circular economy.</p>	<p>The plan includes halving our food waste by 2030, the introduction of a deposit and return scheme for plastic bottles and cans, a ban on certain single use plastics from July 2021, and a levy on disposable cups. Other measures include applying green criteria and circular economy principles in all public procurement, a waste recovery levy to encourage recycling, and ensuring all packaging is reusable or recyclable by 2030.</p>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>National Hazardous Waste Management Plan (EPA) 2014-2020</b>	<p>This Plan sets out the priorities to be pursued over the next six years and beyond to improve the management of hazardous waste, taking into account the progress made since the previous plan and the waste policy and legislative changes that have occurred since the previous plan was published. Section 26 of the Waste Management Act 1996 as amended, sets out the overarching objectives for the National Hazardous Waste Management Plan. In this context, the following objectives are included as priorities for the revised Plan period:</p> <ul style="list-style-type: none"> <li>To prevent and reduce the generation of hazardous waste by industry and society generally;</li> <li>To maximise the collection of hazardous waste with a view to reducing the environmental and health impacts of any unregulated waste;</li> <li>To strive for increased self-sufficiency in the management of hazardous waste and to minimise hazardous waste export;</li> <li>To minimise the environmental, health, social and economic impacts of hazardous waste generation and management.</li> </ul>	<p>The revised Plan makes 27 recommendations under the following topics:</p> <ul style="list-style-type: none"> <li>Prevention</li> <li>Collection</li> <li>Self-sufficiency</li> <li>Regulation</li> <li>Legacy issues</li> <li>North-south cooperation</li> <li>Guidance and awareness</li> <li>Implementation</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>

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<p><b>Ministerial Guidelines such as Sustainable Rural Housing Guidelines and Flood Risk Management Guidelines</b></p>	<ul style="list-style-type: none"> <li>The Department produces a range of guidelines designed to help planning authorities, An Bord Pleanála, developers and the general public and cover a wide range of issues amongst others, architectural heritage, child care facilities, landscape, quarries and residential density.</li> </ul>	<ul style="list-style-type: none"> <li>The Minister issues statutory guidelines under Section 28 of the Act which planning authorities and An Bord Pleanála are obliged to have regard to in the performance of their planning functions.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<p><b>HSE Healthy Ireland Framework for Improved Health and Wellbeing 2013-2025</b></p>	<ul style="list-style-type: none"> <li>The vision is: <i>“A Healthy Ireland, where everyone can enjoy physical and mental health and wellbeing to their full potential, where wellbeing is valued and supported at every level of society and is everyone’s responsibility.”</i></li> </ul>	<p>These four goals are interlinked, interdependent and mutually supportive:</p> <ul style="list-style-type: none"> <li>Goal 1: Increase the proportion of people who are healthy at all stages of life</li> <li>Goal 2: Reduce health inequalities</li> <li>Goal 3: Protect the public from threats to health and wellbeing</li> <li>Goal 4: Create an environment where every individual and sector of society can play their part in achieving a healthy Ireland</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<p><b>Our Sustainable Future: A Framework for Sustainable Development for Ireland 2012</b></p>	<p>A medium to long term framework for advancing sustainable development and the green economy in Ireland. It identifies spatial planning as a key challenge for sustainable development and sets a series of measures to address these challenges.</p>	<ul style="list-style-type: none"> <li>Sets out the challenges facing us and how we might address them in making sure that quality of life and general wellbeing can be improved and sustained in the decades to come.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<p><b>Smarter Travel – A Sustainable Transport Future – A New Transport Policy for Ireland 2009 – 2020 (2009)</b></p>	<ul style="list-style-type: none"> <li>Outlines a policy for how a sustainable travel and transport system can be achieved.</li> <li>Sets out five key goals: <ul style="list-style-type: none"> <li>To reduce overall travel demand.</li> <li>To maximise the efficiency of the transport network.</li> <li>To reduce reliance on fossil fuels.</li> <li>To reduce transport emissions.</li> <li>To improve accessibility to transport.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Others lower level aims include: <ul style="list-style-type: none"> <li>reduce distance travelled by private car and encourage smarter travel, including focusing population growth in areas of employment and to encourage people to live in close proximity to places of employment ensuring that alternatives to the car are more widely available, mainly through a radically improved public transport service and through investment in cycling and walking</li> <li>improving the fuel efficiency of motorised transport through improved fleet structure, energy efficient driving and alternative technologies</li> <li>strengthening institutional arrangements to deliver the targets</li> </ul> </li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<p><b>Investing in our Future: A Strategic Framework for Investment in Land Transport (SFILT) – Department of Transport, Tourism and Sport</b></p>	<ul style="list-style-type: none"> <li>SFILT sets out a set of priorities to guide the allocation of the State’s investment to best develop and manage Ireland’s land transport network over the coming decades.</li> </ul>	<p>The three priorities stated in SFILT are:</p> <ul style="list-style-type: none"> <li>Priority 1: Achieve steady state maintenance (meaning that the maintenance and renewal of the existing transport system is at a sufficient level to maintain the system in an adequate condition);</li> <li>Priority 2: Address urban congestion; and</li> <li>Priority 3: Maximise the value of the road network.</li> </ul> <p>In delivering on the steady state maintenance objective set out in SFILT, the Plan includes for:</p> <ul style="list-style-type: none"> <li>Planned replacement programme for the bus fleet operated under Public Service Obligation (“PSO”) contracts;</li> <li>Tram refurbishment and asset renewal in the case of light rail; and</li> <li>To the extent within the Authority’ remit, support for the operation of the existing rail network within the GDA.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<p><b>Delivering a Sustainable Energy Future for Ireland – The Energy Policy Framework 2007 – 2020 (2007)</b></p>	<ul style="list-style-type: none"> <li>White paper setting out a framework for delivering a sustainable energy future in Ireland.</li> <li>Outlines strategic Goals for: <ul style="list-style-type: none"> <li>Security of Supply</li> <li>Sustainability of Energy</li> <li>Competitiveness of Energy Supply</li> </ul> </li> </ul>	<p>The underpinning Strategic Goals are:</p> <ul style="list-style-type: none"> <li>Ensuring that electricity supply consistently meets demand</li> <li>Ensuring the physical security and reliability of gas supplies to Ireland</li> <li>Enhancing the diversity of fuels used for power generation</li> <li>Delivering electricity and gas to homes and businesses over efficient, reliable and secure networks</li> <li>Creating a stable attractive environment for hydrocarbon exploration and production</li> <li>Being prepared for energy supply disruptions</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory</p>

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<b>National Adaptation Framework (NAF) 2018 and associated regional, local and sectoral adaptation plans</b>	<ul style="list-style-type: none"> <li>NAF specifies the national strategy for the application of adaptation measures in different sectors and by local authorities in their administrative areas in order to reduce the vulnerability of the State to the negative effects of climate change and to avail of any positive effects that may occur</li> </ul>	<ul style="list-style-type: none"> <li>Adaptation under this Framework should seek to minimise costs and maximise the opportunities arising from climate change.</li> <li>Adaptation actions range from building adaptive capacity (e.g. increasing awareness, sharing information and targeted training) through to policy and finance-based actions.</li> <li>Adaptation actions must be risk based, informed by existing vulnerabilities of our society and systems and an understanding of projected climate change.</li> <li>Adaptation actions taken to increase climate resilience must also consider impacts on other sectors and levels of governance</li> </ul>	<p>framework for environmental protection and management.</p> <p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>2030 Climate and Energy Framework</b>	Adopted October 2014, includes EU-wide targets and policy objectives for the period from 2021 to 2030.	<p>Key targets for 2030:</p> <ul style="list-style-type: none"> <li>At least 40% cut in greenhouse gas emissions (from 1990 levels).</li> <li>At least 32% share for renewable energy. This was revised upwards in 2018.</li> <li>At least 32.5% improvement in energy efficiency. This was revised upwards in 2018.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>National Renewable Energy Action Plan (2010)</b>	<ul style="list-style-type: none"> <li>Sets out the Member State's national targets for the share of energy from renewable sources to be consumed in transport, electricity and heating and cooling in 2020, and demonstrates how the Member State will meet its overall national target established under the Directive.</li> </ul>	Including Ireland's 16% target of gross final consumption to come from renewables by 2020.	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>National Energy Efficiency Action Plan for Ireland (2009 – 2020)</b>	<ul style="list-style-type: none"> <li>This is the second National Energy Efficiency Action Plan for Ireland.</li> </ul>	<ul style="list-style-type: none"> <li>The Plan reviews the original 90 actions outlined in the first Plan and updates/renews/removes them as appropriate.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>National Energy &amp; Climate Plan (NECP) 2021 – 2030</b>	Ireland's National Energy & Climate Plan (NECP) 2021-2030 takes into account energy and climate policies developed up to 2019, the levels of demographic and economic growth identified in the National Planning Framework - Project 2040 and includes all of the climate and energy measures as set out in the National Development Plan 2018-2027.	The planned policies and measures that were identified up to the end of 2019, collectively deliver a 30% reduction by 2030 in non-Emission Trading Systems greenhouse gas emissions (from 2005 levels). Ireland is committed to achieving a 7% annual average reduction in greenhouse gas emissions between 2021 and 2030. The NECP was drafted in line with the current EU effort-sharing approach, before the Government committed to this higher level of ambition, and therefore does not reflect this higher commitment. Ireland is currently developing those policies and measures and intends to integrate the revision of the NECP into the process which will be required for increasing the overall EU contribution under the Paris Agreement.	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>Wildlife Act of 1976</b> <b>Wildlife (Amendment) Act, 2000</b>	<ul style="list-style-type: none"> <li>The act provides protection and conservation of wild flora and fauna.</li> </ul>	<ul style="list-style-type: none"> <li>Provides protection for certain species, their habitats and important ecosystems</li> <li>Give statutory protection to NHAs</li> <li>Enhances wildlife species and their habitats</li> <li>Includes more species for protection</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory</p>

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<b>Actions for Biodiversity (2017-2021) Ireland's National Biodiversity Plan</b>	<ul style="list-style-type: none"> <li>Sets out strategic objectives, targets and actions to conserve and restore Ireland's biodiversity and to prevent and reduce the loss of biodiversity in Ireland and globally.</li> </ul>	<ul style="list-style-type: none"> <li>To mainstream biodiversity in the decision-making process across all sectors.</li> <li>To substantially strengthen the knowledge base for conservation, management and sustainable use of biodiversity.</li> <li>To increase awareness and appreciation of biodiversity and ecosystems services.</li> <li>To conserve and restore biodiversity and ecosystem services in the wider countryside.</li> <li>To conserve and restore biodiversity and ecosystem services in the marine environment.</li> <li>To expand and improve on the management of protected areas and legally protected species.</li> <li>To substantially strengthen the effectiveness of international governance for biodiversity and ecosystem services.</li> </ul>	<p>framework for environmental protection and management.</p> <p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>National Broadband Plan (2012)</b>	<ul style="list-style-type: none"> <li>Sets out the strategy to deliver high speed broadband throughout Ireland.</li> </ul>	<p>The Plan sets out:</p> <ul style="list-style-type: none"> <li>A clear statement of Government policy on the delivery of High-Speed Broadband.</li> <li>Specific targets for the delivery and rollout of high-speed broadband and the speeds to be delivered.</li> <li>The strategy and interventions that will underpin the successful implementation of these targets.</li> <li>A series of specific complementary measures to promote implementation of Government policy in this area.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<p><b>European Communities (Water Policy) Regulations of 2003 (SI 722 of 2003)</b></p> <p><b>European Communities (Water Policy) Regulations of 2003 (SI 350 of 2014)</b></p> <p><b>European Communities Environmental Objectives (Surface waters) Regulations of 2009 (SI 272 of 2009)</b></p>	<ul style="list-style-type: none"> <li>Transpose the Water Framework Directive into legislation.</li> <li>Outlines the general duty of public authorities in relation to water.</li> <li>Identifies the competent authorities in charge of water policy (amended to Irish Water in 2013) and gives EPA and the CER the authority to regulate and supervise their actions.</li> </ul>	<ul style="list-style-type: none"> <li>Requires the public to be informed and consulted on the Plan and for progress reports to be published on River Basin Districts (RBDs).</li> <li>Implements a Register of protected areas, Classification systems and Monitoring programmes for water bodies.</li> <li>Allows the competent authority to recover the cost of damage/destruction of status of water body.</li> <li>Outlines environmental objectives and programme of measures and environmental quality standards for priority substances.</li> <li>Outlines criteria for assessment of groundwater.</li> <li>Outlines environmental objectives to be achieved for surface water bodies.</li> <li>Outlines surface water quality standards.</li> <li>Establishes threshold values for the classification and protection of surface waters against pollution and deterioration in quality.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>European Communities Environmental Objectives (Groundwater) Regulations of 2010 (SI 9 of 2010)</b>	<ul style="list-style-type: none"> <li>Transpose the requirements of the Groundwater Directive 2006/118/EC into Irish Legislation.</li> </ul>	<ul style="list-style-type: none"> <li>Outlines environmental objectives to be achieved for groundwater bodies of groundwater against pollution and deterioration in quality.</li> <li>Sets groundwater quality standards.</li> <li>Outlines threshold values for the classification and protection of groundwater.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>Water Pollution Acts 1977 to 1990</b>	<ul style="list-style-type: none"> <li>The Water Pollution Acts allow Local Authorities the authority regulate and supervise actions relating to water in their division.</li> </ul>	<p>The Water Pollution Acts enable local authorities to:</p> <ul style="list-style-type: none"> <li>Prosecute for water pollution offences.</li> <li>Attach appropriate pollution control conditions in the licensing of effluent discharges from industry, etc., made to waters.</li> <li>Issue notices ("section 12 notices") to farmers, etc., specifying measures to be taken within a prescribed period to prevent water pollution.</li> <li>Issue notices requiring a person to cease the pollution of waters and requiring the mitigation or remedying of any effects of the pollution in the manner and within the period specified in such notices;</li> <li>Seek court orders, including High Court injunctions, to prevent, terminate, mitigate or remedy pollution/its effects.</li> <li>Prepare water quality management plans for any waters in or adjoining their functional areas.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<p><b>Water Services Act 2007</b></p> <p><b>Water Services (Amendment) Act 2012</b></p> <p><b>Water Services Act (No. 2) 2013</b></p>	<ul style="list-style-type: none"> <li>Provides the water services infrastructure.</li> <li>Outlines the responsibilities involved in delivering and managing water services.</li> <li>Identifies the authority in charge of provision of water and waste water supply.</li> </ul>	<p>Key strategic objectives include:</p> <ul style="list-style-type: none"> <li>Ensuring Irish Water delivers infrastructural projects that meet key public health, environmental and economic objectives in the water services sector.</li> <li>Ensuring the provision of adequate water and sewerage services in the gateways and hubs listed in the National Spatial Strategy, and in other locations where services need to be enhanced.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and</p>

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	<ul style="list-style-type: none"> <li>Irish Water was given the responsibility of the provision of water and waste water services in the amendment act during 2013, therefore these services are no longer the responsibility of the 34 Local Authorities in Ireland.</li> </ul>	<ul style="list-style-type: none"> <li>Ensuring good quality drinking water is available to all consumers of public and group water supplies, in compliance with national and EU drinking water standards</li> <li>Ensuring the provision of the remaining infrastructure needed to provide secondary waste water treatment, for compliance with the requirements of the EU Urban Waste water Treatment Directive.</li> </ul>	<p>cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>Irish Water's Water Services Strategic Plan 2015 and associated Proposed Capital Investment Plan (2014-2016)</b>	<ul style="list-style-type: none"> <li>This Water Services Strategic Plan sets out strategic objectives for the delivery of water services over the next 25 years up to 2040. It details current and future challenges which affect the provision of water services and identifies the priorities to be tackled in the short and medium term.</li> </ul>	<p>Six strategic objectives as follows:</p> <ul style="list-style-type: none"> <li>Meet Customer Expectations.</li> <li>Ensure a Safe and Reliable Water Supply.</li> <li>Provide Effective Management of Waste water.</li> <li>Protect and Enhance the Environment.</li> <li>Support Social and Economic Growth.</li> <li>Invest in the Future.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>Raised Bog SAC Management Plan and Review of Raised Bog Natural Heritage Areas</b>	<ul style="list-style-type: none"> <li>Aims to meet nature conservation obligations while having regard to national and local economic, social and cultural needs</li> </ul>	<ul style="list-style-type: none"> <li>Ensure that the implications of management choices for water levels, quantity and quality are fully explored, understood and factored into policy making and land use planning.</li> <li>Review the current raised bog NHA network in terms of its contribution to the national conservation objective for raised bog habitats and determine the most suitable sites to replace the losses of active raised bog habitat and high bog areas within the SAC network and to enhance the national network of NHAs.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>Food Harvest 2020</b>	<ul style="list-style-type: none"> <li>Food Harvest 2020 is a roadmap for the Irish food industry, as it seeks to innovate and expand in response to increased global demand for quality foods. It sets out a vision for the potential growth in agricultural output after the removal of milk quotas.</li> </ul>	<ul style="list-style-type: none"> <li>Seeks for the improvement of all agricultural sectors at all levels in terms of sustainability, environmental consideration and marketing development.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>Agri-vision 2015 Action Plan</b>	<p>Outlines the vision for agricultural industry to improve competitiveness and response to market demand while respecting and enhancing the environment</p>	<p>not applicable</p>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<p><b>Rural Environmental Protection Scheme (REPS)</b></p> <p><b>Agri-Environmental Options Scheme (AEOS)</b></p> <p><b>Green, Low-Carbon, Agri-environment Scheme (GLAS)</b></p>	<ul style="list-style-type: none"> <li>Agri-environmental funding schemes aimed at rural development for the environmental enhancement and protection.</li> <li>GLAS is the new replacement for REPS and AEOS which are both expiring.</li> </ul>	<ul style="list-style-type: none"> <li>Establish best practice farming methods and production methods in order to protect landscapes and maximise conservation.</li> <li>Protect biodiversity, endangered species of flora and fauna and wildlife habitats.</li> <li>Ensure food is produced with the highest regard to the environment.</li> <li>Implement nutrient management plans and grassland management plans.</li> <li>Protect and maintain water bodies, wetlands and cultural heritage.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>National Rural Development Programme</b>	<p>The National Rural Development Programme, prepared by the Department of Agriculture, Fisheries and Food, sets out a national programme based on the EU framework for rural development and prioritises improving the competitiveness of agriculture, improving the environment and improving the quality of life in rural areas</p>	<p>At a more detailed level, the programme also:</p> <ul style="list-style-type: none"> <li>Supports structural change at farm level including training young farmers and encouraging early retirement, support for restructuring, development and innovation;</li> <li>Aims to improve the environment, biodiversity and the amenity value of the countryside by support for land management through funds such as Natura 2000 payments etc.; and</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with</p>



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Legislation, Plan, etc.	Summary of high-level aim/ purpose/ objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
		<ul style="list-style-type: none"> <li>Aims to improve quality of life in rural areas and encouraging diversification of economic activity through the implementation of local development strategies such as non-agricultural activities</li> </ul>	other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Realising our Rural Potential: The Action Plan for Rural Development 2017</b>	The Plan aims to unlock the potential of rural Ireland through a framework of supports at national and local level which will ensure that people who live in rural areas have increased opportunities for employment locally, and access to public services and social networks that support a high quality of life.	<p>The Plan contains 276 actions across five key pillars. The five pillars are:</p> <ul style="list-style-type: none"> <li>Supporting Sustainable Communities,</li> <li>Supporting Enterprise and Employment,</li> <li>Maximising our Rural Tourism and Recreation Potential,</li> <li>Fostering Culture and Creativity in Rural Communities, and</li> <li>Improving Rural Infrastructure and Connectivity.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>National Forestry Programme (2014-2020)</b>	<ul style="list-style-type: none"> <li>Represents Ireland's proposals for 100% State aid funding for a new Forestry Programme for the period 2014 – 2020.</li> </ul>	<p>Measures include the following:</p> <ul style="list-style-type: none"> <li>Afforestation and Creation of Woodland</li> <li>Neighbour Wood Scheme</li> <li>Forest Roads</li> <li>Reconstitution Scheme</li> <li>Woodland Improvement Scheme</li> <li>Native Woodland Conservation Scheme</li> <li>Knowledge Transfer and Information Actions</li> <li>Producer Groups</li> <li>Innovative Forest Technology</li> <li>Forest Genetic Reproductive Material</li> <li>Forest Management Plans</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>River Basin Management Plan</b>	<ul style="list-style-type: none"> <li>The River Basin Management Plan sets out the measures planned to maintain and improve the status of waters.</li> </ul>	<ul style="list-style-type: none"> <li>Aim to protect and enhance all water bodies in the RBD and meet the environmental objectives outlined in Article 4 of the Water Framework Directive.</li> <li>Identify and manages water bodies in the RBD.</li> <li>Establish a programme of measures for monitoring and improving water quality in the RBD.</li> <li>Involve the public through consultations.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>National Peatlands Strategy (2015-2025)</b>	This Strategy aims to provide a long-term framework within which all of the peatlands within the State can be managed responsibly in order to optimise their social, environmental and economic contribution to the well-being of this and future generations.	<p>Objectives of the Strategy include:</p> <ul style="list-style-type: none"> <li>To give direction to Ireland's approach to peatland management.</li> <li>To apply to all peatlands, including peat soils.</li> <li>To ensure that the relevant State authorities and state-owned companies that influence such decisions contribute to meeting cross-cutting objectives and obligations in their policies and actions.</li> <li>To ensure that Ireland's peatlands are sustainably managed so that their benefits can be enjoyed responsibly.</li> <li>To inform appropriate regulatory systems to facilitate good decision making in support of responsible use.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Flood Risk Management Plans arising from National Catchment Flood Risk Assessment and Management Programme</b>	<ul style="list-style-type: none"> <li>The national Catchment Flood Risk Assessment and Management (CFRAM) programme commenced in Ireland in 2011 and is being overseen by the Office of Public Works. The CFRAM Programme is intended to deliver on core components of the National Flood Policy, adopted in 2004, and on the requirements of the EU Floods Directive.</li> </ul>	CFRAM Studies have been undertaken for all River Basin Districts. The studies are focusing on areas known to have experienced flooding in the past and areas that may be subject to flooding in the future either due to development pressures or climate change. Flood Risk and Hazard mapping, including Flood Extent Mapping, was finalised in 2017. The final outputs from the studies are the CFRAM Plans, finalised in 2018. The Plans define the current and future flood risk in the River Basin Districts and set out how this risk can be managed.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Draft National Bioenergy Plan 2014 - 2020</b>	<p>The Draft Bioenergy Plan sets out a vision as follows:</p> <ul style="list-style-type: none"> <li>Bioenergy resources contributing to economic development and sustainable growth, generating jobs for citizens, supported by coherent policy, planning and regulation, and managed in an integrated manner.</li> </ul>	<p>Three high level goals, of equal importance, based on the concept of sustainable development are identified:</p> <ul style="list-style-type: none"> <li>To harness the market opportunities presented by bioenergy in order to achieve economic development, growth and jobs.</li> <li>To increase awareness of the value, opportunities and societal benefits of developing bioenergy.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with

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		<ul style="list-style-type: none"> <li>To ensure that bioenergy developments do not adversely impact the environment and its living and non-living resources.</li> </ul>	other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Draft Renewable Electricity Policy and Development Framework (DCCAE) 2016</b>	Goal: To optimise the opportunities in Ireland for renewable electricity development on land at significant scale, to serve both the All Island Single Electricity Market and any future regional market within the European Union, in accordance with European and Irish law, including Directive 2009/28/EC: On the promotion of the use of energy from renewable resources.	Objective: To develop a Policy and Development Framework for renewable electricity generation on land to serve both the All Island Single Electricity Market and any future regional market within the European Union, with particular focus on large scale projects for indigenous renewable electricity generation. This will, inter alia, provide guidance for planning authorities and An Bord Pleanála.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>National Alternative Fuels Infrastructure for the Transport Sector (DTAS) 2017- 2030</b>	This Framework sets targets to achieve an appropriate level of alternative fuels infrastructure for transport, which is relative to national policy and Irish market needs. Non-infrastructure-based incentives to support the use of the infrastructure and the uptake of alternative fuels are also included within the scope of the Framework.	Targets for alternative fuel infrastructure include the following: <ul style="list-style-type: none"> <li>AFV forecasts</li> <li>Electricity targets</li> <li>Natural gas (CNG, LNG) targets</li> <li>Hydrogen targets</li> <li>Biofuels targets</li> <li>LPG targets</li> <li>Synthetic and paraffinic fuels targets</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Food Wise 2025 (DAFM)</b>	Food Wise 2025 sets out a ten-year plan for the agri-food sector. It underlines the sector's unique and special position within the Irish economy, and it illustrates the potential which exists for this sector to grow even further.	Food Wise 2025 identifies ambitious and challenging growth projections for the industry over the next ten years including: <ul style="list-style-type: none"> <li>85% increase in exports to €19 billion.</li> <li>70% increase in value added to €13 billion.</li> <li>60% increase in primary production to €10 billion.</li> <li>The creation of 23,000 additional jobs all along the supply chain from producer level to high-end value-added product development.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>National Cycle Network Scoping Study 2010</b>	<ul style="list-style-type: none"> <li>Outlines objectives and actions aimed at developing a strong cycle network in Ireland</li> <li>Sets out 19 specific objectives, and details the 109 actions, aimed at ensuring that a cycling culture is developed</li> </ul>	<ul style="list-style-type: none"> <li>Sets a target where 10% of all journeys will be made by bike by 2020</li> <li>Proposes the planning, infrastructure, communication, education and stakeholder participations measures required to implement the initiative</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>National Policy Framework for Alternative Fuels Infrastructure for Transport in Ireland 2017 to 2030</b>	<ul style="list-style-type: none"> <li>This National Policy Framework on Alternative Fuels Infrastructure for Transport represents the first step in communicating our longer-term national vision for decarbonising transport by 2050, the cornerstone of which is our ambition that by 2030 all new cars and vans sold in Ireland will be zero-emissions capable.</li> <li>By 2030 it is envisaged that the movement in Ireland to electrically-fuelled cars and commuter rail will be well underway, with natural gas and biofuels developing as major alternatives in the freight and bus sectors.</li> </ul>	<p>This policy set out to achieve five key goals in transport:</p> <ul style="list-style-type: none"> <li>Reduce overall travel demand</li> <li>Maximise the efficiency of the transport network</li> <li>Reduce reliance on fossil fuels</li> <li>Reduce transport emissions</li> <li>Improve accessibility to transport</li> </ul> <p>These goals remain the cornerstone of transport policy and are fully aligned to the objectives of this National Policy Framework.</p>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Tourism Action Plan 2019-2021</b>	The Tourism Action Plan 2019-2021 sets out actions that the Tourism Leadership Group has identified as priorities to be progressed until 2021 in order to maintain sustainable growth in overseas tourism revenue and employment. Each action involves specific tourism stakeholders, both in the public and private sectors, all of whom we expect to proactively work towards the completion of actions within the specified timeframe.	The Plan contains 27 actions focusing on the following areas: <ul style="list-style-type: none"> <li>Policy Context</li> <li>Marketing Ireland as a Visitor Destination</li> <li>Enhancing the Visitor Experience</li> <li>Research in the Irish Tourism Sector</li> <li>Supporting Local Communities in Tourism</li> <li>Wider Government Policy</li> <li>International Context</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the

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		<ul style="list-style-type: none"> <li>Co-ordination Structures</li> </ul>	achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Tourism Policy Statement: People, Place and Policy – Growing Tourism to 2025</b>	The main goal of this policy statement is to have a vibrant, attractive tourism sector that makes a significant contribution to employment across the country; is economically, socially and environmentally sustainable; helps promote a positive image of Ireland overseas, and is a sector in which people want to work.	The Tourism Policy Statement sets three headline targets to be achieved by 2025: <ul style="list-style-type: none"> <li>Overseas tourism revenue of €5 billion per year net of inflation excluding carrier receipts;</li> <li>250,000 people employed in tourism; and</li> <li>10 million overseas visitors to Ireland per year.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Draft Renewable Electricity Policy and Development Framework</b>	Goal: To optimise the opportunities in Ireland for renewable electricity development on land at significant scale, to serve both the All Island Single Electricity Market and any future regional market within the European Union, in accordance with European and Irish law, including Directive 2009/28/EC: On the promotion of the use of energy from renewable resources.	Objective: To develop a Policy and Development Framework for renewable electricity generation on land to serve both the All Island Single Electricity Market and any future regional market within the European Union, with particular focus on large scale projects for indigenous renewable electricity generation. This will, inter alia, provide guidance for planning authorities and An Bord Pleanála.  Methodology: Development of the Policy and Development Framework is to be informed by the carrying out of an SEA, including widespread consultation with stakeholders and public, and with AA under the Habitats Directive.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>National Alternative Fuels Infrastructure for the Transport Sector 2017- 2030</b>	This Framework sets targets to achieve an appropriate level of alternative fuels infrastructure for transport, which is relative to national policy and Irish market needs. Non-infrastructure-based incentives to support the use of the infrastructure and the uptake of alternative fuels are also included within the scope of the Framework.	Targets for alternative fuel infrastructure include the following: <ul style="list-style-type: none"> <li>AFV forecasts</li> <li>Electricity targets</li> <li>Natural gas (CNG, LNG) targets</li> <li>Hydrogen targets</li> <li>Biofuels targets</li> <li>LPG targets</li> <li>Synthetic and paraffinic fuels targets</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>People Place and Policy - Growing Tourism to 2025</b>	Growing Tourism to 2025 is a policy framework for the development of tourism within the Country.	The framework establishes the overall tourism goal of Government: <ul style="list-style-type: none"> <li>Employment in the tourism sector will be 250,000 by 2025, compared with around 200,000 at present.</li> <li>There will be 10 million visits to Ireland annually by 2025.</li> </ul> The Government's ambition is that overseas tourism revenue will reach €5 billion in real terms by 2025.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Waterways Ireland Heritage Plan 2016-2020</b>	The overarching aim of the Plan is to: <i>"Identify and protect the unique waterways heritage and promote its sustainable use for the enjoyment of this and future generations"</i> .	Four objectives of the Plan include the following: <ul style="list-style-type: none"> <li>Objective 1: Fostering partnerships to continue building waterway heritage knowledge through storing information, undertaking research and developing best practice.</li> <li>Objective 2: Promoting awareness, appreciation and enjoyment of our waterway heritage with a focus on community engagement.</li> <li>Objective 3: Promoting the integrated management, conservation, protection and sustainable use of the inland navigable waterway asset.</li> <li>Objective 4: To develop Waterways Ireland as a heritage organisation committed to achieving the aim of this plan.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Tourism Development and Innovation – A Strategy for Investment 2016-2022</b>	This strategy sets out the framework and mechanism for the delivery of investment to cities, towns, villages, communities and businesses across the country. It identifies priorities to support innovation in the sector to retain and grow the country's competitiveness in the marketplace. Its ultimate aim is to strengthen the appeal of Ireland for international visitors.	The objectives of the Tourism Development and Innovation Strategy are: <ul style="list-style-type: none"> <li>To successfully and consistently deliver a world class visitor experience;</li> <li>To support a tourism sector that is profitable and achieves sustainable levels of growth and delivers jobs;</li> <li>To facilitate communities to play an enhanced role in developing tourism in their locality, thereby strengthening and enriching local communities; and</li> <li>To recognise, value and enhance Ireland's natural environment as the cornerstone of Irish tourism.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory

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<b>All Ireland Pollinator Plan 2015-2020 and 2021-2025 [in preparation]</b>	<p>The All-Ireland Pollinator Plan is an island-wide attempt to reverse declines in pollinating insects in order to ensure the sustainability of our food, avoid additional economic impacts on agriculture, and protect the health of the environment.</p> <p>The main objectives include:</p> <ul style="list-style-type: none"> <li>• Making farmland, public land and private land in Ireland pollinator friendly;</li> <li>• Raising awareness of pollinators and how to protect them;</li> <li>• Managed pollinators – supporting beekeepers and growers;</li> <li>• Expanding our knowledge of pollinators and pollination service; and</li> <li>• Collecting evidence to track change and measure success.</li> </ul>	<ul style="list-style-type: none"> <li>• This voluntary Plan identified 81 actions, shared out between over 100 governmental and non-governmental organisations.</li> <li>• A large focus of the Plan is to identify actions to improve the quality and amount of flower-rich habitat.</li> <li>• Actions range from creating pollinator highways along our transport routes, to supporting pollinators on farmland, in gardens, businesses, and on public land.</li> </ul>	<p>framework for environmental protection and management.</p> <p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>Regional/ County/Local Level</b>			
<b>Southern Regional Economic and Spatial Strategy 2020-2032</b>	<p>The Regional Spatial and Economic Strategy provides a long-term strategic planning and economic framework for the Southern Region in order to support the implementation of the National Planning Framework.</p>	<p>The Southern Regional Economic and Spatial Strategy includes provisions for its nine constituent local authorities: Waterford City and County Council, Cork City Council, Cork County Council, Tipperary County Council, Wexford County Council, Kerry County Council, Clare County Council, Limerick City and County Council, Kilkenny County Council and Carlow County Council.</p>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>Integrated Implementation Plan 2019-2024</b>	<p>The priorities in the Integrated Infrastructure Plan align with the objectives and priorities set out in the Greater Dublin Transport Strategy 2016-2035, focused on improving public and sustainable transport. While the bulk of the Plan relates solely to the Greater Dublin Area, certain areas such as public transport services and activities related to small public service vehicles are dealt with on a national basis.</p>	<p>The Implementation Plan identifies investment proposals for a number of areas including:</p> <ul style="list-style-type: none"> <li>• Bus</li> <li>• Light Rail;</li> <li>• Heavy Rai;</li> <li>• Integration Measures and Sustainable Transport Investment;</li> <li>• Integrated Service Plan; and</li> <li>• Integration and Accessibility.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>NPWS Conservation Plans and/or Conservation Objectives for SACs and SPAs</b>	<p>Management planning for nature conservation sites has a number of aims. These include:</p> <ul style="list-style-type: none"> <li>• To identify and evaluate the features of interest for a site</li> <li>• To set clear objectives for the conservation of the features of interest</li> <li>• To describe the site and its management</li> <li>• To identify issues (both positive and negative) that might influence the site</li> <li>• To set out appropriate strategies/management actions to achieve the objectives</li> </ul>	<ul style="list-style-type: none"> <li>• Conservation objectives for SACs and SPAs (i.e. sites within the Natura 2000 network) have to be set for the habitats and species for which the sites are selected.</li> <li>• These objectives are used when carrying out appropriate assessments for plans and projects that might impact on these sites.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>
<b>Groundwater Protection Schemes</b>	<p>A Groundwater Protection Scheme provides guidelines for the planning and licensing authorities in carrying out their functions, and a framework to assist in decision-making on the location, nature and control of developments and activities in order to protect groundwater.</p>	<ul style="list-style-type: none"> <li>• A Groundwater Protection Scheme aims to maintain the quantity and quality of groundwater, and in some cases improve it, by applying a risk assessment-based approach to groundwater protection and sustainable development.</li> </ul>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.</p>

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Legislation, Plan, etc.	Summary of high-level aim/ purpose/ objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
<b>Land Use Plans (including Development Plans Local Area Plans) in force within County Tipperary and in other adjoining planning authorities</b>	<ul style="list-style-type: none"> <li>Outline planning objectives for land use development.</li> <li>Strategic framework for planning and sustainable development including those set out in National Planning Framework and Southern Regional Economic and Spatial Strategy.</li> <li>Set out the policies and proposals to guide development in the relevant area.</li> </ul>	<ul style="list-style-type: none"> <li>Identify future infrastructure, development and zoning required.</li> <li>Protect and enhances amenities and environment.</li> <li>Guide planning authority in assessing proposals.</li> <li>Aim to guide development in the area and the amount of nature of the planned development.</li> <li>Aim to promote sustainable development.</li> <li>Provide for economic development and protect natural environmental, heritage.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Local Economic and Community Plans (LECPs), including the Tipperary LECP 2016-2022</b>	<ul style="list-style-type: none"> <li>The overarching vision for each LECP is: “to promote the well-being and quality of life of citizens and communities</li> </ul>	<ul style="list-style-type: none"> <li>The purpose of the LECP, as provided for in the Local Government Reform Act 2014, is to set out, for a six-year period, the objectives and actions needed to promote and support the economic development and the local and community development of the relevant local authority area, both by itself directly and in partnership with other economic and community development stakeholders.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>County Tipperary Landscape Character Assessment (2016) and Landscape Character Assessments in adjoining counties</b>	Characterises the geographical dimension of the landscape.	<ul style="list-style-type: none"> <li>Identifies the quality, value, sensitivity and capacity of the landscape area.</li> <li>Guides strategies and guidelines for the future development of the landscape.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Strategic Tourism Marketing, Experience and Destination Development Plan 2016-2021 and ‘Tipperary Transforming – Tourism Product Development Plan 2020 – 2030’</b>	The overall objective has been to create a Plan to enable growth for Tipperary as a unique tourism destination within the island of Ireland experience.	<p>In meeting that objective the Plan’s aims are:</p> <ul style="list-style-type: none"> <li>To develop and promote the tourism experiences in order to improve Tipperary’s performance within the national framework;</li> <li>To encourage industry sustainability and growth through the improvement and development of product offering;</li> <li>To build the capacity of tourism providers and to extend visitor length of stay; and</li> <li>To identify and build synergies between different tourism product offerings in order to deliver a top quality visitor experience.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Tipperary Heritage Plan 2017-2021</b>	The aim of the Tipperary Heritage and Biodiversity Plan 2017- 2021 is to connect the citizens of Tipperary to their heritage, raise awareness and appreciation of this rich asset and ensure its protection for future generations.	<p>The actions of this plan come under 3 key objectives:</p> <ul style="list-style-type: none"> <li>Promote awareness and appreciation of the Heritage of Tipperary;</li> <li>Promote active conservation of the Heritage of Tipperary; and</li> <li>Support gathering and dissemination of information on the Heritage of Tipperary.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Tipperary Noise Action Plan 2019-2023</b>	Noise Action Plans are prepared in accordance with the requirements of the Environmental Noise Regulations 2006, Statutory Instrument 140 of 2006. These Regulations give effect to the EU Directive 2002/49/EC relating to the assessment and management of environmental noise. This Directive sets out a process for managing environmental noise in a consistent manner across the EU and the Noise Regulations set out the approach to meeting the requirements of the Directive in Ireland.	The main purpose of Noise Action Plans is to: Inform and consult the public about noise exposure, its effects and the measures which may be considered to address noise problems Address strategic noise issues by requiring competent authorities to draw up action plans to manage noise issues and their effects Reduce noise, where possible, and maintain the environmental acoustic quality where it is good	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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Legislation, Plan, etc.	Summary of high-level aim/ purpose/ objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
<b>Tipperary County Council's Climate Adaptation Strategy 2019-2024</b>	The Strategy is developed around 6 key thematic areas: <ol style="list-style-type: none"> <li>1. Local Adaptation Governance and Business Operations</li> <li>2. Infrastructure and Built Environment</li> <li>3. Land Use and Development</li> <li>4. Drainage and Flood Management</li> <li>5. Natural Resources and Cultural Infrastructure</li> <li>6. Sustaining Our Communities</li> </ol>	The Climate Adaptation Strategy takes on the role as the primary instrument at local level to: <ul style="list-style-type: none"> <li>• Ensure a proper comprehension of the key risks and vulnerabilities of climate change;</li> <li>• Bring forward the implementation of climate resilient actions in a planned and proactive manner; and</li> <li>• Ensure that climate adaptation considerations are mainstreamed into all plans and policies and integrated into all operations and functions of Tipperary County Council.</li> </ul>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Tipperary County Council Renewable Energy Strategy</b>	The Strategy sets out the framework for the delivery of sustainable and renewable energies throughout the County.	The LARES outlines the potential for a range of renewable energy resources and developments and acknowledges the significant contribution that they can make to the county in terms of energy security, reduced reliance on traditional fossil fuels, enabling future energy exports, meeting assigned national targets and the transition to a low carbon economy.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Southern Regional Waste Management Plan 2015-2021</b>	These plans give effect to national and EU waste policy, and address waste prevention and management (including generation, collection and treatment) over the period 2015-2021.	To manage wastes in a safe and compliant manner, a clear strategy, policies and actions are required.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Fáilte Ireland Tourism plans, strategies, including those relating to the 'Ireland's Ancient East', 'Ireland's Hidden Heartlands' and 'Wild Atlantic Way' brands</b>	Fáilte Ireland's work includes preparing various plans and strategies for Ireland's Wild Atlantic Way and other brands and initiatives. These plans are subject to their own environmental assessment processes and any project arising is required to be consistent with and conform with the provisions of all adopted/approved Statutory Policies, Strategies, Plans and Programmes, including provisions for the protection and management of the environment.	Some of Fáilte Ireland's plans and strategies include various projects relating to land use and infrastructural development, including those relating to development of land or on land and the carrying out of land use activities. Many of these projects exist already while some are not currently in existence. The Statutory Policies, Strategies, Plans and Programmes that provide for different projects undergo a variety of environmental assessments. These assessments ensure that environmental effects are considered, including: those arising from new and intensified uses and activities; and those arising from various sectors such as tourism.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
<b>Various existing, planned and emerging projects provided for by the above plans and programmes</b>	These projects have been provided for by higher-level plans and programmes.	These projects will contribute towards the development of the area to which the Plan relates and/or wider area and will contribute towards environmental protection and management.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

# Appendix II Ecological, Geological and Landscape Designations

SACs (23) and SPAs (4) within County Tipperary		
Site Code	Site Name	Sensitive Features
002125	Anglesey Road SAC	Sensitive features include: Species-rich Nardus Grassland.
002207	Arragh More (Derrybreen) Bog SAC	Sensitive features include: Degraded Raised Bog.
000641	Ballyduff/Clonfinane Bog SAC	Sensitive features include: raised bog; degraded raised bog; rhynchosporion vegetation; and bog woodland.
002170	Blackwater River (Cork/Waterford) SAC	Sensitive features include: estuaries; tidal mudflats and sandflats; perennial vegetation of stony banks; salicornia mud; Atlantic salt meadows; Mediterranean salt meadows; floating river vegetation; old oak woodlands; alluvial forests; freshwater pearl mussel; white-clawed crayfish; sea lamprey; brook lamprey; river lamprey; twaite shad; Atlantic salmon; otter; and Killarney fern.
002124	Bolingbrook Hill SAC	Sensitive features include: wet heath; dry heath; and species-rich nardus grassland.
000930	Clare Glen SAC	Sensitive features include: old oak woodlands; and Killarney fern.
000646	Galtee Mountains SAC	Sensitive features include: wet heath; dry heath; alpine and subalpine heaths; species-rich nardus grassland; blanket bogs; siliceous scree; calcareous rocky slopes; and siliceous rocky slopes.
001197	Keeper Hill SAC	Sensitive features include: Northern Atlantic wet heaths; and Blanket bogs.
000647	Kilcarren-Firville Bog SAC	Sensitive features include: raised bog; degraded raised bog; and rhynchosporion vegetation.
000934	Kilduff, Devilsbit Mountain SAC	Sensitive features include: dry heath; and species-rich nardus grassland.
001683	Liskeenan Fen SAC	Sensitive features include: Cladium Fens.
002241	Lough Derg, North-east Shore SAC	Sensitive features include: juniper scrub; cladium fens; alkaline fens; limestone pavement; alluvial forests; and yew woodlands.
002165	Lower River Shannon SAC	Sensitive features include: sandbanks; estuaries; tidal mudflats and sandflats; coastal lagoon; large shallow inlets and bays; reefs; perennial vegetation of stony banks; vegetated sea cliffs; salicornia mud; Atlantic salt meadows; Mediterranean salt meadows; floating river vegetation; molinia meadows; alluvial forests; freshwater pearl mussel; sea lamprey; brook lamprey; Atlantic salmon; bottle-nosed dolphin; and otter.
002137	Lower River Suir SAC	Sensitive features include: Atlantic salt meadows; Mediterranean salt meadows; floating river vegetation; hydrophilous tall herb communities; old oak woodlands; alluvial forests; yew woodlands; freshwater pearl mussel; white-clawed crayfish; sea lamprey; brook lamprey; river lamprey; twaite shad; Atlantic salmon; and otter.
002257	Moanour Mountain SAC	Sensitive features include: wet heath; and dry heath.
001847	Phillipston Marsh SAC	Sensitive features include: transition mires.
002353	Redwood Bog SAC	Sensitive features include: raised bog; degraded raised bog; and rhynchosporion vegetation.
002162	River Barrow and River Nore SAC	Sensitive features include: estuaries; tidal mudflats and sandflats; reefs; salicornia mud; Atlantic salt meadows; Mediterranean salt meadows; floating river vegetation; dry heath; hydrophilous tall herb communities; petrifying springs; old oak woodlands; alluvial forests; Desmoulin's whorl snail; freshwater pearl mussel; white-clawed crayfish; sea lamprey; brook lamprey; river lamprey; twaite shad; Atlantic salmon; otter; Killarney fern; and Nore freshwater pearl mussel.
000216	River Shannon Callows SAC	Sensitive features include: molinia meadows; lowland hay meadows; alkaline fens; limestone pavement; alluvial forests; and otter.
002206	Scohaboy (Sopwell) Bog SAC	Sensitive features include: degraded raised bog.
000585	Sharavogue Bog SAC	Sensitive features include: raised bog; degraded raised bog; and rhynchosporion vegetation.
000939	Silvermine Mountains SAC	Sensitive features include: wet heath; and species-rich nardus grassland.
002258	Silvermines Mountains West SAC	Sensitive features include: wet heath; dry heath; and calamarian grassland.
004058	Lough Derg (Shannon) SPA	Sensitive features include: cormorant; tufted duck; goldeneye; common tern; wetland and waterbirds.
004096	Middle Shannon Callows SPA	Sensitive features include: whooper swan; wigeon; corncrake; golden plover; lapwing; black-tailed godwit; black-headed gull; wetland and waterbirds.
004086	River Little Brosna Callows SPA	Sensitive features include: whooper swan; wigeon; teal; pintail; shoveler; golden plover; lapwing; black-tailed godwit; black-headed gull; Greenland white-fronted goose; wetland and waterbird.
004165	Slievefelim to Silvermines Mountains SPA	Sensitive features include: hen harrier.

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## SACs (28) and SPAs (9) within 15 km buffer, but beyond the County boundary

Site Code	Site Name	Sensitive Features
000030	Danes Hole, Poulnalecka SAC	Sensitive features include: caves; old oak woodlands; and lesser horseshoe bat.
000231	Barroughter Bog SAC	Sensitive features include: raised bog; degraded raised bog; and rhynchosporion vegetation.
000248	Cloonmoylan Bog SAC	Sensitive features include: raised bog; degraded raised bog; rhynchosporion vegetation; and bog woodland.
000261	Derrycrag Wood Nature Reserve SAC	Sensitive features include: old oak woodlands.
000308	Loughatorick South Bog SAC	Sensitive features include: blanket bogs.
000319	Pollnacknockaun Wood Nature Reserve SAC	Sensitive features include: old oak woodlands.
000404	Hugginstown Fen SAC	Sensitive features include: alkaline fens.
000407	The Loughans SAC	Sensitive features include: turloughs.
000412	Slieve Bloom Mountains SAC	Sensitive features include: wet heath; blanket bogs; and alluvial forests.
000566	All Saints Bog and Esker SAC	Sensitive features include: orchid-rich calcareous grassland; raised bog; degraded raised bog; rhynchosporion vegetation; and bog woodland.
000668	Nier Valley Woodlands SAC	Sensitive features include: old oak woodlands.
000831	Cullahill Mountain SAC	Sensitive features include: orchid-rich calcareous grassland.
000849	Spahill And Clomantagh Hill SAC	Sensitive features include: orchid-rich calcareous grassland.
000919	Ridge Road, SW of Rapemills SAC	Sensitive features include: orchid-rich calcareous grassland.
001013	Glenomra Wood SAC	Sensitive features include: old oak woodlands.
001313	Rosturra Wood SAC	Sensitive features include: old oak woodlands.
001430	Glen Bog SAC	Sensitive features include: alluvial forests.
001432	Glenstal Wood SAC	Sensitive features include: Killarney fern.
001858	Galmoy Fen SAC	Sensitive features include: alkaline fens.
001952	Comeragh Mountains SAC	Sensitive features include: oligotrophic waters containing very few minerals; floating river vegetation; wet heath; dry heath; alpine and subalpine heaths; blanket bogs; siliceous scree; calcareous rocky slopes; siliceous rocky slopes; and slender green feather-moss.
002126	Pollagoona Bog SAC	Sensitive features include: blanket bogs.
002147	Lisduff Fen SAC	Sensitive features include: petrifying springs; alkaline fens; and geyser's whorl snail.
002236	Island Fen SAC	Sensitive features include: juniper scrub; and alkaline fens.
002312	Slieve Bernagh Bog SAC	Sensitive features include: wet heath; dry heath; and blanket bogs.
002324	Glendine Wood SAC	Sensitive features include: Killarney fern.
002332	Coolrain Bog SAC	Sensitive features include: raised bog; degraded raised bog; and rhynchosporion vegetation.
002333	Knockacoller Bog SAC	Sensitive features include: raised bog; degraded raised bog; and rhynchosporion vegetation.
002356	Ardgraique Bog SAC	Sensitive features include: raised bog; degraded raised bog; and rhynchosporion vegetation.
004032	Dungarvan Harbour SPA	Sensitive features include: great crested grebe; light-bellied brent goose; shelduck; red-breasted merganser; oystercatcher; golden plover; grey plover; lapwing; knot; dunlin; black-tailed godwit; bar-tailed godwit; curlew; redshank; turnstone; wetland and waterbirds.
004077	River Shannon and River Fergus Estuaries SPA	Sensitive features include: cormorant; whooper swan; light-bellied brent goose; shelduck; wigeon; teal; pintail shoveler; scaup; ringed plover; golden plover; grey plover; lapwing; knot; dunlin; black-tailed godwit; bar-tailed godwit; curlew; redshank; greenshank; black-headed gull; wetland and waterbirds.



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004094	Blackwater Callows SPA	Sensitive features include: whooper swan; wigeon; teal; black-tailed godwit; wetland and waterbird.
004097	River Suck Callows SPA	Sensitive features include: whooper swan; wigeon; golden plover; lapwing; Greenland white-fronted goose; wetland and waterbirds.
004103	All Saints Bog SPA	Sensitive features include: Greenland white-fronted goose.
004160	Slieve Bloom Mountains SPA	Sensitive features include: hen harrier.
004168	Slieve Aughty Mountains SPA	Sensitive features include: hen harrier; and merlin.
004233	River Nore SPA	Sensitive features include: Kingfisher.
004137	Dovegrove Callows SPA	Sensitive features include: Greenland white-fronted goose.
<b>Other sites (1 SPA) Connected to County Tipperary but beyond 15 km Buffer</b>		
<b>Site Code</b>	<b>Site Name</b>	<b>Sensitive Features</b>
004028	Blackwater Estuary SPA	Sensitive features include: wigeon; golden plover; lapwing; dunlin; black-tailed godwit; bar-tailed godwit; curlew; redshank; wetland and waterbird.

NHAs (12) and pNHAs (63) within County Tipperary							
Site Code	Site Name	Site Code	Site Name	Site Code	Site Name	Site Code	Site Name
000640	Arragh More Bog NHA	000649	Knockavilla National School, Dundrum pNHA	000945	Ardmayle Pond pNHA	001197	Keeper Hill pNHA
000642	Ballymacegan Bog NHA	000650	Lough Ourna pNHA	000947	Cahir Park Woodland pNHA	001526	Quarryford Bridge pNHA
002450	Bleanbeg Bog NHA	000651	Mitchelstown Caves pNHA	000948	Aughnaglanny Valley pNHA	001683	Liskeenan Fen pNHA
000890	Cangort Bog NHA	000653	Newchapel Turlough pNHA	000950	Dundrum Sanctuary pNHA	001844	Ballydonagh Marsh pNHA
000648	Killeen Bog NHA	000654	Redwood Bog pNHA	000952	Glenboy Wood pNHA	001845	Doonoor Marsh pNHA
001684	Lorrha Bog NHA	000655	River Suir Below Carrick-On-Suir pNHA	000954	Grove Wood pNHA	001846	Ballyneill Marsh pNHA
002385	Mauherslieve Bog NHA	000656	St. Anne's, (Sean Ross Abbey), Roscrea pNHA	000956	Inchinquillib and Dowlings Woods pNHA	001847	Phillipston Marsh pNHA
000652	Monaincha Bog/Ballaghmore Bog NHA	000929	Clareen Lough pNHA	000958	Kilcooly Abbey Lake pNHA	001848	Kilbeg Marsh pNHA
001853	Nore Valley Bogs NHA	000930	Clare Glen pNHA	000959	Killough Hill pNHA	001934	Cabragh Wetlands pNHA
000564	River Little Brosna Callows NHA	000931	Derrygareen Heath pNHA	000961	Knockanavar Wood pNHA	001980	Lizzy Smyth's Bog pNHA
000937	Scohaboy Bog NHA	000932	Flagh Bog pNHA	000964	Knockroe Fox Covert pNHA	001981	Marfield Lake pNHA
002388	Slievenamon Bog NHA	000933	Friar's Lough pNHA	000965	Laffansbridge pNHA	001982	Templetney Quarry pNHA
000011	Lough Derg pNHA	000934	Kilduff, Devilsbit Mountain pNHA	000966	Moneypark, Fethard pNHA	001984	Greenane Marsh pNHA
000216	River Shannon Callows pNHA	000936	Lough Nahinch (Tipperary) pNHA	000969	Power's Wood pNHA	001995	Lough Avan pNHA
000585	Sharavogue Bog pNHA	000938	Sheehills Esker pNHA	000970	Rockwell College Lake pNHA	002043	Bansha Wood pNHA
000639	Annacarty Wetlands pNHA	000939	Silvermine Mountains pNHA	000971	Scaragh Wood pNHA	002060	Aghsmear House pNHA
000641	Ballyduff/ Clonfinane Bog pNHA	000941	Spring Park Wetlands pNHA	000972	Shanbally Wood pNHA	002066	Ormond's Mill, Loughmoe, Templemore pNHA
000646	Galtee Mountains pNHA	000942	Templemore Wood pNHA	001133	Nenagh River Gorge pNHA	002096	Dundrum pNHA
000647	Kilcarren-Firville Bog pNHA	000943	Willsborough Esker pNHA	001178	Killavalla Wood pNHA		

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Tipperary County Geological Sites (69)

Site Code	Site Name	Site Code	Site Name	Site Code	Site Name	Site Code	Site Name
TY001	Annagh Mushroom Rock	TY002	Ardcrony Esker	TY003	Ardfinnan	TY004	Arragh More Bog
TY005	Ballingarry Copper	TY006	Ballyduff-Clonmona Mushroom Rocks	TY007	Ballygown	TY008	Ballymacadam
TY009	Ballynunty-Mardyke	TY010	Ballyoughter Bridge	TY011	Ballyrichard Quarry	TY012	Ballytarsna M8 Road Cut
TY013	Bansha and Castle Mary Moraine and Outwash	TY014	Bay Lough Corrie	TY015	Birdhill M7 Road Cut	TY016	Borrisnoe and Cloncannon
TY017	Breagaun Hill Quarry	TY018	Cabragh Wetlands	TY019	Carrigatogher M7 Road Cut	TY020	Clare Glens
TY021	Clodiagh River Meanders	TY022	Cloghleigh Quarry	TY023	Coalbrook	TY024	Commons
TY025	Dangan Mushroom Rock	TY026	Devilsbit	TY027	Earlshill	TY028	Fantane Quarry
TY029	Flagh Bog	TY030	Galtee Mountains	TY031	Garryard	TY032	Glen of Aherlow
TY033	Gortdrum	TY034	Gorteen	TY035	Hollyford Mines	TY036	Horeabbey
TY037	Kilcarren-Firville Bog	TY038	Kilfeacle Quarry	TY039	Killough Hill	TY040	Kilmastulla Meltwater Channels
TY041	Knockordan Hill	TY042	Laffansbridge Quarry	TY043	Latteragh Quarry	TY044	Lisheen Mine
TY045	Lissvarrinane Meltwater Channels	TY046	Little Brosna Callows	TY047	Littleton Bog	TY048	Magcobar
TY049	Marfield	TY050	Mitchelstown Caves	TY051	Monaraha Esker	TY052	Newchapel Turlough
TY053	Nore Valley Bog	TY054	Owenbeg Moraines	TY055	Polldonragh and The Bulls Hole of Rocks	TY056	Portroe
TY057	Reafadda Quarry	TY058	Rear Cross Moraines	TY059	River Shannon Callows	TY060	Roaring Wells
TY061	Rock of Cashel	TY062	Schoaboy Bog	TY063	Seefin	TY064	Shallee
TY065	Thurles Cathedral	TY066	Tincurry Sink	TY067	Toberadora	TY068	Tobernaloo
TY069	Tourknockane M7 Road Cut						

Scenic Routes and Views (63) within County Tipperary

Ref	Description	Ref	Description	Ref	Description	Ref	Description
V01	View towards the Rock of Cashel from Dundrum Road.	V02	View towards the Rock of Cashel from Ardmayle Road.	V03	View towards the Rock of Cashel from Boherlahan Road.	V04	View towards the Rock of Cashel from Dublin Road.
V05	View towards the Rock of Cashel from Dualla Road.	V06	View towards the Rock of Cashel from Clonmel Road.	V07	Views from N74 at Deerpark, Cashel.	V08	Views around Marfield Lake, Clonmel.
V09	Views over River Suir Valley along Clonmel - Carrick-on-Suir road (N24).	V10	Views to Slievenamon along Clonmel - Kilkenny road (N76), from Kilhefferan – Clashinsky.	V11	Views to Slievenamon along Seskin - Killusty road (R706).	V12	Views to Slievenamon along Cloneen - Mullinahone road (R692).
V13	Views to Galtees along Cahir - Kilbehenny road (N8).	V14	Views to Galtees and Slievenamuck along Bansha - Lisvrenane road (R663).	V15	Views to Galtees along Ballyglass - Newtown road (R664).	V16	Views along M8 West and South of Cahir.
V17	Views south along Ardfinnan - Clogheen road (R665).	V18	Views along Clogheen - Mount Mellerary road (R668).	V19	Views south to Knockmealdown Mountains from Kilcoran.	V20	Views in all directions from Ironmills to Milestone Road (R497).
V21	Views south to Comeragh foothills from Kilsheelan.	V22	Views north to Slievenamon from Kilsheelan.	V23	Views north to Slievenamon and south to the Comeraghs, east of Kilsheelan (N24).	V24	Views to Slievenamon and the Comeraghs.
V25	Views along road from Tipperary Town - Kilshane (N24).	V26	Views south towards Knockmealdown Mountains.	V27	War House Hill, views east and west.	V28	Views south to Slievenamon along R690.
V29	Views to the south along road R691.	V30	Views to the west and south along road R691.	V31	Views to the west between Glengoole and Ballysloe, along road R689.	V32	Views north at junction of N76 and R690.
V33	Views south along road R505 at Drehideenglashanatooha Bridge.	V34	Views to the south and south-east from Shronell crossroads (R515).	V35	Views of the Comeragh Mountains looking south on the R639 from Cashel.	V36	Views of the Comeragh Mountains looking South on the approach R689 from Fethard.
V37	Views South over River Suir Valley from Marfield - Knocklofty Road.	V38	View on the Cahir approach road to Clonmel looking southeast to lands north of Marfield and west of the town.	V39	View over Clashawley River to the south from quay west of Watergate Street, Fethard.	V40	Views north-west and south-east from bridge at west end of Main Street, Fethard.
V41	Views to the south and to the west at the junction of Old Church Street and Market Street, Cahir.	V42	View to the west up Castle Street from The Square, Cahir.	V43	Views to the north and south from Bridge Street, Cahir.	V44	Views west and sections of the Road to the east of the R494.
V45	Views along Lakeside Roads north of Portroe	V46	Views west south of Dromineer	V47	Views west to lake north of Dromineer	V48	West of R493 Puckane to Ballinderry
V49	West of L5080 north of Ballinderry	V50	Views west of the L1091 south west of Terryglass	V51	West of the R493 north of Terryglass.	V52	South on the R489 east of Lorrha.
V53	Views east on the R491 Cloughjordan to Nenagh.	V54	Views from the R498 from Bouladuff through Borrisoleigh.	V55	North and South of the R503 from Newport to Ballycahill.	V56	East and West of the R497.
V57	View west on the Cork Road approach to Newport.	V58	West on the N62 north of Templemore.	V59	Views of surrounding landscape from M7 including Annaholty and Rossfinch.	V60	Views of landscape from M7 at Gortmore southwest of Nenagh.
V61	Views of the landscape from the M7 at Clash.	V62	Views from the N75 in Borris, east of Thurles.	V63	Views from M8 near Longford's Pass.		

## **Appendix III Non-Technical Summary**

# Non-Technical Summary Table of Contents

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- 2.3 Relationship with other relevant Plans and Programmes

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- 3.2 Likely Evolution of the Environment in the Absence of the Plan
- 3.3 Biodiversity and Flora and Fauna
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# Section 1 Introduction and Terms of Reference

This is the Non-Technical Summary of the Environmental Report for the Draft Tipperary County Development Plan 2022-2028 (“the Draft 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

The SEA has been carried out in order to comply with the provisions of the European SEA Directive and in order to enable sustainable development and environmental protection and management. SEA is the planning authority’s and the public’s guide to what are generally the best areas for development in the County.

SEA enables the planning authority to direct development towards robust, well-serviced and connected areas in the County – thereby facilitating the general avoidance of incompatible areas in the most sensitive, least well-serviced and least well-connected areas. Compact development can be accompanied by placemaking initiatives to enable the County’s towns and villages to become more desirable places to live – so that they maintain and improve services to existing and future communities.

SEA enables requirements relating to environmental protection and management to be integrated into the Plan so that compatible sustainable development in the County’s sensitive areas is also facilitated.

SEA provides greater 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.

An overlay of environmental sensitivities in County Tipperary is shown on Figure 1.1.

The overlay mapping shows that environmental sensitivities are not evenly distributed throughout the County. Much of the County is identified as having low to moderate levels of sensitivity.

Higher levels of environmental sensitivities are found in upland and foothill areas and foothills due to ecological designations (including SAC, NHA and pNHA), water sensitivities (extremely and highly vulnerable aquifers), sensitive landcover (peat bogs) and landscape designations (the highest level of landscape sensitivity).

Water bodies throughout the County, including Lough Derg and the River Shannon along the County’s northern and western boundary, due to sensitivities such as: ecological designations; nutrient sensitivity; and flood risk.

Areas within the County’s settlements, on account of sensitivities including those related to architectural and archaeological heritage.

### **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.

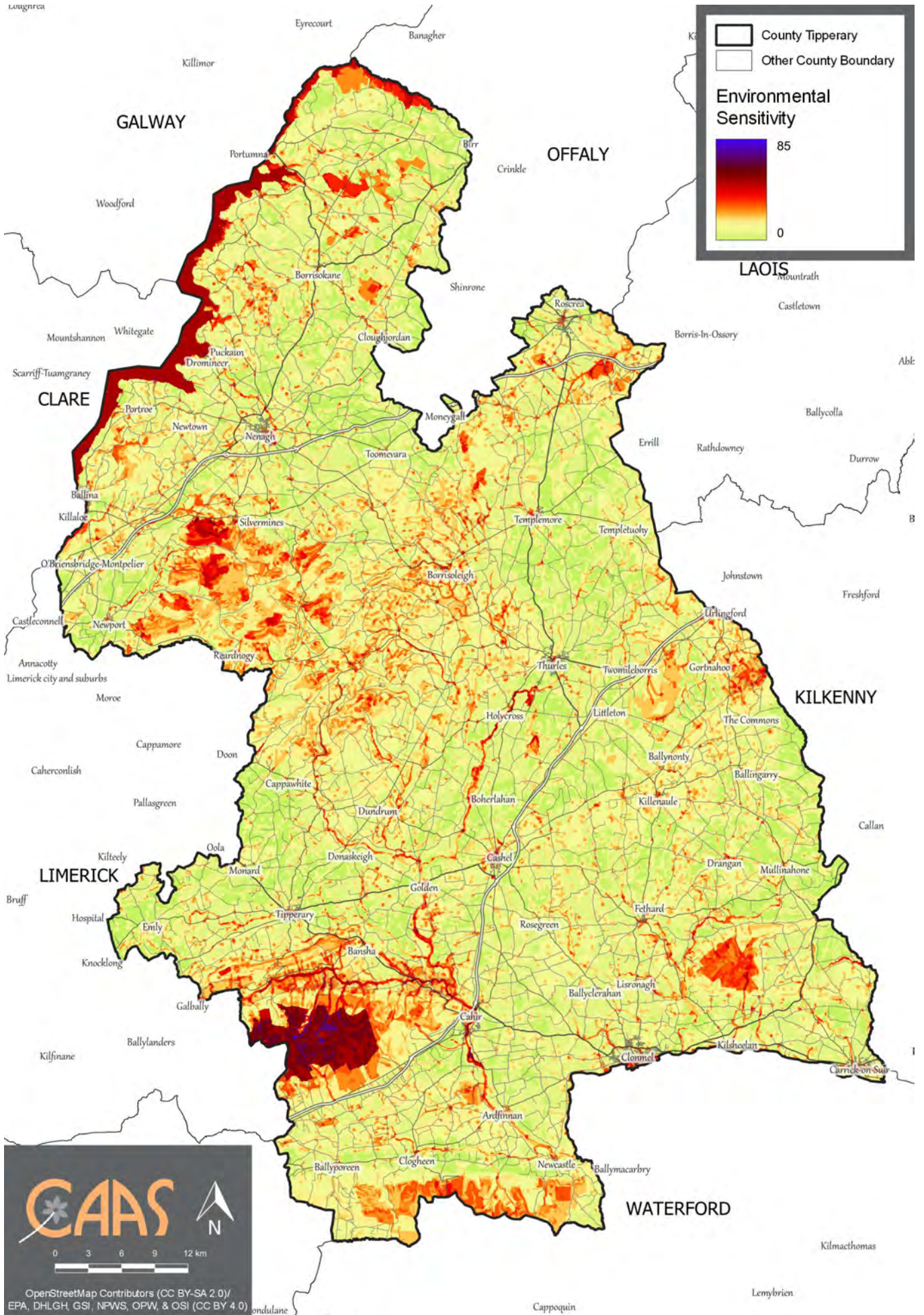
### **Difficulties Encountered during the SEA process**

No significant difficulties have been encountered during the undertaking of the assessment. There was limited water services information available for some settlements within the County however objectives requiring the provision of appropriate levels of water services alongside new development have been integrated into the Plan.

There is a data gap relating to WFD surface water status data. There are a number of waterbodies within the Plan area with overall status currently not assigned to them and the term "unassigned status" applies in respect of these waterbodies. The SEA ensured that the Plan contains measures that will contribute towards the maintenance and improvement of status of all water bodies within the zone of influence.

### **What happens at the end of the process?**

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



**Figure 1.1 Environmental Sensitivities that the Plan directs incompatible development away from CAAS for Tipperary County Council**

## Section 2 The Plan

### 2.1 Introduction and Content

The Plan is a land use plan and overall strategy for the proper planning and sustainable development of the functional area of County Tipperary over the six-year period 2022-2028. The Plan sets out the Council's proposed policies and objectives for the development of the County over the Plan period.

The Plan is set out over five volumes:

- Volume 1: Written Statement
- Volume 2: Settlement Statements and Maps, and Serviced Land Assessment
- Volume 3: Appendices
- Volume 4: Built Heritage
- Volume 5: Environmental Reports

Volume 1 is set out in 16 chapters under key headings that broadly reflect the themes of the RSES as follow:

- 1) Introduction
- 2) Core Strategy
- 3) Low-Carbon Society & Climate Action
- 4) Settlement Strategy
- 5) Housing
- 6) Supporting Sustainable Communities
- 7) Town Centres & Placemaking
- 8) Enterprise and Rural Employment
- 9) Tourism
- 10) Renewable Energy and Bio-Economy
- 11) Environment and Natural Assets
- 12) Sustainable Transport
- 13) Built Heritage
- 14) Green and Blue Infrastructure
- 15) Water and Energy Utilities
- 16) Monitoring and Evaluation

Volume 2 sets out the village statements and maps for the rural settlements. Volume 3 sets out the appendices that inform the Plan as follows:

- County Housing Strategy
- Renewable Energy Strategy
- Landscape Character Assessment and schedule of scenic Views and Routes
- Rural Housing Design Guide
- Cluster Housing Design Guide
- Development Management Standards
- Statement of Compliance with Ministerial Guidelines

Volume 4 sets out the Record of Protected Structures with proposed additions and deletions and a schedule of Architectural Conservation areas and Volume 5 contains the SEA Environmental Report, the Appropriate Assessment Natura Impact Report (NIR) and the Strategic Flood Risk Assessment (SFRA).

### 2.2 Overarching Vision and Strategic Objectives

The Vision for the Plan included is one for “for resilience and for recovery from the impacts of the Covid-19 pandemic, for sustainable towns and rural areas, and for self-sustaining and inclusive communities. The Plan is a proactive spatial planning framework for sustainable future growth, building on the strengths and assets of the county, its communities and its environment. The Vision presented underpins the Vision Statement for Tipperary as set out in the Corporate Plan 2020 – 2024: Tipperary - A vibrant place where people can live, visit and work in a competitive and resilient economy, a sustainable environment and an inclusive and active community”.



The Overarching Strategic Objectives of the Plan are as follows:

- SO – 1: To support the just transition to a climate resilient, biodiversity-rich, environmentally-sustainable and climate-neutral economy.
- SO – 2: To facilitate and promote the development of Clonmel, Nenagh and Thurles as Key Towns, economic drivers and significant population and service centres for the Southern Region.
- SO – 3: To support the implementation of the County Settlement Hierarchy, in regenerating our towns and villages, creating vibrant town centres, attracting new residents and delivering quality residential neighbourhoods.
- SO – 4: To facilitate the development of active, connected and socially inclusive communities, where affordable and quality housing is provided in line with the needs of the population, and integrated with the delivery of community and social infrastructure.
- SO – 5: To promote, support and enable sustainable economic development, and foster new opportunities harnessing the talent of our workforce and communities.
- SO – 6: To support a sustainable, diverse and resilient rural economy, whilst integrating the sustainable management of land and natural resources.
- SO – 7: To protect, enhance and connect areas of natural heritage, blue and green infrastructure and waterbodies, for quality of life, biodiversity, species and habitats, while having regard to climate change adaptation and flood risk management measures.
- SO – 8: To support, value and protect our Artistic, Cultural and Built Heritage for future generations and to recognise its key role in our economy.
- SO – 9: To enhance connectivity and promote sustainable transport, through the integration of land-use and transport planning and promotion of and prioritisation of public transport and walking cycling.
- SO – 10: To protect existing infrastructural assets and utilities, and the strategic function of the existing national road and rail network, and associated junctions and support investment in strategic infrastructure both at the county, and the regional level thereby ensuring Tipperary's access to key services for economic growth and resilience.

## 2.3 Relationship with other relevant Plans and Programmes

It is acknowledged that many of the major issues affecting the County's development are contingent on national policy and government funding. The Plan sits within a hierarchy of statutory documents setting out public policy. The Plan must comply with relevant higher-level strategic actions and will, in turn, guide lower-level strategic actions. These documents include plans and programmes such as those detailed in Appendix of the main SEA ER. 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, tourism, infrastructure, sustainable development, environmental protection and environmental management that have been subject to environmental assessment and must be implemented through the County Development Plan.

As required by the Planning and Development Act 2000, as amended, the Plan is consistent with and conforms with national and regional policies, plans and programmes, including the NPF and the RSES for the Southern Region. The Plan will, in turn, guide lower-level strategic actions, such as Local Area Plans that will be subject to their own lower-tier environmental assessments.

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

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

In the absence of a new Plan, there would be no framework for planning applications and no regulation of development across the County. The current Plan has contributed towards environmental protection within County Tipperary. If the current North Tipperary County Development Plan 2010 (as extended) and South Tipperary County Development Plan 2009 (as extended) were to expire and not be replaced by a new Plan, this would result in a deterioration of the County's planning and environmental protection framework. As a result, there would be an increased likelihood in the extent, magnitude and frequency of adverse effects on all environmental components occurring, including:

- Arising from both construction and operation of development and associated infrastructure:
  - 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;
  - Habitat loss, fragmentation and deterioration, including patch size and edge effects; and
  - Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species such as birds and bats.
- Potential interactions if effects arising from environmental vectors.
- Potential adverse effects on the hydrogeological and ecological function of the soil resource, including as a result of development on contaminated lands.
- Potential for riverbank erosion.
- Potential adverse effects upon the status of water bodies and entries to the WFD Register of Protected Areas (ecological and human value), arising from changes in quality, flow and/or morphology.
- Increase in flood risk and associated effects associated with flood events.
- Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity ensures the mitigation of potential conflicts).
- Failure to adequately treat surface water run-off that is discharged to water bodies (water services infrastructure and capacity ensures the mitigation of potential conflicts).
- Failure to comply with drinking water regulations and serve new development with adequate drinking water (water services infrastructure and capacity ensures the mitigation of potential conflicts).
- Increases in waste levels.
- Potential impacts upon public assets and infrastructure.
- 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.
- Potential conflict between development under the Plan and aiming to reduce carbon emissions in line with local, national and European environmental objectives.
- Potential conflicts between transport emissions, including those from cars, and air quality.
- Potential conflicts between increased frequency of noise emissions and protection of sensitive receptors.
- Potential conflicts with climate adaptation measures including those relating to flood risk management.
- Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities.
- Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape.

### 3.3 Biodiversity and Flora and Fauna

Information on biodiversity and flora and fauna that is relevant to project planning and development and associated environmental assessment and administrative consent of projects includes available information on designated ecological sites and protected species, ecological connectivity (including stepping stones and corridors) and non-designated habitats.

The most ecologically sensitive and heavily designated and protected areas within County Tipperary include wetland and upland areas. These areas contain many rare and threatened habitats and species of national and international importance, including those protected under the national and European legislation.

Ecological sensitivities within and surrounding the County include: peatlands; uplands; lakes; ponds; marshes; swamps; rivers; streams; canals; woodlands; wetlands; grasslands; eskers; turloughs; and hedgerows. These habitats support a variety of species and ecosystems that contribute to the biodiversity of the County. Dispersed areas of marginal agricultural lands that may include ecological sensitivities occur throughout the County's lowlands and foothills.

A network of green spaces, including gardens, parks, graveyards, amenity walks, railway lines and patches of woodland and scrub, provide habitats and ecological connectivity within the County and beyond.

Designated sites within the County include Special Areas of Conservation<sup>1</sup> (SACs) and Special Protection Areas<sup>2</sup> (SPAs). These are mapped on Figure 3.1. There are 27 European sites (23 SACs and four SPAs) designated within or partially within County Tipperary. Other ecological designations occur within and adjacent to the County and these are detailed in the main SEA Environmental Report.

CORINE<sup>3</sup> land cover mapping shows that the most dominant land cover types are pastures and agricultural lands.

### **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 include: 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); and Climate change.

Ireland's Article 12 Birds Directive Reports and the 6th National Report under the Convention of Biological Diversity identify similar issues.

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

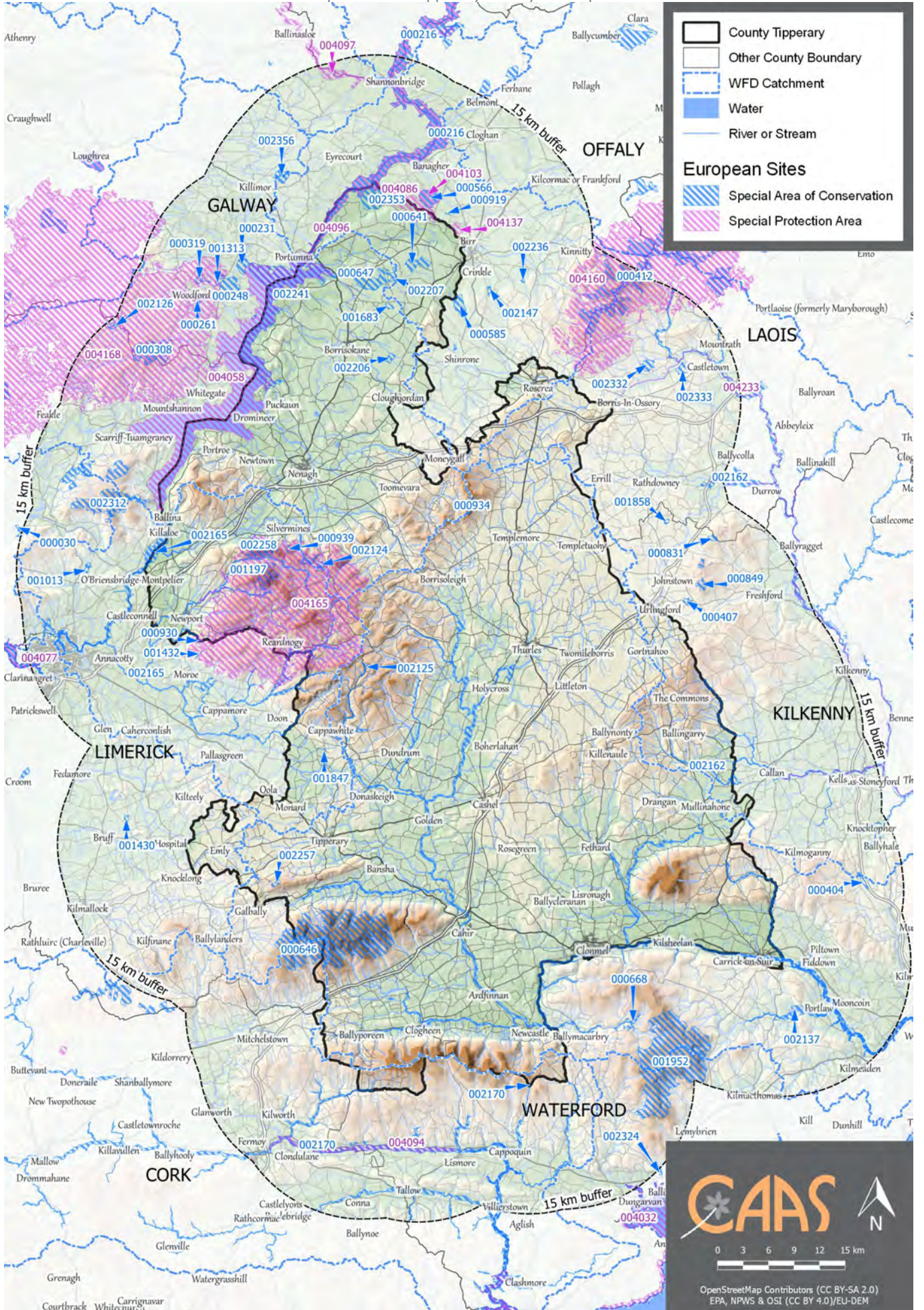
Previous changes in land uses arising from human development have resulted in a loss of biodiversity and flora and fauna however, legislative objectives governing biodiversity and fauna were not identified as being conflicted with.

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<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.

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



**Figure 3.1 European sites within and within 15 km of the County**

CAAS for Tipperary County Council

### 3.4 Population and Human Health

In the 2016 Census the total population of County Tipperary was identified as being of 159,553 persons, an increase in total population in the County by c. 0.5% (c. 799 persons) since the previous census. Tipperary has a targeted population growth of 24,500 additional persons by 2031<sup>4</sup>.

County Tipperary's Key Towns include: Clonmel, with population of 17,140 persons; Thurles, with population of 7,940 persons; and Nenagh, with population of 8,968 persons.<sup>5</sup> Clonmel is the largest town in the County and an important employment location, while Nenagh and Thurles are strategically located urban centres with accessibility and significant influence in a sub-regional context, as identified by the Southern Regional Spatial and Economic Strategy. Key Towns provide important connections with adjoining regions and have the capacity and future growth potential to accommodate above average growth in tandem with the requisite investment in employment creation, services, amenities and sustainable transport.

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

- Recreational and development pressure on habitats and landscapes;
- Increase in demand for waste water treatment at the municipal level;
- 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

There is historic and predictive evidence of flooding in various locations across the County.

The greatest health risk from radiation in Ireland is caused by radon. The presence of radon gas, a naturally occurring radioactive gas that originates from the decay of uranium in rocks and soils, occurs across the country. The number of homes within the County with radon levels above the reference level is within the normal range experienced in other locations across the country.

### 3.5 Soil

Luvisols<sup>6</sup> (occupying most of the northern, central and southern parts of the County) are the most dominant soil type in County Tipperary. Peat soils are found mainly within the north, north-west, north-east and southern areas of the County. Many of these peat areas are also subject to ecological designations.

The audit of County Geological Sites in County Tipperary was completed in 2019 and identified 69 County Geological Sites<sup>7</sup>. Concentrations of these designations can be found in upland areas.

There are a number of Source Protection Areas in County Tipperary.

The GSI have identified that most of the County has relatively low levels of landslide susceptibility, with moderate to high susceptibility found in upland areas.

<sup>4</sup> Draft Tipperary County Development Plan 2022-2028

<sup>5</sup> Census 2016 (CSO)

<sup>6</sup> Generally fertile, widely used for agriculture and associated with significant accumulation of clay.

<sup>7</sup> Geological Survey of Ireland (2019) *The Geological Heritage of County Tipperary. An audit of County Geological Sites in County Tipperary 2019.*

## 3.6 Water

Since 2000, Water Management in the EU has been directed by the Water Framework Directive 2000/60/EC (WFD). The WFD requires that all Member States implement the necessary measures to prevent deterioration of the status of all waters - surface, ground, estuarine and coastal - and protect, enhance and restore all waters with the aim of achieving good status.

Most of the County is located within the sub-catchments of the Suir (this catchment includes the area drained by the River Suir and all streams entering tidal water between Drumdowney and Cheekpoint, County Waterford) and Lower Shannon (this catchment includes Lough Derg and its catchment) and partially within the catchments of the Nore, Shannon Estuary South and Blackwater (Munster).

The WFD status of most of the rivers and lakes within the County is classified as *moderate*, *good* and *high*, however some sections of rivers and streams are identified as *poor* due to unsatisfactory ecological/biological and/or physio-chemical status. The WFD surface water status (2013-2018) of transitional waterbodies downstream of County Tipperary (Upper Suir Estuary) is identified as *poor* due to unsatisfactory ecological/biological and/or physio-chemical status. WFD surface water status (2013-2018) within and surrounding the County is shown on Figure 3.2.

The WFD status (2013-2018) of groundwater underlying the entire County is generally identified as being of *good* status, with some localised areas of *poor* status to the north-west, west and south-west of the County and in the east of the County.

Aquifer vulnerability refers to the ease with which pollutants of various kinds can enter into groundwater. The vulnerability of aquifers is classified as being generally High and moderate vulnerability throughout the County with areas of Extreme vulnerability and extreme (rock at or near surface or karst) found mainly in upland areas.

Certain areas across the County are at risk of flooding from sources including groundwater, pluvial<sup>8</sup> and fluvial<sup>9</sup>. There is historic evidence of flooding in various locations across the County, including along the rivers Shannon and Suir.

### Existing Problems

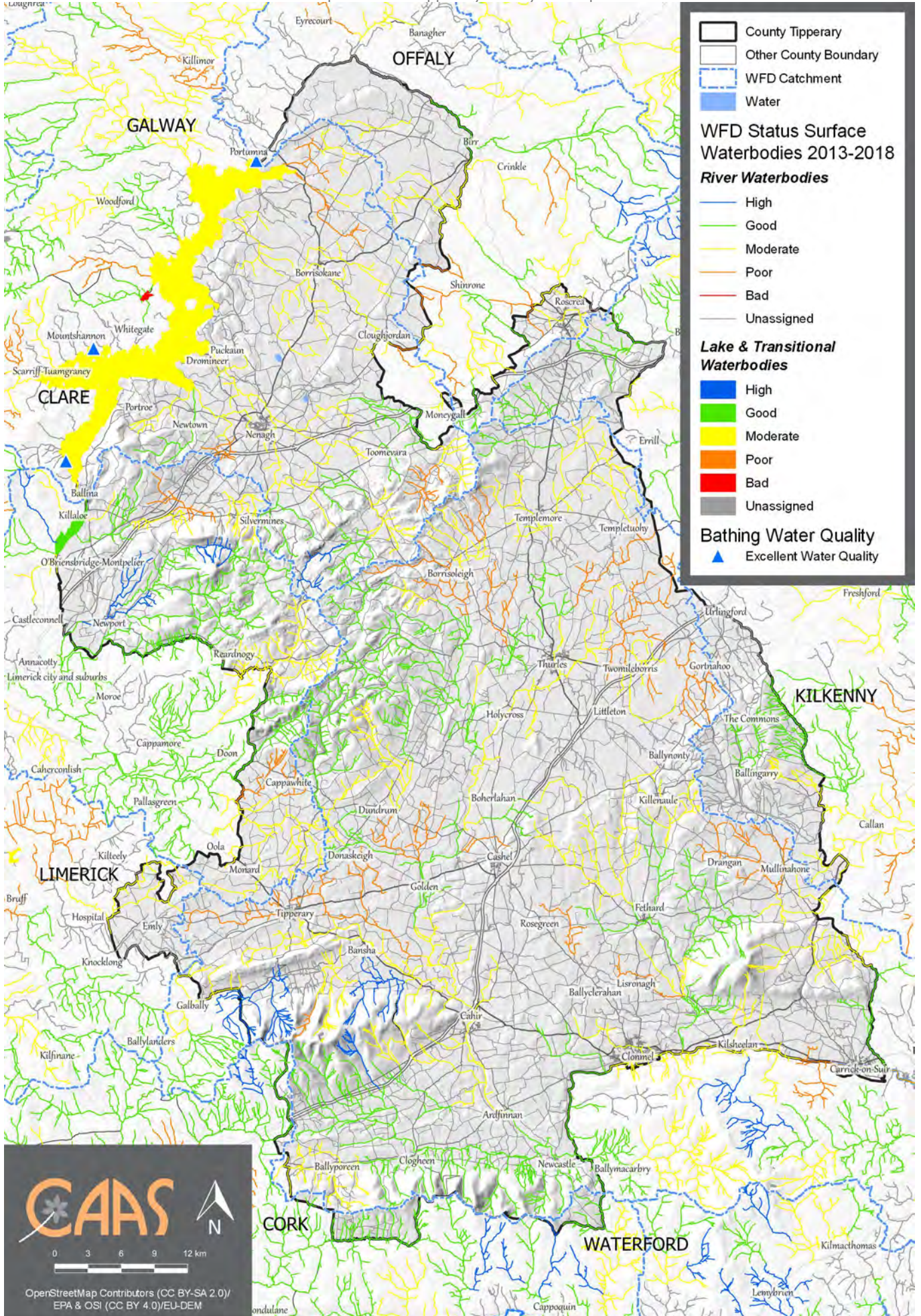
Subject to exemptions provided for by Article 4 of the WFD, based on available water data, certain surface and groundwater bodies will need improvement in order to comply with the objectives of the WFD.

The Plan includes provisions that will contribute towards improvements in the status of waters.

There is historic and predictive evidence of elevated levels of flood risk at various locations across the County.

<sup>8</sup> Resulting from high intensity rainfall events where run-off volume exceeds capacity of surface water network.

<sup>9</sup> Watercourse capacity is exceeded or the channel is blocked and excess water spills from the channel onto adjacent floodplains.



**Figure 3.2 Surface Water Status (2013-2018)**

CAAS for Tipperary County Council

### 3.7 Air and Climatic Factors

Total emissions of greenhouse gases by humans come from various sectors including transport, agriculture, energy industries, manufacturing combustion, industrial processes, residential developments, commercial services developments, waste management processes and fluorinated gases equipment (such as refrigeration and fire protection systems).

The National Climate Action Plan 2021 is an all of Government plan to tackle climate change and bring about a step change in Ireland's climate ambition over the coming years. The Plan sets out an ambitious course of action over the coming years to address the diverse and wide-ranging impacts climate disruption is having on Ireland's environment, society, economic and natural resources. The Climate Action Plan sets out clear 2030 targets for each sector with the ultimate objective of achieving a transition to a competitive, low-carbon, climate-resilient, and environmentally sustainable society and economy by 2050. The Action Plan deals with both mitigation and adaptation.

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

The Climate Change Advisory Council's Annual Review 2020 identifies that the most recent projections demonstrate that, under different assumptions, Ireland will not meet its emissions reduction targets, even with the additional policies and measures included in the 2018 National Development Plan (superseded in 2021). The projections also show that progress on reducing emissions is sensitive to the future path of fuel prices. A significant and sustained rate of emissions reduction of approximately - 2.5% per year is required to meet our objectives for 2050. It is noted that additional measures within the recent Climate Action Plan are not included.

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

The National Adaptation Framework 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, a number of Government Departments will be required to prepare sectoral adaptation plans in relation to a priority area that they are responsible for.

The Tipperary County Council Climate Change Adaptation Strategy 2019-2024 seeks to:

- Ensure a proper understanding of the key risks and vulnerabilities of climate change;
- Advance the implementation of climate resilient actions in a planned and proactive manner;
- Ensure that climate adaptation considerations are mainstreamed into all plans and policies; and
- integrated into all operations and functions of the local authority.

The EPA's (2020) Air Quality in Ireland 2019 identifies that:

- Air quality in Ireland is generally good however there are localised issues;
- Nitrogen dioxide (NO<sub>2</sub>) from transport emissions is polluting urban areas; and
- Ireland was above World Health Organization air quality guideline value levels at 33 monitoring sites – mostly due to the burning of solid fuel within settlements across the country.

With regard to solutions, the report identifies that:

- To tackle the problem of particulate matter, clean ways of heating homes and improve energy efficiency of homes can be progressed; and
- To reduce the impact of nitrogen dioxide, transport options in the Government's Climate Action Plan can be implemented and transport choices can be considered by individuals.

In order to comply with European Directives relating to air quality, the EPA manages the National Ambient Air Quality Network and measures the levels of a number of atmospheric pollutants at locations across the country. The current<sup>10</sup> air quality within the County is identified by the EPA as being *good*.

<sup>10</sup> 26/05/2021 (<http://www.epa.ie/air/quality/>)  
CAAS for Tipperary County Council



## 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 1.1).

### Public Assets and Infrastructure

Public assets and infrastructure that have the potential to be impacted upon by the Plan, if unmitigated, include; settlements; resources such as public open spaces, parks and recreational areas; public buildings and services; transport and utility infrastructure (electricity, gas, telecommunications, water supply, wastewater infrastructure etc.); forestry; and natural resources that are covered under other topics such as water and soil.

### Waste Water

The County is served by 90 Wastewater Treatment Plants (WWTPs)<sup>11</sup>. In unserved areas and outside the main settlements, the main method of sewage disposal is by individual septic tanks and other types of wastewater treatment. Irish Water has provided information on wastewater treatment capacity, constraints and projects planned within the County to improve the existing network, to assist the Council in the preparation of the new County Development Plan. This information indicates where there may be wastewater treatment capacity available to accommodate growth ("headroom") in terms of population equivalent<sup>12</sup> (PE) in areas serviced by a public wastewater treatment plant. Spare treatment capacity is identified as being available in all of these settlements, except for: Ballina and Killaloe, Newport, Fethard, Cloughjordan, Golden, Lisvarrinane, Newcastle and Silvermines. The highest levels of headroom (PE) are available at Clonmel WWTP (51,026 PE), Thurles WWTP (4,811 PE) and Carrick-On-Suir WWTP (3,803 PE) and Templemore (3,530 PE). Tipperary County Council will work alongside and facilitate the delivery of Irish Water's Water Investment Plan to support and facilitate the delivery of new or improved wastewater treatment plants in the County.

### Water Supply

Irish Water is responsible for providing and maintaining adequate public water supply infrastructure throughout the County. 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). The EPA publishes their results in annual reports that are supported by Remedial Action Lists (RALs). The RAL identifies water supplies that are not in compliance with the Regulations mentioned above. The most recent available RAL (Q1 of 2021) identifies three County Tipperary drinking water supplies where action plans are being proposed or implemented.

### Waste Management

Waste management across the County is guided by the Southern Waste Management Plan 2015-2021.

### Transport

Road and rail infrastructure in the County has the potential to support reductions in energy demand from the transport sector, including through electrification of modes.

### Land

The Plan seeks to assist with the reuse and regeneration of brownfield sites thereby contributing towards sustainable mobility and reducing the need to develop greenfield lands and associated potential adverse environmental effects. Brownfield lands are generally located within urban/suburban areas.

### Existing Problems

There are a number of challenges with respect to the provision of water services infrastructure, some of which are summarised above. The provisions of the new County Development Plan will contribute towards protection of the environment with regard to impacts arising from material assets.

<sup>11</sup> Irish Water (2020)

<sup>12</sup> WWTPs are described in terms of their designed treatment capacity, which is generally expressed as population equivalent (PE). This is a measurement of total organic biodegradable load, including industrial, institutional, commercial and domestic organic load, on a wastewater treatment plant, converted to the equivalent number of PEs. One person is considered to generate 60g of five-day Biochemical Oxygen Demand (BOD) per day. 1 PE is defined as being equivalent to 60g of BOD per day.

## 3.9 Cultural Heritage

### Archaeological Heritage

Archaeological heritage is protected under the National Monuments Acts (1930-2004), Natural Cultural Institutions Act 1997 and the Planning Acts. 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.

There are hundreds of Recorded Monuments within the County, including graveyards, castles, forts and tombs. Clusters of archaeological heritage are identified: along river and lake banks including Lough Derg and the River Suir; surrounding settlements (such as the medieval walled towns of Clonmel, Fethard, Cashel and Carrick on Suir and the historical towns of Nenagh, Roscrea and Thurles); and in lowland rural areas. There are lower concentrations of protected monuments in the upland areas.

The Cashel area of County Tipperary is the location of a complex of archaeological monuments historically used for royal inauguration, ceremony and assembly. The Rock of Cashel consists of a stone fort on a large rock outcrop and was the site of inauguration of the overkings of Munster, known as 'Kings of Cashel'. The group of buildings at the site includes 12<sup>th</sup> century round tower, Cormac's Chapel (a Romanesque church) and a 13<sup>th</sup> century cruciform cathedral. Cashel is nominated to a Tentative UNESCO World Heritage Site List (as part of the 'Royal Sites of Ireland'), for future designation as UNESCO World Heritage Sites.

### Architectural Heritage

Records of Protected Structures are legislated for under Section 12 and Section 51 of the Planning and Development Act 2000 as amended. Protected structures are defined in the Planning and Development Act 2000 as amended as structures, or parts of structures that are of special interest from an architectural, historical, archaeological, artistic, cultural, scientific, social or technical point of view. Similar to the general spatial spread of archaeological heritage, clusters of architectural heritage are found within the County's settlements, including examples of country houses, churches, bridges and mills. Notable protected structures in County Tipperary include: Farney Castle, Lisheen Castle, Ballyartella Bridge and Gortkelly Castle.

In addition to Protected Structures, the Planning and Development Act, 2000 provides the legislative basis for the protection of Architectural Conservation Areas (ACAs). The ACA designation requires that planning permission must be obtained before significant works can be carried out to the exterior of a structure in the ACA that might alter the character of the structure or the ACA. There are 33 ACAs designated within the County.

### Existing Problems

The context of archaeological and architectural heritage has changed over time within County Tipperary, however no existing conflicts with legislative objectives governing archaeological and architectural heritage have been identified.

## 3.10 Landscape

County Tipperary is characterised by a rich and diverse landscape types, including: large lowland plains, uplands, mountain ranges, valleys and variety of wetlands. Upland areas include the Silvermines, Arra, Galtee and Knockmealdown Mountains, the Slieveardagh Hills, the Devil's Bit and Slievenamon. The Shannon wetlands and Lough Derg are situated in the north-west of the County.

The landscape's capacity to absorb new development, without exhibiting a significant loss of character or change of appearance is referred to as its 'sensitivity'. The sensitivity of the landscape depends on factors including elevation, slope, land-cover and soil. The most sensitive landscapes in County Tipperary occur in wetland and upland areas in the north, west and south-west of the County.

The Landscape Character Areas in County Tipperary are classified according to their level of sensitivity, ranging from: 'Vulnerable'; 'Transitional Vulnerability'; 'Sensitive'; 'Transitional Sensitivity'; 'Normal'; and 'Robust'. The 'Vulnerable' areas are the most sensitive to development; developments that are likely to create a significant visual impact will best be absorbed in areas where the landscape is most robust, i.e. where the landscape has the capacity to absorb development without significantly changing its character. Landscape Character Areas in the County that are classified as 'Vulnerable' include: Upper Lough Derg; The Shannon Callows; River Shannon – Newport; Arra Mountains – Lower Lough Derg; Upperchurch –

Kilcomommon/Hollyford Hills Mountain Mosaic; Silvermines – Rearcross; Slievenamon Mountain Mosaic; Glen of Aherlow Uplands; Galtee Mountain Mosaic; Devilsbit Uplands; and Knockmealdown Mountain Mosaic

### Existing Environmental Problems

New developments have resulted in changes to the visual appearance of lands within the County 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 that are required to be implemented. The SEOs are set out under a range of topics and are used as standards against which the provisions of the Plan and the alternatives are evaluated in order to help identify which provisions would be likely to result in significant environmental effects and where such effects would be likely to occur, if - in the case of adverse effects - unmitigated.

**Table 3.1 Strategic Environmental Objectives**

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
<b>Biodiversity, Flora and Fauna</b>	<b>BFF</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>	<b>PHH</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>	<b>S</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>	<b>W</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>	<b>MA</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</li> </ul>

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
			<p>electrification of road and rail transport modes</p> <ul style="list-style-type: none"> <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>	<b>A</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 by 2020 and move closer to WHO recommended levels</li> </ul>
<b>Climatic Factors</b>	<b>C</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>	<b>CH</b>	Safeguard cultural heritage features and their settings through responsible design and positioning of development	Protect places, features, buildings and landscapes of cultural, archaeological or architectural heritage
<b>Landscape</b>	<b>L</b>	Protect and enhance the landscape character	To implement the Plan's framework for identification, assessment, protection, management and planning of landscapes having regard to the European Landscape Convention

## Section 4 Alternatives

### 4.1 Introduction

The SEA Directive requires that reasonable alternatives (taking into account the objectives and the geographical scope of the plan or programme) are identified, described and evaluated for their likely significant effects on the environment. Available reasonable alternatives for the Plan are provided under Types 1 to 3 detailed 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 limited by the provisions of higher-level planning objectives, including those of the National Planning Framework (NPF) and the Regional Spatial and Economic Strategy (RSES) for the Southern Region. These documents set out various requirements for the content of the Plan including on topics such as settlement typology, land use zoning and the sustainable development of rural areas.

### 4.3 Type 1: Alternatives for an Environmental Approach to the Plan

Although many environmental (including infrastructure, natural capital<sup>13</sup> and ecosystem<sup>14</sup> service and climate action issues) have been considered over previous Plan periods, the importance of these in fulfilling environmental obligations has increasingly emerged as a key focus of the NPF, the RSES and new and emerging planning legislation.

In addition, the protection and promotion of biodiversity, ecosystems services and natural amenities was a key concern of people and communities in pre-draft consultation for the Draft Plan. In this respect, the Chief Executive Report sets out details of the 190 (no.) submissions received at [www.tipperarycoco.ie/cdp](http://www.tipperarycoco.ie/cdp).

Three pillars in terms of the overall environmental approach to the Plan are set out:

1. An Infrastructural capacity led approach would primarily use strategic Infrastructural Assessment and Serviced Land Assessment to provide an evidence base to inform future development to be provided for by the Plan.
2. An Ecosystems-Services Approach supporting the integrated management of land, water and living resources that promotes conservation Nature-Based Solutions and sustainable landuse.
3. Support for a move to a low-carbon and climate resilient economy and society incorporating stronger responses in how the population of the County lives, travels and works to contribute towards the achievement of a low-carbon Tipperary.

Having consideration to the above, two alternative approaches to the overall approach of the Plan have been considered:

#### Alternative A

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 for 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.

<sup>13</sup> Renewable and non-renewable resources (e.g. plants, animals, air, water, soils, minerals)

<sup>14</sup> Ecosystems are multifunctional communities of living organisms interacting with each other and their environment. Ecosystems provide a series of services for human well-being (ecosystem services) either directly or indirectly contributing towards human wellbeing

- 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<sup>15</sup> and ecosystem service issues, such as the management of air quality, noise pollution, light pollution, pollination, flood risk, water bodies and river basins and natural resources supporting energy production and recreation; and
- A decreased likelihood in the extent, magnitude and frequency of adverse effects on natural capital and ecosystem services.
- Active support for the provisions of the National Climate Action Plan and the national targets for GHG emissions as set out.

Furthermore, 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 in all settlements, contribute to carbon reduction targets and achieve environmental enhancement and economic growth.

Alternative A would ensure that the sustainable development of settlements 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. This approach would also contribute towards compliance with the objectives of the RSES and NPF.

Under **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", as has been the case over previous plan periods, 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 the national targets for GHG emissions as set out.

Furthermore, this alternative 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.

This alternative 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

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<sup>15</sup> Renewable and non-renewable resources (e.g. plants, animals, air, water, soils, minerals)

led approach would not contribute towards achieving policy objectives of the RSES or NPF to the same degree as Alternative A.

**Selected Type 1 Alternative for the Plan: Alternative A.** Under Alternative A, the County Development Plan enshrines a move to a low-carbon and climate resilient economy and society in its Core Strategy and other Plan provisions.



Figure 2.2: Core Ambitions for Tipperary

#### 4.4 Type 2: Alternatives for Settlement Hierarchy Positioning and Growth

In considering significant realistic alternatives for placing of individual settlements under alternative typologies, or in other words the development of a Settlement Hierarchy, the planning authority has taken into account the objectives of the NPF and the Southern RSES. It is noted that the RSES has designated the Towns of Clonmel, Nenagh and Thurles as Key Towns with the remaining towns and villages to be designated by the Planning Authority having consideration to a sustainable infrastructure-led approach. In this respect, alternative approaches to how these lower tier settlements could be set out in a settlement strategy are outlined below:

**Alternative A “Plan for Settlement growth based on urban capacity and compact growth”** would support the function of the Key towns of Clonmel, Nenagh and Thurles and set out typologies for the smaller settlements taking into account factors such as population, infrastructural availability and capacity assessment. Based on this, a Settlement Hierarchy could be devised with appropriate population projections across the tiers and land development policies appropriate to the tiers. This would enable structured and plan-led growth of towns and rural areas. Growth would be guided by an infrastructural assessment, with growth allocated within existing or planned capacity of infrastructure. Positive environmental effects and compact growth would be maximised and negative environmental effects minimised.

**Alternative B “Strong support for Key Towns with flexible and organic growth enabled in all other settlements”** would support the growth of the Key Towns, planning for 30% of new population in these settlements, and plan for the equal growth and expansion of all the other towns and villages in the County. While this option would support the Key Towns it would result in a poor

settlement structure among the other settlements that would not support the sustainable delivery of services and facilities in line with a strong settlement hierarchy. There is also the risk that development would occur in settlements that would not be of a nature and scale appropriate to individual settlements. Infrastructural capacity would be exceeded within settlements and compact growth would not be maximised, with unnecessary levels of greenfield development in areas outside of built development envelopes occurring. This would present potential significant adverse environmental effects that would be challenging to fully mitigate.

**Alternative C “New settlement favour in urban and rural areas on an equal basis”** would support the development of urban towns (i.e. towns >1,500 persons) and rural settlements (settlements <1,500 persons) equally. This would provide for 50% of population growth to occur in the 12 urban towns and 50% of population growth to occur in the 114 rural villages and open countryside. This would result in a poor settlement structure and a lack of critical mass that would not support the sustainable delivery of services and facilities in line with a strong settlement hierarchy. Development would be likely to occur in settlements that would not be of a nature and scale appropriate to individual settlements. This alternative would be likely propagate decline of rural settlements and increase demand for one-off rural housing. This alternative would not be sustainable and would conflict with environmental protection and management the most.

**Selected Type 2 Alternative for the Plan: Alternative A** was chosen as the most appropriate response to the sustainable development of the County and the achievement of the provisions of the NPF and RSES. The function of the Key towns of Clonmel, Nenagh and Thurles is provided for in the development of the County and the Region, with a 30% growth allocation and ensuring delivery of critical mass in terms of population and services. In addition, ensuring the competitiveness of Tipperary in the region. The other urban towns will each grow strongly each by at least 10% and by 15% where they are over 4,000 persons. Typologies for the smaller settlements have been set out taking into account factors such as population, infrastructural availability and capacity assessment.

## 4.5 Type 3: Alternatives for Rural Tipperary

NPO 19 of the NPF sets out provisions for the designation of ‘Areas under Urban Influence’ based on the core consideration of commuter patterns to key employment centres. The objective being to limit applications for rural housing in these areas to those with a social and economic need to reside in the open countryside and to direct urban generated rural housing demand to smaller settlements and serviced sites.

### Rural Areas under ‘Strong Urban Influence’

- **Type 3 (i) Alternative A:** Designate Rural Areas under ‘Strong Urban Influence’ that require various criteria to be demonstrated in advance of planning permission being granted for a single dwelling for permanent occupation. Also designate primary amenity areas and strategic roads, whereby housing will be similarly assessed. This would support the provisions of the NPF, limit housing in areas demonstrated to be under pressure, and protect sensitive areas and infrastructure.

**Alternative A** provides for a robust and transparent policy approach to manage rural housing.

Restricting the development of single dwellings in rural areas that are under strong urban influence/pressure would positively impact upon the protection and management of the environment and sustainable development. The restrictions would help to both reduce levels of greenfield development in areas immediately surrounding existing centres and encourage brownfield development within existing centres.

Single dwellings in rural areas would be facilitated as appropriate, taking into account primary amenity areas and strategic roads, and urban development would be directed towards established settlements. This alternative would help to prevent low density urban sprawl and associated adverse effects upon sustainable mobility, climate emission reduction targets and various environmental components.



- **Type 3 (i) Alternative B:** Do not designate Rural Areas under Strong Urban Influence, with all areas, including rural areas near large employment centres, designated in the same way, with planning applications assessed on their own merits. Designate primary amenity areas and strategic roads that require various criteria to be demonstrated in advance of planning permission being granted for a single dwelling for permanent occupation. This would protect sensitive areas and infrastructure, however, all areas outside of these would be treated the same and there would be continued pressure for rural housing in close proximity to large towns.

**Alternative B** Provides a vague and unclear policy approach to rural housing and risks facilitating a significant increase in urban-generated one-off housing in the open countryside which will undermine the role of small towns and villages and have consequences for the environment, including primary amenity areas, and the function of strategic roads.

Not restricting the development of single dwellings in rural areas that are under strong urban influence/pressure would adversely impact upon the protection and management of the environment and sustainable development. The absence of restrictions would result in increased levels of greenfield development in areas immediately surrounding existing centres and less demand for brownfield development within existing centres.

Urban generated housing development would occur within rural areas outside of established settlements. This alternative would result in low density urban sprawl and associated adverse effects upon sustainable mobility, climate emission reduction targets and various environmental components.

**Selected Type 3 (i) Alternative for the Plan: Alternative A.** Under Alternative Type 3 (i) A, the Core Strategy, in line with the provisions of the NPF has designated 'Rural Areas under Strong Urban Influence' that require various criteria to be demonstrated in advance of planning permission being granted for a single dwelling for permanent occupation. Primary Amenity Areas and Strategic Roads also designated whereby housing will be similarly assessed. This will respect those areas most at risk of urban generated housing and where the impacts of uncontrolled housing would be most significant. This approach will also support social and economic need for rural housing in line with the provisions of the Core Strategy. (Refer to Chapters 2 and 3).

### **Type 3 (ii) Smaller settlements and Serviced Sites**

- **Type 3 (ii) Alternative A:** Provide focus to, support and deliver targeted policies/objectives for smaller settlements to act as a viable alternative to one-off housing in the open countryside through serviced sites. This would be an important alternative in terms of encouraging development in rural settlements and would provide an alternative for those seeking to live in the rural area.

Serviced sites would be served by infrastructure (including water services infrastructure) and more likely to protect the environment including the status of ground and surface waters, water used for drinking water, human health, biodiversity and flora and fauna and the landscape. Development would be required to be subject to siting, design, protection of residential amenities and normal development management criteria, subject to the satisfactory provision of infrastructure and services and in keeping with the character of the settlement. The Tipperary County Council Design Guidelines for Cluster Housing in Rural Villages 2019 would apply.

- **Type 3 (ii) Alternative B:** Smaller settlements are included, but no focus or incentive for these locations to act as a viable alternative to one-off housing in the open countryside. The current patterns would continue with little development in rural villages.

Alternative B would be less likely to provide a viable alternative to one-off housing in the open countryside. Development within the open countryside would be less likely to be served by infrastructure (including water services infrastructure) and less likely to protect the

environment including the status of ground and surface waters, water used for drinking water, human health, biodiversity and flora and fauna and the landscape. Alternative B would be the least sustainable of these two alternatives and would be most harmful to the environment.

**Selected Type 3 (ii) Alternative for the Plan: Alternative A.** This approach will also support social and economic need for rural housing in line with the provisions of the Core Strategy. The Council will actively support regeneration and land use in settlements to support the development of cluster housing and accommodate rural housing demand in settlements (Chapters 4 and 6).

## 4.6 Type 4: Alternatives for Settlement Plans

Land-use zoning has been applied in a way that primarily seeks to achieve sustainable and compact growth, considering the various requirements set out in the higher-level NPF and Southern RSES.

It should be noted that a detailed rationalisation of land zoning under the current County Development Plan area (with SEA, AA and SRFA) was carried out in 2017 and informed a Variation to the current County Development Plan. Therefore, all lands zoned in the County Development Plan are already based on a detailed SLA and environmental assessment.

The NPF further emphasises the requirement to provide a linkage between the zoning of land for development, and the availability of infrastructure required to facilitate development, implemented through a tiered approach to land use zoning<sup>16</sup>.

To address this requirement, the Settlement Hierarchy is underpinned by a Serviced Land Assessment (SLA) which applies a standardised and tiered approach to residential land zoning, identifying lands within the settlements that are fully serviced by available infrastructure (Tier 1) and lands which will be serviced within the lifetime of the Plan (Tier 2). The SLA provides an evidence base for the zoning of lands, by assessing the infrastructural capacity of land coupled with the principles set out in the NPF to promote compact sustainable growth.

**Alternative A** identifies and zones Tier 1 lands (within the settlements that are fully serviced by available infrastructure) and Tier 2 lands (which will be serviced within the lifetime of the Plan) for residential use across the Service Centres in accordance with the NPF Methodology, including based on the principle of sequential development. Landowning is applied to settlements >400 persons.

Alternative A would both ensure that the most suitable lands are designated for development and that sufficient lands are zoned to enable variety and choice in terms of land availability, with a greater extent of new development located on zoned lands that are less environmentally sensitive, better-serviced and better connected.

The supply of zoned land would meet the projected demand for new housing in line with the Core Strategy. This would be more likely to ensure alignment between new development and essential services provision with associated positive effects on the protection of environmental components.

Alternative A would help to ensure compact, sustainable development within and adjacent to the existing built-up footprint and would conflict with the protection and management of environmental components the least. A more compact form of development would help to:

- Avoid potential adverse environmental effects on unzoned lands that are more environmentally sensitive, less well-serviced and less well-connected
- Maximise benefits from infrastructural investment
- Contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health).
- Deliver population growth targets and housing choice in line with the Core Strategy

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<sup>16</sup> NPO 72a, 72b & 72c

**Alternative B** identifies Tier 1 and Tier 2 lands for residential use across the Service Centres in accordance with the NPF Methodology, however; Alternative B would only zone Tier 1 lands for new development.

This alternative would significantly reduce the availability of lands for new residential development and would not meet the targets of the Core Strategy in terms of sustainable settlement growth.

Alternative B would restrict choice, variety and land availability and would have the potential to push new development towards more environmentally sensitive lands that are less well-serviced and less well-connected, resulting in unnecessary potentially significant adverse effects on all environmental components.

The zoning of only Tier 1 lands could result in a mis-alignment between the supply of zoned land to meet the projected demand for new housing with associated consequences for compact development and essential services provision. A less compact form of development would:

- Increase potential adverse environmental effects on unzoned lands that are more environmentally sensitive, less well-serviced and less well-connected;
- Increase inefficiencies in infrastructural investment; and
- Hinder efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health).

**Selected Type 4 Alternative for the Plan: Alternative A.** Alternative A was chosen - identify all Tier 1 lands, and those Tier 2 lands most suitable for development over the lifetime of the Plan, based on the principle of sequential development and in line with the provisions of the Core Strategy. This alternative will both ensure that the most suitable lands are designated for development and that sufficient lands are zoned to enable variety and choice in terms of land availability.

## 4.7 Reasons for Selecting Chosen Alternatives

The selected alternatives for the Plan are indicated above.

These alternatives have been incorporated into the Plan having regard to both:

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

## Section 5 Summary of Effects arising from Plan

All parts of the Plan-preparation process were informed by the SEA, AA and SFRA processes - this includes the preparation of the Chief Executive's Draft Plan, Members' Amendments to that Plan in advance of public display, Proposed Material Alterations and Further Modifications. The mitigation integrated into the final, adopted Plan includes that summarised at Section 6 of this report. There were no Material Alterations to the Draft Plan, modified or otherwise, that were advised against by the SEA and adopted as part of the final Plan.

Table 5.1 summarises the overall environmental effects arising from Plan provisions. The effects encompass all in-combination/cumulative effects arising from implementation of the Plan. The potentially significant adverse environmental effects (if unmitigated) arising from implementation of the Plan are detailed as are residual effects, taking into account mitigation through both provisions integrated into the Plan – see summary at Section 6. Taking into account, *inter alia*, the detailed mitigation which has been integrated into the Plan, it was determined that significant residual adverse environmental effects will not occur.

Stage 2 Appropriate Assessment (AA) and Strategic Flood Risk Assessment (SFRA) have been undertaken alongside the preparation of the Draft Plan.

The requirement for AA is provided under the EU Habitats Directive (Directive 1992/43/EEC). The AA assesses the effects of the Plan on European Sites designated for certain habitats and species. The conclusion of the AA is that the Plan will not affect the integrity of the Natura 2000 network<sup>17</sup>.

SFRA is required by '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. Recommendations from the SFRA have been integrated into the Plan.

Various policies and objectives have been integrated into the Plan through the SEA, SFRA and AA processes. The preparation of the Plan, SEA, AA and SFRA has taken place concurrently and the findings of the AA and SFRA have informed both the Plan and the SEA.

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<sup>17</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/programme/project to proceed; and  
 (c) adequate compensatory measures in place.

**Table 5.1 Overall Evaluation – Effects arising from the Draft Plan**

Environmental Component	Environmental Effects, in combination with the wider planning framework Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP, the Southern RSES, 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 County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the 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 County's settlements) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the County and beyond.</li> <li>• Contribution towards the protection of human health by facilitating development of lands (including those within and adjacent to the County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the 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>

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, 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 County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the 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 County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the 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 County's settlements) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the 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>

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, 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 County's settlements) 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 noting the Plan will be supported by a Sustainable Transport Strategy and Local Transport Plans/Active travel plans at the LAP level.</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 existing settlements.</li> <li>• Contributes towards protection of cultural heritage within existing settlements 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 existing settlements.</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 the:

- Strategic work undertaken by the Council to ensure contribution towards environmental protection and sustainable development<sup>18</sup>;
- Considering alternatives for the Plan<sup>19</sup>;
- Integration of environmental considerations into zoning provisions of the Plan<sup>20</sup>; and
- Integration of individual SEA, AA and SFRA provisions into the text of the 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. Monitoring indicators, targets, sources and remedial action is provided at Table 6.1 overleaf.

As provided by Plan Policy 16 – 1, the Council shall:

*"Undertake a programme of monitoring and evaluation of the County Development Plan over its lifetime, as follows and to align these monitoring protocols with each other as part of an overall monitoring framework:*

- a) Prepare a 2 Year Progress Report of the County Development Plan (as required under Section 15(2) of The Act), having consideration to any regional monitoring programme in place.*
- b) Prepare a Report to the Regional Assembly setting out progress made in supporting objectives of the RSES (as required under Section 25A(1) of The Act).*
- c) SEA Monitoring as detailed in the Environmental Report."*

<sup>18</sup> Far in advance of both the submission of the pre-Draft Plan to the Elected Members for approval, the placing of the Draft Plan on public display and the adoption of the Plan, Tipperary County Council carried out research and data analysis, including the preparation of a Strategic Issues Paper and Background papers in order to inform the preparation of the Draft Plan.

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

Strategic work undertaken by the Council includes background work in relation to Plan Strategies and other provisions for a variety of sectors.

<sup>19</sup> Although strategic alternatives in relation to the content of the Plan were significantly limited for the Plan (see Section 4), as part of the Plan preparation/SEA process, 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>20</sup> Environmental considerations were integrated into the Plan's zoning through an interdisciplinary approach. Zoning has been applied in a way that primarily seeks to achieve sustainable and compact growth, taking into account the various requirements set out in the higher-level NPF and Southern RSES. The detailed Plan preparation process undertaken by the Planning Department combined with specialist seeks to facilitate zoning that will help to avoid inappropriate development being permitted in areas of elevated sensitivity, such as in areas at risk of flooding or ecological sensitivity. Various provisions have been integrated into the Plan that provide for flood risk management and ecological protection and management at project level. Also taken into account were environmental sensitivities relating to ecology, cultural heritage, landscape and water, as well as the overlay mapping of environmental sensitivities.



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

Environmental Component	Indicators	Targets	Sources	Remedial Action
<b>Biodiversity, Flora and Fauna</b>	<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>21</sup></li> <li>DHLGH National Birds Directive Monitoring Report for the under Article 12 (every 3 years)<sup>22</sup></li> <li>Consultations with the NPWS<sup>23</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 – see Chapter 11 “Environment and Natural Heritage”</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 – see Chapter 11 “Environment and Natural Heritage”</li> </ul>	<ul style="list-style-type: none"> <li>Internal monitoring of likely significant environmental effects of grants of permission<sup>24</sup></li> </ul>	<ul style="list-style-type: none"> <li>Review internal systems</li> </ul>
<b>Population and Human Health</b>	<ul style="list-style-type: none"> <li>Implementation of Plan measures relating to the promotion of economic growth as provided for by Chapter 8 “Enterprise and Rural Employment”</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 Chapter 8 “Enterprise and Rural Employment”</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 2016 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 2016 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</li> </ul>	<ul style="list-style-type: none"> <li>Require all local level land use plans to include</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>

<sup>21</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>22</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>23</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>24</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.

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Environmental Component	Indicators	Targets	Sources	Remedial Action
	specific green infrastructure mapping	specific green infrastructure mapping		
<b>Soil (and Land)</b>	<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 County's settlements</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>
<b>Water</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>25</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>	<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 2016 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 2016 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>25</sup> Including monitoring of water quality and nitrogen deposition due to bioenergy and agricultural projects where available.

SEA Environmental Report for the Tipperary County Development Plan 2022-2028

Environmental Component	Indicators	Targets	Sources	Remedial Action
<b>Air</b>	<ul style="list-style-type: none"> <li>Proportion of journeys made by private fossil fuel-based car compared to 2016 National Travel Survey levels of 74%</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 2016 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>	<ul style="list-style-type: none"> <li>Implementation of Plan measures relating to climate reduction targets</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 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</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 target of aggregate reduction in carbon dioxide (CO<sub>2</sub>) emissions of at least 80% (compared to 1990 levels) by 2050 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 2016 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 2016 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 2016 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 2016 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>

SEA Environmental Report for the Tipperary County Development Plan 2022-2028

Environmental Component	Indicators	Targets	Sources	Remedial Action
<b>Cultural Heritage</b>	<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>	<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>



Comhairle Contae Thiobraid Árann  
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## Contact

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