

# SEA ENVIRONMENTAL REPORT

## APPENDIX III – NON-TECHNICAL SUMMARY

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FOR THE

### KILLALOE-BALLINA TOWN ENHANCEMENT AND MOBILITY PLAN 2021

for: **Clare County Council**

Áras Contae an Chláir  
New Road, Ennis  
County Clare



COMHAIRLE CONTAE AN CHLÁIR  
CLARE COUNTY COUNCIL

and **Tipperary County Council**

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## Table of Contents

<b>Section 1</b>	<b>Introduction and Terms of Reference .....</b>	<b>1</b>
<b>Section 2</b>	<b>The Plan.....</b>	<b>2</b>
2.1	Summary .....	2
2.2	Overall Objective and Vision Statement.....	2
2.3	Themes and Goals .....	2
2.4	Relationship with other relevant Plans and Programmes .....	3
<b>Section 3</b>	<b>The Environmental Baseline.....</b>	<b>4</b>
3.1	Biodiversity and Flora and Fauna.....	4
3.2	Population and Human Health.....	5
3.3	Soil.....	5
3.4	Water .....	6
3.5	Air and Climatic Factors.....	7
3.6	Material Assets .....	8
3.7	Cultural Heritage.....	9
3.8	Landscape.....	9
3.9	Strategic Environmental Objectives.....	11
<b>Section 4</b>	<b>Alternatives .....</b>	<b>13</b>
<b>Section 5</b>	<b>Summary of Effects arising from the Plan .....</b>	<b>15</b>
<b>Section 6</b>	<b>Mitigation and Monitoring Measures .....</b>	<b>18</b>
6.1	Mitigation.....	18
6.2	Monitoring.....	19

## **Section 1 Introduction and Terms of Reference**

This is the Non-Technical Summary of the Strategic Environmental Assessment (SEA) Environmental Report for the Killaloe-Ballina Town Enhancement and Mobility Plan 2021 (hereafter referred to as 'the Plan'). The purpose of the Environmental Report is to provide a clear understanding of the likely environmental consequences of decisions regarding the adoption and implementation of the Plan. The Environmental Report has been prepared as part of a SEA process that is being undertaken by CAAS Ltd. on behalf of the Clare and Tipperary County Councils.

### **What is an 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 it needed?**

Taking legislative requirements relating to environmental assessment into account and in order to ensure that environmental considerations are integrated into the Plan, so that the Plan can usefully inform future decision-making, it has been determined that it would be prudent and responsible to undertake an SEA of the Plan, aligned with SEA requirements under: Directive 2001/42/EC of the European Parliament and of the Council of Ministers of 27 June 2001 on the Assessment of the Effects of Certain Plans and Programmes on the Environment; and European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (SI No. 435 of 2004), as amended.

### **How does it 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 is consistent with the statutory decision-making and consent-granting framework and includes advice on environmental protection and management. The SEA was scoped in consultation with designated environmental authorities.

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

The Environmental Report contains the following information:

- 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 can avoid/reduce the environmental effects of developing the towns of Killaloe-Ballina and can contribute towards compliance with important environmental protection legislation.

### **Difficulties Encountered during the SEA process**

No significant difficulties were encountered in undertaking the assessment.

There is a data gap relating to WFD surface water status data. There are a number of waterbodies within the study area with overall status currently not assigned to them and the term "unassigned status" applies in respect of these waterbodies. Measures have been integrated into the Plan that could 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?**

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

## **Section 2 The Plan**

### **2.1 Summary**

The Killaloe-Ballina Town Enhancement and Mobility Plan 2021 will be non-statutory and will not form public policy. The Plan will identify non-binding criteria that will only become binding if the Plan is incorporated into the relevant Clare and Tipperary County Development Plans.

The Plan outlines a coordinated approach to public realm enhancements within Killaloe (town in County Clare) and Ballina (town in County Tipperary), providing a clear vision for Killaloe and Ballina as linked settlements in the context of the changing transport and mobility profile of the towns as a result of the future Killaloe Bypass and Shannon bridge crossing.

### **2.2 Overall Objective and Vision Statement**

The main objective of the Plan is to establish a holistic, joined, and well-coordinated approach towards future development of Killaloe and Ballina. Accordingly, the Plan pictures future of the towns as the following:

“Killaloe and Ballina are towns of sustainable, inclusive environment and vibrant economy which enjoy a highly valued riverfront location and townscape that not only inspires identity and unity, but also encourages a diverse range of activities and recreation Safe, accessible, and visually attractive public realm improvements will improve the quality of life for residents, visitors, and workers The Shannon Crossing and Bypass will change the face of both towns by linking two national tourism brands of the Hidden Heartlands and the Wild Atlantic Way In this way, the riverfront will be further opened up as a key amenity that both enhances public access and fosters new investment”. Underpinning this vision is the desire to ultimately develop an evidence based long term strategy that will inform the future development of these twin towns.

The vision statement is framed to embark on a transformational journey to create a single cohesive settlement highlighting the assets of Killaloe Ballina and providing an inclusive environment which brings vibrancy to the area.

This can be achieved by improvements to connectivity, public realm, and amenities as well as the historic fabric of the area and the tourism experience.

### **2.3 Themes and Goals**

A set of goals within thematic areas that help to frame the values and vision of the area has been developed. These thematic areas are:

1. Mobility Management and Transport
2. Public Realm
3. Heritage
4. Tourism
5. Green and Blue Infrastructure

To determine how the Plan will meet these goals, a set of detailed objectives are identified, which are outlined in short to medium and long term timeframes.

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

The Plan exists separate to the hierarchy of statutory documents setting out public policy for, among other things, transport, land use development, infrastructure, public realm, tourism and environment protection and management. These other existing policies, plans etc. have been subject to their own environmental assessment processes, as relevant, and form the decision-making and consent-granting framework.

The National Planning Framework (NPF) sets out Ireland's planning policy direction until 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, the existing Clare County Development Plan 2017-2023 (as varied) and North Tipperary Development Plan 2010-2016 (as varied) and the emerging, new Clare and Tipperary draft County Development Plans, set out (or will set out) objectives relating development of the area, that have been (or are being) subject to environmental assessment.

Implementation of the Plan shall be consistent with and conform with the NPF, RSES and these lower-tier Development Plans, including provisions relating to sustainable development, environmental protection and environmental management that have been (or are being) integrated into these documents, including through SEA and AA processes.

In order to be realised, projects mentioned in the Plan (in a similar way to other projects from any other sector) will have to demonstrate compliance with, as relevant, with various legislation, policies, plans and programmes (including requirements for lower-tier Appropriate Assessment, Environmental Impact Assessment and other licencing requirements as appropriate) that form the statutory decision-making and consent-granting framework, of which the Plan currently is not part.

## Section 3 The Environmental Baseline

The environmental baseline together with the Strategic Environmental Objectives, which are identified in Section 3.9, 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.

The likely evolution of the environment in the absence of a Plan would resemble the environmental effects that are described for Alternative 1 “Do not prepare a Plan to inform future decision making” under Section 4.

### 3.1 Biodiversity and Flora and Fauna

Information on biodiversity and flora and fauna which 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.

Key ecological sensitivities across the Plan area include those relating to:

- Rare species and habitats protected in the **Lower River Shannon SAC**, within the southern/central parts of the Plan area, **Slieve Bernagh Bog SAC**, in vicinity of the north-east parts of Killaloe, and **Lough Derg (Shannon) SPA**, adjacent to the northern parts of the Plan area;
- Aquatic and riverine ecology associated with lakes, rivers, their tributaries and riparian buffer zones, including those associated with the River Shannon and Lough Derg within and adjacent to the Plan area; and
- Mature trees, priority hedgerows and woodland areas of local biodiversity value.

European sites occur along the waterways within and adjacent to the Plan area. These European Sites comprise:

- Special Areas of Conservation<sup>1</sup> (SACs); and
- Special Protection Areas<sup>2</sup> (SPAs).

SACs designated within and adjacent to the Plan area, include the Lower River Shannon SAC, within the southern/central parts of the Plan area, the Slieve Bernagh Bog SAC, in vicinity of the north-eastern parts of Killaloe, and Lough Derg (Shannon) SPA, adjacent to the northern parts of the Plan area.

#### Existing Problems

Ireland’s Article 17 report on the Status of EU Protected Habitats and Species in Ireland (DCHG, 2019) identifies many Irish habitats 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;
- Energy production processes and related infrastructure development;
- Development and operation of transport systems; and
- Development, construction and use of residential, commercial, industrial and recreational infrastructure and areas.

Ireland’s Article 12 Birds Directive Reports and the 6th National Report under the Convention of Biological Diversity identify similar issues.

Advice relating to the protection of biodiversity and flora and fauna and associated ecosystem services has been integrated into the Plan.

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

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

## 3.2 Population and Human Health

Using the Census data, the population of the Plan area in 2016 was identified as being of: 1,484 persons in the settlement of Killaloe; and 2,632 persons in the settlement of Ballina. Killaloe and Ballina are identified by the Southern Regional Spatial and Economic Strategy 2019-2031 as offering employment opportunities and services in strategically located areas and providing social opportunities, employment and infrastructure to a network of communities.

Population has the potential to interact with various environmental components. Potential interactions include:

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

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

### Existing Problems

The 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 areas within the Plan area with radon levels above the reference level is within the normal range experienced in other locations across the country.

## 3.3 Soil

Typical brown earths<sup>3</sup> make up most of the soils across and surrounding the Plan. Other soils identified across the Plan area include:

- **Surface water gleys**<sup>4</sup> (adjacent to the south in Killaloe and Ballina);
- **Alluvial soils**<sup>5</sup> (along the main waterways); and
- **Urban and man-made soils** (in the central parts of the Plan area).

Geological Survey of Ireland coordinates the Irish Geological Heritage Programme, which seeks to identify and select sites of geological interest within each county across the country. County Tipperary and County Clare Geological Sites Audits were completed in 2019 and 2005, respectively.<sup>6</sup> There are no County Geological Sites within the Plan area; the closest geological site - Kilmastulla Meltwater Channels County Geological Site (Site Code: TY040) - is located approx. 2 km south of Ballina. This site comprises a series of deep channels that were formed by meltwater erosion.

The GSI have identified the Plan area as having low levels of landslide susceptibility with some areas of moderately low and moderately high.

In the absence of mitigation, contaminated materials have the potential to adversely impact upon human health, water quality and habitats and species. In urban areas that have had a range of historical land use activities, soils have the potential to have been contaminated in the past. Such contamination has the potential to affect water quality, biodiversity and flora and fauna and human health. Requirements have been identified in the relevant Development Plans that address potential contamination issues.

<sup>3</sup> Brown earths are well drained mineral soils, associated with high levels of natural fertility.

<sup>4</sup> Surface water gleys are wetland soils with slowly permeable horizons resulting in seasonal waterlogging.

<sup>5</sup> These are associated with alluvial (clay, silt or sand) river deposits.

<sup>6</sup> Details are available from Geological Survey Ireland ([www.gis.ie](http://www.gis.ie)).

## 3.4 Water

### Surface and Ground Water Status

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*.

The WFD status of the surface waters of sections<sup>7</sup> of rivers and lakes in the Plan area (see Figure 3.1) are classified as *good* and *moderate*, including: Lough Derg (on the River Shannon) with *good status* within the south of the Plan area/it is also classified as 'HMWB' (heavily-modified waterbody) and *moderate status* within the north of the Plan area.

The WFD groundwater status (2013-2018) of all groundwater underlying the Plan area is identified as being of *good status*, meeting the objectives of the WFD.

Groundwater quality is an important resource for potable water and a sustaining resource for ecology. Geological conditions within and surrounding the Plan area mean that much of it is vulnerable to contamination.

### Aquifer Vulnerability

Aquifer vulnerability refers to the ease with which pollutants of various kinds can enter into groundwater. The vulnerability of aquifers underlying the Plan area and generally classified as being of:

- *High, moderate and low vulnerability*, in the west and south of the Plan area; and
- *Extreme vulnerability and extreme (rock at or near surface or karst)* mainly in the north-east of the Plan area.

### Flooding

Certain areas across the Plan area are at risk from pluvial<sup>8</sup> and fluvial<sup>9</sup> flooding. Historical flooding is documented at a number of locations, including along the Lough Derg on the River Shannon within the centre of the Plan area. Catchment Flood Risk Assessment (CFRAM) flood risk mapping for the Plan area indicates areas likely to be at most risk of flooding.

### Existing Problems

Subject to exemptions provided for by Article 4 of the WFD, based on available water data, certain surface water bodies in the wider area will need improvement in order to comply with the objectives of the WFD.

<sup>7</sup> As per EPA classification system ([gis.epa.ie/EPAMaps](http://gis.epa.ie/EPAMaps)).

<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.

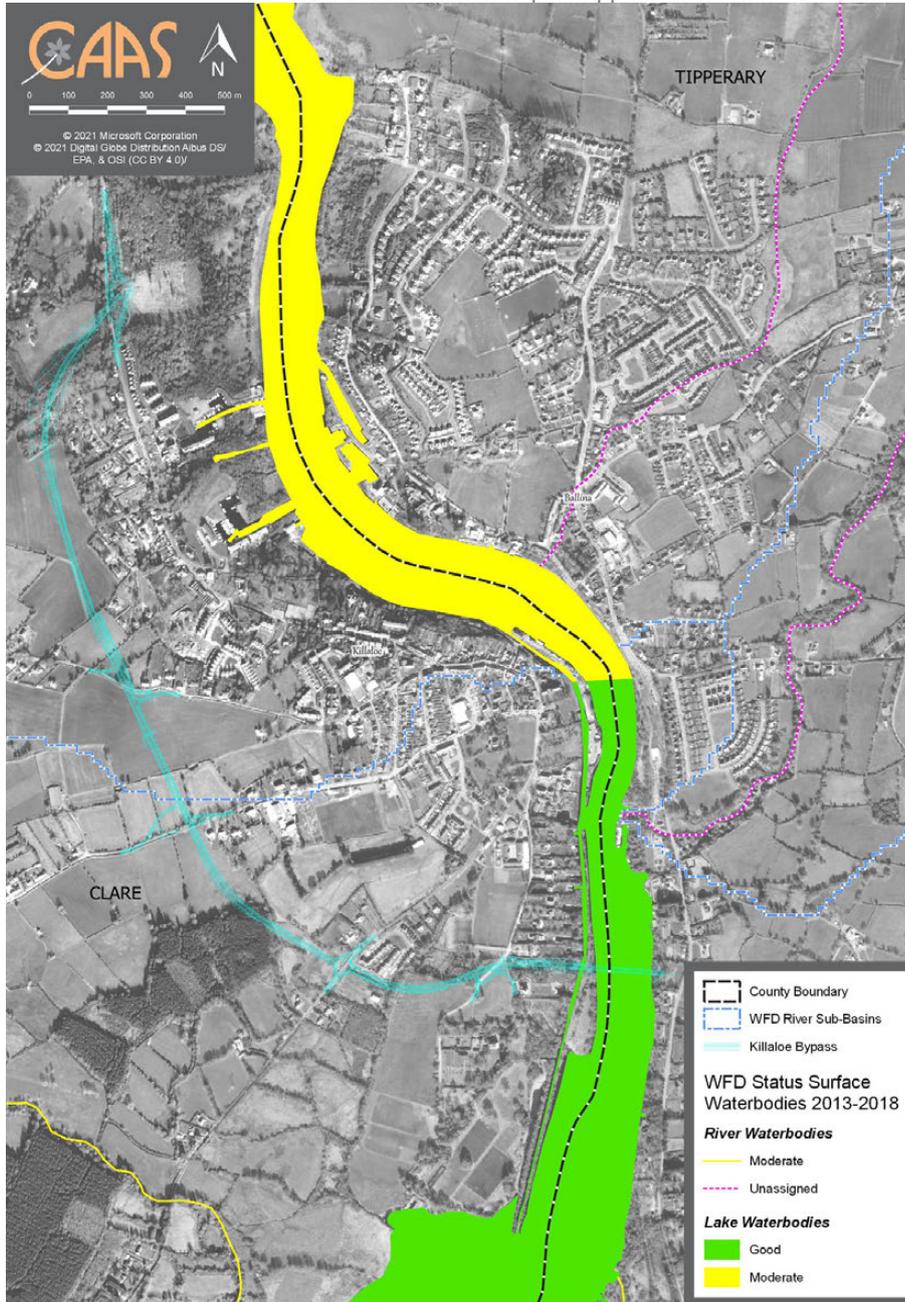


Figure 3.1 Surface Water Status (2013-2018)

### 3.5 Air and Climatic Factors

Various provisions relating to climatic action have been integrated into the Plan. Such measures include those relating to:

- Sustainable mobility and access;
- A highly accessible experience for pedestrians and cyclists;
- Enhancing connectivity of the towns by transition of the bridge to pedestrian and cycle link; and
- Various local mobility and public realm improvements.

Interactions with climatic factors are also present with other environmental components including water/flooding (see Section 3.4).

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 2019 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.

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>10</sup> air quality at all monitoring stations in Counties Clare and Tipperary is identified by the EPA as being *good*.

## 3.6 Material Assets

### Waste Water

The Plan area is served by the Ballina Wastewater Treatment Plant (WWTP) (serving both settlements - Ballina and Killaloe). Irish Water has provided information on wastewater treatment capacity, constraints and projects planned for Ballina WWTP, to improve the existing network. This information indicates where there may be wastewater treatment capacity available to accommodate growth ("headroom") in terms of population equivalent<sup>11</sup> (PE) in areas serviced by the public wastewater treatment plant. Currently, there is no spare treatment capacity available in the Ballina WWTP<sup>12</sup>.

### Water Supply

Drinking water supply in the Plan area is provided by and private/public water supply schemes. Under Section 58 of the Environmental Protection Agency Act 1992, the EPA is required to collect and verify monitoring results for all water supplies in Ireland covered by the European Communities (Drinking Water) Regulations, 2000. The EPA publishes their results in annual reports that are supported by Remedial Action Lists (RALs). The RAL identifies water supplies that are not in compliance with the Regulations mentioned above. The most recent EPA Remedial Action List (Q1 of 2021) does not identify any sources within the Plan area.

### Public Assets and Infrastructure

Killaloe is identified as "Small Town", of fundamental importance offering services and facilities including employment and tourism, to residents and to surrounding rural area. Ballina is identified as a "Service Town", robust settlement that have a capacity to accommodate new residential growth, employment and enterprise and other appropriate uses.

The Plan area is served by regional and strategic roads, including a crossing of the River Shannon.

Two bus routes operate within the Plan area: 'Bus 323' (Drummin Village - Newport Tipperary), stopping at Ballina Church, operates seven services per day Monday to Friday and three services per day on Sunday; and 'Bus 345' (Limerick – Scariff), stopping at St. Anne's College, operates two services per day Sunday to Thursday.

A new Shannon river crossing, Killaloe by-pass and upgrade of the R494 was approved by An Bord Pleanála in 2012 to alleviate traffic in the Plan area.

### Waste Management

Waste management within the Southern Region is guided by the Southern Region Waste Management Plan 2015-2021. The Southern Region comprises: Limerick City and County Council; Tipperary County Council; Wexford County Council; Carlow County Council; Kilkenny County Council; Waterford City and County Council; Cork City Council; Cork County Council; Kerry County Council; and Clare County Council. The Strategy provides a framework for the prevention and management of waste in a sustainable manner.

<sup>10</sup> 15/06/2021 (<http://www.epa.ie/air/quality/>)

<sup>11</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.

<sup>12</sup> Wastewater Treatment Capacity for Tipperary County Council (Irish Water, 2020)

## 3.7 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.

The Plan area comprises a number of archaeological monuments, including entries to the Record of Monuments and Places (RMP) - see Figure 3.2.

The Zone of Notification in Killaloe and Ballina encompasses a number of historically important features in the river and aligns with the County boundary line in the centre of the River Shannon and the zone extends south of St. Flannan's Cathedral.

There are 18 National Monuments and four scheduled monuments located within the Plan area, including two National Monuments in State Care (shown on Figure 3.2): St. Flannan's Church, (a Romanesque cathedral, built in the 1180s); and St. Molua's Church (originally constructed in the 9<sup>th</sup> and 10<sup>th</sup> century on Friars Island and later dismantled and reconstructed at the present site).

Clusters of archaeological heritage are found within the towns' core, with higher concentrations of monuments occurring in Killaloe. Archaeological sites of the particular importance include: Brian Borus Fort (located 2 km north of Killaloe); St Lua's Oratory; and Killaloe Bridge (18<sup>th</sup> century bridge joining Killaloe and Ballina).

### 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 concentrated within the towns' core, as shown on Figure 3.3. Notable structures include: Killaloe Bridge; Church of Our Lady and Saint Lua; Ferns Hollow; Killaloe Courthouse; and Parochial House. There are 22 Protected Structures within the Plan area. These include examples of churches, shops and houses.

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. Killaloe ACA is designated within the Plan area (shown on Figure 3.3) and covers the old historic centre of the town, including Killaloe Bridge, extending south from the canal walls to Royal Parade, John St., Main St., The Green, Chapel St., Thomas St., New St., parts of Courthouse Road and Carrig's Lane. Killaloe ACA is designated in order to maintain the integrity and character of this historic town.

## 3.8 Landscape

The towns of Killaloe and Ballina are located on the southern end of Lough Derg, along the border shared between Counties Clare and Tipperary. The River Shannon runs through the centre of the two towns, which are joined by the historic bridge. The area is rich in heritage and public amenities associated with Lough Derg and the River Shannon.

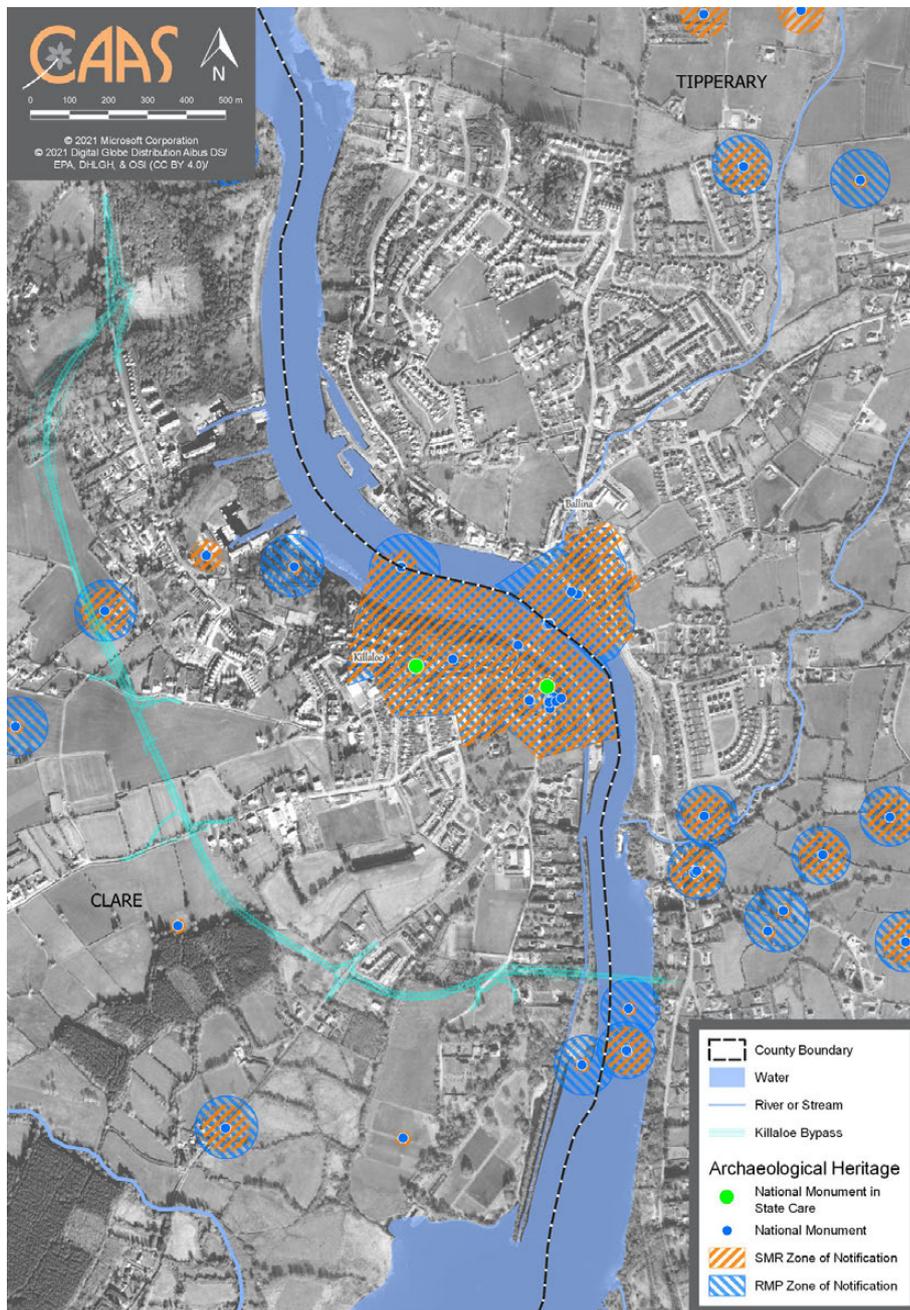
The Landscape Character Assessment for County Tipperary identifies 23 Landscape Character Areas<sup>13</sup>. The Plan area is identified as being situated within the 'Arra Mountains – Lower Lough Derg Landscape Character Areas'. This area is described as a lakeland enclosure that is a mixture of upland/lowland and lake areas. The area is identified as being of transitional vulnerability.

<sup>13</sup> Landscape Character Assessment for Tipperary (2016)  
CAAS for Clare and Tipperary County Councils

The Landscape Character Assessment for County Clare identifies 21 Landscape Character Areas<sup>14</sup>. The Plan area is identified as being situated in the 'Lough Derg Basin Landscape Character Area'. This area is described as highly scenic, with recognised ecological value, including lough shores enclosed by semi-natural deciduous woodland.

The landscape designations provided for by the Clare and Tipperary County Development Plans, are considered when assessing planning applications. These designations include Scenic Views and Routes and Primary and Secondary Amenity Areas.

Views and Vistas identified by the Plan within the Plan area include those along the River Shannon (including the hills to the north as seen when approaching the bridge on the Ballina side). There are also a number of landmarks within the Plan area, with linear views from the river bank such as Our Lady and St. Lua and St. Flannan's Cathedral. In addition, there are contrasting and emerging views along the Main Street in Killaloe when walking towards the Bridge and from the short link from Main Street in Ballina to the river-bank, these views contrast with the emerging view of the St. Flannan's Cathedral.



**Figure 3.2 Archaeological Heritage**

<sup>14</sup> Clare County Development Plan 2017 – 2023 (as varied)  
CAAS for Clare and Tipperary County Councils

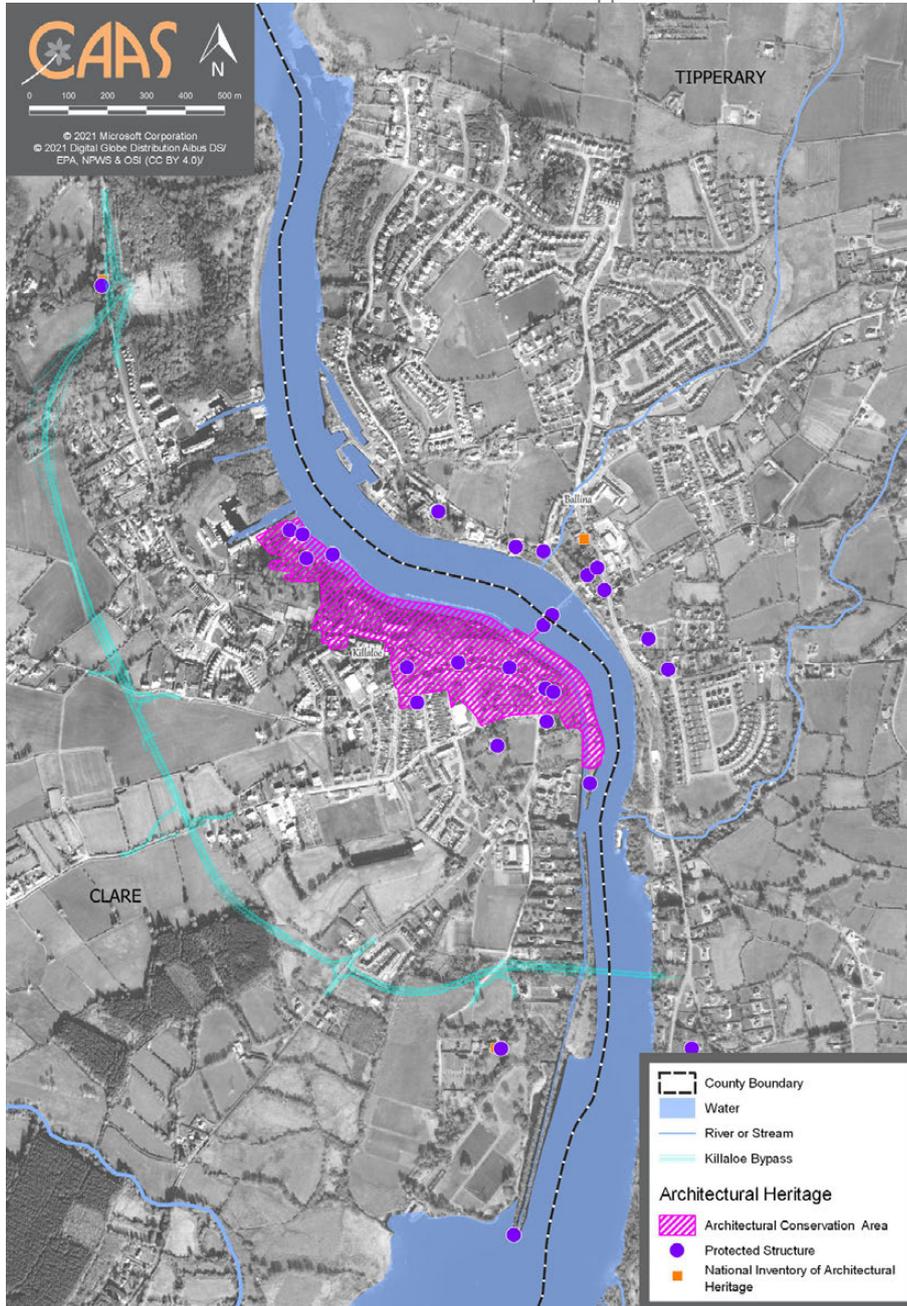


Figure 3.3 Architectural Heritage

### 3.9 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. 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. The measures have been identified having regard to the SEAs for the adopted Southern RSES and the SEAs for the existing and emerging, new Development Plans. Having a degree of consistency with these SEAs can help to avoid duplication and to improve the efficiency and effectiveness of future monitoring.

**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 Strategy and its targets</li> <li>To protect, maintain and conserve 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 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 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 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</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 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 provisions for the identification, assessment, protection, management and planning of landscapes having regard to the European Landscape Convention

## Section 4 Alternatives

As per the requirements of the SEA Directive, reasonable alternatives are considered, taking into account the objectives and the geographical scope of the Plan.

Projects under all alternatives would continue to be required to comply, as relevant, with the various provisions of documents that form the statutory decision-making and consent-granting framework.

### Alternative 1: Do not prepare a Plan to inform future decision making

Under this Alternative, guidance on the balanced development of Killaloe and Ballina as linked settlements in the context of the changing transport and mobility profile of the towns as a result of the future Killaloe Bypass and Shannon bridge crossing would be limited to the City/County-wide provisions of the Development Plan in force at the time. Applications for development would be made on an ad-hoc basis and without the benefit of a sustainable mobility led, planned and co-ordinated approach.

Planning Assessment:

- There would be less clarity for the public and developers.
- Planning applications would be less likely to be granted permission without delays or challenges due to limited coordinated guidance and advice.
- Individual developments would be less likely to be coherent and complementary across the two towns.
- There is greater potential for the aspirations of the County Development Plans, NPF and RSES not to be fulfilled.

Environmental Assessment:

- Objectives for the sustainable development (encompassing environmental protection and management) would be more likely to take a longer amount of time to achieve.
- Linkages, mobility and environmental infrastructure would not be set out at a strategic level for the towns and would be developed in a piecemeal fashion.
- Increased potential for delays in accommodating demand for development within the town could drive demand towards less well-connected, less well-serviced and more environmentally sensitive areas elsewhere in the wider region.
- Not having the Plan in place prevents the consideration of mobility issues and environmental impacts at the earliest and most strategic stage and may reduce the degree to which mitigating provisions would be contributed towards.

### Alternative 2A and 2B: Prepare a Plan to inform future decision making

Under this Alternative, the Plan would be available in addition to the City/County-wide provisions of the Development Plan, providing more detailed and specific guidance on the balanced development of Killaloe and Ballina as linked settlements in the context of the changing transport and mobility profile of the towns as a result of the future Killaloe Bypass and Shannon bridge crossing. Applications for new development would be able to consider a clear vision with advice on issues including Mobility Management and Transport; Public Realm; Heritage; Tourism; Green and Blue Infrastructure.

Planning Assessment:

- There would be more clarity for the public and developers.
- Planning applications would be more likely to be granted permission without delays or challenges.

- Individual developments would be more likely to be coherent and complementary across the two towns.
- There is greater potential for the aspirations and objectives of the County Development Plans, NPF and RSES not to be fulfilled.

Environmental Assessment:

- Objectives for the sustainable development (encompassing environmental protection and management) would be more likely to take a shorter amount of time to achieve.
- Linkages, mobility and environmental infrastructure would be set out strategically for the towns and could be developed wholly and in good time, taking into account the wider context, including development of the Killaloe Bypass, Shannon River Crossing and R494 Improvement.
- Accommodating demand for development in the urban core and on brownfield land would reduce future increases in demand at less well-connected, less well-serviced and more environmentally sensitive areas elsewhere in the wider region.

Under Alternative 2 there are two separate alternatives as identified below.

**Alternative 2A: Prepare a Plan to inform future decision making and do not undertake SEA and AA**

This alternative involves not undertaking SEA and AA, on the basis that the Plan: will be non-statutory; will not form public policy; and will identify non-binding criteria that will only become binding if the Plan is incorporated into the relevant Clare and Tipperary County Development Plans.

Not undertaking SEA and AA would result in a Plan into which less environmental considerations are integrated. Such a Plan would not contribute to environmental protection and management to the same degree as a Plan under Alternative 2B. Not undertaking SEA and AA could result in projects being included in the Plan that would be challenging to achieve in compliance with environmental requirements.

**Alternative 2B: Prepare a Plan to inform future decision making and undertake SEA and AA**

This alternative involves undertaking SEA and AA on the Plan, even though the Plan: will be non-statutory; will not form public policy; and will identify non-binding criteria that will only become binding if the Plan is incorporated into the relevant Clare and Tipperary County Development Plans.

Undertaking SEA and AA would result in a Plan into which more environmental considerations are integrated. Such a Plan would contribute to environmental protection and management to a greater degree than a Plan under Alternative 2A. Undertaking SEA and AA would help to ensure that projects being included in the Plan can be realistically achieved, subject to further assessment, in compliance with environmental requirements.

**Selected Alternative: 2B Prepare a Plan to inform future decision making and undertake SEA and AA**

## Section 5 Summary of Effects arising from the Plan

The Councils have integrated various environmental considerations into the Plan. In order to be realised, projects mentioned in the Plan (in a similar way to other projects from any other sector) will have to demonstrate compliance with, as relevant, with various legislation, policies, plans and programmes (including requirements for lower-tier Appropriate Assessment, Environmental Impact Assessment and other licencing requirements as appropriate) that form the statutory decision-making and consent-granting framework, of which the Plan currently is not part. This framework includes a multitude of provisions for sustainable development, environmental management and environmental protection that have been (or are being) subject to environmental assessment, including provisions from: the NPF; the RSES for the Southern Region; the Clare County Development Plan 2017-2023 (as varied); the North Tipperary Development Plan 2010-2016 (as varied); and the emerging, new Clare and Tipperary draft County Development Plans.

Table 5.1 provides a detailed overall assessment of the environmental effects of developing Killaloe-Ballina, including effects of the combined planning framework. The effects encompass all in-combination/cumulative effects arising. The potentially significant adverse environmental effects (if unmitigated) are detailed as are residual effects, taking into account mitigation, including that which has been integrated into the Plan.

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

Following public display of the Draft Plan, a number of updates were made to the Plan document in advance of endorsement. The updates further contribute towards provisions related to sectors and topics that are already provided for within the Draft Plan. Taking into account the measures that have already been integrated into the Draft Plan that provide for and contribute towards environmental protection, environmental management and sustainable development, any potential effects arising from these updates would either: be present already (beneficial) and would be further contributed towards, but not to a significant extent; and/or would be mitigated so as not to be significant (adverse). Taking this into account the updates would not be likely to result in significant environmental effects.

Table 5.1 Overall Findings – Summary of Assessment

Environmental Component	Environmental effects of developing Killaloe-Ballina, including effects of the combined 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 and the existing and emerging Development 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 helping to facilitate compact development within the existing built-up footprint of the two towns.</li> <li>Contribution towards the maintenance of existing green and blue 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> </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>
<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 the existing population and planned growth by helping to facilitate compact development within the existing built-up footprint of the two towns.</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 and helping to facilitate compact development within the existing built-up footprint of the two towns.</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 helping to facilitate compact development within the existing built-up footprint of the two towns.</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 (if such unknown lands exist).</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> </ul>	<b>S</b>
<b>Water</b>	<ul style="list-style-type: none"> <li>Contribution towards the protection of water by helping to facilitate compact development within the existing built-up footprint of the two towns.</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 surface and ground water bodies and entries to the WFD Register of Protected Areas (ecological and human value), arising from changes in quality, flow and/or morphology – and associated interactions with ecological and human receptors.</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 or changes in flow as a result of development to comply with the River Basin Management Plan and various provisions of integrated into the Plan from the relevant Development Plans.</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 relevant Development Plans.</li> </ul>	<b>W</b>

SEA Environmental Report Appendix III: Non-Technical Summary

Environmental Component	Environmental effects of developing Killaloe-Ballina, including effects of the combined 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 and the existing and emerging Development Plans			SEO Codes
	Significant Positive Effect, likely to occur	Potentially Significant Adverse Environmental Effects, if unmitigated	Likely Residual Adverse Non-Significant Effects	
<b>Material Assets</b>	<ul style="list-style-type: none"> <li>Contribution towards appropriate provision of infrastructure and services to the existing population and planned growth by helping to facilitate compact development within the existing built-up footprint of the two towns.</li> <li>Contribution towards compliance with national and regional water services and waste management policies.</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> </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.</li> <li>Any impacts upon public assets and infrastructure to comply with statutory planning/consent-granting framework.</li> </ul>	MA
<b>Air and Climatic Factors</b>	<ul style="list-style-type: none"> <li>Contribution towards climate mitigation and adaptation by helping to facilitate compact development within the existing built-up footprint of the two towns.</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 mobility and access;</li> <li>A highly accessible experience for pedestrians and cyclists;</li> <li>Enhancing connectivity of the towns by transition of the bridge to pedestrian and cycle link; and</li> <li>Various local mobility and public realm improvements.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Potential conflict between development 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 and the wider planning framework, including those relating to sustainable compact growth and sustainable mobility.</li> <li>Interactions between noise emissions and sensitive receptors. Various provisions have been integrated into the Development Plans to ensure that noise levels at sensitive receptors will be minimised.</li> </ul>	AC
<b>Cultural Heritage</b>	<ul style="list-style-type: none"> <li>Contributes towards protection of cultural heritage elsewhere in the City and County by helping to facilitate compact development within the existing built-up footprint of the two towns.</li> <li>Contributes towards protection of cultural heritage within the two towns 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>	CH
<b>Landscape</b>	<ul style="list-style-type: none"> <li>Contributes towards protection of wider landscape and landscape designations by helping to facilitate compact development within the existing built-up footprint of the two towns.</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 and views 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 and wider planning framework's landscape protection/visual assessment measures.</li> </ul>	L

## Section 6 Mitigation and Monitoring Measures

### 6.1 Mitigation

Mitigation measures are measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse impacts on the environment of implementing the Plan.

Various environmental sensitivities and issues have been communicated to the Councils through the SEA and Appropriate Assessment (AA) processes. By integrating SEA and AA related recommendations into the Plan, the Councils are helping to ensure that:

- Environmental effects of developing Killaloe-Ballina, including effects of the combined planning framework, are avoided, reduced or offset; and
- The beneficial environmental effects of developing Killaloe-Ballina, including effects of the combined planning framework, are maximised.

Mitigation was achieved through the following:

- The consideration of strategic alternatives<sup>15</sup>;
- Establishing the status of the Plan and its interrelationship with the Statutory Decision-Making and Consent-Granting Framework<sup>16</sup>;
- Consideration of Requirements for Sustainable Development, Environmental Protection and Management<sup>17</sup>; and
- Mitigation Measures from the Plan, including advice provided at Appendix I to the Plan.

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<sup>15</sup> As part of the Plan preparation/SEA process, the Councils 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 Plan that was prepared and placed on public display.

<sup>16</sup>The SEA team worked with the Plan-preparation team in order to help establish the status of the Plan and its interrelationship with the Statutory Decision-Making and Consent-Granting Framework.

The Killaloe-Ballina Town Enhancement and Mobility Plan 2021 will be non-statutory and will not form public policy. The Plan will identify non-binding criteria that will only become binding if the Plan is incorporated into the relevant Clare and Tipperary County Development Plans.

The Plan exists separate to the hierarchy of statutory documents setting out public policy for, among other things, transport, land use development, infrastructure, public realm, tourism and environment protection and management. These other existing policies, plans etc. have been subject to their own environmental assessment processes, as relevant, and form the decision-making and consent-granting framework.

The National Planning Framework (NPF) sets out Ireland's planning policy direction until 2040. The NPF is to be implemented through Regional Spatial and Economic Strategies (RSEs) and lower tier Development Plans and Local Area Plans. The RSEs for the Southern Region, the existing Clare County Development Plan 2017-2023 (as varied) and North Tipperary Development Plan 2010-2016 (as varied) and the emerging, new Clare and Tipperary draft County Development Plans, set out (or will set out) objectives relating development of the area, that have been (or are being) subject to environmental assessment.

Implementation of the Plan shall be consistent with and conform with the NPF, RSEs and these lower-tier Development Plans, including provisions relating to sustainable development, environmental protection and environmental management that have been (or are being) integrated into these documents, including through SEA and AA processes.

<sup>17</sup>In order to be realised, projects mentioned in the Plan (in a similar way to other projects from any other sector) will have to demonstrate compliance with, as relevant, with various legislation, policies, plans and programmes (including requirements for lower-tier Appropriate Assessment, Environmental Impact Assessment and other licencing requirements as appropriate) that form the statutory decision-making and consent-granting framework, of which the Plan currently is not part. This framework includes a multitude of provisions for sustainable development, environmental management and environmental protection that have been (or are being) subject to environmental assessment, including provisions from: the NPF; the RSEs for the Southern Region; the Clare County Development Plan 2017-2023 (as varied); the North Tipperary Development Plan 2010-2016 (as varied); and the emerging, new Clare and Tipperary draft County Development Plans.

## 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.

Where the Plan, or parts of the Plan, become part of the Development Plans, monitoring will be undertaken as part of the programme set out by the Development Plan's SEA.

In order to avoid duplication and to improve the efficiency and effectiveness of future monitoring, monitoring reports prepared for implementation of the Southern RSES and, when adopted, the emerging, new draft Development Plans will be significant informants of future monitoring reports for the Plan, if it does not become part of these Plans.

Table 6.1 overleaf shows the current indicators and targets that have been selected for monitoring.

**Table 6.1 Selected Indicators and Targets**

Environmental Component	Indicators	Targets
<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>Inclusion of ecosystem services and green/blue infrastructure provisions in 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 the Clare County Heritage Plan 2017-2023, and any superseding versions of same</li> </ul>
	<ul style="list-style-type: none"> <li>Consideration of ecosystem services and green infrastructure in proposals for development</li> </ul>	<ul style="list-style-type: none"> <li>Inclusion of ecosystem services and green infrastructure ecosystem services and green infrastructure in proposals for development and 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 the Clare County Heritage Plan 2017-2023, and any superseding versions of same</li> </ul>
	<ul style="list-style-type: none"> <li>Screening for EIAs and AAs, and subsequent assessment as relevant, for proposals for development</li> </ul>	<ul style="list-style-type: none"> <li>Screen for and undertake, as relevant, EIA and AA for new proposals for development</li> </ul>
	<ul style="list-style-type: none"> <li>Status of water quality</li> <li>Compliance of planning permissions with measures providing for the protection of biodiversity and flora and fauna – see Development Plan measures at Section 9 of this SEA Environmental Report</li> </ul>	<ul style="list-style-type: none"> <li>Included under Water below</li> <li>Compliance of planning permissions with measures providing for the protection of biodiversity and flora and fauna – see Development Plan measures at Section 9 of this SEA Environmental Report</li> </ul>
<b>Population and Human Health</b>	<ul style="list-style-type: none"> <li>Implementation of measures relating to the promotion of economic growth as provided for the in-force Development Plans</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 the in-force Development Plans</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 in-force Development Plans within Killaloe-Ballina</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 in-force Development Plans within Killaloe-Ballina</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>Inclusion of specific green infrastructure mapping in development proposals</li> </ul>	<ul style="list-style-type: none"> <li>Inclusion of specific green infrastructure mapping in development proposals</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%</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 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>	<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>	<ul style="list-style-type: none"> <li>Programmed delivery of Irish Water infrastructure 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</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>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>	<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>Contribution towards maintenance of and 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>Implementation of Development Plan measures relating to climate mitigation</li> </ul>	<ul style="list-style-type: none"> <li>For review of progress on implementing objectives to demonstrate successful implementation of measures relating to climate reduction targets</li> </ul>
<b>Climatic Factors</b>	<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>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 Development 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 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>	<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</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</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</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</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</li> </ul>	<ul style="list-style-type: none"> <li>No developments permitted which result in avoidable adverse visual impacts on the landscape, especially with regard to landscape designations, resulting from development</li> </ul>