

# SEA ENVIRONMENTAL REPORT

## APPENDIX III – NON-TECHNICAL SUMMARY

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FOR THE

### LOUTH COUNTY DEVELOPMENT PLAN 2021-2027

**for: Louth County Council**

County Hall  
Millennium Centre  
Dundalk  
County Louth



Comhairle Contae Lú  
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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>4</b>
2.1	Introduction .....	4
2.2	Content of the Plan.....	4
2.3	Plan Strategic Vision and Objectives.....	4
2.4	Strategic work undertaken by the Council to ensure contribution towards environmental protection and sustainable development .....	5
2.5	Relationship with other relevant Plans and Programmes.....	6
<b>Section 3</b>	<b>The Environmental Baseline .....</b>	<b>7</b>
3.1	Introduction .....	7
3.2	Likely Evolution of the Environment in the Absence of the Plan.....	7
3.3	Biodiversity and Flora and Fauna .....	8
3.4	Population and Human Health .....	9
3.5	Soil .....	9
3.6	Water .....	11
3.7	Air and Climatic Factors.....	12
3.8	Material Assets .....	12
3.9	Cultural Heritage .....	14
3.10	Landscape.....	14
3.11	Strategic Environmental Objectives .....	15
<b>Section 4</b>	<b>Alternatives .....</b>	<b>17</b>
4.1	Introduction .....	17
4.2	Limitations in Available Alternatives .....	17
4.3	Alternatives for Settlement Hierarchy.....	17
4.4	Alternatives for Population Allocations.....	18
4.5	Alternatives for Rural Areas .....	19
4.6	Alternatives for Densities.....	20
4.7	Alternatives for Land Use Zoning .....	21
<b>Section 5</b>	<b>Summary of Effects arising from Plan .....</b>	<b>23</b>
<b>Section 6</b>	<b>Mitigation and Monitoring Measures .....</b>	<b>28</b>
6.1	Mitigation.....	28
6.2	Monitoring.....	28

# Section 1 Introduction and Terms of Reference

This is the Non-Technical Summary of the Environmental Report for the Louth County Development Plan 2021-2027 (**hereafter referred to as 'the Plan'**). The purpose of the Environmental Report is to provide a clear understanding of the likely environmental consequences of decisions regarding the adoption and implementation of the Plan. The Environmental Report has been prepared as part of a Strategic Environmental Assessment (SEA) process for the Plan.

## What is SEA?

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

## Why is SEA needed? The Benefits

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.

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 Louth is shown on Figure 1.1.

The most sensitive areas in the County include:

- Upland areas, including Cooley Mountains - on account of ecological and land cover sensitivities, Areas of Outstanding Natural Beauty and Areas of High Scenic Quality designations and extreme groundwater vulnerability;
- Coastal and marine areas within the County - on account of ecological designations, sensitive land cover sensitivities, shellfish production areas and/or nutrient sensitivity in surface waters;
- Individual rivers throughout the County;
- Areas throughout the County on account of areas of elevated groundwater vulnerability.

The Plan directs incompatible development away from the most sensitive areas in the County and focuses on directing: **compact, sustainable development within the existing envelopes 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 populations and services.**

**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.**

### **How does the SEA work?**

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

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

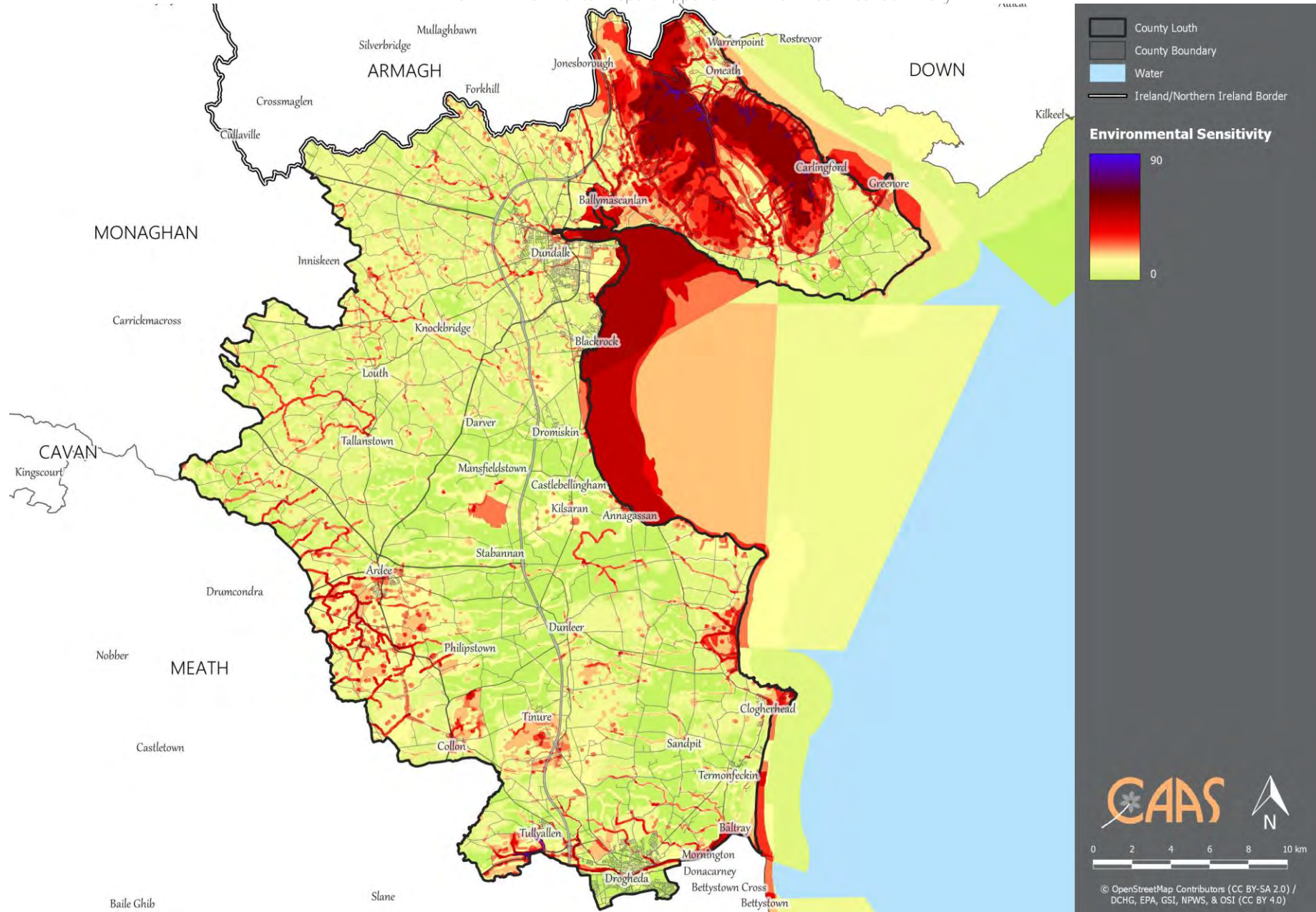
- A description of the environment and the key environmental issues;
- A description and assessment of alternatives for the Plan;
- An assessment of the provisions of the Plan; and,
- Mitigation measures, which will avoid/reduce the environmental effects of implementing the Plan and will contribute towards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

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

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

### **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.



**Figure 1.1 Environmental Sensitivities that the County Development Plan directs incompatible development away from**

## Section 2 The Plan

### 2.1 Introduction

The Louth County Development Plan is a land use plan and overall strategy for the proper planning and sustainable development of the functional area of County Louth over the six-year period 2021-2027. Not later than four years after the adoption of the Plan, the Council is required to review it and commence the preparation of a new Plan. The implementation of the Local Government Reform Act 2014 introduced legislative amendments, resulting in the abolition of town and borough councils. Consequently, the County Development Plan incorporates the functional area of the entire county including the areas formerly within the Drogheda Borough Council, Dundalk Town Council and Ardee Town Council. When adopted, the County Development Plan will replace the Drogheda and Dundalk Development Plans, and Urban Area Plans will be prepared for these towns during the lifetime of this Plan, in addition to a Local Area plan for Ardee.

### 2.2 Content of the Plan

The Plan includes a Written Statement, that provides the development policies, Core Strategy and mandatory and discretionary objectives for different policy areas addressed by the Development Plan, and **Settlement Plans for the county's towns** and villages.

The Written Statement is divided into 14 separate chapters setting out various policies and objectives under the headings of:

- Introduction
- Core Strategy and Settlement Strategy
- Housing
- Social and Community
- Economy and Employment
- Tourism
- Movement
- Natural Heritage, Biodiversity and Green Infrastructure
- Built Heritage and Culture
- Infrastructure and Public Utilities
- Environment, Natural Resources and the Coast
- Climate Action
- Development Management Guidelines
- Implementation and Monitoring

### 2.3 Plan Strategic Vision and Objectives

The Plan's Strategic Vision is to:

*Promote County Louth, in particular the Regional Growth Centres of Drogheda and Dundalk, as uniquely attractive places in which to live, work, visit and do business and where the quality of employment and educational opportunities, natural and built environment, cultural experiences and provision of inclusive communities are all to the highest standards, while transitioning to a low carbon and climate resilient society.*

The Vision for County Louth will be achieved through realisation of the following Strategic Objectives:

- SO 1 Realise the potential and promote the development and growth of County Louth through harnessing the economic and employment potential of the competitive advantages of the County. This includes its strategic location, connectivity and accessibility to external markets and having regard in particular to the role of Drogheda and Dundalk as Regional Growth Centres located on the Dublin-Belfast Economic Corridor.
- SO 2 Support and promote the role of Drogheda and Dundalk as key designated Regional Growth Centres with high levels of self-sustaining employment and services, to act as regional economic drivers, playing a significant role for a wide catchment area and to help achieve a more coordinated and sustainable settlement and travel pattern across the region.
- SO 3 Direct new development in accordance with the Core and Settlement Strategies, which will provide for the sustainable development of the County for the period 2021-2027 and beyond and in accordance with the principles of compact growth, consolidation and regeneration.
- SO 4 Transition to a low carbon and climate resilient County supporting energy efficiency and reducing energy demand, through a combination of mitigation and adaptation responses to climate change. This includes for increased

usage of renewable energy through developing indigenous energy resources, supporting the transition to a low carbon economy by 2050, and ensuring flood risk management. The Council will work with other bodies and organisations as appropriate, to identify and help protect critical infrastructure.

- SO 5 Ensure a more sustainable and integrated concept of development with regard to land use, transportation, water services, energy supply and waste management over the lifetime of the Plan.
- SO 6 **Conserve and enhance the County's Green Infrastructure and ecosystem services supporting the sustainable management of natural assets and the biodiversity of the County's protected habitats and species to provide a wide range of environmental, social and economic benefits to communities.**
- SO 7 Protect and enhance the built, cultural and natural heritage assets of Louth, the intrinsic value of which helps to define the character of both urban and rural areas, contributes to the attractiveness, vibrancy and sense of place for residents, tourists and visitors, including improved access to the countryside through the development of greenways, walking trails and blueways in support of and advancing sustainable communities.
- SO 8 Develop and support vibrant, inclusive, sustainable and healthy communities in Louth where people can live, work, invest and visit, enjoying access to a wide range of community, health and educational facilities and amenities, suitable for all ages and needs, in both urban and rural areas, thereby supporting a high quality of life for all to enjoy.
- SO 9 **Protect and enhance the unique character and identity of Louth's towns and villages and improve quality of life and well-being through the application of Healthy Placemaking, underpinned by good urban design with the creation of attractive public spaces that are age friendly vibrant, distinctive, safe and accessible and which promote and facilitate positive social interaction.**
- SO 10 Support implementation of the objectives and actions for strengthening economic and community development in the County in accordance with the Louth Local Economic and Community Plan (LECP).
- SO 11 Support the further development of a resilient economic base in Louth and promote both enterprise and entrepreneurship, underpinned by innovation and talent resulting in the delivery of sustainable jobs and economic growth.
- SO 12 Support improvements in and access to education and training as central to skills, knowledge, innovation and quality job creation which will underpin future prosperity for all and aid in achieving a more sustainable, balanced and inclusive society.
- SO 13 Support the sustainable development of rural areas that are under strong urban influence to avoid over-development, while sustaining vibrant rural communities.
- SO 14 Reverse rural decline in small towns and villages through sustainable, targeted measures addressing vacancy and delivering sustainable reuse and regeneration outcomes.
- SO 15 Ensure the proper integration of transportation and land use planning through the increased use of sustainable transport modes and the minimisation of travel demand to achieve a sustainable, integrated and low carbon transport system with excellent connectivity both within and beyond the County.
- SO 16 Ensure the efficient and sustainable use and development of water and waste water service infrastructure throughout the County in a manner that supports a healthy society, economic development and a cleaner environment.
- SO 17 Facilitate the development of infrastructural projects, which will underpin sustainable development throughout the County during the period of the Plan.
- SO 18 Afford suitable protection to the environment and natural resources of the County and ensure the fulfilment of environmental responsibilities.
- SO 19 Provide a framework for the management and regulation of development and use of land that will guide day to day planning decisions, thus ensuring a more sustainable and integrated concept of development with regard to all forms of land use.

## **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 and the placing of the Draft Plan on public display, Louth County Council undertook various works 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, including:

- Strategic Environmental Assessment;
- Appropriate Assessment;
- Strategic Flood Risk Assessment;
- Core Strategy;
- Housing Strategy;
- Retail Strategy;
- Infrastructure Strategy;
- Green Infrastructure Strategy;

- Record of Protected Structures and Architectural Conservation Areas;
- Landscape Designations;
- Economic Development;
- Energy and Utilities;
- Climate Action; and
- Movement.

The undertaking of this SEA process and associated Appropriate Assessment and Strategic Flood Risk Assessment processes were part of this strategic work and contributed towards the integration of environmental considerations into individual Plan provisions as detailed in Section 6 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 to the 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 Eastern and Midlands 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 County Development Plan is consistent with and conforms with national and regional policies, plans and programmes, including the NPF and the RSES for the Eastern and Midlands Region. The County Development Plan may, in turn, guide lower level strategic actions, such as the Local Area Plans that will be subject to their own lower-tier environmental assessments.

In order to be realised, projects included in the County Development 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 it is uncertain how permission for new development would be applied for and considered.

The 2015-2021 Plan has contributed towards environmental protection within County Louth. If the 2015-2021 Plan was to expire and not be replaced by the 2021-2027 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. Such development could result in an increase in the occurrence of adverse effects on all environmental components, especially those arising cumulatively. Cumulative effects occur as a result of the addition of many small impacts to create one larger, more significant, impact.**

Such adverse effects could include:

- Arising from both construction and operation of development and associated infrastructure:
  - Loss of/damage to biodiversity in designated sites (including European Sites and Natural Heritage Areas) 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 adverse effects arising from flood events.
- 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 and coastal 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 agricultural waste and soil, water, biodiversity and human health – including as a result of emissions of ammonia from agricultural activities (e.g. manure handling, storage and spreading) 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

Ecologically sensitive areas in Louth include: the Cooley Mountains and the Peninsula; Carlingford Mountain; the coastline from Carlingford Lough to the Boyne Estuary; Dundalk Bay; the Rivers Boyne and Blackwater; woodlands; grasslands; trees; and hedgerows. These habitats support a variety of species and ecosystems that contribute to the unique biodiversity of County Louth.

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 – the Northern Ireland Carlingford Lough Proposed Marine extension area SPA is also included on this map. There are six SACs and five SPAs designated within and adjacent to the County including: Boyne Coast and Estuary SAC; Carlingford Mountain SAC; Carlingford Shore SAC; Clogher Head SAC; Dundalk Bay SAC; River Boyne and River Blackwater SAC; Boyne Estuary SPA; Carlingford Lough SPA; Dundalk Bay SPA; River Boyne and River Blackwater SPA; and Stabannan-Braganstown SPA. For more detail on European Sites please refer to the AA Natura Impact Report that accompanies the Plan.

Other ecological designations occur within and adjacent to the County, including designations along the County border with Northern Ireland, and these are detailed in the main SEA Environmental Report.

CORINE<sup>3</sup> land cover mapping for the County is shown on Figure 3.2. The most dominant land cover types are pastures and agricultural lands. Categories from CORINE mapping that may indicate areas likely to contain Annex I habitats, in the County, include: peat bogs; inland marshes; salt marshes; intertidal flats; estuaries; natural grassland; water bodies; mixed forests; coniferous forest; broad-leaved forests; stream courses; moors and heaths; water bodies; transitional woodland and scrub; and land principally occupied by agriculture with areas of natural vegetation.

#### Existing Problems

**Ireland's Article 17 report on the Status of EU Protected Habitats and Species in Ireland (DCHG, 2019)** identifies various Irish, EU-protected habitats and species to be of unfavourable status and many to be still declining, although it also identifies that a range of positive actions are underway. Categories for pressures and threats on Ireland's habitats and species identified by the report comprise:

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

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

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

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

<sup>3</sup> 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.**

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.

### 3.4 Population and Human Health

In the 2016 Census the total population of County Louth was identified as being 128,884 persons, showing the trends of an increase in total population in the County by c. 4.6% (5,987 persons) since the previous Census.

The new population provided for in 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;
- 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

The majority of the Plan area is underlain by brown earths<sup>4</sup> and surface water gleys<sup>5</sup>. Other soil types identified include:

- Lithosol soils<sup>6</sup> (in the upland and coastal areas);
- Alluvial soils<sup>7</sup> (in the flood plains of the rivers and streams); and
- Luvisol soils<sup>8</sup> (in the east of the County).

There are many areas of peat across the Plan area, with concentrations of these in the west and north-west. Rain-fed (ombrotrophic) and groundwater-fed (minerotrophic) peat soils occurring in the County are subject to ecological designations. Outcropping rock is identified in a number of upland locations.

An audit of County Geological Sites<sup>9</sup> in County Louth was completed in 2013. There are 33 Sites of Geological Interest in County Louth<sup>10</sup>. 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. There are various Source Protection Areas identified within County Louth.

<sup>4</sup> Brown earths are well drained mineral soils, associated with high levels of natural fertility.

<sup>5</sup> Surface Water Gleys are wetland soils with slowly permeable horizons resulting in seasonal waterlogging.

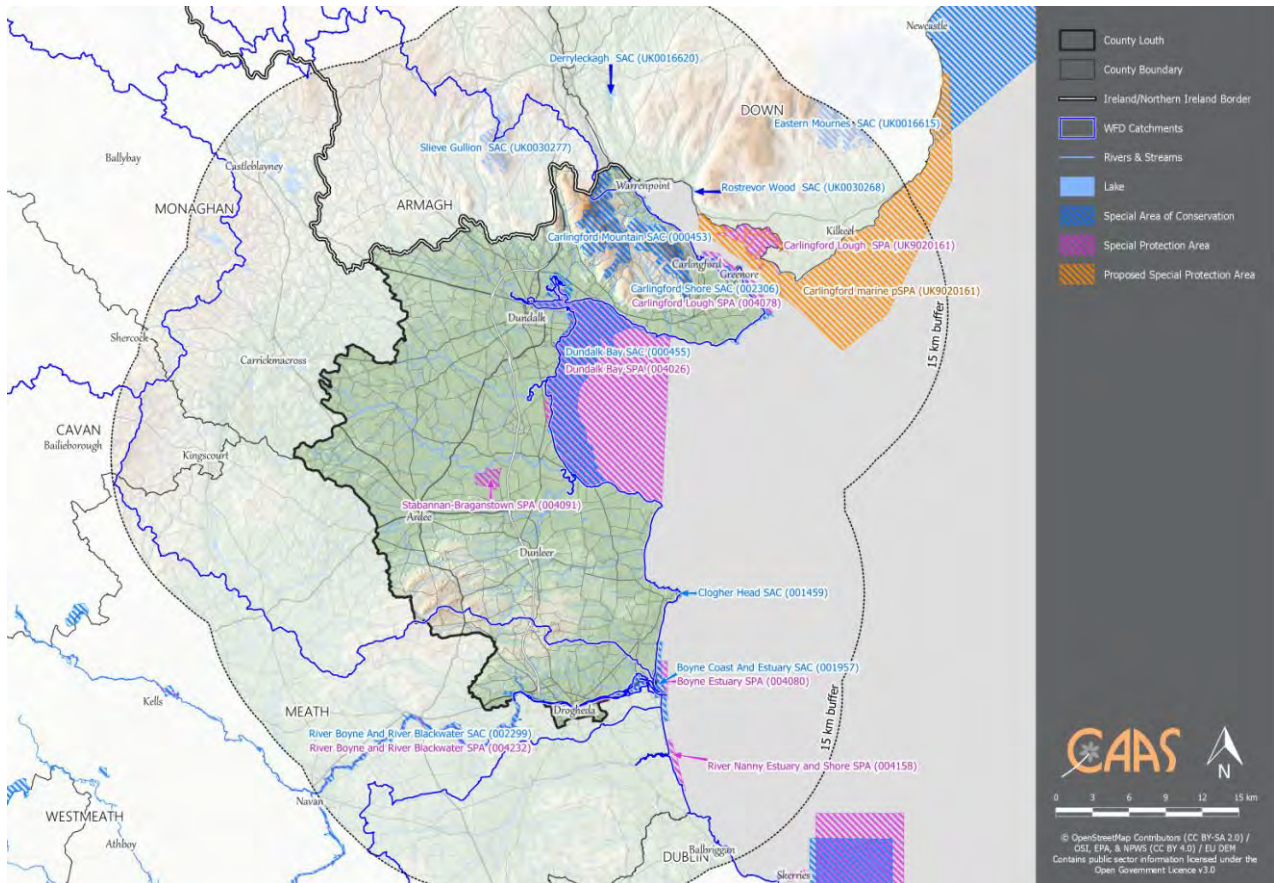
<sup>6</sup> Lithosols are shallow non-calcareous soils, commonly overlying hard rock or skeletal and gravelly material. They tend to be stony soils, or with shattered bedrock and are associated with frequent rock outcrops.

<sup>7</sup> These are associated with alluvial (clay, silt or sand) river deposits.

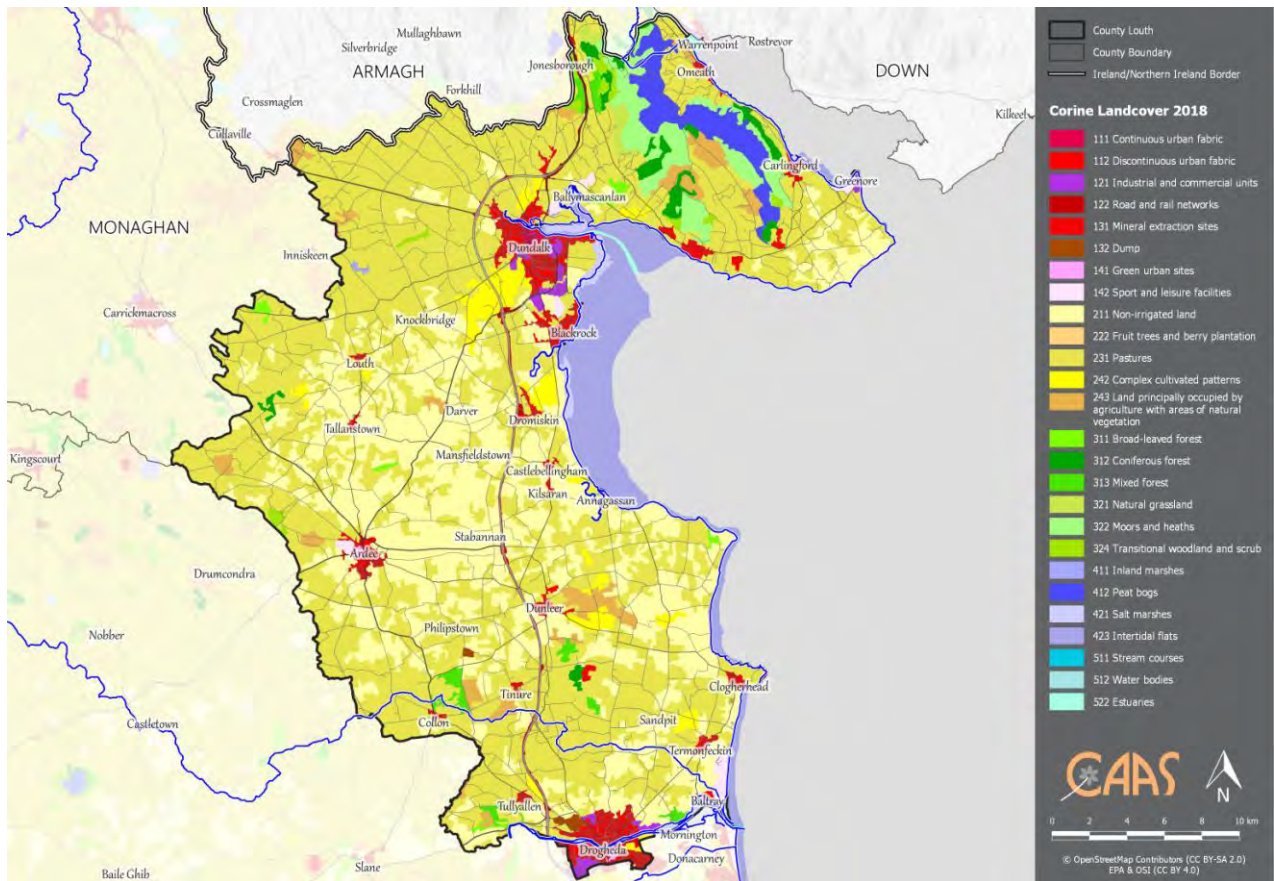
<sup>8</sup> Luvisol soils are generally fertile, widely used for agriculture and associated with significant accumulation of clay.

<sup>9</sup> NHA sites are those considered to be worthy of designation as Natural Heritage Areas by the NPWS. CGS refers to sites of lesser importance which should still be protected as County Geological Sites.

<sup>10</sup> Individual audited site reports for County Louth are available from the GSI ([www.gsi.ie](http://www.gsi.ie)).



**Figure 3.1 European Sites within and adjacent to the County**



**Figure 3.2 CORINE Land Cover Mapping 2018**

## 3.6 Water

### Surface and Ground Water Status

Rivers, coastal and transitional waterbodies in the County range in status from *good* to *moderate* and *poor*. *Moderate* and *poor* status water bodies have the potential to fail the requirement of *good* status set out by the Water Framework Directive (WFD). In addition, there are a number of unassigned rivers, coastal and transitional waterbodies across the County. The WFD surface water status (2013-2018) of rivers and lakes within and surrounding the County is shown on Figure 3.3.

The WFD status (2013-2018) of most of groundwater underlying the County is identified as being of *good status*, meeting the objectives of the WFD. The area underlying the industrial facility to the north-east of Drogheda is identified as being of *poor* groundwater body status.

### Aquifer Vulnerability and Productivity

Aquifer vulnerability refers to the ease with which pollutants of various kinds can enter into groundwater. The aquifers underlying most of the County are generally classified as being of *high* or *moderate vulnerability*. *Areas of extreme* or *low vulnerability* are found across smaller areas.

### Bathing Waters

Bathing waters are now classed 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<sup>11</sup> shows that bathing waters within the Plan area reported on are of 'excellent' water quality<sup>12</sup>.

### Flooding

Certain areas across the County are at risk from groundwater, coastal, estuarial, pluvial and fluvial flooding. There are various historic and predictive indicators of flood risk in the County, including along the coastline, surrounding estuaries and along the Rivers Boyne, Slieveboy, Dee, Glyde, Fane, Ramparts and Castletown.

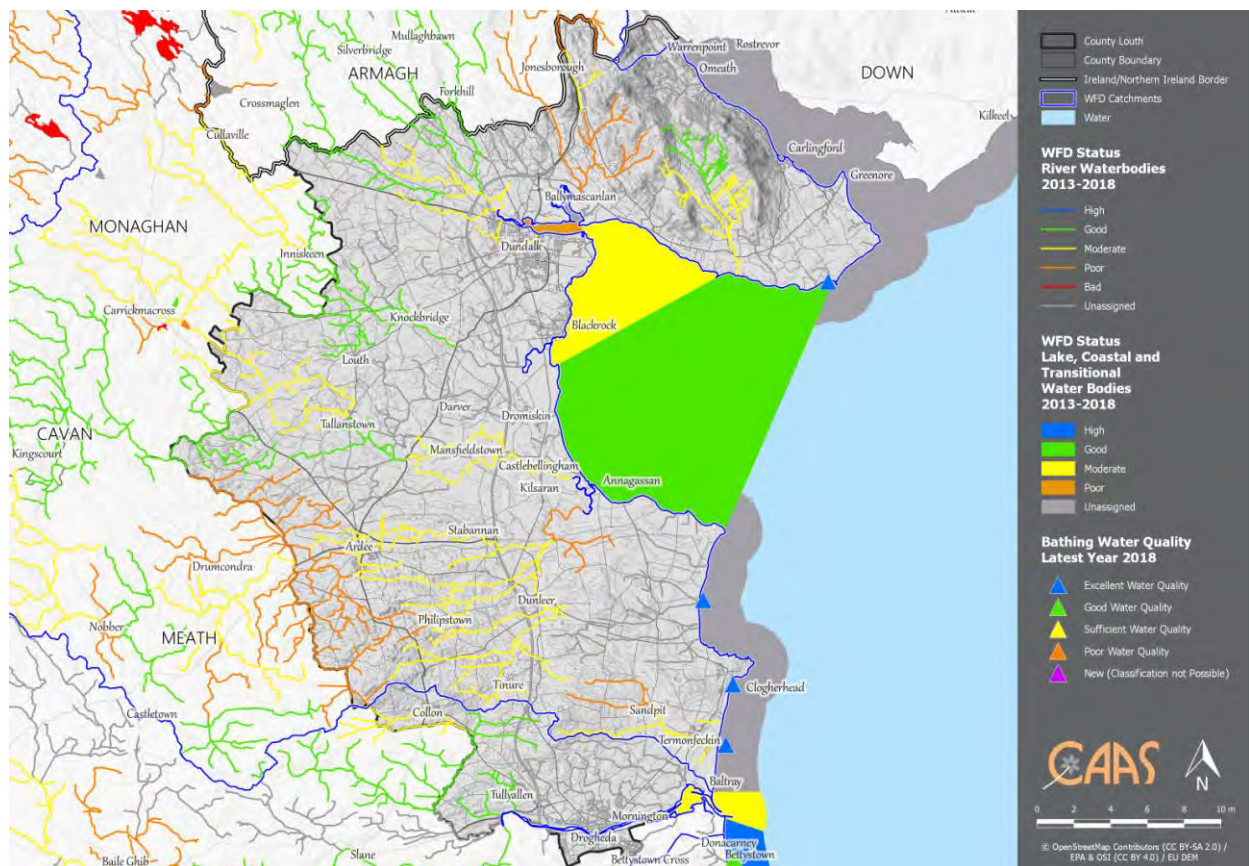


Figure 3.3 Surface Water Status (2013-2018)

<sup>11</sup> EPA Report on *Bathing Water Quality in Ireland 2018*

<sup>12</sup> Bathing locations at: Seapoint; Clogherhead; Port/Luganboy; and Shelling Hill/Templetown.

### 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). **Ireland's National Policy** position is to reduce CO<sub>2</sub> emissions in 2050 by 80% on 1990 levels across the Energy Generation, Built Environment and Transport sectors, with a goal of Climate neutrality in the Agriculture and Land-Use sector. For 2017, total national greenhouse gas emissions are estimated to be 0.9% lower than emissions in 2016.

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 Climate Change Advisory Council's Annual Review 2019 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.

The National Adaptation Framework (published by the then 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 EPA's (2019) *Air Quality in Ireland 2018* identifies that:

- Levels at monitoring sites in Ireland were below the EU legislative limit values in 2018;
- Ireland was above World Health Organization (WHO) air quality guideline value levels at a number of monitoring sites for fine particulate matter, ozone and nitrogen dioxide;
- Ireland was above the European Environment Agency reference level for PAH, a toxic chemical, at three monitoring sites.

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>13</sup> air quality within the Plan area (Rural East Air Quality Index Region) is identified by the EPA as being *good*.

### 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) and natural resources of economic value, such as water and air (see Sections 3.6 and 3.7).

#### Public Assets and Infrastructure

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

<sup>13</sup> 06/08/2020 (<http://www.epa.ie/air/quality/>)

## Waste Water

Irish Water is responsible for the treatment of wastewater in towns and villages where public wastewater treatment facilities exist and currently operates eighteen public sewerage schemes in the County.

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 waste water treatment systems. There are six urban areas in County Louth listed as priority areas where improvements are required to resolve urgent environmental issues (EPA, 2019):

- Blackrock (due to not meeting the secondary treatment requirements and waste water discharges causing a significant pressure on the waters of the Inner Dundalk Bay);
- Castlebellingham (due to waste water discharges causing a significant pressure on the waters of the River Glyde);
- Dundalk (due to not meeting the secondary treatment requirements and waste water discharges causing a significant pressure on the waters of the Castletown Estuary and the Inner Dundalk Bay);
- Dunleer (due to waste water discharges causing a significant pressure on the River White);
- Omeath (due to continued release of untreated waste water into the environment); and
- Tallanstown (due to waste water discharges causing a significant pressure on waters of the River Glyde).

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

## Water Supply

Irish Water is responsible for the treatment and supply of water in towns, villages and rural areas where public water supply schemes are in place and currently operates thirteen water supply schemes in the County from five water resource zones. Private supplies provide water to those areas not served by a public water supply and comprise private Group Water Schemes serving local communities or private wells serving single dwelling houses. There are seven private Group Schemes operating in County Louth.

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 Drinking Water Regulations. The Greenmount Regional Public Supply Scheme, South Louth East Meath Regional Public Supply Scheme and Tallanstown Regional Public Supply Scheme are listed on the most recent EPA Remedial Action List (Q2 of 2020). There is a proposed plan of action to remedy the issue at this scheme.

## Waste Management

Waste management across the County is guided by the Eastern and Midlands Region 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 and Coastline

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.

Louth has a coastline of over 90 kilometres providing significant opportunities for the support of a range of marine activities such as aquaculture, defence, energy, fisheries, mining and aggregates, ports harbours and shipping, telecommunications cables, tourism, safety at sea, sport and recreation and waste-water treatment and disposal.

## 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.

## 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. Clusters of monuments in County Louth are located within **the County's settlements**.

County Louth has an array of archaeological assets, ranging from the historic ruins of Monasterboice (listed as part of the Early Medieval Monastic Sites UNESCO Tentative World Heritage Site) in the south of the County, to the walled medieval towns of Carlingford, Drogheda and Dundalk which were founded between the twelfth and thirteenth centuries. Castles, megalithic tombs, souterrains, ring forts, mottes, battlefield sites and ecclesiastical sites are amongst the most common recorded monuments in the County. Brú na Bóinne UNESCO World Heritage Site is located partially within the Plan area. Brú na Bóinne, refers to the **area within the bend of the river Boyne around Newgrange, Knowth and Dowth, and is one of the world's** most important archaeological complexes. Other notable sites of archaeological significance include Mellifont Abbey in Drogheda and King John's Castle in Carlingford.

### 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 indicated within **the County's settlements**.

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 36 ACAs designated within County Louth.

### Existing Problems

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

## 3.10 Landscape

The landscape of County Louth includes a variety of different land forms and features, including its extensive coastline (stretching from Carlingford Lough to Boyne Estuary), wetlands, woodlands, rivers, bogs and uplands. Some upland areas in Cooley Peninsula are recognised as being amongst the most unspoiled in the Country. Each landscape type has varying capacity to absorb development related to its overall sensitivity.

The County Louth Landscape Character Assessment has identified the following nine Landscape Character Areas: Cooley Lowlands and Coastal Area; Carlingford Lough and Mountains, including West Feede Uplands; Lower Faughart, Castletown and Flurry River Basins; Louth Drumlin and Lakes Areas; Muirhevna Plain; Dundalk Bay Coast; Dunany, Boyne Estuary Coast; Uplands of Collon and Monasterboice; and Boyne and Mattock Valleys. Landscape Character Areas in County Louth are mapped on Figure 3.4:

Areas of Outstanding Natural Beauty (AONB) have been identified by the Council to facilitate the protection and enhancement of their unspoiled natural landscapes and spectacular scenic quality. There are two AONBs in the County:

- Carlingford and Feede Mountains in the north of the County;
- and Clogherhead and Port Oriel in the south of the County.

As both of these areas are extremely sensitive environments, they have been afforded a high degree of protection in the Plan to preserve their uniqueness and amenity value.

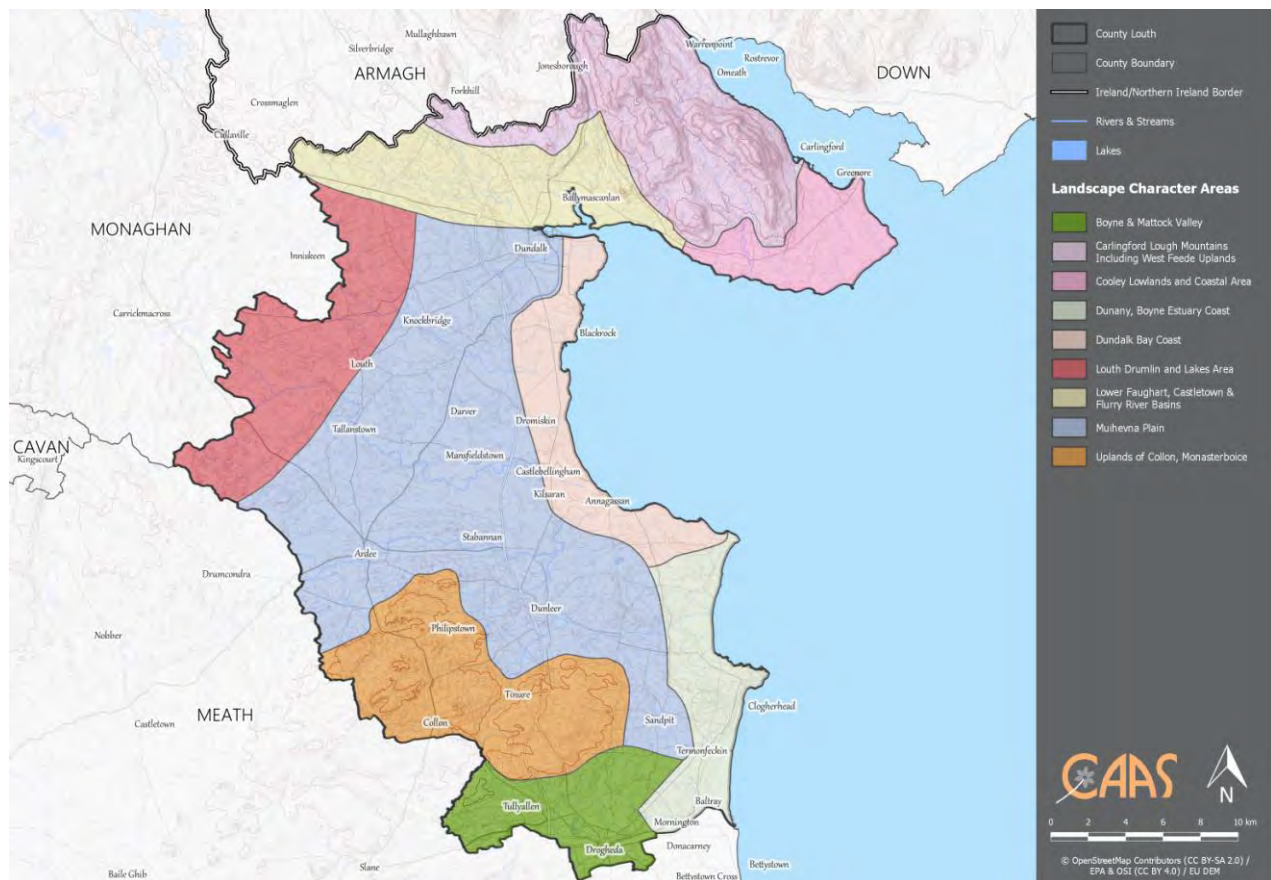
Further to this, Areas of High Scenic Quality (AHSQ) have been identified by the Council to facilitate the protection and enhancement of natural scenic landscapes within the County. There are six designated Areas of High Scenic Quality in the County:

- Feede Mountains and Cooley Area;
- Monasterboice;
- Boyne Valley / King Williams Glen;
- Collon Uplands;
- Dunany; and
- Ardee Bog.

There are also 23 Scenic Routes and 76 Protected Views and Prospects identified within the County.

### 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 3.4 Landscape Character Areas**

## 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 Strategy and its targets</li> <li><b>To protect, maintain and conserve the County's natural capital</b></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><b>Safeguard the County's citizens from environment-related pressures and risks to health and well-being</b></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 within the County</li> <li><b>Safeguard areas of prime agricultural land and designated geological sites</b></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 and Marine Strategy Framework Directive</li> <li>Ensure that economic growth of the marine resource and its ecosystems are managed sustainably</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 waste water 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, particularly coastal areas</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 in the County</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, wave solar, tidal, 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, cities 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><b>Integrate sustainable design solutions into the County's infrastructure (e.g. energy efficient buildings; green infrastructure).</b></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	<ul style="list-style-type: none"> <li>Protect places, features, buildings and landscapes of cultural, archaeological or architectural heritage</li> </ul>
<b>Landscape</b>	<b>L</b>	Protect and enhance the landscape character	<ul style="list-style-type: none"> <li>To implement the <b>Plan's framework for identification, assessment, protection, management and planning of landscapes</b> having regard to the European Landscape Convention</li> </ul>

## Section 4 Alternatives

### 4.1 Introduction

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

Whether or not alternatives for the County Development Plan are available has been identified by Louth County Council.

### 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 Eastern and Midland 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 Alternatives for Settlement Hierarchy

#### *Description of Alternatives for Ardee and Dunleer*

- (A) Designate Ardee and Dunleer as Self-Sustaining Growth Towns
- (B) Designate Dunleer as Self-Sustaining Towns

#### *Summary of Assessment*

Both Ardee and Dunleer are two towns which display many attributes including a good level of jobs and services catering for both the resident population but also a wider catchment area, a broad range of services and facilities and transport links. They have the capacity for continued commensurate growth in terms of population and employment and to become more self-sustaining. Both towns have opportunities to accommodate compact growth within their development envelopes in accordance with national and regional policy.

By facilitating population and employment growth commensurate to the attributes of Ardee and Dunleer, Alternative A would provide for a more sustainable Settlement Hierarchy and a greater level of sustainable development at a County level. Alternative A would help to facilitate a more compact form of development at these settlements that would help to maximise benefits from infrastructural investment. Alternative A would not increase pressure in lower level settlements, which are generally less well-serviced and less-well connected, and the open countryside— and would, as a result, avoid potential adverse significant effects on various environmental components.

By limiting population growth in the two towns, Alternative B would fail to provide viable alternatives to the large towns of Drogheda and Dundalk as a place to live and work and would result in increased pressure in the lower level settlements and the open countryside. It would also militate against the future compact growth of the settlements. As a result, Alternative B would be likely to result in a greater extent of significant effects on various environmental components and would not be as sustainable as Alternative A.

#### *Selected Alternative*

- (A) Designate Ardee and Dunleer as Self-Sustaining Growth Towns

#### *Description of Alternatives for Dromiskin*

- (A) Designate Dromiskin as a Small Town and Village
- (B) Designate Dromiskin as a Self-Sustaining Town

#### *Summary of Assessment*

Alternative A would focus on localised sustainable growth and employment related development that would strengthen and support the local base and reduce commuting to and from Dromiskin. It would also provide a realistic and suitable alternative to one off housing in the countryside.

By facilitating population and employment growth commensurate to its attributes, Alternative A would provide for a more sustainable Settlement Hierarchy and a greater level of sustainable development at a County level and at a town level in Dromiskin. Alternative A would help to prevent further linear sprawl at this settlement which would not

be adequately serviced by the town. As a result, Alternative A would avoid potential adverse significant effects on various environmental components.

Designating Dromiskin as per Alternative B, would not be in line with the remainder of the settlements identified as **Self Sustaining towns as although Dromiskin's population is higher** than many of the other settlements in this category, it is characterised by elongated, linear development along a north-south axis, with very limited services, a weak employment base and displaying a lack of compact growth. A greater level of sprawl and higher dependence on outbound commuting for employment means that Alternative B would be likely to result in a greater extent of significant effects on various environmental components and would not be as sustainable as Alternative A.

#### *Selected Alternative*

- (A) Designate Dromiskin as a Small Town and Village

#### *Description of Alternatives for 2 Potential "Rural Nodes"*

- (A) **Designate 24 (no.) Level 5 Settlements, "Rural Nodes" dispersed throughout the County to meet rural generated housing needs.**
- (B) Do not designate 24 (no.) Level 5 Settlements, settlements to remain in the Open Countryside
- (C) **Designate 21 (no.) "Rural Nodes" but designate Tinure, Lordship and Greenore as "Small Towns and Villages"**

#### *Summary of Assessment*

The 24 Level 5 settlements are primarily residential in nature. Some of these villages are served by public mains water and/or waste water supply, whilst there are others that are unserved. The purpose of these settlements is to assist in satisfying rural generated housing needs within a low-density environment as an alternative to scattered one of housing in the open countryside. In accordance with the Settlement Typology as identified in the Eastern and Midland RSES, it is considered appropriate that these settlements are identified as Rural Nodes. As part of the strategy of strengthening the fabric of villages and creating sustainable communities, the Plan has identified the lands within these settlements as suitable to meet rural generated housing needs.

Alternative A, by providing focus to and targeted policies/objectives for the Rural Nodes, would facilitate a viable alternative to one-off housing in the open countryside. Development within these settlements would be more likely to 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.

Not designating a wide selection of rural nodes throughout the County would result in a consequential increase in the unsustainable provision of one-off housing in the open countryside. This would further erode these small settlement centres and diminish the opportunity to provide for focused, compact development within small rural nodes and which would in turn threaten community cohesion and quality of life. Alternative B, by not providing a focus to and targeted policies/objectives for Rural Nodes 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 all alternatives and would be most harmful to the environment.

The settlements of Tinure and Lordship, albeit displaying a higher resident population and Greenore with a strong economic base are very limited in terms of services and capacity to absorb additional development. Some of the rural nodes have water services in place while others are not fully serviced. Including these villages in the higher tier would not be sustainable and would be harmful to the environment, resulting in adverse environmental impacts associated with the absence of waste water treatment in a number of instances (including effects on water, drinking water, human health). Designating the other 21 (no.) settlements as Rural Node would result in the positive environmental effects as detailed under Alternative A.

## **4.4 Alternatives for Population Allocations**

#### *Description of Alternatives*

- (A) Concentrate future growth in the settlements in the upper tiers of the settlement hierarchy, in particular the Regional Growth Centres of Drogheda and Dundalk and the Self-Sustaining Growth Towns of Ardee and Dunleer, with a more limited level of growth in the smaller settlements and open countryside.
- (B) Continued growth of Drogheda and Dundalk with dispersed pattern of growth across the smaller settlements and the open countryside.

#### *Summary of Assessment*

The concentration of growth in the larger settlements in the County i.e. Drogheda, Dundalk, Ardee, and Dunleer will ensure there are settlements suitably located in the County with the capacity to grow at a sustainable level where there are opportunities to consolidate development in the existing urban footprint through infill and brownfield development. These settlements have a number of positive attributes including a broad range of services, transport links, a strong employment base, and capacity to facilitate population and economic growth. By providing for a concentration in the larger settlements in the County, Alternative A would result in lower levels of commuting, benefiting efforts to improve sustainable mobility and meet greenhouse gas emission reduction targets the most. Development in these centres would be better serviced and there would be a reduced need for greenfield

development (and associated adverse environmental effects) in less well-served, less-well connected and more sensitive locations in the County, including the open countryside and smaller settlements.

A more dispersed pattern of development as identified in Alternative B that would result in the expansion of the smaller towns and villages in the County. Development is more likely to be on greenfield lands as there are few infill and brownfield sites available. Services and public transport are more limited and there would be a greater dependence on commuting for employment. Alternative B would result in higher levels of commuting, conflicting with efforts to improve sustainable mobility and meet greenhouse gas emission reduction targets the most. Alternative B would provide for higher levels of greenfield development (and associated adverse environmental effects) in less well-served, less-well connected and more sensitive locations in the County, including the open countryside and smaller settlements. This type of development would result in a higher adverse environmental impact, including effects on water, drinking water, human health, ecology and landscape designations. Alternative B would not be sustainable and would conflict with environmental protection and management.

*Selected Alternative*

- (A) Concentrate future growth in the settlements in the upper tiers of the settlement hierarchy, in particular the Regional Growth Centres of Drogheda and Dundalk and the Self-Sustaining Growth Towns of Ardee and Dunleer, with a more limited level of growth in the smaller settlements and open countryside.

## 4.5 Alternatives for Rural Areas

*Description of Alternatives*

- (A) Retain the 6 Development Control Zones for the County as set out in the CDP 2015-2021
- (B) **Consolidate the 6 Development Control Zones into 2 'Rural Policy Zones' as follows:**
- Rural Policy Zone 1 – Area under strong urban influence and of significant landscape value;
  - Rural Policy Zone 2 – Area under strong urban influence
- (C) Have a single Rural Policy Zone for the entire County as follows: Rural Policy Zone – Area under strong urban influence

*Summary of Assessment*

An analysis of data from the Census 2016 identified a strong relationship between large urban centres and the rural areas in Louth with high volumes of commuting to Dundalk, Drogheda, and the Dublin Metropolitan Area. Based on **this analysis the entire County has been identified as an 'Area Under Strong Urban Influence.'**

Restricting development in rural areas that are under strong urban influence 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.

Rural development would be directed towards appropriate rural areas and urban development would be directed towards established settlements. This approach would prevent low density urban sprawl and associated adverse effects upon sustainable mobility, climate emission reduction targets and various environmental components.

In the 2015-2021 County Development Plan, 6 'Development Control Zones' in the County were identified. The qualifying criteria varied in each Control Zone, and was based on the environmental sensitivities of each Zone, with a more stringent criteria in the more environmentally sensitive locations. Alternative A involves the retention of these 6 zones. Although these zones contribute towards the protection and management of the environment, they do not provide as coherent or as universally interpretable an approach as would be the case with Alternative B.

Alternative B condenses the 6 Control Zones into 2 'Rural Policy Zones' and reduces any confusion regarding the qualifying criteria in each of the Zones. This assists in interpreting and implementing the qualifying criteria whilst also ensuring the policy is sufficiently robust to protect the most sensitive landscapes in the County. Alternative B provides the most coherent approach to environmental protection and management and sustainable development.

**Option 3 proposes a single Rural Policy Zone for the County 'Rural Area Under Strong Urban Influence'. Whilst this policy zone would take account of the pressures the countryside is under from potential urban generated development this option does not differentiate between the more sensitive rural landscapes in the County and therefore could potentially result in the erosion of such sensitive landscapes.**

*Selected Alternative*

- (B) **Consolidate the 6 Development Control Zones into 2 'Rural Policy Zones' as follows:**
- Rural Policy Zone 1 – Area under strong urban influence and of significant landscape value;
  - Rural Policy Zone 2 – Area under strong urban influence

## 4.6 Alternatives for Densities

### *Descriptions of Density Alternatives for Ardee and Dunleer*

- (A) Densities applicable to the Settlements are min 35/ha in the town centre and min 25/ha at the edge of centre
- (B) Densities in line with the larger settlements of Drogheda and Dundalk
- (C) Densities in line with the lower Level settlements

### *Summary of Assessment*

Within the Settlement Hierarchy, Ardee and Dunleer occupy a lower level than the two towns of Drogheda and Dundalk but still provide the opportunity for higher densities. The densities provided for allow for securing compact growth and consolidating development within the town centre commensurate with the existing pattern of development and the character of the area, while the lower densities on the more peripheral areas allows for a variety in residential development to cater for a wide range of needs and desires.

Densities in line with Drogheda and Dundalk might lead to over-development and detract from the character and pattern of development established within these more moderate sized towns.

Lower densities within these towns would undoubtedly fail to realise compact growth, would generate urban sprawl and fail to maximise the return on infrastructure investment.

### *Selected Alternative*

- (A) Densities applicable to the Settlements are min 35/ha in the town centre and min 25/ha at the edge of centre

### *Descriptions of Density Alternatives for Sustaining Towns and Small Towns and Villages*

- (A) The density of development will be reflective of the character of the settlement and the existing pattern of development in the area
- (B) A defined density applicable to all the designated settlements

### *Summary of Assessment*

Whilst all developments should strive to achieve recommended densities it is acknowledged that there will be cases where there are specific constraints (such as topography) that will restrict the scale of development that can be delivered. It is essential in these settlements that the character of the settlement and the existing pattern of development is considered in future proposed development. In such cases a lower density than that prescribed may be considered acceptable.

### *Selected Alternative*

- (A) The density of development will be reflective of the character of the settlement and the existing pattern of development in the area

## 4.7 Alternatives for Land Use Zoning

Land use 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 Eastern and Midlands RSES.

The Council have identified realistic alternatives for certain settlements, where these are available taking into account the various requirements set out in the higher-level NPF and Eastern and Midlands RSES. These realistic alternatives are described on Table 4.1 with a summary of assessment provided.

**Table 4.1 Land Use Zoning Alternatives and Summary Assessment**

Town	Alternative (selected alternatives in <b>bold</b> )	Summary of Assessment
Dundalk (Set 1)	New Residential Zoning: <b>A. North, to the north of Castletown River</b>	Alternative A does not provide for sequential development of the town and is not linked as well as Alternative B for movement to and from services.
	<b>New Residential Zoning: B. Along Mount Avenue</b>	Alternative B provides for sequential development of the town, close to the existing town centre. Funding has been secured for movement infrastructure
	New Residential Zoning: <b>C. South, to the south of Oriel Park</b>	Alternative C does not provide for sequential development of the town and is not linked as well as Alternative B for movement to and from services.
Dundalk (Set 2)	<b>General Employment Zoning: A. Northern site, along N52</b>	Alternative A provides access to the Motorway through the Inner Relief Road – this issue would not hinder the sustainable development of these lands and the town.
	General Employment Zoning: <b>B. North Western site along R177</b>	There is no direct access to the Motorway from this site. As a result, development of the site could be hindered and pressures may present elsewhere in the County, on less well-serviced, less-well connected, more sensitive lands – and associated adverse environmental effects.
Drogheda (Set 1)	<b>A. Site (within Flood Zone A) along the Boyne zoned as New Residential</b>	New Residential would be an inappropriate use for these lands and would be unlikely to be in compliance with the Flood Risk Management Guidelines. Due to the elevated flood risk, the development of this site would be hindered and development pressures may present elsewhere in the County, on less well-serviced, less-well connected, more sensitive lands – and associated adverse environmental effects.
	<b>B. Site (within Flood Zone A) along the Boyne zoned as Open Space</b>	Open Space would be an appropriate use for these lands and would be to be in compliance with the Flood Risk Management Guidelines. New Residential lands could be zoned elsewhere in the settlement on lands with low levels of flood risk. Such residential development would reduce the need for development elsewhere in the County, on less well-serviced, less-well connected, more sensitive lands – and associated adverse environmental effects.
Drogheda (Set 2)	Westgate Area Zoning <b>A. Town or Village Centre</b>	The regeneration of Westgate is essential to the sustainable development of Drogheda. Development of this area would be more likely to occur and receive funding under Alternative A – less likely under Alternative B.
	<b>Westgate Area Zoning B. Regeneration</b>	<b>The purpose of the 'Regeneration' zoning is to encourage and facilitate opportunities for regeneration and place making. The lands or areas are strategically located within settlements and consist of vacant or under-utilised buildings or land with significant potential to stimulate the rejuvenation of an area or neighbourhood. The primary objective is to support regeneration, make a positive contribution to urban spaces, and improve quality of life for all.</b> Development of Westgate would reduce the need for development elsewhere in the County, on less well-serviced, less-well connected, more sensitive lands – and associated adverse environmental effects.
Drogheda (Set 3)	Site to the north west of the M1/R168 roundabout <b>A. Tourism and Leisure</b>	There is a planning need identified for Tourism and Leisure Uses on an adequately sized site. Placing such uses at this location would not provide for the sequential development of the town and would not provide for the compact development of the town – this site is removed from the existing development envelope and is the other side of the Motorway.
	Site to the north west of the M1/R168 roundabout <b>B. Retail Park</b>	There is no established planning need for such a retail development as would be provided by Alternative B. Placing a retail park at this location would not provide for the sequential development of the town and would not provide for the compact development of the town – this site is removed from the existing development envelope and is the other side of the Motorway. A retail park would undermine and reduce the viability of the existing retail offering in the town centre.
	<b>Site to the north west of the M1/R168 roundabout C. Do not include in the settlement plan boundary</b>	Not developing this site would help to ensure that compact and sequential development of Drogheda is achieved.

SEA Environmental Report Appendix III: Non-Technical Summary

Town	Alternative (selected alternatives in <b>bold</b> )	Summary of Assessment
Drogheda (Set 4)	<b>Site to the north west of the N51/R132 roundabout</b> <b>A. Tourism and Leisure</b>	There is a planning need identified for Tourism and Leisure Uses on an adequately sized site. Although the development of such a site would have potential adverse impacts, it would contribute to the overall sustainable development and available service offering in Drogheda. Although this site is removed from the existing development envelope, it is adjacent to planned residential uses in an area where there is limited services available.
	Site to the north west of the N51/R132 roundabout <b>B. Retail Park</b>	There is no established planning need for such a retail development as would be provided by Alternative B. A retail park would undermine and reduce the viability of the existing retail offering in the town centre.
	Site to the north west of the N51/R132 roundabout <b>C. Do not include in the settlement plan boundary</b>	There is a planning need identified for Tourism and Leisure Uses on an adequately sized site. Although the development of such a site would have potential adverse impacts, it would contribute to the overall sustainable development and available service offering in Drogheda. Although this site is removed from the existing development envelope, it is adjacent to planned residential uses in an area where there is limited services available.
Ardee (Set 1)	<b>Zoning for sites in the north of the settlement:</b> <b>A. New Residential for eastern site (with open space provided in flood areas), Strategic Reserve for western site</b>	Alternative A provides for sequential development of the town and is better linked than Alternative B to and from the existing town centre and development envelope.
	Zoning for sites in the north of the settlement: <b>B. Strategic Reserve for eastern site (with open space provided in flood areas), New Residential for western site</b>	Alternative B does not provide for sequential development of the town and is not linked as well as Alternative A to and from the existing town centre and development envelope.
Dunleer (Set 1)	<b>General Employment Zoning:</b> <b>A. Site adjoining the south west of the existing settlement envelope</b>	This is adjacent to the Motorway providing the potential for easy and efficient access. Employment uses are appropriate to this location which is likely to experience elevated levels of noise.
	General Employment Zoning: <b>B. Site adjoining the north east of the existing settlement envelope</b>	This site is further out from the town centre and more detached from the Motorway.
Baltray (Set 1)	<b>A. Sites (within Flood Zone A) along the Boyne Estuary zoned as New Residential</b>	New Residential would be an inappropriate use for these lands and would be unlikely to be in compliance with the Flood Risk Management Guidelines. Due to the elevated flood risk, the development of this site would be hindered and development pressures may present elsewhere in the County, on less well-serviced, less-well connected, more sensitive lands.
	<b>B. Sites (within Flood Zone A) along the Boyne Estuary zoned as Open Space</b>	Open Space would be an appropriate use for these lands and would be in compliance with the Flood Risk Management Guidelines. New Residential lands could be zoned elsewhere in the settlement on lands with low levels of flood risk. Such residential development would reduce the need for development elsewhere in the County, on less well-serviced, less-well connected, more sensitive lands.
Carlingford (Set 1)	<b>A. Site (within Flood Zone A) along Carlingford Lough zoned as New Residential</b>	New Residential would be an inappropriate use for these lands and would be unlikely to be in compliance with the Flood Risk Management Guidelines. Due to the elevated flood risk, the development of this site would be hindered and development pressures may present elsewhere in the County, on less well-serviced, less-well connected, more sensitive lands.
	<b>B. Site (within Flood Zone A) along Carlingford Lough zoned as Open Space</b>	Open Space would be an appropriate use for these lands and would be in compliance with the Flood Risk Management Guidelines. New Residential lands could be zoned elsewhere in the settlement on lands with low levels of flood risk. Such residential development would reduce the need for development elsewhere in the County, on less well-serviced, less-well connected, more sensitive lands.
Clogherhead (Set 1)	<b>General Employment Zoning:</b> <b>A. Site adjoining the west of the existing settlement envelope</b>	Site Alternative A has less sensitivities than site alternative B – including flood risk, ecological and visual sensitivities.
	<b>B. Site adjoining the south of the existing settlement envelope and coast</b>	Site Alternative B has more sensitivities than site alternative A – including flood risk, ecological and visual sensitivities.
Tallanstown (Set 1)	<b>A. Site (within Flood Zone A) adjacent to centre zoned as New Residential</b>	New Residential would be an inappropriate use for these lands and would be unlikely to be in compliance with the Flood Risk Management Guidelines. Due to the elevated flood risk, the development of this site would be hindered and development pressures may present elsewhere in the County, on less well-serviced, less-well connected, more sensitive lands.
	<b>B. Site (within Flood Zone A) adjacent to centre zoned as Open Space</b>	Open Space would be an appropriate use for these lands and would be in compliance with the Flood Risk Management Guidelines. New Residential lands could be zoned elsewhere in the settlement on lands with low levels of flood risk. Such residential development would reduce the need for development elsewhere in the County, on less well-serviced, less-well connected, more sensitive lands.

## **Section 5 Summary of Effects arising from Plan**

Louth County Council have integrated various recommendations arising from the SEA, AA and SFRA processes into the Plan (see Section 6). Table 5.1 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, taking into account mitigation through both provisions integrated into the Plan.

The Plan, considered as a whole, contributes towards environmental protection and management and sustainable development and complies with various legislative requirements. This is identified throughout the SEA documentation.

Various Plan provisions that would contribute towards the sustainable development of the County would, at the same time, have the potential to conflict with the environment, were mitigation measures not taken into account. This is normal and mitigation measures have been integrated into the Plan to deal with these potential effects.

However, a small number of provisions have been adopted by the Elected Members as part of the Plan that are internally inconsistent with the overall approach provided for by the Plan. These provisions are identified in the main SEA Environmental Report and include those relating to land use zoning objectives and rural housing policy that would present unnecessary and elevated potential for significant adverse environmental effects.

**Table 5.1 Overall Evaluation (including Transboundary) – Effects arising from the Plan**

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 Eastern and Midland 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 <b>within and adjacent to the County's settlements</b>) 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, Wildlife Sites and Areas of Special Scientific Interest) 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 Natural Heritage areas) 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			SEO Codes
	Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP 2018, the Eastern and Midland 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>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 <b>County's settlements</b>) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-served lands elsewhere in the County and beyond</li> <li>Contribution towards the protection of human health by facilitating development of lands (including those <b>within and adjacent to the County's settlements</b>) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-served lands elsewhere in the County and beyond.</li> <li>Contributes towards protection of human health as a result of contributing towards the protection of natural capital including environmental vectors, including air and water.</li> </ul>	<ul style="list-style-type: none"> <li>Potential adverse effects arising from flood events.</li> <li>Potential interactions if effects arising from environmental vectors.</li> </ul>	<ul style="list-style-type: none"> <li>Potential interactions with residual effects on environmental vectors – please refer to residual adverse effects under "Soil", "Water" and "Air and Climatic Factors" below.</li> </ul>	<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 <b>County's settlements</b>) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-served lands elsewhere in the County and beyond.</li> <li>Contribution towards the protection of the environment from contamination the highest standards of remediation, and where appropriate 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 and coastal 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> </ul>	<b>S</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 Eastern and Midland 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 <b>within and adjacent to the County's settlements</b>) 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 <b>County's settlements</b>) 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 energy efficient buildings, retrofitting, smart buildings, cities and grids.</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 agricultural waste and soil, water, biodiversity and human health – including as a result of emissions of ammonia from agricultural activities (e.g. manure handling, storage and spreading) 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.</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 Eastern and Midland 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>Sectors including agriculture, residential heating and infrastructure;</li> <li>Sustainable infrastructure design solutions including energy efficient buildings; green 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.</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>	Potential effects on protected and unknown archaeology <sup>14</sup> and protected architecture <sup>15</sup> arising from construction and operation activities.	<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>

<sup>14</sup> As identified in the Plan, archaeological heritage encompasses designated and unknown archaeological heritage including entries to the Record of Monuments and Places, underwater archaeology, entries to the Northern Ireland Sites and Monuments Record and Northern Ireland Areas of Significant Archaeological Interest and Archaeological Potential. Also encompassed are intervisibility and interrelationships between archaeological heritage within the wider landscape, including cross-border intervisibility and interrelationships.

<sup>15</sup> As identified in the Plan, architectural heritage encompasses that which is designated or included within the National Inventory of Architectural Heritage (NIAH), NIAH Historic Gardens and Designed Landscapes, Records of Protected Structures and Northern Ireland's Listed Buildings and Northern Ireland's Historic Parks, Gardens and Demesnes. Also encompassed are intervisibility and interrelationships between architectural heritage within the wider landscape, including cross-border intervisibility and interrelationships.

## 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, AA and 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>16</sup>;
- Considering alternatives for the Plan<sup>17</sup>;
- Integration of environmental considerations into zoning provisions of the Plan<sup>18</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.

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<sup>16</sup> Far in advance of both the submission of the pre-Draft Plan to the Elected Members for approval and the placing of the Draft Plan on public display, Louth County Council undertook various works 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, including:

- Strategic Environmental Assessment;
- Appropriate Assessment;
- Strategic Flood Risk Assessment;
- Core Strategy;
- Housing Strategy;
- Retail Strategy;
- Infrastructure Strategy;
- Green Infrastructure Strategy;
- Record of Protected Structures and Architectural Conservation Areas;
- Landscape Designations;
- Economic Development;
- Energy and Utilities;
- Climate Action; and
- Movement

<sup>17</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>18</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 Eastern and Midland RSES. 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 high flood risk. Various provisions have been inserted into the Plan which provide for flood risk 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	SEO Code	Indicators	Targets	Sources	Remedial Action
<b>Biodiversity, Flora and Fauna</b>	<b>BFF</b>	<ul style="list-style-type: none"> <li>Condition of European sites</li> <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</li> <li>SEA and AA as relevant for new Council policies, plans, programmes etc.</li> <li><b>Status of water quality in the County's water bodies</b></li> <li>Compliance of planning permissions with Plan measures providing for the protection of Biodiversity and flora and fauna – see Chapter 8 “Natural Heritage, Biodiversity and Green Infrastructure”</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, Louth Heritage Plan and the Louth Biodiversity Plan</li> <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 8 “Natural Heritage, Biodiversity and Green Infrastructure”</li> </ul>	<ul style="list-style-type: none"> <li>Department of Housing, Local Government and Heritage report of the implementation of the measures contained in the Habitats Directive - as required by Article 17 of the Directive (every 6 years).</li> <li>Department of Housing, Local Government and Heritage National Monitoring Report for the Birds Directive under Article 12 (every 3 years)</li> <li>Internal monitoring of preparation of local land use plans</li> <li>Internal monitoring of likely significant environmental effects of grants of permission (grant by grant).</li> <li>Consultations with the NPWS (at monitoring evaluation)</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 DCHG (and the DHLGH for 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 water bodies are failing to meet at least good status this will be investigated with the DHLGH Water Section, the Regional Assembly, the EPA Catchment Unit 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> </ul>
<b>Population and Human Health</b>	<b>PHH</b>	<ul style="list-style-type: none"> <li>Implementation of Plan measures relating to the promotion of economic growth as provided for by Chapter 5 “Economy and Employment”</li> <li>Number of spatial concentrations of health problems arising from environmental factors resulting from development permitted under the Plan</li> <li>Proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures</li> <li>Number of spatial plans that include specific green infrastructure mapping</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 5 “Economy and Employment”</li> <li>No spatial concentrations of health problems arising from environmental factors as a result of implementing the Plan</li> <li>Increase in the proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures.</li> <li>Implementation of Green Infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>Internal review of progress on implementing Plan objectives</li> <li>Consultations with the Health Service Executive and EPA</li> <li>CSO data</li> <li>Internal monitoring of preparation of local land use plans</li> </ul>	<ul style="list-style-type: none"> <li>Where planning applications in key growth towns are rejected due to insufficient capacity in the waste water treatment plant or failure of the waste water treatment plant to meet Emission Limit Values, the Council will contribute towards a response with the Regional Assembly, EPA and Irish Water to achieve the necessary capacity.</li> <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, DCCAE and NTA to develop a tailored response.</li> </ul>
<b>Soil (and Land)</b>	<b>S</b>	<ul style="list-style-type: none"> <li>Proportion of population growth occurring on infill and brownfield lands compared to greenfield</li> <li>Volume of contaminated material generated from brownfield and infill development</li> <li>Number of AA determinations and environmental assessments undertaken to support applications for brownfield and infill development prior to planning permission</li> </ul>	<ul style="list-style-type: none"> <li>Maintain built surface cover nationally to below the EU average of 4%.</li> <li>Achieve the 40% target for growth on infill as per NPF.</li> </ul>	<ul style="list-style-type: none"> <li>Environmental Protection Agency (EPA), Geoportal</li> <li>Internal monitoring of likely significant environmental effects of grants of permission (grant by grant)</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>
<b>Water</b>	<b>W</b>	<ul style="list-style-type: none"> <li>Status of water bodies as reported by the EPA Water Monitoring Programme for the WFD</li> <li>Indicators for descriptors as reported under Article 11 of the Marine Strategy Framework Directive</li> <li>Number of incompatible developments permitted within flood risk areas</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 second cycle of the River Basin Management Plan by 2021 (and subsequent iterations as relevant)</li> <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>EPA Monitoring Programme for WFD compliance</li> <li>Internal monitoring of likely significant environmental effects of grants of permission (grant by grant)</li> <li>Department of Housing, Planning and Local Government, Marine and Foreshore Section</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 marine water bodies are failing to meet good ecological status this will be interrogated with the Marine Institute, the DHLGH Water Section and the Regional Assembly to establish if the pressures are related to Plan actions/activities. A tailored response will be</li> </ul>

SEA Environmental Report Appendix III: Non-Technical Summary

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
					<p>developed in consultation with these stakeholders in such a circumstance.</p> <ul style="list-style-type: none"> <li>Where planning applications in key growth towns are rejected due to insufficient capacity in the Waste water treatment Plant or failure of the plant to meet Emission Limit Values, the Eastern and Midland Regional Assembly will coordinate a response between the relevant local authority, EPA and Irish Water to achieve the necessary capacity.</li> <li>The Council will engage, as relevant, with the Eastern and Midland Regional Assembly and the OPW with respect to planning applications for development in areas of elevated flood risk.</li> </ul>
<b>Material Assets</b>	<b>MA</b>	<ul style="list-style-type: none"> <li>Programmed delivery of Irish Water infrastructure for all key growth towns in line with Irish Water Investment Plan and prioritisation programme to ensure sustainable growth can be accommodated</li> <li>Number of new developments granted permission which can be adequately and appropriately served with waste water treatment over the lifetime of the Plan</li> <li>Proportion of population within who report regular cycling / walking to school and work above 2016 CSO figures</li> </ul>	<ul style="list-style-type: none"> <li>To map brownfield and infill land parcels across the County.</li> <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>Increased budget spends on water and waste water infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>Internal monitoring of likely significant environmental effects of grants of permission (grant by grant)</li> <li>CSO data</li> <li>Consultations with Irish Water (at monitoring evaluation)</li> <li>Department of Housing, Planning and Local Government in conjunction with Local Authorities</li> <li>Department of Environment, Climate and Communications</li> <li>Department of Public Expenditure and Reform</li> </ul>	<ul style="list-style-type: none"> <li>Where planning applications in key growth towns are rejected due to insufficient capacity in the waste water treatment plant or failure of the waste water treatment plant to meet Emission Limit Values, the Council will coordinate a response between the Regional Assembly, EPA and Irish Water to achieve the necessary capacity.</li> <li>Where proportion of population shows increase in private car use above CSO 2016 figures, the Council will coordinate with the Regional Assembly, DHLGH and NTA to develop a tailored response.</li> </ul>
<b>Air</b>	<b>A</b>	<ul style="list-style-type: none"> <li>Proportion of journeys made by private fossil fuel-based car compared to 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 <b>private fossil fuel-based car compared to 2016 National Travel Survey levels.</b></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, Transport Trends and Department of Environment, Climate and Communications (at monitoring evaluation)</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, DCCAE and NTA to develop a tailored response. See also entry under Population and human health above</li> </ul>
<b>Climatic Factors</b>	<b>C</b>	<ul style="list-style-type: none"> <li>Implementation of Plan measures relating to climate reduction targets as provided for by Plan provisions including those provided for and referenced in Chapter 12 “Climate Action”</li> <li>Proportion of journeys made by private fossil fuel-based car compared to 2016 levels</li> <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>For review of progress on implementing Plan objectives to demonstrate successful implementation of measures climate reduction targets as provided for by Plan provisions including those provided for and referenced in <b>Chapter 12 “Climate Action”</b></li> <li>Increase in the proportion of people resident in the County reporting regular cycling / walking to school and work above 2016 CSO figures</li> <li>Decrease in the proportion of journeys made by residents of the County using private fossil fuel-based car compared to 2016 levels</li> <li>Contribute towards transition to a competitive, <b>low-carbon, climate-resilient and environmentally sustainable economy by 2050</b></li> <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 2020</li> <li>Contribute towards the target of aggregate</li> </ul>	<ul style="list-style-type: none"> <li>EPA Annual National Greenhouse Gas Emissions Inventory reporting</li> <li>Climate Action Regional Office</li> <li>Consultations with Department of Environment, Climate and Communications (at monitoring evaluation)</li> <li>CSO data</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 to establish reasons and develop solutions</li> <li>Where proportion of population shows increase in private car use above CSO 2016 figures, the Council will coordinate with the Regional Assembly, DHLGH and NTA to develop a tailored response</li> </ul>

SEA Environmental Report Appendix III: Non-Technical Summary

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
			<p>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</p> <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>		
<b>Cultural Heritage</b>	<b>CH</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> <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 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> <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>Internal monitoring of likely significant environmental effects of grants of permission (grant by grant)</li> <li>Consultation with Department of Housing, Local Government and Heritage (at monitoring evaluation).</li> </ul>	<ul style="list-style-type: none"> <li>Where monitoring reveals visitor pressure is causing negative effects on key tourist features, the Council will work with Regional Assembly, Fáilte Ireland and other stakeholders to address the pressures through additional mitigation</li> </ul>
<b>Landscape</b>	<b>L</b>	<ul style="list-style-type: none"> <li>Number of developments permitted which result in avoidable adverse visual impacts on the landscape, especially with regard to landscape and amenity designations included in Land Use Plans, resulting from development which is granted permission under the Plan</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 and amenity designations included in Land Use Plans, 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 (grant by grant)</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>