

SEA ENVIRONMENTAL REPORT

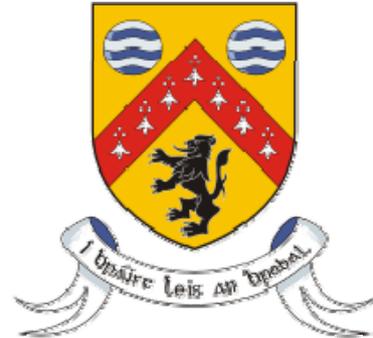
APPENDIX IV – NON-TECHNICAL SUMMARY

FOR
RELEVANT PROPOSED MATERIAL ALTERATIONS
TO THE

**DRAFT LAOIS
COUNTY DEVELOPMENT PLAN 2021-2027**

for: Laois County Council

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Section 1 Introduction and Terms of Reference

This is the Non-Technical Summary of the Environmental Report for relevant Proposed Material Alterations to the Draft Laois 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 Proposed Material Alterations. The Environmental Report has been prepared as part of a Strategic Environmental Assessment (SEA) process for the Proposed Material Alterations.

The Proposed Material Alterations were screened for the need to undertake SEA. Certain Proposed Material Alterations were determined as requiring full SEA. The SEA Screening Determination accompanies the SEA Environmental Report and the Proposed Material Alterations document. Appendix III to the SEA Environmental Report comprises the SEA Screening Report that was prepared to inform the SEA Screening Determination.

This SEA Environmental Report provides the findings of the assessment and will be placed on public display alongside the Proposed Material Alterations. The Elected Members will be required to take account of this document, the Proposed Material Alterations and any submissions received on these after public display.

The SEA is being undertaken in order to comply with Section 12 of the Planning and Development Act, as amended.

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 for the Draft Plan provided the planning authority and the public a guide to what are generally the best areas for development in the County.

SEA enables the planning authority to direct development towards robust, well-serviced and connected areas in the County – thereby facilitating the general avoidance of incompatible areas in the most sensitive, least well-serviced and least well-connected areas. Compact development can be accompanied by placemaking initiatives to enable the County's towns and villages to become more desirable places to live – so that they maintain and improve services to existing and future communities.

SEA enables requirements relating to environmental protection and management to be integrated into the Plan so that compatible sustainable development in the County's sensitive areas is also facilitated.

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

An overlay of environmental sensitivities in County Laois is shown on Figure 1.1.

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

The most sensitive areas in the County include:

- Those areas in the north east of the County, concentrated around the Slieve Bloom Mountain Area Landscape Character Area. This is due to a variety of overlapping and related factors including soil type (peat), landscape value and ecological designations.

- Those areas along the banks of the County's various rivers - including the Rivers Nore and Barrow - due to water status, ecological, flood and visual sensitivities.
- Those areas in the south of the County within catchments designated for freshwater pearl mussel and within Hills and Uplands Landscape Character Area.

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 Draft Plan.

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

What happens at the end of the process?

The SEA Environmental Report prepared for the Draft Plan will be finalised in advance of adoption of the Plan taking into account, among other things, the content of the SEA Environmental Report for the Proposed Material Alterations to which this Non-Technical Summary relates. An SEA Statement will also be prepared which will summarise, inter alia, how environmental considerations have been integrated into the Plan.

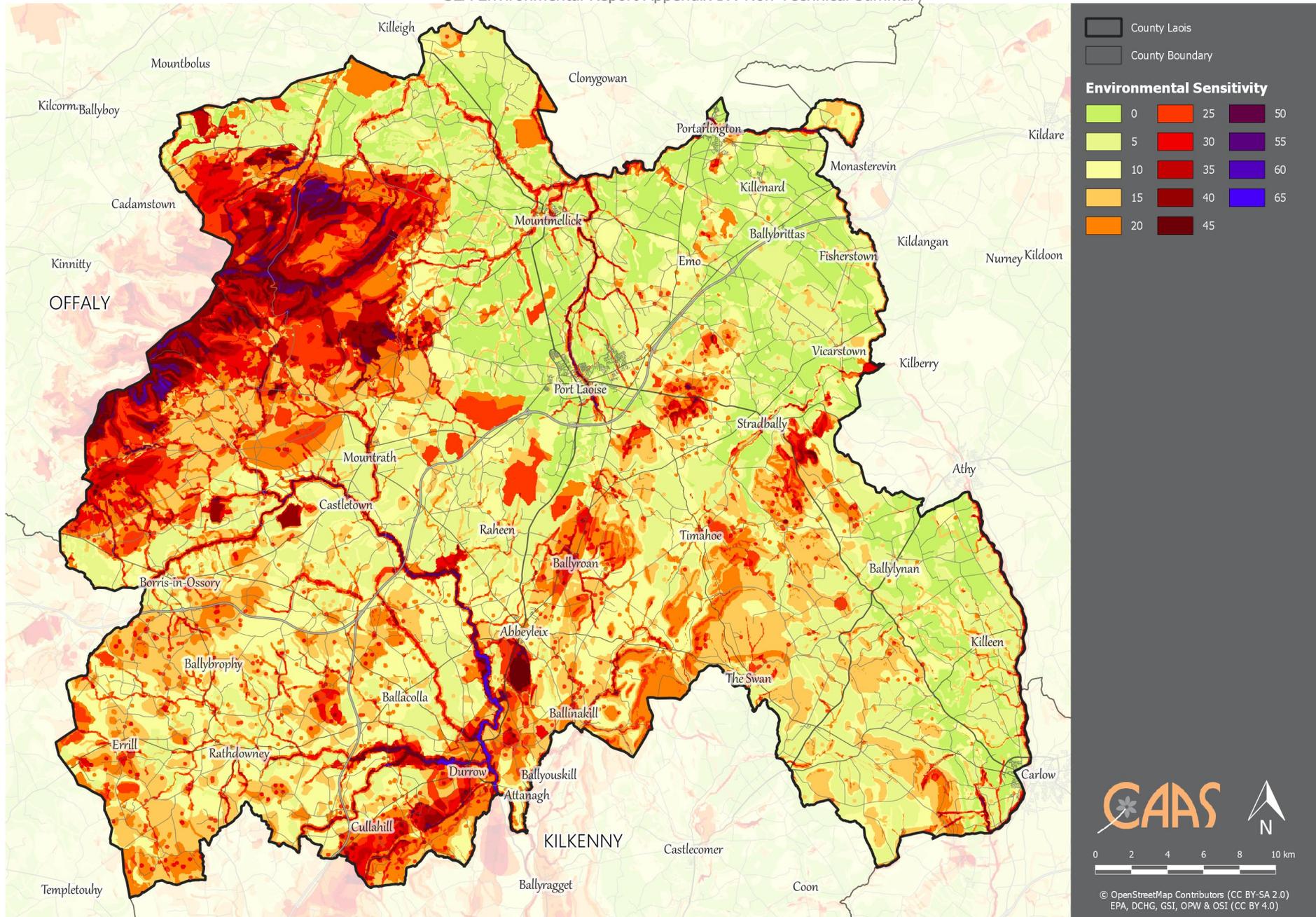


Figure 1.1 Environmental Sensitivities that the County Development Plan directs incompatible development away from

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Section 2 The Draft Plan and associated Proposed Material Alterations

2.1 Introduction

The Laois County Development Plan is a land use plan and overall strategy for the proper planning and sustainable development of the functional area of County Laois 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.

2.2 Content of the Draft Plan

The Draft, to which the Proposed Material Alterations relate, Plan consists of a written document with supporting appendices and maps, as set out in the table of contents. There are three Volumes, accompanied by Appendices, contained in the Plan:

- Volume 1: The Written Statement which comprises of 14 Chapters, providing policy objectives for each Chapter as follows:
 1. Introduction
 2. Core and Settlement Strategy
 3. Climate Change
 4. Housing
 5. Quality of Life
 6. Economic Development
 7. Retail
 8. Tourism
 9. Rural Laois
 10. Infrastructure
 11. Biodiversity and Natural Heritage
 12. Built and Cultural Heritage
 13. General Location and Pattern of Development
 14. Implementation of Monitoring
- Volume 2: Written Statements and maps for the settlements within the County which have been categorised as Self-Sustaining Growth towns, Self-Sustaining towns, towns and villages and rural areas.
- Volume 3: The SEA Environmental Report, the, AA Natura Impact Report and the SFRA Report.

2.3 Overall Vision and Aims

The Vision of the Plan is:

"To improve the quality of life for all citizens in County Laois by creating sustainable communities and an environment that supports a vibrant, growing and well connected economy, making it a County where people want to live, work, visit and do business, without compromising the environmental integrity of the county."

In order to achieve this Vision, the County Development Plan has the following Objectives:

- To provide a framework for the future sustainable development of the county, defining acceptable forms of development and where they should be directed;
- To support and facilitate and promote a transition to a low carbon society;
- To provide a detailed basis for the promotion and management of development;
- To implement National and Regional development policy provisions at a county level;
- To promote and assist Laois's economic development opportunity and encourage increased resilience in the County's enterprise.

2.4 Strategic Aims

The Strategic Aims for the Plan set out by Laois County Council are as follows:

- I. To guide the future development of Laois in line with national and regional objectives set out in the NPF and RSES and other national guidelines and policies;
- II. To promote and facilitate the development of the County in accordance with the provisions of the Core Strategy, including directing development in line with the settlement hierarchy and promoting development at an appropriate scale that is reflective of the terms of the Core Strategy Table and zoning maps.
- III. To apply the Settlement Hierarchy to determine the scale, rate and location of proposed developments and apply appropriate development management measures to ensure compliance with the Settlement Hierarchy including the population targets for the County.
- IV. To promote the delivery of at least 30% of all new homes that are targeted in settlements within their existing built-up footprints;
- V. To ensure that development is promoted, supported or facilitated through the Laois County Development Plan that provides for climate action including the increased risk of flooding and the promotion of sustainable transport options and renewable energy where possible in order to achieve a successful transition to a low carbon economy;
- VI. To support the achievement of more self-sustaining towns and villages through residential and employment opportunities together with supporting social and community facilities
- VII. To monitor and maintain a record of residential development permitted in settlements designated under the Settlement Hierarchy in order to ensure compliance with the population allocations defined by the Core Strategy and to adjust the approach to permitting development proposals in instances where Core Strategy objectives are not being met.

2.5 Proposed Material Alterations

The Proposed Material Alterations are outlined in detail in the accompanying Proposed Material Alteration document. The "Alteration References" provided in this report can be used to locate this detail in the accompanying Proposed Material Alteration document.

Alterations proposed include those relating to maps, including land use zoning, and text.

The Proposed Material Alterations were screened for the need to undertake SEA and the alterations below were determined as requiring full SEA. The SEA Screening Determination accompanies this SEA Environmental Report and the Proposed Material Alterations document. Appendix III to this SEA Environmental Report comprises the SEA Screening Report that was prepared to inform the Determination. Proposed Material Alterations requiring SEA and consideration in this SEA Environmental Report¹ are as follows:

Alteration No.	Alteration No.
Volume 1 Amendments:	Volume 2 Zoning Amendments:
2.10	Zoning Amendment No. 85
3.8	Zoning Amendment No. 86
3.12	Zoning Amendment No. 87
3.20	Zoning Amendment No. 88
3.23	Zoning Amendment No. 89
3.35	Zoning Amendment No. 90
4.7	Zoning Amendment No. 91
5.21	Zoning Amendment No. 92
8.16	Zoning Amendment No. 93
9.4	Zoning Amendment No. 96
9.5	Other Volume 2 Amendments:
9.6	Stradbally – 1.1
11.6	Castletown – 1.1
11.16	Coolrain – 1.1
11.17	Amendments to Appendix 1 – RPS:
11.18	Appendix 1 - RPS 1.1

¹ For detail please refer to Proposed Material Alterations document.

2.6 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, Laois 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 (SEA); Appropriate Assessment (AA)²; and Strategic Flood Risk Assessment (SFRA)³.

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 summarised in Section 6 of this report.

2.7 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 Draft Plan, to which the Proposed Material Alterations relate, 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 for the next 22 years. 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 Draft 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 will, 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.

² Appropriate Assessment (AA) Screening and Stage 2 AA are being undertaken alongside the Plan and Proposed Material Alterations. The requirement for AA is provided under the EU Habitats Directive (Directive 1992/43/EEC). The emerging conclusion of the AA is that the Plan will not affect the integrity of the European Sites, alone or in combination with other plans or projects (subject to exceptions). The Proposed Material Alterations are accompanied by an AA Natura Impact Report, which has informed this SEA Environmental Report.

³ SFRA is being undertaken to inform the preparation of the Draft Plan and the Proposed Material Alterations. The SFRA process has informed this report. The SFRA has considered the Proposed Material Alterations and finds that all Proposed Material Alterations, comply with "The Planning System and Flood Risk Management Guidelines for Planning Authorities" (DEHLG/OPW, 2009).

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 Draft Plan and in order to determine appropriate monitoring measures.

3.2 Likely Evolution of the Environment in the Absence of the Draft Plan and associated Proposed Material Alterations

In the absence of a new Plan it is uncertain how permission for new development would be applied for and considered.

The 2017-2023 Plan has contributed towards environmental protection within County Laois. If the 2017-2023 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 Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance to biodiversity and flora and fauna;
 - Habitat loss, fragmentation and deterioration, including patch size and edge effects; and
 - Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species such as birds and bats.
- Potential 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 erosion.
- Potential adverse effects upon the status of water bodies and entries to the WFD Register of Protected Areas (ecological and human value), arising from changes in quality, flow and/or morphology.
- Increase in flood risk and associated effects associated with flood events.
- Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity ensures the mitigation of potential conflicts).
- Failure to adequately treat surface water run-off that is discharged to water bodies (water services infrastructure and capacity ensures the mitigation of potential conflicts).
- Failure to comply with drinking water regulations and serve new development with adequate drinking water (water services infrastructure and capacity ensures the mitigation of potential conflicts).
- Increases in waste levels.
- Potential impacts upon public assets and infrastructure.
- Interactions between agriculture and soil, water, biodiversity and human health – including phosphorous and nitrogen deposition as a result of agricultural activities and the production of secondary inorganic particulate matter.
- Potential conflict between development under the Plan and aiming to reduce carbon emissions in line with local, national and European environmental objectives.
- Potential conflicts between transport emissions, including those from cars, and air quality.
- Potential conflicts between increased frequency of noise emissions and protection of sensitive receptors.
- Potential conflicts with climate adaptation measures including those relating to flood risk management.
- Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities.
- Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape.

3.3 Biodiversity and Flora and Fauna

Ecological sensitivities in County Laois include peatlands, lakes, canals, woodlands, wetlands, grasslands, eskers and hedgerows. These habitats support a variety of species and ecosystems that contribute to the biodiversity of County Laois.

Designated sites within the County include Special Areas of Conservation⁴ (SACs) and Special Protection Areas⁵ (SPAs). These are mapped on Figure 3.1. There are eight SACs and two SPAs designated within or partially within the County, including: Ballyprior Grassland SAC; Clonaslee Eskers and Derry Bog SAC; Coolrain Bog SAC; Knockacoller Bog SAC; Lisbigney Bog SAC; Mountmellick SAC; River Barrow and River Nore SAC; Slieve Bloom Mountains SAC; River Nore SPA; and Slieve Bloom Mountains SPA.

Other ecological designations occur within and adjacent to the County and these are detailed in the main SEA Environmental Report.

CORINE⁶ land cover mapping for the County is shown on Figure 3.2. The most dominant land cover type is pastures. There is also a concentration of peatlands in upland areas, mainly in the north-west of the County. Categories from CORINE mapping that may indicate areas with the potential for Annex I habitats include: peat bogs; natural grassland; water bodies; mixed forests; coniferous forest; broad-leaved forest; inland marshes; moors and heaths; complex cultivated patterns; non-irrigated land; pastures; 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.

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.

⁴ 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.

⁵ 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.

⁶ 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.

3.4 Population and Human Health

In the 2016 Census the total population of County Laois was identified as being 84,697 persons, showing an increase in total population of c. 5.1% (4,138 persons) since the previous Census.

The population of County Laois is estimated to increase further, up to 92,500-94,400 persons by 2026 and 95,500-97,500 persons by 2031, as set out by the NPF and RSES for Eastern and Midland Region.

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

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

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

Existing Problems

There is historic and predictive evidence of flooding in various locations across the County.

The greatest health risk from radiation in Ireland is caused by radon. The presence of radon gas, a naturally occurring radioactive gas that originates from the decay of uranium in rocks and soils, occurs across the country. The number of homes within the County with radon levels above the reference level is within the normal range experienced in other locations across the country.

3.5 Soil

Luvisols⁷ and groundwater gleys⁸ are the two most dominant soil types across the Plan area. Other soil types identified include:

- Alluvial soils⁹ (in the flood plains of rivers and streams);
- Brown podzol¹⁰ (in the Slieve Bloom Mountains, west of the Plan area);
- Surface Water Gleys (mainly in depressions in the upper reaches of river valleys in both uplands and lowlands);
- Brown earths¹¹ (mainly in small areas in the centre and the south of the Plan area);
- Rendzina¹² (mainly in the east of the Plan area); and
- Podzol¹³ (mainly in the north-west of the Plan area).

Active blanket bogs and active raised bogs are considered to be priority habitats, listed on Annex I of the EU Habitats Directive. Peat soils are often indicative of areas that are the most sensitive to development due to ecological sensitivities and impeded drainage issues. Many of these peat areas are also subject to ecological designations. The ombrotrophic (rain-fed) peat soils occur mainly in the upland locations in the north and north-west of the County.

The Geological Survey of Ireland audit of County Geological Sites in County Laois (completed in 2016) located 33 County Geological Sites occurring throughout County Laois. These sites include quarries, springs, eskers and caves.

⁷ Luvisol soils are generally fertile, widely used for agriculture and associated with significant accumulation of clay.

⁸ Surface water gleys and groundwater gleys are wetland soils with slowly permeable horizons resulting in seasonal waterlogging.

⁹ These are associated with alluvial (clay, silt or sand) river deposits.

¹⁰ Brown podzol soils are characterised by dark brown humus-mineral soil covered with a thin mat of partly decayed leaves.

¹¹ Brown earths are well drained mineral soils, associated with high levels of natural fertility.

¹² Rendzina soils are shallow calcareous soils with hard rock or skeletal material comprising coarse fragments.

¹³ Infertile acidic soils with an ash-like subsurface layer associated with acid leaching typically formed under coniferous forest.

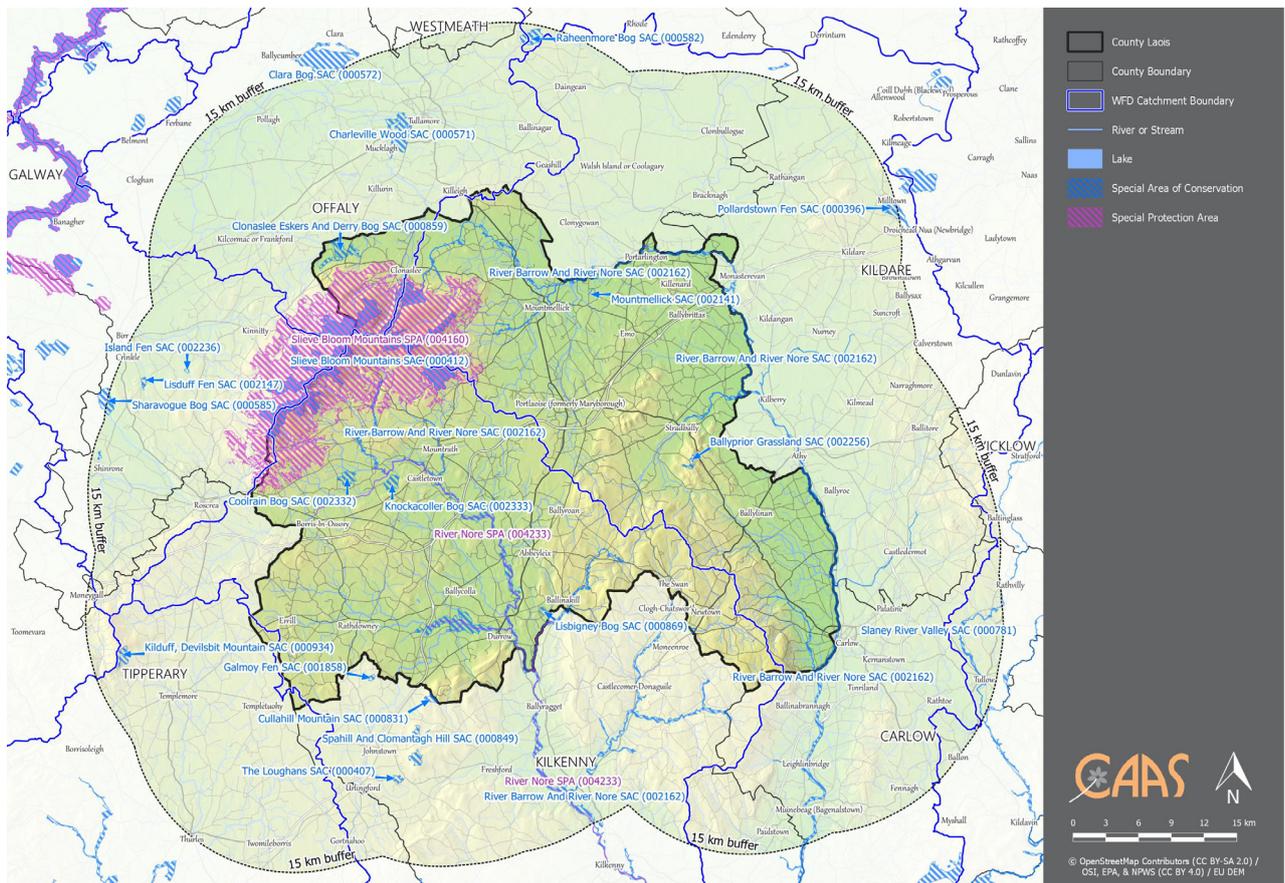


Figure 3.1 European sites within and within 15 km of the County

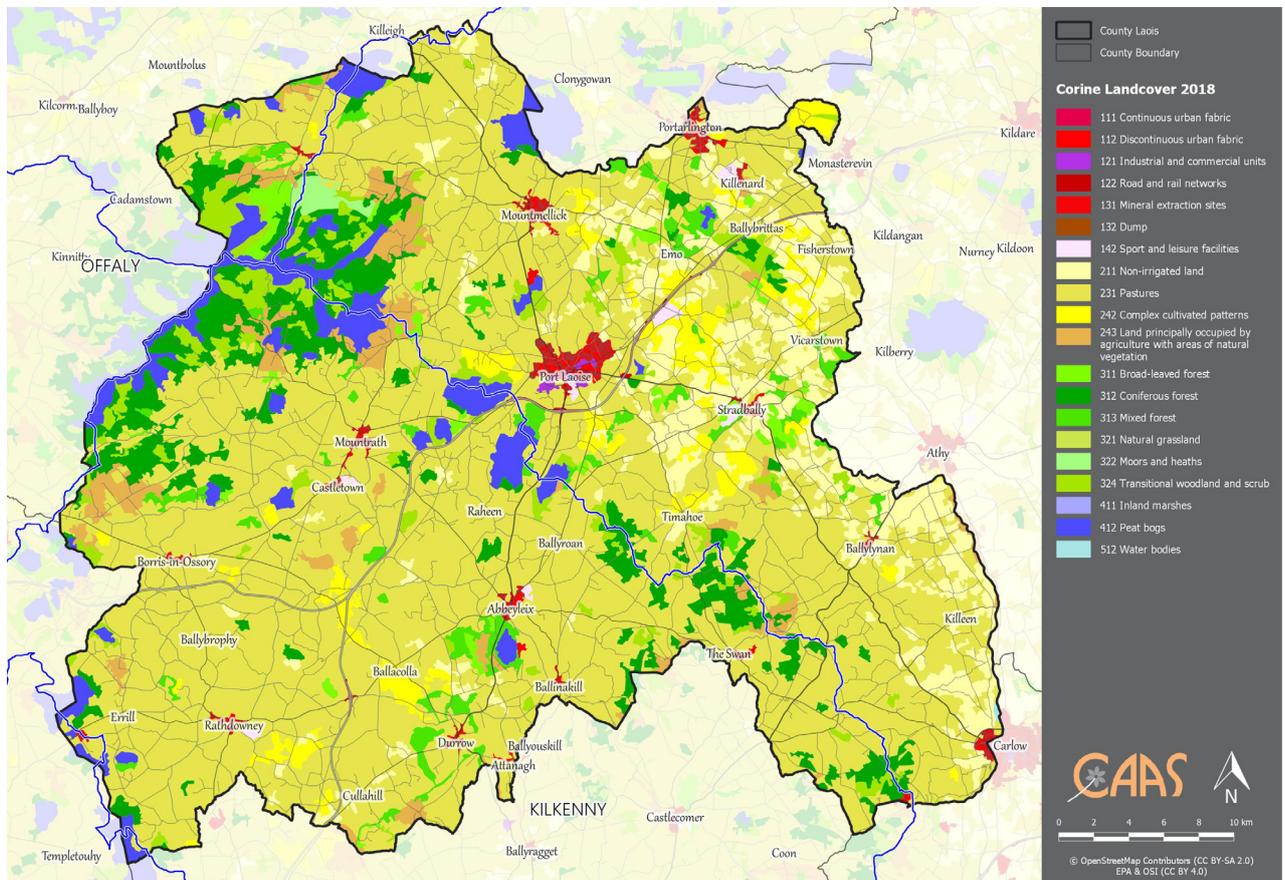


Figure 3.2 CORINE Land Cover Mapping 2018

3.7 Air and Climatic Factors

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

The National Climate Action Plan 2019 is an all of Government plan to tackle climate change and bring about a step change in Ireland's climate ambition over the coming years. The plan sets out an ambitious course of action over the coming years to address the diverse and wide-ranging impacts climate disruption is having on Ireland's environment, society, economic and natural resources. The Climate Action Plan sets out clear 2030 targets for each sector with the ultimate objective of achieving a transition to a competitive, low-carbon, climate-resilient, and environmentally sustainable society and economy by 2050. The Action Plan deals with both mitigation and adaptation.

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

The Climate Change Advisory Council's Annual Review 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.

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

The National Adaptation Framework Department of Communications, Climate Action and Environment, 2018), sets out the national strategy to reduce the vulnerability of the country to the negative effects of climate change and to avail of positive impacts. The National Adaptation Framework outlines a whole of government and society approach to climate adaptation. Under the Framework, a number of Government Departments will be required to prepare sectoral adaptation plans in relation to a priority area that they are responsible for.

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

- Air quality in Ireland is generally good however there are localised issues;
- Ireland was above World Health Organization air quality guideline value levels at 33 monitoring sites – mostly due to the burning of solid fuel in cities, towns and villages; and
- There was one exceedance of the EU annual average legal limit values in 2019 at one urban traffic station (in Dublin) due to pollution from transport.

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 current¹⁶ air quality within the Plan area (Rural East and Small Towns Air Quality Index Regions) 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) 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; public buildings

¹⁶ 09/11/2020 (<http://www.epa.ie/air/quality/>)
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and services; transport and utility infrastructure (electricity, gas, telecommunications, water supply, wastewater infrastructure etc.); forestry; and natural resources that are covered under other topics such as water and soil.

Waste Water

There are currently 14 licenced wastewater treatment plants in Laois. Monitoring of the treated effluent from the plants is carried out as required in accordance with the Urban Wastewater Treatment Directive and conditions of the Discharge Licences and Certificates of Authorisation issued by the Environmental Protection Agency.

Irish Water has provided the Wastewater Treatment Capacity Register to assist the Council in the preparation of the new County Development Plan by indicating where there may be wastewater treatment capacity available to accommodate growth ("headroom") in terms of population equivalent (PE) in each settlement serviced by a public wastewater treatment plant. Spare treatment capacity is available now in most of these settlements, except for Ballyroan.

Currently, there are three Wastewater Treatment Plants (WWTPs) in County Laois servicing urban areas that are listed as Priority Areas, where improvements are required to resolve urgent environmental issues with respect to wastewater treatment: Ballyroan; Castletown; and Portarlinton. Portarlinton is identified as an area where wastewater discharges are the sole significant pressure on water bodies (Barrow) at risk of pollution. Ballyroan and Castletown are identified as areas where wastewater treatment must improve to protect freshwater pearl mussels, or where the EPA awaits confirmation that recent improvement works were successful.

Water Supply

Irish Water is responsible for providing and maintaining adequate public water supply infrastructure throughout the County. Public drinking water in County Laois is supplied through of 28 Public Water Supply (PWS) Schemes supplying drinking water to 14 towns, seven villages, a number of small rural settlements and rural areas. 98.5% of all Laois water comes from groundwater.

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 Abbeyleix 1 Public Water Supply is listed on the most recent EPA RAL (Q3 of 2020) due to inadequate treatment for cryptosporidium. This Water Supply Scheme has a supply volume of 866 m³/day, serving a population of 1,836 people. The proposed plan of action to remedy this issue is an installation of pressure filtration and UV disinfection by September 2021.

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

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

Existing Problems

There are a number of challenges with respect to the provision of water services infrastructure, some of which are summarised above.

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

3.9 Cultural Heritage

Archaeological Heritage

Archaeological heritage is protected under the National Monuments Acts (1930-2004), Natural Cultural Institutions Act 1997 and the Planning Acts. The Record of Monuments and Places (RMP) is an inventory, put on a statutory basis by amendment to the National Monuments Act 1994, of sites and areas of archaeological significance, numbered and mapped.

There are hundreds of Recorded Monuments within the Plan area. Clusters of monuments are concentrated within and adjacent to the existing built-up footprint of the County and in the rural areas. Enclosures, fulacht fias, castles, churches and graveyards are amongst the most common recorded monuments in the Plan area.

There are eight Monuments in State Care (all in State Ownership), five Monuments Protected under Preservation Order in County Laois and many important sites of significant archaeological interest, such as: Abbey at Aghaboe; Viking Longboat; the Rock of Dunamaise (associated with the remains of an early Christian settlement, that was pillaged in 842 by the Vikings); Dunamaise Castle (dating back to the 13th century); and Fort Protector in Portlaoise (a foundation of the town of Portlaoise, currently a part of the new Heritage Quarter for the town).

Historic Towns have been identified by the Department of Environment as Zones of Archaeological Potential, for general protection. Within County Laois these historic towns include: Ballinakill; Castletown; Dunamase; Killaban; Portarlinton; and Portlaoise.

County Laois has also significant industrial heritage with many industrial archaeological sites documented by the National Monuments Service, including the canal, mills, bridges and railways.

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. There are currently c. 900 entries to the Record of Protected Structures within the County, which include many notable buildings in the County such as: country houses (Ballyfin House, Stradbally Hall and Emo Court); and public buildings (Oughaval Church, Mountmellick Courthouse and Abbeyleix Railway Station). Other structures of architectural significance include Donaghmore Workhouse Dining Hall, Durrow Courthouse and Clonaslee Heritage Centre.

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 seven ACAs designated within the Plan area.

Existing Problems

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

3.10 Landscape

Laois has a diverse landscape, including large central lowland areas defined by the Rivers Barrow, Nore and Erkina and their various tributaries flowing in a northwest-southeast trajectory through the Plan area. The upland areas and hills are found in the north-western and southern parts of the County and include the Slieve Bloom Mountains (containing the highest summits in the County); Cullahill Mountain; Cullenagh Mountain; Fossy Mountain; and Killeshin Hills. There are also significant peatland areas on the south-western and eastern edge of the County, in the central areas around Portlaoise, Mountrath, Mountmellick and Abbeyleix and further north in the foothills of the Slieve Blooms.

The purpose of landscape character assessment is to provide the foundation for policy formulation and decision making for landscape management. The County Laois Landscape Character Assessment has identified the following seven Landscape Character Areas (shown on Figure 3.4):

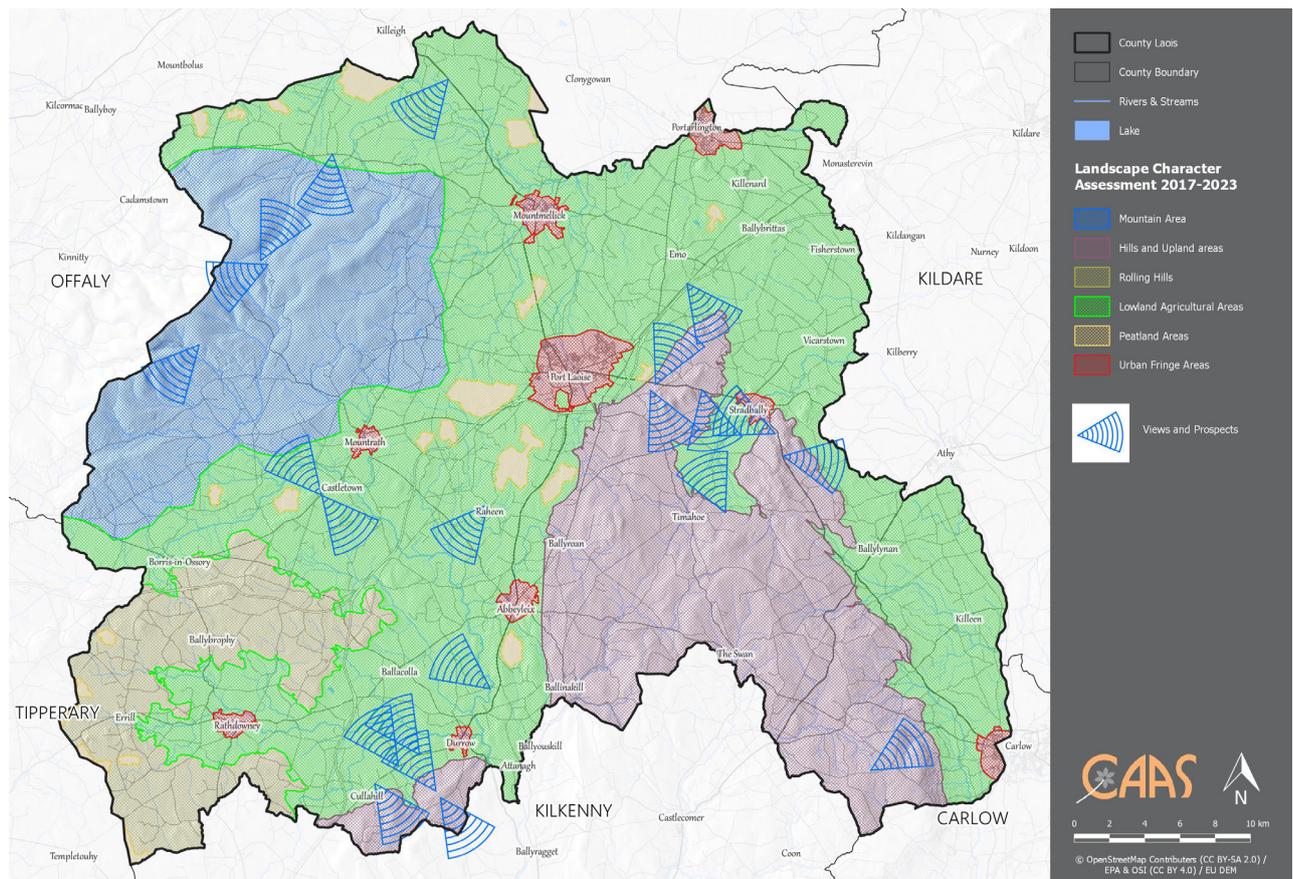
- Hills and Upland Areas;
- Lowland Agricultural Areas;
- River Corridors and Lakes;
- Mountain Areas;
- Peatland Areas;
- Urban Fringe Areas; and
- Rolling Hill Areas.

Landscape Character Areas in County Laois are assigned with level of sensitivity from low and medium to high. The high sensitivity areas are the most sensitive to development; developments that are likely to create a significant visual impact will best be absorbed in areas where the landscape is most robust, i.e. where the landscape has the capacity to absorb development without significantly changing its character. Landscape Character Areas in County Laois which are most sensitive to development include the Peatlands, River Corridors and Lakes and Mountain Areas.

There are a number of valuable views and prospects designated in County Laois that offer attractive cross-sectional views and overall impressions of differing landscapes in the County. These Protected Views and Prospects are considered when assessing planning applications and are mapped on Figure 3.4.

Existing Environmental Problems

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



3.11 Strategic Environmental Objectives

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

Table 3.1 Strategic Environmental Objectives

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
Biodiversity, Flora and Fauna	BFF	No net contribution to biodiversity losses or deterioration	<ul style="list-style-type: none"> To preserve, protect, maintain and, where appropriate, enhance the terrestrial, aquatic and soil biodiversity, particularly EU designated sites and protected species Ensure no adverse effects on the integrity of any European site, with regard to its qualifying interests, associated conservation status, structure and function Safeguard national, regional and local designated sites and supporting features which function as stepping stones for migration, dispersal and genetic exchange of wild species Enhance biodiversity in line with the National Biodiversity Strategy and its targets To protect, maintain and conserve the County's natural capital
Population and Human Health	PHH	Improve quality of life for all ages and abilities based on high-quality, serviced, well connected and sustainable residential, working, educational and recreational environments	<ul style="list-style-type: none"> Promote economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management Ensure that existing population and planned growth is matched with the required public infrastructure and the required services Safeguard the County's citizens from environment-related pressures and risks to health and well-being
Soil (and Land)	S	Ensure the long-term sustainable management of land	<ul style="list-style-type: none"> Protect soils against pollution, and prevent degradation of the soil resource Promote the sustainable use of infill and brownfield sites over the use of greenfield within the County Safeguard areas of prime agricultural land and designated geological sites
Water	W	Protection, improvement and sustainable management of the water resource	<ul style="list-style-type: none"> Ensure that the status of water bodies is protected, maintained and improved in line with the requirements of the Water Framework Directive Ensure water resources are sustainably managed to deliver proposed regional and County growth targets in the context of existing and projected water supply and waste water capacity constraints ensuring the protection of receiving environments Avoid inappropriate development in areas at risk of flooding and areas that are vulnerable to current and future erosion Integrate sustainable water management solutions (such as SuDS, porous surfacing and green roofs) into development proposals
Material Assets	MA	Sustainable and efficient use of natural resources	<ul style="list-style-type: none"> Optimise existing infrastructure and provide new infrastructure to match population distribution proposals in the County 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 Promote the circular economy, reduce waste, and increase energy efficiencies Ensure there is adequate sewerage and drainage infrastructure in place to support new development Reduce the energy demand from the transport sector and support moves to electrification of road and rail transport modes Encourage the transition to a zero-carbon economy by facilitating the development of a grid infrastructure to support renewables and international connectivity. Reduce the average energy consumption per capita including promoting energy efficient buildings, retrofitting, smart- buildings, cities and grids
Air	A	Support clean air policies that reduce the impact of air pollution on the environment and public health	<ul style="list-style-type: none"> To avoid, prevent or reduce harmful effects on human health and the environment as a whole resulting from emissions to air from all sectors with particular reference to emissions from transport, residential heating, industry and agriculture Maintain and promote continuing improvement in air quality through the reduction of emissions and promotion of renewable energy and energy efficiency Promote continuing improvement in air quality Reduction of emissions of sulphur dioxide, nitrogen oxides, volatile organic compounds, ammonia and fine particulate matter which are responsible for acidification, eutrophication and ground-level ozone pollution Meet Air Quality Directive standards for the protection of human health – Air Quality Directive Significantly decrease noise pollution by 2020 and move closer to WHO recommended levels.
Climatic Factors	C	Achieving transition to a competitive, low carbon, climate-resilient economy that is cognisant of environmental impacts	<ul style="list-style-type: none"> To minimise emissions of greenhouse gasses. Integrate sustainable design solutions into the County's infrastructure (e.g. energy efficient buildings; green infrastructure). Contribute towards the reduction of greenhouse gas emissions in line with national targets. Promote development resilient to the effects of climate change Promote the use of renewable energy, energy efficient development and increased use of public transport

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Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
Cultural Heritage	CH	Safeguard cultural heritage features and their settings through responsible design and positioning of development	<ul style="list-style-type: none"> • Protect places, features, buildings and landscapes of cultural, archaeological or architectural heritage
Landscape	L	Protect and enhance the landscape character	<ul style="list-style-type: none"> • To implement the Plan's framework for identification, assessment, protection, management and planning of landscapes having regard to the European Landscape Convention

Section 4 Alternatives

4.1 Introduction

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

Whether or not alternatives for the County Development Plan are available has been identified by Laois 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 an Ecosystem Services Approach to the Plan

Although many natural capital¹⁷ and ecosystem¹⁸ service issues have been taken into account over previous Plan periods, the importance of these in fulfilling environmental obligations has increasingly emerged. An Ecosystems Services Approach would provide a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way

Alternative A: A Plan that takes an Ecosystems Services Approach; or

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

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

This would mean that there would be:

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

¹⁷ Renewable and non-renewable resources (e.g. plants, animals, air, water, soils, minerals)

¹⁸ Ecosystems are multifunctional communities of living organisms interacting with each other and their environment. Ecosystems provide a series of services for human well-being (ecosystem services) either directly or indirectly contributing towards human wellbeing

- A decreased likelihood in the extent, magnitude and frequency of adverse effects on natural capital and ecosystem services.

Alternative B: A Plan that does not take an Ecosystems Services Approach.

As has been the case over previous plan periods, many natural capital and ecosystem service issues would be integrated into individual Plan Policy Objectives and into decision making at lower tiers of plan preparation and development management. However, this approach would be less coordinated and comprehensive than would be the case under an Ecosystems Services Approach.

This would mean that there would be:

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

Selected Alternative for the Plan: Alternative A.

4.4 Alternatives for Population Allocations

Following allocation of most of the County's projected new population across the County's settlements, taking into account the requirements of higher-level planning objectives, a decision was required as to whether to provide for an unallocated extent of growth – either to the Key Town Graiguecullen (Carlow) or the Self-Sustaining Growth Town of Portarlinton.

- **Alternative A:** Provide additional extent of growth to Graiguecullen (Carlow); or
- **Alternative B:** Provide additional extent of growth to Portarlinton.

Based on the planning interactions provided for the alternatives it can be identified that:

- There would be more control over water services infrastructure in Portarlinton than would be the case with Graiguecullen (Carlow) – this means that there would be greater certainty that development could take place in Portarlinton and that environmental protection and management would be contributed towards.
- Graiguecullen is connected by virtue of the train lines to Dublin/Waterford from Carlow, it is not as connected as Portarlinton. Sustainable accessibility is more of an attractive feature in Portarlinton.
- Portarlinton has experienced rapid population growth with high levels of commuter focused residential expansion without the equivalent increase in jobs and services. However, Portarlinton is located on the main line railway line Dublin-Galway and Dublin-Cork/Limerick and since 2016 has experienced investment in services including a new secondary school and a new library and ongoing investment in Community and leisure centres. On an economic front, since 2016, a number of new business have been established in Portarlinton with Portarlinton Enterprise Centre expanding their offering to allow for more remote working practices on site. Derrycastle Walks and Trails also has been developed since 2016 which has improved the amenities in Portarlinton.
- While Portarlinton may have low resident to worker ratio at 0.43 (CSO, 2016) it has developed since 2016 which would suggest that the catch up required has already started. For the reason of good connectivity, the offering of a variety of economic opportunities such as large tracts of zoned land for industrial purposes to remote working, it was considered that Portarlinton should be allowed to grow appropriate to the scale of the town with a focus on compact growth and emphasis on developing economic and social opportunities.

Selected Alternative for the Plan: Alternative A.

4.5 Alternatives for Rural Areas

Alternative A: Provide 3 Rural Housing Designations for the County as set out in the County Development Plan 2017-2023:

- Areas under Strong Urban Influence
- Stronger Rural Areas
- Structurally Weak Areas.

Alternative A would restrict 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 - to a lesser degree than would be the case under Alternative B, as this approach would be based on older requirements, guidance and data.

Rural development would be directed towards appropriate rural areas and urban development would be directed towards established settlements. This alternative would help to prevent low density urban sprawl and associated adverse effects upon sustainable mobility, climate emission reduction targets and various environmental components – to a lesser degree than would be the case under Alternative B, as this approach would be based on older requirements, guidance and data.

Alternative B: Provide 2 Rural Housing Designations as follows (also integrating mapping of Areas of Sensitivity - Natura 2000 Network), based on most up to date requirements, guidance and data:

- Areas under Strong Urban Influence
- Structurally Weak Areas

Alternative B would restrict 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 – to a greater degree than would be the case under Alternative A.

Rural development would be directed towards appropriate rural areas and urban development would be directed towards established settlements. This alternative would help to prevent low density urban sprawl and associated adverse effects upon sustainable mobility, climate emission reduction targets and various environmental components – to a greater degree than would be the case under Alternative A.

Alternative C: Do not provide for Rural Housing Designations and assess all applications on their merit.

Alternative C, by not providing for Rural Housing Designations at Plan level and instead assessing all applications on their merit, would provide a less coherent and coordinated approach that would adversely impact upon the protection and management of the environment and sustainable development. The absence of restrictions would be more likely to result in increased levels of greenfield development in areas immediately surrounding existing centres and less demand for brownfield development within existing centres.

Urban generated development would be more likely to occur under this alternative within rural areas outside of established settlements. This alternative would result in lower density urban sprawl and associated adverse effects upon sustainable mobility, climate emission reduction targets and various environmental components.

Note:

The Selected Tier 4 Alternative for the Draft Plan was Alternative B. However, the Members, through Material Alteration No. 4.7 (Volume 1), are proposing to select Alternative A. This does not benefit the protection and management of the environment as well as Alternative B does.

4.6 Alternatives for Densities

- **Alternative A:** Application of a single standard density across all settlements.

The application of a singular low net residential density across the County would have the potential to push new development towards more environmentally sensitive lands that are less well-serviced and less well-connected, resulting in unnecessary potentially significant adverse effects on all environmental components.

The application of a singular high net residential density could result in a potential misalignment between the supply of zoned land to meet the projected demand for new housing. This could result in a misalignment between new development and essential services provision with associated potential for adverse effects on environmental components.

- **Alternative B:** Application of different densities at different locations, as appropriate; higher densities where sustainable transport mode opportunities are available and lower densities where constraints are presented by, for example, wastewater and water infrastructure constraints, cultural heritage designations or the local road network.

Higher densities would be provided where sustainable transport mode opportunities are available and lower densities would be provided where constraints are presented by, for example, wastewater and water infrastructure constraints, cultural heritage designations or the local road network. This approach would contribute towards national and regional strategic outcomes including the efficient use of land, compact growth and the transition towards a low carbon and more climate resilient society.

Alternative B would help to ensure compact, sustainable development within and adjacent to the existing built-up footprint and would conflict with the protection and management of environmental components the least. Alignment between new development and essential services provision would be most likely under Alternative B.

Selected Alternative for the Plan: Alternative B.

4.7 Alternatives for Land Use Zoning

Available alternatives for land use zoning at relevant settlements and the associated environmental assessment are summarised on Table 4.1.

Table 4.1 Land Use Zoning Alternatives and Summary Assessment

Town	Alternative (selected alternatives in bold)	Summary Assessment
Portlaoise	"New Residential" Zoning: A. To south of proposed indicative northern bypass	Development of lands to the south of the proposed indicative northern bypass would provide high levels of accessibility to the regional and national road network. However, these are greenfield lands and by not consolidating land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from other infrastructural investment in the town. By failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Higher levels of premature development and associated avoidable potential adverse environmental effects would be likely to occur.
	or B. Infill throughout the town	By consolidating land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid premature development, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing greenfield development would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components. Selection of lands for zoning throughout the County took into account: whether water services infrastructure was already provided for or, if not, whether it could be more easily provided for; access to transport infrastructure; and proximity to the existing development envelope and town centre.
<p>Note: The Selected Alternative for Portlaoise in the Draft Plan was Alternative B "Infill throughout the town". However, the Members, through the Material Alterations are proposing to select a mix between Alternative B "Infill throughout the town" and a less compact approach to zoning. This does not benefit the protection and management of the environment as well as Alternative B "Infill throughout the town" does.</p>		
Abbeyleix (Alternative Set 1)	Site south of the School on Ballyroan Road A. Zone New Residential	The zoning of this site south of the school on the Ballyroan Road as Community/ Educational/ Institutional would allow for needed educational related facilities, collocated beside the existing school. Such facilities are necessary in making settlements more desirable places to live – so that they maintain and improve services to existing and future communities. Attracting new populations into the County's settlements will reduce demand for development in areas that are less well serviced and connected – that type of development would be unsustainable and would have higher environmental impacts. The development of educational related facilities would present potential local impacts; residual impacts would be mitigated by the measures integrated into the Plan.
	or B. Zone Community/ Educational/ Institutional	
Abbeyleix (Alternative Set 2)	"Town Centre" Zoning: A. Less compact	By not consolidating land use zoning and including unnecessary land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.
	or B. More compact	By consolidating land use zoning and reducing unnecessary land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid unnecessary sprawl of the settlement, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing unnecessary zoning would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components. Selection of lands for zoning throughout the County took into account: whether water services infrastructure was already provided for or, if not, whether it could be more easily provided for; access to transport infrastructure; and proximity to the existing development envelope and town centre.
Rathdowney	"New Residential" Zoning: A. Less compact	By not consolidating land use zoning and including unnecessary land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.
	or B. More compact	By consolidating land use zoning and reducing unnecessary land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid unnecessary sprawl of the settlement, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing unnecessary zoning would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components. Selection of lands for zoning throughout the County took into account: whether water services infrastructure was already provided for or, if not, whether it could be more easily provided for; access to transport infrastructure; and proximity to the existing development envelope and town centre.

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Town	Alternative (selected alternatives in bold)	Summary Assessment
Mountmellick	"New Residential" Zoning: A. Less compact	By not consolidating land use zoning and including unnecessary land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.
	or B. More compact	By consolidating land use zoning and reducing unnecessary land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid unnecessary sprawl of the settlement, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing unnecessary zoning would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components. Selection of lands for zoning throughout the County took into account: whether water services infrastructure was already provided for or, if not, whether it could be more easily provided for; access to transport infrastructure; and proximity to the existing development envelope and town centre.
<p>Note: The Selected Alternative for Mountmellick in the Draft Plan was Alternative B "More Compact". However, the Members, through the Material Alterations are proposing to select a mix between Alternative A "Less Compact" and Alternative B "More Compact". This does not benefit the protection and management of the environment as well as Alternative B "More Compact" does.</p>		
Mountrath (Alternative Set 1)	"New Residential" Zoning: A. Less compact	By not consolidating land use zoning and including unnecessary land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.
	or B. More compact	By consolidating land use zoning and reducing unnecessary land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid unnecessary sprawl of the settlement, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing unnecessary zoning would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components. Selection of lands for zoning throughout the County took into account: whether water services infrastructure was already provided for or, if not, whether it could be more easily provided for; access to transport infrastructure; and proximity to the existing development envelope and town centre.
Mountrath (Alternative Set 2)	Addition of "Open Space Amenity" Zoning along rivers and streams A. Add to existing or B. Don't add to existing	The additional "Open Space Amenity" Zoning would help to improve protection of future residential and employment populations (and their and the town's built assets) from flood risk, further contribute towards the protection of this amenity asset from visually intrusive developments and further contribute towards the protection of ecological connectivity and the quality of surface waters. The absence of a green buffer would make adverse impacts upon the aforementioned sensitivities more likely.
Stradbally	"Enterprise and Employment" Zoning: A. Less compact	By not consolidating land use zoning and including unnecessary land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.
	or B. More compact	By consolidating land use zoning and reducing unnecessary land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid unnecessary sprawl of the settlement, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing unnecessary zoning would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components. Selection of lands for zoning throughout the County took into account: whether water services infrastructure was already provided for or, if not, whether it could be more easily provided for; access to transport infrastructure; and proximity to the existing development envelope and town centre.
Borris in Ossory	"General Business" Zoning: A. Less compact	By not consolidating land use zoning and including unnecessary land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.
	or B. More compact	By consolidating land use zoning and reducing unnecessary land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid unnecessary sprawl of the settlement, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing unnecessary zoning would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components. Selection of lands for zoning throughout the County took into account: whether water services infrastructure was already provided for or, if not, whether it could be more easily provided for; access to transport infrastructure; and proximity to the existing development envelope and town centre.
Ballyinan	"New Residential" Zoning: A. Less compact	By not consolidating land use zoning and including unnecessary land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.

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Town	Alternative (selected alternatives in bold)	Summary Assessment
	or B. More compact	By consolidating land use zoning and reducing unnecessary land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid unnecessary sprawl of the settlement, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing unnecessary zoning would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components. Selection of lands for zoning throughout the County took into account: whether water services infrastructure was already provided for or, if not, whether it could be more easily provided for; access to transport infrastructure; and proximity to the existing development envelope and town centre.
<p>Note: The Selected Alternative for Ballylynan in the Draft Plan was Alternative B "More Compact". However, the Members, through the Material Alterations are proposing to select Alternative A "Less Compact". This does not benefit the protection and management of the environment as well as Alternative B "More Compact" does.</p>		
Durrow (Alternative Set 1)	"New Residential" Zoning: A. Less compact	By not consolidating land use zoning and including unnecessary land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.
	or B. More compact	By consolidating land use zoning and reducing unnecessary land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid unnecessary sprawl of the settlement, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing unnecessary zoning would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components. Selection of lands for zoning throughout the County took into account: whether water services infrastructure was already provided for or, if not, whether it could be more easily provided for; access to transport infrastructure; and proximity to the existing development envelope and town centre.
Durrow (Alternative Set 2)	Zoning around WWTP: A. Town Centre or B. Open Space	A buffer of Open Space around the WWTP would help to avoid any conflicts between new residential development and the WWTP development – such as those which could arise from emissions or impacts on residential amenity.
Durrow (Alternative Set 3)	Zoning of Graveyard: A. Town Centre	This is an existing graveyard and Town Centre uses on this site would not be in the interests of the sustainable development of the town. Zoning as Community, Educational and Institutional would be commensurate with the existing use and could allow for future small-scale developments.
	or B. Community, Educational and Institutional	
Ballcolla	"Town Centre" Zoning: A. Less compact	By not consolidating land use zoning and including unnecessary land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.
	or B. More compact	By consolidating land use zoning and reducing unnecessary land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid unnecessary sprawl of the settlement, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing unnecessary zoning would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components. Selection of lands for zoning throughout the County took into account: whether water services infrastructure was already provided for or, if not, whether it could be more easily provided for; access to transport infrastructure; and proximity to the existing development envelope and town centre.
Ballybrittas	"Industrial" Zoning: A. Less compact	By not consolidating land use zoning and including unnecessary land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.
	or B. More compact	By consolidating land use zoning and reducing unnecessary land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid unnecessary sprawl of the settlement, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing unnecessary zoning would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components. Selection of lands for zoning throughout the County took into account: whether water services infrastructure was already provided for or, if not, whether it could be more easily provided for; access to transport infrastructure; and proximity to the existing development envelope and town centre.
Ballyroan	"New Residential" Zoning: A. Less compact	By not consolidating land use zoning and including unnecessary land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.

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Town	Alternative (selected alternatives in bold)	Summary Assessment
	or B. More compact	By consolidating land use zoning and reducing unnecessary land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid unnecessary sprawl of the settlement, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing unnecessary zoning would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components. Selection of lands for zoning throughout the County took into account: whether water services infrastructure was already provided for or, if not, whether it could be more easily provided for; access to transport infrastructure; and proximity to the existing development envelope and town centre.
Clough	Various Zoning Objectives: A. Less compact	By not consolidating land use zoning and including unnecessary land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.
	or B. More compact	By consolidating land use zoning and reducing unnecessary land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid unnecessary sprawl of the settlement, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing unnecessary zoning would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components. Selection of lands for zoning throughout the County took into account: whether water services infrastructure was already provided for or, if not, whether it could be more easily provided for; access to transport infrastructure; and proximity to the existing development envelope and town centre.
Cullahill	A. More compact, with public Open Space in the centre of the Village	By consolidating land use zoning and reducing unnecessary land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid unnecessary sprawl of the settlement, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing unnecessary zoning would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components. Selection of lands for zoning throughout the County took into account: whether water services infrastructure was already provided for or, if not, whether it could be more easily provided for; access to transport infrastructure; and proximity to the existing development envelope and town centre.
	or B. Less compact, with Town Centre in the centre of the Village	By not consolidating land use zoning and including unnecessary land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.
Emo	A. More compact, with Open Space in area surrounding demesne	By consolidating land use zoning and reducing unnecessary land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid unnecessary sprawl of the settlement, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing unnecessary zoning would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components. Selection of lands for zoning throughout the County took into account: whether water services infrastructure was already provided for or, if not, whether it could be more easily provided for; access to transport infrastructure; and proximity to the existing development envelope and town centre.
	or B. Less compact, with Community/ Educational/ Institutional Zoning in area surrounding demesne	By not consolidating land use zoning and including unnecessary land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.
Killeshin	"Town Centre" Zoning: A. Less compact	By not consolidating land use zoning and including unnecessary land use zoning, this alternative would provide for a less compact form of development that would fail to maximise benefits from infrastructural investment. By facilitating the unnecessary sprawl of the settlement and failing to consolidate zoning, this alternative would decrease the likelihood of brownfield development and conflict with efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Providing for unnecessary zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.
	or B. More compact	By consolidating land use zoning and reducing unnecessary land use zoning this alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment. By consolidating the zoning and helping to avoid unnecessary sprawl of the settlement, this alternative would increase the likelihood of brownfield development and contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health). Reducing unnecessary zoning would help to minimise sprawl and would avoid potential adverse environmental effects that would otherwise occur - this would benefit the protection of multiple environmental components. Selection of lands for zoning throughout the County took into account: whether water services infrastructure was already provided for or, if not, whether it could be more easily provided for; access to transport infrastructure; and proximity to the existing development envelope and town centre.
Timahoe	Zoning of Round Tower Site:	This is an existing cultural heritage asset in the town that includes built heritage. Providing for potential future tourism uses at this site could contribute towards the future sustainable development of the town and associated environmental protection and management.
	A. Village Centre or B. Tourism or Leisure	

Section 5 Summary of Effects arising from Plan

Table 5.1 summarises the overall environmental effects arising from the Proposed Material Alterations.

Table 5.1 Overall Evaluation – Effects arising from the Proposed Material Alterations

Alteration Ref. ¹⁹	Commentary
Volume 1 Amendments 2.10 4.7	These Proposed Alterations would not be consistent with the proper planning or sustainable development of the County. These Alterations would dilute the Plan's rural housing policy and are based on older requirements, guidance and data. As a result, it would present additional, unnecessary and potentially significant adverse effects on various environmental components, including soil, water, landscape, non-designated habitats and species, sustainable mobility and climate emission reduction targets.
Volume 1 Amendments 3.12 13.3	These Alterations would not provide the most evidence-based framework for development and have the potential to undermine sustainable development and proper planning, including compact growth, by placing non-evidence based restrictions on future growth. They do not align with higher level policy or guidance. These amendments have the potential to push development that would be appropriate in certain locations to more sensitive, less well-served, less well-connected locations.
Volume 1 Amendments 3.8 8.16 11.17 Stradbally – 1.1 Coolrain – 1.1	As these alterations could potentially impact upon the protection of a European site, Stage 2 AA was required. Consequently, it was determined prudent to undertake SEA on these alterations. Taking into account the measures that have been already integrated into the Draft Plan that provide for and contribute towards environmental protection, environmental management and sustainable development, the AA process identified that there is no potential for effects to arise on the integrity of any European site as a result of all Proposed Material Alterations.
Volume 1 Amendments 3.20 3.23 3.35 5.21 9.4 9.5 9.6 11.6 11.16 11.18 Other Volume 2 Amendments Castletown – 1.1	As these alterations could be considered mitigation, in relation to the Plan elements that could potentially affect the integrity of European sites under the Plan, further to that already included in the Draft Plan, it was deemed prudent to undertake Stage 2 AA. Consequently, SEA was advised as prudent . These alterations could benefit the protection and management of various environmental components, in addition to European sites.
Volume 2 Zoning Amendments Zoning Amendment No. 85 Zoning Amendment No. 86 Zoning Amendment No. 87 Zoning Amendment No. 88 Zoning Amendment No. 89 Zoning Amendment No. 90 Zoning Amendment No. 91 Zoning Amendment No. 92 Zoning Amendment No. 93 Zoning Amendment No. 96	These Proposed Alterations would not be consistent with established population targets and/or the proper planning and sustainable development of the County. As a result they would present additional, unnecessary and potentially significant adverse effects on various environmental components, including soil, water, non-designated habitats and species, air and climatic factors and material assets. Much of the zoning provided for by these amendments is considered to be premature in the context of current population targets. Potentially significant adverse unnecessary effects, would be likely to include: <ul style="list-style-type: none"> • Effects on non-designated habitats and species • Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces • Increased loadings on water bodies • Conflict with efforts to maximise sustainable compact growth and sustainable mobility • Occurrence of adverse visual impacts Where such alterations are further from the centre of settlements, potentially significant unnecessary adverse effects would be likely to include: <ul style="list-style-type: none"> • Difficulty in providing adequate and appropriate waste water treatment as a result of zoning outside of established built development envelopes of settlements • Adverse impacts upon the economic viability of providing for public assets and infrastructure • Adverse impacts upon carbon emission reduction targets in line with local, national and European environmental objectives • Conflicts between transport emissions, including those from cars, and air quality • Conflicts between increased frequency of noise emissions and protection of sensitive receptors • Potential effects on human health as a result of potential interactions with environmental vectors
Amendments to Appendix 1 - RPS Appendix 1 - RPS 1.1	This alteration would reduce the protection of architectural heritage by removing a structure that merits inclusion on the Record of Protected Structures (the structure is identified as being of regional importance by the NIAH).
Amendments to Appendix 1 - RPS RPS – 1.2 to RPS 1.20	This alteration would further contribute towards the protection of architectural heritage provided for by the Plan.

¹⁹ For detail on Proposed Material Alterations please refer to Proposed Material Alterations document

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 to which the Proposed Material Alterations relate. Various environmental sensitivities and issues have been communicated to the Council through the SEA, Appropriate Assessment (AA) and Strategic Flood Risk Assessment (SFRA) processes. By integrating all related recommendations into the Plan, the Council have ensured that both the beneficial environmental effects of implementing the Plan have been and will be maximised and that potential adverse effects have been and will be avoided, reduced or offset. These measures also apply to Proposed Material Alterations.

Mitigation was achieved through the:

- Strategic work undertaken by the Council to ensure contribution towards environmental protection and sustainable development²⁰;
- Considering alternatives for the Plan²¹;
- Integration of environmental considerations into zoning provisions of the Plan²²; 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.

²⁰ 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, Laois 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 (SEA);
- Appropriate Assessment (AA);
- Strategic Flood Risk Assessment (SFRA);
- Core Strategy;
- Economic Strategy;
- Settlement Strategy;
- Housing Strategy;
- Rural Housing Design Guidelines;
- Retail Strategy;
- Landscape Character Assessment;
- Climate Action and Sustainable mobility provisions;
- Infrastructure including Green Infrastructure provisions; and
- Record of Protected Structures and Architectural Conservation Areas.

²¹ 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.

²² 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 that 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
Biodiversity, Flora and Fauna	BFF	<ul style="list-style-type: none"> • Condition of European sites • 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 • SEA and AA as relevant for new Council policies, plans, programmes etc. • Status of water quality in the County's water bodies • Compliance of planning permissions with Plan measures providing for the protection of Biodiversity and flora and fauna – see Chapter 11: Biodiversity and Natural Heritage" 	<ul style="list-style-type: none"> • Require all local level land use plans to include ecosystem services and green/blue infrastructure provisions in their land use plans and as a minimum, to have regard to the required targets in relation to the conservation of European sites, other nature conservation sites, ecological networks, and protected species • Implement and review, as relevant, Local Biodiversity Action Plans • For planning permission to be only granted when applications demonstrate that they comply with all Plan measures providing for the protection of biodiversity and flora and fauna – see Chapter 11: Biodiversity and Natural Heritage" 	<ul style="list-style-type: none"> • Department of Culture, Heritage and the Gaeltacht report of the implementation of the measures contained in the Habitats Directive - as required by Article 17 of the Directive (every 6 years). • Department of Culture, Heritage and the Gaeltacht National Monitoring Report for the Birds Directive under Article 12 (every 3 years) • Internal monitoring of preparation of local land use plans • Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). • Consultations with the NPWS) 	<ul style="list-style-type: none"> • Where condition of European sites is found to be deteriorating this will be investigated with the Regional Assembly and the DCHG (and the DHPLG 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. • Where water bodies are failing to meet at least good status this will be investigated with the DHPLG 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.
Population and Human Health	PHH	<ul style="list-style-type: none"> • Implementation of Plan measures relating to the promotion of economic growth as provided for by Chapter 6 "Economic Development" • Number of spatial concentrations of health problems arising from environmental factors resulting from development permitted under the Plan • Proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures • Number of spatial plans that include specific green infrastructure mapping 	<ul style="list-style-type: none"> • 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 6 "Economic Development" • No spatial concentrations of health problems arising from environmental factors as a result of implementing the Plan • Increase in the proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures. • Implementation of Green Infrastructure 	<ul style="list-style-type: none"> • Internal review of progress on implementing Plan objectives • Consultations with the Health Service Executive and EPA • CSO data • Internal monitoring of preparation of local land use plans 	<ul style="list-style-type: none"> • 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. • Where proportion of population shows increase in private car use above CSO 2016 figures, the Council will coordinate with the Regional Assembly, the DHPLG, DCCA and NTA to develop a tailored response.
Soil (and Land)	S	<ul style="list-style-type: none"> • Proportion of population growth occurring on infill and brownfield lands compared to greenfield • Volume of contaminated material generated from brownfield and infill • Number of AA determinations and environmental assessments undertaken to support applications for brownfield and infill development prior to planning permission 	<ul style="list-style-type: none"> • Maintain built surface cover nationally to below the EU average of 4%. • NPF National Policy Objective 3c: Deliver at least 30% of all new homes that are targeted in settlements other than the five Cities and their suburbs, within their existing built-up footprints. 	<ul style="list-style-type: none"> • Environmental Protection Agency (EPA), Geoportal • Internal monitoring of likely significant environmental effects of grants of permission (grant by grant) 	<ul style="list-style-type: none"> • 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. • Compulsory Purchase Order powers • Master-planning of sites

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Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
Water	W	<ul style="list-style-type: none"> • Status of water bodies as reported by the EPA Water Monitoring Programme for the WFD • Number of incompatible developments permitted within flood risk areas 	<ul style="list-style-type: none"> • Not to cause deterioration in the status of any surface water or affect the ability of any surface water to achieve 'good status' • Implementation of the objectives of the second cycle of the River Basin Management Plan by 2021 (and subsequent iterations as relevant) • Minimise developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk 	<ul style="list-style-type: none"> • EPA Monitoring Programme for WFD compliance • Internal monitoring of likely significant environmental effects of grants of permission (grant by grant) 	<ul style="list-style-type: none"> • Where water bodies are failing to meet at least good status this will be investigated with the DHPLG 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. • 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. • 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.
Material Assets	MA	<ul style="list-style-type: none"> • 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 • Number of new developments granted permission which can be adequately and appropriately served with waste water treatment over the lifetime of the Plan • Proportion of population within who report regular cycling / walking to school and work above 2016 CSO figures 	<ul style="list-style-type: none"> • To map brownfield and infill land parcels across the County. • All new developments granted permission to be connected to and adequately and appropriately served by waste water treatment over the lifetime of the Plan • Where septic tanks are proposed, for planning permission to be only granted when applications demonstrate that the outfall from the septic tank will not – in combination with other septic tanks – contribute towards any surface or ground water body not meeting the objective of good status under the Water Framework Directive • Increased budget spends on water and waste water infrastructure • By 2020 all citizens will have access to speeds of 30Mbps, and that 50% of citizens will be subscribing to speeds of 100Mbps 	<ul style="list-style-type: none"> • Internal monitoring of likely significant environmental effects of grants of permission (grant by grant) • CSO data • Consultations with Irish Water • Department of Housing, Planning and Local Government in conjunction with Local Authorities • Department of Communications, Climate Action and Environment • Department of Public Expenditure and Reform 	<ul style="list-style-type: none"> • 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. • Where proportion of population shows increase in private car use above CSO 2016 figures, the Council will coordinate with the Regional Assembly, DHPLG and NTA to develop a tailored response.

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Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
Air	A	<ul style="list-style-type: none"> • Proportion of journeys made by private fossil fuel-based car compared to 2016 National Travel Survey levels of 74% • NO_x, SO_x, PM10 and PM2.5 as part of Ambient Air Quality Monitoring 	<ul style="list-style-type: none"> • Decrease in proportion of journeys made by private fossil fuel-based car compared to 2016 National Travel Survey levels. • Improvement in Air Quality trends, particularly in relation to transport related emissions of NO_x and particulate matter 	<ul style="list-style-type: none"> • CSO data • Data from the National Travel Survey • EPA Air Quality Monitoring • Consultations with Department of Transport Tourism and Sport, Transport Trends and Department of Communication Climate Action and Environment 	<ul style="list-style-type: none"> • Where proportion of population shows increase in private car use above CSO 2016 figures, the Council will coordinate with the Regional Assembly, DHPLG, DCCAE and NTA to develop a tailored response. See also entry under Population and human health above
Climatic Factors	C	<ul style="list-style-type: none"> • Implementation of Plan measures relating to climate reduction targets as provided for by Plan provisions including those provided for and referenced in Chapter 3 "Climate Change" • Proportion of journeys made by private fossil fuel-based car compared to 2016 levels • Proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures 	<ul style="list-style-type: none"> • 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 Chapter 3 "Climate Change" • Increase in the proportion of people resident in the County reporting regular cycling / walking to school and work above 2016 CSO figures • Decrease in the proportion of journeys made by residents of the County using private fossil fuel-based car compared to 2016 levels • Contribute towards transition to a competitive, low-carbon, climate-resilient and environmentally sustainable economy by 2050 • 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 • Contribute towards the target of aggregate reduction in carbon dioxide (CO₂) emissions of at least 80% (compared to 1990 levels) by 2050 across the electricity generation, built environment and transport sectors • To promote reduced energy consumption and support the uptake of renewable options and a move away from solid fuels for residential heating • See various other national and local targets 	<ul style="list-style-type: none"> • EPA Annual National Greenhouse Gas Emissions Inventory reporting • Climate Action Regional Office • Consultations with Department of Communication Climate Action and Environment • CSO data 	<ul style="list-style-type: none"> • Where trends toward carbon reduction are not recorded, the Council will liaise with the Regional Assembly to establish reasons and develop solutions • Where proportion of population shows increase in private car use above CSO 2016 figures, the Council will coordinate with the Regional Assembly, DHPLG and NTA to develop a tailored response

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Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
Cultural Heritage	CH	<ul style="list-style-type: none"> 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 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 	<ul style="list-style-type: none"> 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 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 	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant) Consultation with Department of Culture, Heritage and the Gaeltacht 	<ul style="list-style-type: none"> Where monitoring reveals visitor pressure is causing negative effects on key tourist features, the Council will work with Regional Assembly, the Office of Public Works, Fáilte Ireland and other stakeholders to address the pressures through additional mitigation
Landscape	L	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant) 	<ul style="list-style-type: none"> 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