

SEA ENVIRONMENTAL REPORT

APPENDIX II – NON-TECHNICAL SUMMARY

FOR THE

EDENDERRY LOCAL AREA PLAN 2023-2029

for: Offaly County Council

Áras an Chontae
Charleville Road
Tullamore
County Offaly



by: CAAS Ltd.

1st Floor
24-26 Ormond Quay Upper
Dublin 7



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Section 1 Introduction and Terms of Reference

This is the Non-Technical Summary of the Environmental Report for the Edenderry Local Area Plan 2023-2029 (hereafter referred to as 'the Plan'). The purpose of the Environmental Report is to provide a clear understanding of the likely environmental consequences of decisions regarding the adoption and implementation of the Plan. The Environmental Report has been prepared as part of a Strategic Environmental Assessment (SEA) process for the Plan.

What is SEA?

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

Why is SEA needed? The Benefits

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

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

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

The Plan directs incompatible development away from the most sensitive areas in the town and focuses on directing compact, sustainable development within the existing envelope of the Plan area. Development of these generally more robust, well-serviced and well-connected areas of the town will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation.

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

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

How does the SEA work?

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

The SEA was scoped in consultation with designated environmental authorities.

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

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

Difficulties Encountered during the SEA process

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

What happens at the end of the process?

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

Section 2 The Plan

2.1 Introduction

Offaly County Council has adopted a Local Area Plan (LAP) for Edenderry under the Planning and Development Act 2000 (as amended). The Plan sets out an overall strategy for the proper planning and sustainable development over the years 2023-2029.

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

The LAP should be read in conjunction with the Offaly County Development Plan 2021-2027, which sets out the overarching development strategy for the County. Where conflicting objectives arise between the County Development Plan and the LAP, the objectives of the relevant County Development Plan shall take precedence.

2.2 Content of the Plan

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

The general development management standards, zoning matrix/descriptions and policies and objectives in the County Development Plan applicable to settlements (including provisions relating to environmental protection and management) can be applied to the LAP boundary area, while additional policies and objectives that are specific to Edenderry are included in the LAP.

LAP provisions are set out under twelve chapters as follow:

- Chapter 1 Introduction and Context
- Chapter 2 Economic Development
- Chapter 3 Town Centre and Regeneration
- Chapter 4 Built Heritage
- Chapter 5 Residential
- Chapter 6 Biodiversity and Green Infrastructure
- Chapter 7 Community
- Chapter 8 Climate Action
- Chapter 9 Critical Infrastructure
- Chapter 10 Planning and Infrastructural Assessment
- Chapter 11 Land Use Zoning Objectives
- Chapter 12 Implementation and Monitoring

2.3 Strategic Vision and Aims

The LAP is underpinned by a strategic vision statement which is intended to guide the future growth of Edenderry in a sustainable manner, in a way that reflects the inherent character of the area and identifies the potential of utilising its existing assets as the base for improving the quality of life and resilience of both the present and future residents of the town.

The following strategic aims in conjunction with each other will assist in delivering the strategic vision for Edenderry.

- **Strategic Aim 1: Economic Development**
To successfully fulfil Edenderry's role as a self-sustaining town by embracing the transition to a low carbon and climate resilient model of development while seeking to utilise and invest in the town's existing economic, social and environmental assets to generate sustainable economic development and job creation, thereby enhancing its status as the main business,

service, employment, social, cultural, tourism and recreational hub for everyone in east Offaly and ensuring it is an attractive place to live, work and visit.

- **Strategic Aim 2: Town Centre and Regeneration**
To sensitively and sustainably enhance the historic town centre through the provision of healthy place-making. To facilitate a competitive and healthy retail environment and to support the future vitality, diversity and viability of Edenderry. These aims will improve the attractiveness and functionality of Edenderry as a place in which to live, work and visit.
- **Strategic Aim 3: Built Heritage**
To protect, conserve and manage Edenderry's buildings, areas, structures, sites and features of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest, by promoting the understanding, enhancement and appropriate development of these assets in order to instigate regeneration of the town.
- **Strategic Aim 4: Residential**
Deliver high quality housing in terms of design, scale, mix, tenure, sequence and density to reasonable match the requirements of the different categories of households which shall be constructed on the principles of universal design, life-long adaptability and energy efficiency, and developed in a manner which promotes compact growth and healthy place-making and is in line with the Core Strategy in the County Development Plan.
- **Strategic Aim 5: Biodiversity and Green Infrastructure**
Protect and enhance Edenderry's natural assets of clean water, biodiversity, landscape, green infrastructure, natural heritage and agricultural land, while maintaining ecosystem services and improving resilience to climate change.
- **Strategic Aim 6: Community**
Promote Edenderry as a town where people can live and work, with access to a range of community facilities and events that are vital for social inclusion and quality of life for all.
- **Strategic Aim 7: Climate Action**
Enhance climate adaptation and mitigation, and accelerate a transition to a low carbon, climate resilient and environmentally sustainable economy in Edenderry.
- **Strategic Aim 8: Critical Infrastructure**
Promote facilitate the timely provision of infrastructure and utilities that will support sustainable socioeconomic growth and protect the quality of the environment of the town in a low carbon manner.
- **Strategic Aim 9: Planning and Infrastructural Assessment**
To phase new development to ensure that it occurs in a sequential and efficient manner and in tandem with the delivery of supporting physical and social infrastructure.
- **Strategic Aim 10: Land Use Zoning Objectives**
To adhere to the land use zoning objectives contained in this Plan in the interests of orderly development and eliminating potential conflicts between incompatible land uses.
- **Strategic Aim 11: Implementation and Monitoring**
To implement in conjunction with key stakeholders, the objectives of this Local Area Plan, with a particular focus on the key strategic objectives, and to monitor same.

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

Far in advance of the placing of the Draft Plan on public display, Offaly 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.

The following Edenderry specific non-statutory plans and studies were taken into account in the preparation of the LAP:

- Edenderry Local Transport Plan; and
- Blundell Masterplan.

The undertaking of this SEA process was 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.

2.5 Relationship with other relevant Plans and Programmes

It is acknowledged that many of the major issues affecting Edenderry's development are contingent on national policy and government funding.

The Plan sits within a hierarchy of statutory documents setting out public policy for, among other things, land use planning, infrastructure, sustainable development, tourism, environmental protection and environmental management. The Plan must comply with relevant higher-level strategic actions and may, in turn, guide lower level strategic actions. These documents include plans and programmes such as those described under Section 3, Section 4 and Section 6 of this summary. These documents have been subject to their own environmental assessment processes, as relevant.

The National Planning Framework (NPF) sets out Ireland's planning policy direction up to 2040. The NPF is to be implemented through Regional Spatial and Economic Strategies (RSESs) and lower tier Development Plans and Local Area Plans. The RSES for the 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 Offaly County Development Plan 2021-2027, which sets out the overarching development strategy for the County, and the Local Area Plan.

In order to be realised, projects included in the Local Area Plan (in a similar way to other projects from any other sector) will have to comply, as relevant, with various legislation, policies, plans and programmes (including requirements for lower-tier Appropriate Assessment, Environmental Impact Assessment and other licencing requirements as appropriate) that form the statutory decision-making and consent-granting framework.

Section 3 The Environmental Baseline

3.1 Introduction

The summary of the environmental baseline of the Plan area is described in this section. This baseline together with the Strategic Environmental Objectives, which are identified in Section 3.11, is used in order to identify, describe and evaluate the likely significant environmental effects of implementing the Plan and in order to determine appropriate monitoring measures.

3.2 Likely Evolution of the Environment in the Absence of the Plan

In the absence of a new Local Area Plan, the framework for development across the Plan area would be provided by the County Development Plan and other related documents. There would be no Local Area Plan to provide additional detail beyond that provided already through the existing planning framework as how to achieve sustainable development and environmental protection and management in the town.

As a result, there would be both:

- A decreased likelihood in the extent, magnitude and frequency of the positive environmental effects identified by this assessment occurring; and
- An increased likelihood in the extent, magnitude and frequency of the adverse environmental effects identified by this assessment occurring.

3.3 Biodiversity and Flora and Fauna

Key ecological sensitivities within and surrounding the Plan area include:

- The Grand Canal proposed Natural Heritage Area, partially located within and downstream of the Plan area;
- Aquatic and riverine ecology associated with the River Boyne, including its tributaries and riparian buffer zones, and the Grand Canal¹;
- The Long Derris Special Area of Conservation and proposed Natural Heritage Area, located c.2.5 km to the south-east of the Plan area;
- Black Castle Bog Natural Heritage Area, located c.3 km north-west of the Plan area, and Carbury Bog Natural Heritage Area, located c.4 km to the north-east of the Plan area;
- The town's swift (urban bird species of conservation concern) population, which is a significant biodiversity asset; and
- Various trees², woodlands, parks, gardens, hedgerows and lands used for agriculture within and surrounding the Plan area, providing habitats for flora and fauna and facilitating linkages and corridors to the surrounding countryside for the wildlife.

Designated sites in the wider area include Special Areas of Conservation³ (SACs) and Special Protection Areas⁴ (SPAs). These are mapped on Figure 3.1. There are two SACs and one SPA within 15 km of the Plan boundary.

CORINE⁵ land cover mapping is shown on Figure 3.2 and identifies the land cover of the Plan area as urban fabric (within central parts of the Plan area), agricultural (adjacent to the Plan area and surrounding

¹ Waterways Ireland (2014): *Ecological Survey of the Edenderry Branch of the Grand Canal*.

² Tree Preservation Orders (TPOs) are a planning mechanism whereby individual trees or groups of trees can be identified as important and protected. There are seven TPOs designated within Edenderry as identified in the Offaly County Development Plan 2021-2027.

³ SACs have been selected for protection under the European Council Directive on the conservation of natural habitats and of wild fauna and flora (92/43/EEC) due to their conservation value for habitats and species of importance in the European Union. The Habitats Directive seeks to establish Natura 2000, a network of protected areas throughout the EU. It is the responsibility of each member state to designate SACs to protect habitats and species, which, together with the SPAs designated under the 1979 Birds Directive, form Natura 2000. The European Communities (Birds and Natural Habitats) Regulations 2011 consolidate the European Communities (Natural Habitats) Regulations 1997 to 2005 and the European Communities (Birds and Natural Habitats) (Control of Recreational Activities) Regulations 2010. The Regulations have been prepared to address several judgments of the Court of Justice of the European Union (CJEU) against Ireland, notably cases C-418/04 and C-183/05, in respect of failure to transpose elements of the Birds Directive and the Habitats Directive into Irish law.

⁴ 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.

⁵ 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-

lands), forestry (to the north and west of the Plan area) and peat bogs (adjacent to the southern parts of the Plan area).

Existing Problems

Ireland's Article 17 report on the Status of EU Protected Habitats and Species in Ireland (DCHG, 2019) identifies 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.

3.4 Population and Human Health

Census 2016 recorded a population of 7,359 persons in Edenderry. The Core Strategy in the Offaly County Development Plan 2021-2027 provides a population increase of 721 persons for Edenderry over the Plan period.

Edenderry is identified as a "Self-Sustaining Town" in the Offaly County Development Plan 2021-2027, supporting the regional driver role of Tullamore, and acting as an important local driver providing a range of functions for its resident population and its surrounding catchment including housing, employment, services, retail and leisure opportunities.

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

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

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

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.

Existing Problems

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

Parts of the Plan area are vulnerable to adverse effects from changes in the occurrence of severe rainfall events and associated flooding from surface water. Flooding in certain circumstances could pose a risk to human health. There is historic and predictive evidence of flooding within the Plan area.

3.5 Soil

Main soil types surrounding the built up areas of Edenderry are peat soils (often indicative of areas that are the most sensitive to development due to ecological sensitivities and impeded drainage issues) within the north-east, east and south-east of the Plan area and luvisols (generally fertile soils, widely used for agriculture and associated with significant accumulation of clay) within the north-west, west and south-west of the Plan area.

There is one landslide event recorded at the northern bank of the Grand Canal adjacent to the southern parts of the Plan area, associated with peatland areas⁶.

⁶ Landslide events are recorded in the National Landslides Database available from GSI (www.gsi.ie).

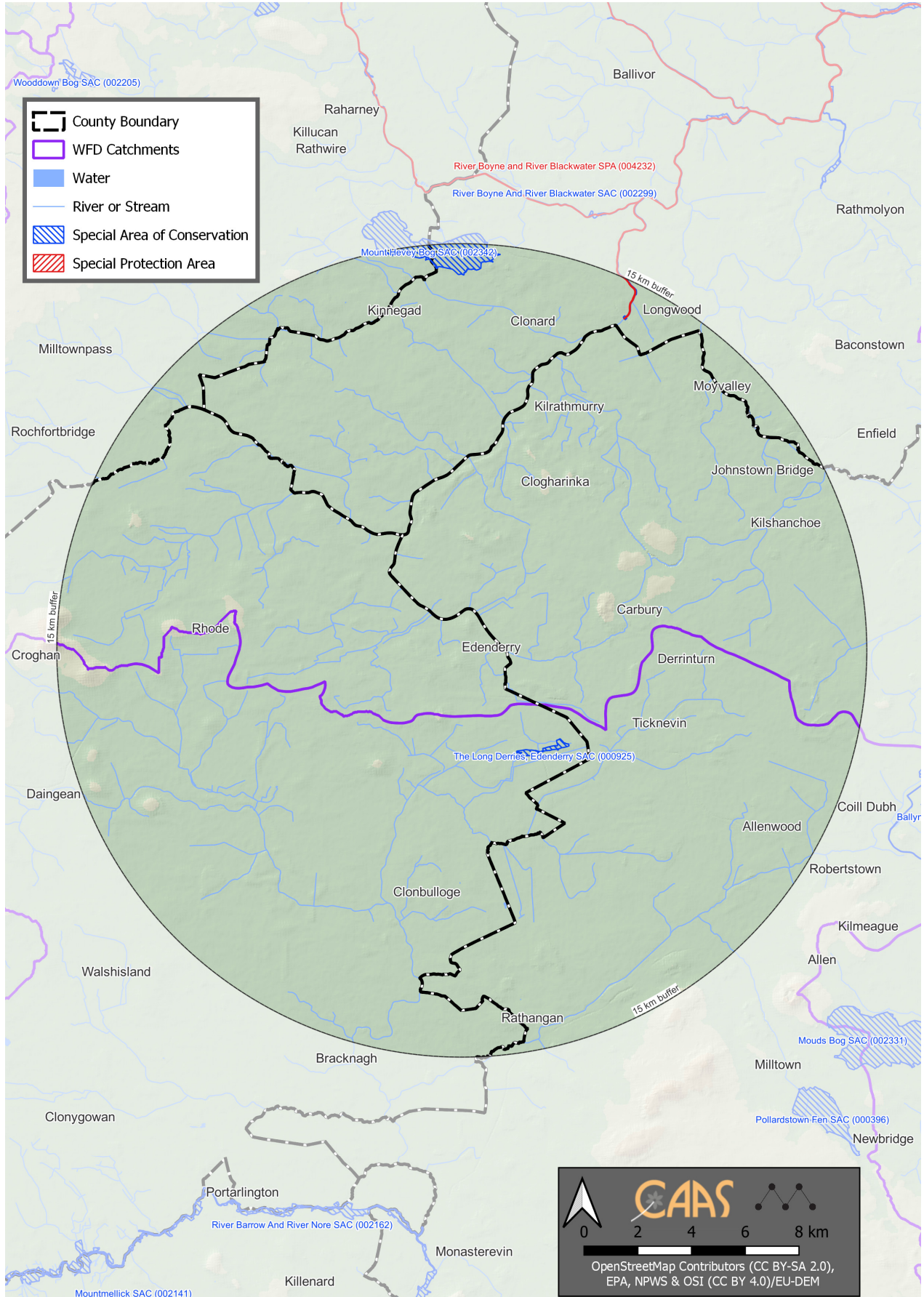


Figure 3.1 European Sites within and within 15 km buffer of Edenderry Plan area



Figure 3.2 CORINE Land Cover Mapping 2018

3.6 Water

Surface and Ground Water Status

The current Water Framework Directive (WFD) (2016-2021) status of the Grand Canal Main Line (Boyne)⁷ within and adjacent to the southern parts of Plan area is *good*. The status of the various sections of the River Boyne within and surrounding the Plan area is *moderate* (Boyne_10), to the east and north-east of the Plan area, and *poor* (Boyne_20) within and adjacent to the Plan area, to the east and north. Subject to exemptions provided for by Article 4 of the WFD, these water bodies will need improvement in order to comply with the objectives of the WFD. The Water Framework Directive surface water status (2016-2021) of rivers and lakes within and surrounding the Plan area is shown on Figure 3.3.

The WFD status (2016-2021) of all groundwater underlying the Plan area is currently identified as being of *good status*, meeting the objectives of the Water Framework Directive.

Aquifer Vulnerability and Productivity

Aquifer vulnerability refers to the ease with which pollutants of various kinds can enter into groundwater. The aquifers underlying most the County are generally classified as being of *high vulnerability*.

Flooding

A Strategic Flood Risk Assessment (SFRA) document accompanies this SEA Environmental Report and the Plan. Requirements in relation to SFRA are provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (Department of Environment and Office of Public Works, 2009) and associated Department of the Environment, Community and Local Government Circular PL2/2014.

Historical flooding is documented by the Office of Public Works. The most significant source of flood risk within the Plan area is from fluvial (from rivers/streams, including from the River Boyne and its tributaries) however there are other sources of flooding present including those from pluvial (from rainwater) and surface drainage systems. Predictive flood risk mapping is also available from the Office of Public Works and is included in the SFRA document that accompanies the Plan.

⁷ As per EPA classification system (gis.epa.ie/EPAMaps)
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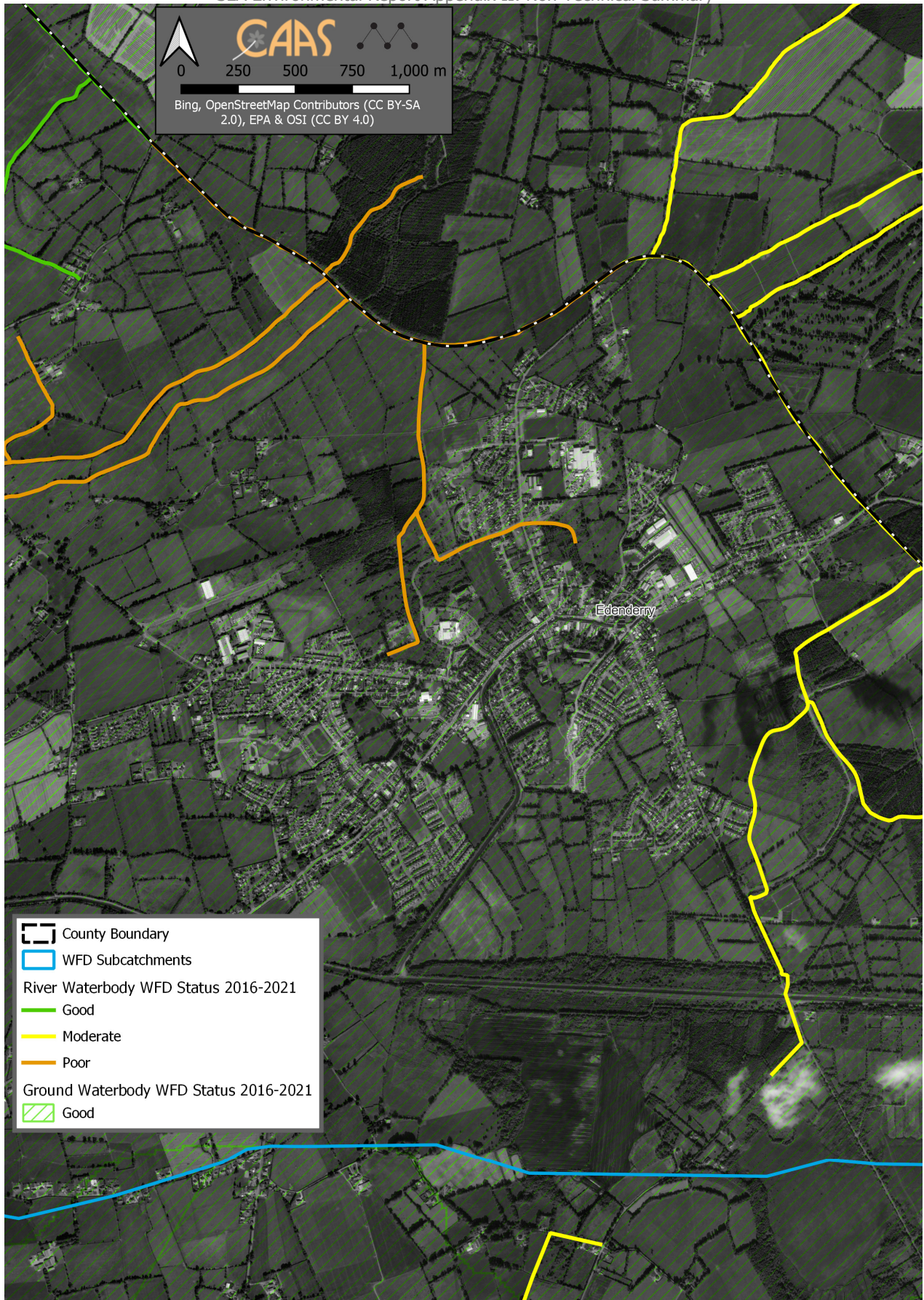


Figure 3.3 Surface Water Status (2016-2021)

3.7 Air and Climatic Factors

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

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

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

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

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

- Air quality in Ireland is generally good, however, there are localised issues.
- Ireland met all of its EU legal requirements in 2021 but it failed to meet the new WHO-based guideline levels for Health in 2021.
- Air quality monitoring results in 2021 showed that fine particulate matter (PM_{2.5}) mainly from burning solid fuel, and nitrogen dioxide (NO₂) mainly from road transport, remain the main threats to good air quality.
- It is estimated that there are approximately 1,300 premature deaths annually in Ireland due to poor air quality from fine particulate matter (PM₅).

With regards to solutions, the report identifies that:

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

3.8 Material Assets

Other material assets, in addition to those referred to below, covered by the SEA include archaeological and architectural heritage (see Section 3.9) natural resources of economic value, such as water and air (see Sections 3.6 and 3.7).

Public Assets and Infrastructure

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

Waste Water

The Wastewater Treatment Plant (WWTP) serving Edenderry is not currently listed as a priority area (such areas are those where improvements are required to resolve urgent environmental issues).⁸

The current wastewater treatment system serving Edenderry is located at Monasteroris, Edenderry. Recent publications identify that:

- The Edenderry WWTP has a design capacity of 9,800 Population Equivalent (PE), with current (2020) load of 9,644 (PE)⁹ and headroom of 156 (PE)¹⁰.
- The additional headroom increased up to 12,500 (PE) will be available upon completion of upgrade works (post 2024).¹¹
- The WWTP is currently fully compliant with the Emission Discharge Values (ELVs).¹²

With respect to waste water treatment capacity, an Uisce Éireann submission made through the Draft Plan consultation process identifies that:

The LAP lands are served by the Edenderry Wastewater Treatment Plant. The treatment plant currently has no capacity for new connections. However, there is a project underway & will be completed before the end of the LAP lifetime. The project is currently at design stage. The decision of the most favourable option will be made in Q2-23 when the Feasibility Study Report is finalised. Alternative solutions such as private wastewater treatment plants should not generally be considered by planning authorities. Uisce Éireann will not retrospectively take over responsibility for developer provided treatment facilities or associated networks, unless agreed in advance.

Water Supply

The water supply in Edenderry is from a number of sources. Three boreholes provide water in the town. Two of these boreholes are located close to the water tower in Blundell Park and one is in close proximity to the Kishawanny Bridge. The town water supply is also supplemented by a connection to the Tubberdaly Public Water Scheme. Edenderry's drinking water is treated by Edenderry Public Water Supply Scheme. The most recent EPA Remedial Action List of supplies that need improvements (Q2 of 2022) does not include any water scheme that supplies the Plan area

Waste Management

Waste management across County Offaly, including the Plan area, is guided by the Eastern and Midlands Region Waste Management Plan 2015-2021.

Transport

Edenderry is strategically located on the edge of the Greater Dublin Area. The upgraded R402 provides access to the M6/N6, making Edenderry more accessible to Dublin and Galway, and links Edenderry to Tullamore. Bus Éireann provides public transport services to the town, including the Edenderry to Dublin service daily and private operators provide direct bus services to Tullamore. Enfield and Tullamore represent the nearest railway connections and as a result bus travel remains the primary form of public transport servicing the town. National, regional and local roads provide vital links between the towns and villages to retail, service and employment centres throughout the County and to adjoining counties. A Local Transport Plan (LTP) has been integrated into the Plan to help ensure a shift towards more sustainable modes of transport.

Existing Problems

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

The provisions of infrastructure and supporting services for development, particularly water and wastewater services, is critical.

⁸ <https://www.epa.ie/publications/compliance--enforcement/waste-water/priority-areas-list-current.php>

⁹ *Irish Water for Offaly County Council (March 2022), Settlements with Waste Water Discharge Authorisations - Wastewater Treatment Capacity Register*: Wastewater load arising from the settlement(s) being served entering the WWTP in 2020.

¹⁰ *Irish Water for Offaly County Council (March 2022), Settlements with Waste Water Discharge Authorisations - Wastewater Treatment Capacity Register*: Spare capacity available.

¹¹ *Irish Water for Offaly County Council (March 2022), Settlements with Waste Water Discharge Authorisations - Wastewater Treatment Capacity Register*: This is the current forecasted completion year as of date of this table and is subject to change. 'Post 2024' indicates that the project is proposed to be completed within the next investment period (2025-2029), subject to the planning and approval of the next capital investment plan. Note, there is no guarantee that this capacity will be delivered if the current Investment Plan is amended due to emerging needs or changes due to exchequer funding.

¹² *Irish Water, Annual Environmental Reports 2021*: https://www.water.ie/docs/aers/2021/D0110-01_2021_AER.pdf

3.9 Cultural Heritage

Archaeological Heritage

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

There are numerous Zones of Archaeological Potential identified within Edenderry¹³, with various entries to Record of Monuments and Places (RMP) in the historic town centre of Edenderry. Clusters of monuments are located within the centre of the Plan area and within the town's hinterland. Entries to the RMP within and around Edenderry, include: sheela-na-gig; silver mine; tower house; font; enclosure; and a rath.

Architectural Heritage

Edenderry has a strong Georgian influence because with unique and largely intact architectural character and setting, characterised by a compact historic core and a defined square. It contains many fine buildings and terraces dating from the 18th and 19th Centuries.¹⁴

There are various Protected Structures within and surrounding the Plan area, including: railway stations; castles; churches; cemeteries; schools; and notable buildings such as Blundell Castle and Town Hall on Market Square. Many of these Protected Structures are located within central parts of Edenderry town and particularly on JKL Street. The Grand Canal and its Harbour are important elements of Edenderry's heritage and historic transportation infrastructure, currently serving mainly as natural and recreational amenity.

Existing Problems

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

3.10 Landscape

Edenderry is situated close to the source of the River Boyne (which runs to the west and north-west of the town) and Grand Canal to the south of the town (which runs in east to west direction). The Grand Canal is one of Edenderry's prime amenity assets providing regional connections and an important wildlife and biodiversity corridor. The Edenderry Branch of the Grand Canal extends a short distance in a north-easterly direction right into the heart of the Town Centre. The amenities of the town include the built environment's historical streetscape and the riverside character of the Grand Canal and the River Boyne. Most of the area surrounding Edenderry consists of agricultural and pasture lands, with coniferous and mixed forests in the south-east of the Plan area and some peatland areas adjacent to the Grand Canal in the south.

There are a range of different landscapes found in the Plan area, each with varying visual and amenity values, topography, exposure levels and contain a variety of habitats. Each landscape type has varying capacity to absorb development related to its overall sensitivity. The Offaly County Development Plan 2021-2027 identifies ten Landscape Character Areas, Areas of High Amenity and Key Amenity Routes and several views and prospects within the Council's administrative area. The Grand Canal Corridor to the south of the Plan area is regarded as an Area of High Amenity. There is also a Scenic Route intersecting central parts of Edenderry.

A landscape's capacity to absorb new development, without exhibiting a significant alteration of character or change of appearance is referred to as it's 'sensitivity'. The sensitivity of the landscapes of County Offaly varies and is thereby classified within the following sensitivity classes: low; medium; and high. Edenderry and adjacent areas are mainly classified as being of 'Low' and 'Moderate' landscape sensitivity. The Grand Canal Corridor partially within and adjacent to the south of the town is classified as being of 'High Sensitivity'. These areas are vulnerable landscapes with extremely low capacity to absorb new development.

¹³ Edenderry LAP 2023-2029

¹⁴ Edenderry LAP 2023-2029

Existing Environmental Problems

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

3.11 Strategic Environmental Objectives

Strategic Environmental Objectives (SEOs) are methodological measures developed from policies that generally govern environmental protection objectives established at international, Community or Member State level e.g. the environmental protection objectives of various European Directives that have been transposed into Irish law and which are required to be implemented.

The SEOs are set out under a range of topics (see Table 3.1) and are used as standards against which the provisions of the Plan and the alternatives are evaluated in order to help identify which provisions would be likely to result in significant environmental effects and where such effects would be likely to occur, if – in the case of adverse effects – unmitigated.

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 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 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 sites 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 zoning and 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 Ensure access to affordable, reliable, sustainable and modern energy for all which encourages a broad energy generation mix to ensure security of supply 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 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
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. Summaries of the alternatives for the Plan and their assessment are provided below.

4.2 Limitations in Available Alternatives

The Plan is required to be prepared by the existing, already in force, Offaly County Development Plan 2021-2027 and the Planning and Development Act 2000 (as amended), which specifies various types of objectives that must be provided for by the Plan.

The alternatives available for the Plan are significantly limited by the provisions of higher-level planning objectives, including those of the National Planning Framework (NPF), the Regional Spatial and Economic Strategy (RSES) for the Eastern and Midland Region and the County Plan. These documents set out various requirements for the content of the Plan including on topics such as land use zoning and the sustainable development of settlements.

4.3 Type 1: Alternatives Already Considered

The preparation of the County Development Plan and associated SEA process already considered various different types of alternatives, including those relating to population allocations, which were integrated into that Plan and which set requirements for lower tier planning in the County, including the Edenderry Local Area Plan.

4.4 Type 2: Land Use Zoning Alternatives

Alternative Type 2 (i): "More Compact Development"

The more compact, serviced/serviceable land and infrastructure assessment approach under this alternative would allow for water supply, waste water, compact growth, public transport and co-ordinated development considerations to be integrated into the Plan to the highest degree.

The infrastructure required to be in place to achieve the growth targets is already in place or planned under this alternative.

The development of the Town Centre and the Core Retail Area would be more compact and sustainable under this scenario and would support the longer-term viability of the settlement.

Opportunity sites identified with clear design and proposed uses identified – making successful applications for the sustainable, compact development of the town more likely.

The approach under Alternative Type 2 (i): "More Compact Development" would benefit the protection of various environmental components. Although potentially adverse effects associated with land use development would exist, they would be mitigated to a significant degree.

Alternative Type 2 (ii): “Less Compact Development”

By not following a more compact, serviced/serviceable land and infrastructure assessment approach, this alternative would not allow for water supply, waste water, compact growth, public transport and co-ordinated development considerations to be integrated into the Plan to the highest degree.

Additional infrastructure would be required to accommodate sporadic development, more than would be required for Alternative 1 ‘More Compact Development’ and some development may have to be serviced by private waste water treatment systems which would have to be properly maintained.

The development of the Town Centre and the Core Retail Area would be less compact and less sustainable under this scenario and would not optimally support the longer-term viability of the settlement.

Opportunity sites are identified but no clear guidance on the design parameters or uses identified – making successful applications for the sustainable, compact development of the town less likely.

An opportunity to mitigate potentially adverse effects arising from land use development to a significant degree would have been missed by the approach under Alternative Type 2 (ii): “Less Compact Development”.

Selected Alternative: Type 2 (i): “More Compact Development”

4.5 Type 3: Alternatives for Transport

Type 3 (i) Low Carbon Corridor

Supporting the use of a low carbon Edenderry-Enfield rail-line corridor within the Plan boundary (Type 3 (i) Alternative A) would make the use of this corridor for sustainable modes of transport more likely. This would be likely to improve the potential for meeting important objectives relating to emissions/energy objectives. Applications for such development would be more likely to be granted permission. Project level consideration of environmental impacts and mitigation, including those relating to construction, would need to take place in the context of more detail around potential proposals.

Not explicitly supporting the use of a low carbon Edenderry-Enfield rail-line corridor within the Plan boundary, would make the use of this corridor for sustainable modes of transport less likely and make its redundant state more likely. This would be likely to reduce the potential for meeting important objectives relating to emissions/energy objectives. Applications for such development would be less likely to be granted permission. Project level consideration of environmental impacts and mitigation, including those relating to construction, would need to take place in the context of more detail around potential proposals.

Selected Alternative: Alternative A

Type 3 (ii) Roadspace Capacity

These alternatives would have the potential to change behaviours and would influence the profile of users of the urban centre and mode share of transport. Reallocating roadscape within Edenderry to walking, cycling and public transport to accompany / occur concurrently with the

provision of any additional roadspace capacity that may arise in the future (Type 3 (ii) Alternative A) could take the form of removing traffic from streets, removing lanes of traffic, narrowing carriageways, traffic management measures, or removing on-street parking to provide cycle tracks or widened footpaths. This would benefit efforts to maximise sustainable mobility. This would also facilitate the enhancement of the public realm (including cultural heritage and its context) by contributing towards the replacement of motorised transport modes with more sustainable and non-motorised modes. Project level consideration of environmental impacts and mitigation, including those relating to construction, would need to take place in the context of more detail around proposals. To not accompany the development of additional roadspace capacity by a corresponding reallocation of roadspace within Edenderry to walking, cycling and public transport (Type 3 (ii) Alternative B) would not benefit efforts to maximise sustainable mobility.

Selected Alternative: Alternative A

Type 3 (iii) How to provide transport infrastructure

The provision of new transport infrastructure, with all additional environmental mitigation left to be defined until project level (Type 3 (iii) Alternative A) would offer the least certainty for environmental protection and management and would be more likely to result in important individual projects (relating to sustainable mobility and emissions objectives) not getting permission.

Specifying environmental constraints (including those related to habitats and potential impacts such as disturbance from lighting – e.g. minimising river crossings, avoiding sensitive habitats, not increasing barriers to flood waters and sustainable design and construction techniques) at Plan level (Type 3 (iii) Alternative B) would offer the most certainty for environmental protection and management and would be more likely to result in important individual projects (relating to sustainable mobility and emissions/energy objectives) receiving permission.

Selected Alternative: Alternative B

4.6 Selected Alternatives

Selected alternatives for the Plan from each of the three types of alternatives that emerged from the planning/SEA process are indicated above.

These alternatives have been adopted by the Members having regard to both:

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

Section 5 Summary of Effects arising from Plan

Table 5.1 summarises the overall environmental effects arising from Plan provisions. The effects encompass all in-combination/cumulative effects arising from implementation of the Plan. The potentially significant adverse environmental effects (if unmitigated) arising from implementation of the Plan are detailed as are residual effects, taking into account mitigation integrated into both the Plan and the Offaly County Development Plan 2021-2027 – see Section 6.

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

Stage 2 Appropriate Assessment (AA) has been undertaken alongside the preparation of the Plan. The requirement for AA is provided under the EU Habitats Directive (Directive 1992/43/EEC). The AA assesses the effects of the Plan on European Sites designated for certain habitats and species. The conclusion of the AA is that the Plan will not affect the integrity of the Natura 2000 network¹⁵.

A Strategic Flood Risk Assessment (SFRA) document accompanies this SEA Environmental Report and the Plan. Requirements in relation to SFRA are provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (Department of Environment and Office of Public Works, 2009) and associated Department of the Environment, Community and Local Government Circular PL2/2014. Flood risk management and drainage provisions are already in force through the County Development Plan and related provisions have been integrated into the LAP. In addition, land use zoning contained within the Plan has been informed by the SFRA process and associated delineation of flood risk zones.

¹⁵ Except as provided for in Article 6(4) of the Habitats Directive, viz. There must be:

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

Table 5.1 Overall Findings – Environmental Effects arising from Plan Provisions

Environmental Component	Environmental Effects, in combination with the wider planning framework			SEO Codes
	Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP, the Eastern and Midland RSES, the Offaly County Development Plan 2021-2027 and adjacent Development Plans and lower-tier land use plans.			
	Significant Positive Effect, likely to occur	Potentially Significant Adverse Environmental Effects, if unmitigated	Likely Residual Adverse Non-Significant Effects	
Biodiversity and Flora and Fauna	<ul style="list-style-type: none"> Contribution towards protection of ecology (including designated sites, ecological connectivity, habitats) by facilitating development of lands (including those within and adjacent to the Plan area) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-served lands elsewhere in the Plan area and beyond. Contribution towards the maintenance of existing green infrastructure and associated ecosystem services, listed species, ecological connectivity and non-designated habitats. Contribution towards protection and/or maintenance of biodiversity and flora and fauna by contributing towards the protection of natural capital including the environmental vectors of air, water and soil. Biodiversity and flora and fauna includes biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species (including birds and bats), listed/protected species, ecological connectivity and non-designated habitats (including terrestrial and aquatic habitats), and disturbance to biodiversity and flora and fauna – including terrestrial and aquatic biodiversity and flora and fauna. Sustains existing sustainable rural management practices – and the communities who support them – to ensure the continuation of long-established managed landscapes and the flora and fauna that they contain. 	<p>Arising from both construction and operation of development and associated infrastructure:</p> <ul style="list-style-type: none"> 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 (e.g. swifts) and bats. 	<ul style="list-style-type: none"> Loss of an extent of non-protected habitats and species arising from the replacement of semi-natural land covers with artificial surfaces. Losses or damage to ecology (these would be in compliance with relevant legislation). 	BFF

SEA Environmental Report Appendix II: Non-Technical Summary

Environmental Component	Environmental Effects, in combination with the wider planning framework			SEO Codes
	Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP 2018, the Eastern and Midland RSES, adjacent Development Plans and lower-tier land use plans.			
	Significant Positive Effect, likely to occur	Potentially Significant Adverse Environmental Effects, if unmitigated	Likely Residual Adverse Non-Significant Effects	
Population and Human Health	<ul style="list-style-type: none"> • Promotion of economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management. • Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands (including those within and adjacent to the Plan area) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-served lands elsewhere in the Plan area and beyond • Contribution towards the protection of human health by facilitating development of lands (including those within and adjacent to the Plan area) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-served lands elsewhere in the Plan area and beyond. • Contributes towards protection of human health as a result of contributing towards the protection of natural capital including environmental vectors, including air and water. 	<ul style="list-style-type: none"> • Potential adverse effects arising from flood events. • Potential interactions if effects arising from environmental vectors. 	<ul style="list-style-type: none"> • Potential interactions with residual effects on environmental vectors – please refer to residual adverse effects under “Soil”, “Water” and “Air and Climatic Factors” below. 	PHH
Soil	<ul style="list-style-type: none"> • Contribution towards the protection of soils (including those used for agriculture) and designated sites of geological heritage by facilitating development of lands (including those within and adjacent to the Plan area) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-served lands elsewhere in the Plan area and beyond. • Contribution towards the protection of the environment from contamination the highest standards of remediation, and where appropriate to consultations with the EPA and other relevant bodies, will be required to resolve any instances of environmental pollution created by contaminated land. 	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces. 	S

SEA Environmental Report Appendix II: Non-Technical Summary

Environmental Component	Environmental Effects, in combination with the wider planning framework			SEO Codes
	Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP 2018, the Eastern and Midland RSES, adjacent Development Plans and lower-tier land use plans.			
	Significant Positive Effect, likely to occur	Potentially Significant Adverse Environmental Effects, if unmitigated	Likely Residual Adverse Non-Significant Effects	
Water	<ul style="list-style-type: none"> Contribution towards the protection of water by facilitating development of lands (including those within and adjacent to the Plan area) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the Plan area and beyond. Contributions towards the protection of water resources including the status of surface and groundwaters and water-based designations. Contribution towards flood risk management and appropriate drainage. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Any increased loadings as a result of development to comply with the River Basin Management Plan. Flood related risks remain due to uncertainty with regard to extreme weather events – however such risks will be mitigated by measures that have been integrated into the Plan. 	W
Material Assets	<ul style="list-style-type: none"> Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands (including those within and adjacent to the Plan area) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the Plan area and beyond. Contribution towards compliance with national and regional water services and waste management policies. Contribution towards increase in renewable energy use by facilitating renewable energy and electricity transmission infrastructure developments. Contribution towards limits in increases in energy demand from the transport sector by facilitating sustainable compact growth. Contribution towards reductions in average energy consumption per capita including promoting energy efficient buildings, retrofitting, smart buildings, cities and grids. 	<ul style="list-style-type: none"> Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity ensures the mitigation of potential conflicts). Failure to adequately treat surface water run-off that is discharged to water bodies (water services infrastructure and capacity ensures the mitigation of potential conflicts). Failure to comply with drinking water regulations and serve new development with adequate drinking water (water services infrastructure and capacity ensures the mitigation of potential conflicts). Increases in waste levels. Potential impacts upon public assets and infrastructure. Interactions between agricultural waste and soil, water, biodiversity and human health – including as a result of emissions of ammonia from agricultural activities (e.g. manure handling, storage and spreading) and the production of secondary inorganic particulate matter. 	<ul style="list-style-type: none"> Exceedance of capacity in critical infrastructure risks remain, including due to uncertainty with regard to climate – however, such risks will be mitigated by: measures, including those requiring the timely provision of critical infrastructure, and compliance with the Water Framework Directive and associated River Basin Management Plan. Residual wastes to be disposed of in line with higher-level waste management policies. Any impacts upon public assets and infrastructure to comply with statutory planning/consent-granting framework. 	MA

SEA Environmental Report Appendix II: Non-Technical Summary

Environmental Component	Environmental Effects, in combination with the wider planning framework			SEO Codes
	Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP 2018, the Eastern and Midland RSES, adjacent Development Plans and lower-tier land use plans.			
	Significant Positive Effect, likely to occur	Potentially Significant Adverse Environmental Effects, if unmitigated	Likely Residual Adverse Non-Significant Effects	
Air and Climatic Factors	<ul style="list-style-type: none"> • Contribution towards climate mitigation and adaptation by facilitating compact development of lands (including those within and adjacent to the Plan area) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-served lands elsewhere in the Plan area and beyond. • In combination with other plans, programmes etc., contribution towards the objectives of the wide policy framework relating to climate mitigation and adaptation, and associated contribution towards maintaining and improving air quality and managing noise levels, including through measures relating to: <ul style="list-style-type: none"> ○ Sustainable compact growth; ○ Sustainable mobility, including walking, cycling and public transport; ○ Drainage, flood risk management and resilience; ○ Sectors including agriculture, residential heating and infrastructure; ○ Sustainable infrastructure design solutions including energy efficient buildings; green infrastructure). 	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • An extent of travel related greenhouse gas and other emissions to air. This has been mitigated by provisions which have been integrated into the Plan, including those relating to sustainable compact growth and sustainable mobility. • Interactions between noise emissions and sensitive receptors. Various provisions have been integrated into the Plan to ensure that noise levels at sensitive receptors will be minimised. 	AC
Cultural Heritage	<ul style="list-style-type: none"> • Contributes towards protection of cultural heritage elsewhere by facilitating development within the Plan area. • Contributes towards protection of cultural heritage within the Plan area by facilitating brownfield development and regeneration. 	<ul style="list-style-type: none"> • Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities. 	<ul style="list-style-type: none"> • Potential effects on known architectural and archaeological heritage and unknown archaeology however, these will occur in compliance with legislation. 	CH
Landscape	<ul style="list-style-type: none"> • Contributes towards protection of wider landscape and landscape designations by facilitating development within the Plan area. 	<ul style="list-style-type: none"> • Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape. 	<ul style="list-style-type: none"> • Landscapes will change overtime as a result of natural changes in vegetation cover combined with new developments that will occur in compliance with the Plan's landscape protection measures. 	L

Section 6 Mitigation and Monitoring Measures

6.1 Mitigation

Mitigation measures are measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse impacts on the environment of implementing the Plan. Various environmental sensitivities and issues have been communicated to the Council through the SEA, Appropriate Assessment (AA) and Strategic Flood Risk Assessment (SFRA) processes. By integrating recommendations into the Plan, the Council have ensured that both the beneficial environmental effects of implementing the Plan have been and will be maximised and that potential adverse effects have been and will be avoided, reduced or offset.

Mitigation was achieved through the:

- Strategic work undertaken by the Council to ensure contribution towards environmental protection and sustainable development¹⁶;
- Considering alternatives for the Plan¹⁷;
- Integration of environmental considerations into zoning provisions of the Plan¹⁸;
- Integration of individual SEA, AA and SFRA provisions into the text of the Plan; and
- Integration of individual provisions into the text of the County Development Plan.

6.2 Monitoring

The SEA Directive requires that the significant environmental effects of the implementation of plans and programmes are monitored. Monitoring is based around indicators that allow quantitative measures of trends and progress over time relating to the Strategic Environmental Objectives identified at Table 3.1 and used in the evaluation. Monitoring indicators, targets, sources and remedial action is provided at Table 6.1 overleaf.

¹⁶ Far in advance of the placing of the Draft Plan on public display, Offaly 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.

The following Edenderry specific non-statutory plans and studies were taken into account in the preparation of the LAP:

- Edenderry Local Transport Plan; and
- Blundell Masterplan.

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

¹⁷ 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, placed on public display and adopted.

¹⁸ Environmental considerations were integrated into the Local Area Plan's zoning through an interdisciplinary approach which was informed by the environmental considerations identified by the SEA, AA and SFRA processes. 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, Eastern and Midland RSES and Offaly County Development Plan 2021-2027. The detailed Plan preparation process undertaken by the Planning Department combined with specialist input from the SFRA process facilitated zoning that helps to avoid inappropriate development being permitted in areas of high flood risk. Also taken into account were environmental sensitivities relating to ecology, cultural heritage, landscape and water.

Table 6.1 Indicators, Targets, Sources and Remedial Action¹⁹

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 County Development Plan Chapter 4 "Biodiversity and Landscape" and Local Area Plan Chapter 6 "Biodiversity and Green Infrastructure" 	<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, the Biodiversity Plan for Offaly as incorporated into the Offaly Heritage Plan 2017-21 • 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 County Development Plan Chapter 4 "Biodiversity and Landscape" and Local Area Plan Chapter 6 "Biodiversity and Green Infrastructure" 	<ul style="list-style-type: none"> • Department of Housing, Local Government and Heritage report of the implementation of the Habitats Directive - as required by Article 17 of the Directive (every 6 years). • Department of Housing, Local Government and Heritage National Monitoring Report for the Birds Directive under Article 12 (every 6 years) • Internal monitoring of preparation of local land use plans • Internal monitoring of likely significant environmental effects of grants of permission (grant by grant).²⁰ • Consultations with the NPWS (at monitoring evaluation). 	<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 DHLGH to establish if the pressures are related to Plan actions / activities. A tailored response will be developed in consultation with these stakeholders in such a circumstance. • Where water bodies are failing to meet at least good status this will be investigated with the DHLGH Water Section, the Regional Assembly, the EPA Catchment Unit and, as relevant, Irish Water to establish if the pressures are related to Plan actions / activities. A tailored response will be developed in consultation with these stakeholders in such a circumstance.
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 County Development Plan Chapter 5 "Economic Development Strategy" and Local Area Plan Chapter 2 "Economic Development Strategy" • 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 County Development Plan Chapter 5 "Economic Development Strategy" and Local Area Plan Chapter 2 "Economic Development Strategy" • 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 previous CSO figures, the Council will coordinate with the Regional Assembly, the DHLGH, DECC 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 	<ul style="list-style-type: none"> • Maintain built surface cover nationally to below the EU average of 4% as per the NPF. • Achieve the 40% target for growth on infill as per the NPF. 	<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.

¹⁹ Indicators are linked to and should be considered alongside the environmental effects outlined in Table 8.3 and proposed mitigation measures outlined in Table 9.1.

²⁰ Including confirmation with development management that the following impacts have been considered and including use of monitoring data, where available: habitat loss; disturbance (e.g. due to noise and lighting along transport corridors)¹ and 'displacement of protected species such as birds and bats.

SEA Environmental Report Appendix II: Non-Technical Summary

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
		undertaken to support applications for brownfield and infill development prior to planning permission			
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 (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 DHLGH Water Section, the EPA Catchment Unit, the Regional Assembly and, as relevant, Irish Water to establish if the pressures are related to Plan actions / activities. A tailored response will be developed in consultation with these stakeholders in such a circumstance. • 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 (at monitoring evaluation) • 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 previous CSO figures, the Council will coordinate with the Regional Assembly, DHLGH 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 the Environment, Climate and Communications (at monitoring evaluation) 	<ul style="list-style-type: none"> • Where proportion of population shows increase in private car use above previous CSO figures, Council will coordinate with the Regional Assembly, DHLGH, DECC and NTA to develop a tailored response. See also entry under Population and human health above
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 County Development Plan Chapter 3 "Climate Action and Energy" and Local Area Plan Chapter 8 "Climate Action" • 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 County Development Plan Chapter 3 "Climate Action and Energy" and Local Area Plan Chapter 8 "Climate Action" • 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 	<ul style="list-style-type: none"> • EPA Annual National Greenhouse Gas Emissions Inventory reporting • Climate Action Regional Office • Consultations with Department of the Environment, Climate and Communications (at monitoring evaluation) • 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 previous CSO figures, the Council will coordinate with the Regional Assembly, DHLGH and NTA to develop a tailored response

SEA Environmental Report Appendix II: Non-Technical Summary

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 Housing, Local Government and Heritage (at monitoring evaluation). 	<ul style="list-style-type: none"> Where monitoring reveals visitor or development pressure is causing negative effects on designated archaeological or architectural heritage, the Council will work with the Regional Assembly, Fáilte Ireland and the National Monuments Service and other stakeholders, as relevant, to address pressures through additional mitigation
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 To seek to align with the National Landscape Strategy 	<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