SEA ENVIRONMENTAL REPORT

FOR

RELEVANT PROPOSED MATERIAL ALTERATIONS

TO THE

DRAFT OFFALY COUNTY DEVELOPMENT PLAN 2021-2027

for: **Offaly County Council**

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List of Abbreviations

AA	Appropriate Assessment
ACA	Architectural Conservation Area
CAFE	Cleaner Air for Europe
CFRAM	Catchment Flood Risk Assessment and Management
CORINE	Co-ORdinated INformation on the Environment
CSO	Central Statistics Office
DAFM	Department of Agriculture, Food and Marine
DCCAE	Department of Communication, Climate Action and Environment
DCHG	Department of Culture, Heritage and the Gaeltacht
DEHLG	Department of the Environment, Heritage and Local Government
DHPLG	Department of Housing, Planning and Local Government
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
EQS	Environmental Quality Standard
EU	European Union
GFC	Gross Final Consumption
GSI	Geological Survey of Ireland
NHA	Natural Heritage Area
NIAH	National Inventory of Architectural Heritage
NTA	National Transport Authority
OPW	Office of Public Works
pNHA	proposed Natural Heritage Area
PAS	Priority Action Substance
RAL	Remedial Action List
RBD	River Basin District
RBMP	River Basin Management Plan
RMP	Record of Monuments and Places
RPA	Register of Protected Areas
RPS	Record of Protected Structures
RSES	Regional Spatial and Economic Strategy
SAC	Special Area of Conservation
SEA	Strategic Environmental Assessment
SEO	Strategic Environmental Objective
SI No.	Statutory Instrument Number
SPA	Special Protection Area
TPOs	Tree Preservation Orders
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WHO	World Health Organisation
WFD	Water Framework Directive

Glossary

Appropriate Assessment

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

Biodiversity and Flora and Fauna

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

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

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

Environmental Problems

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

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

Environmental Vectors

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

Mitigate

To make or become less severe or harsh.

Mitigation Measures

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

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

Natural Heritage

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

Protected Structure

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

Recorded Monument

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

Scoping

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

Strategic Environmental Assessment (SEA)

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

Strategic Environmental Objective (SEO)

Strategic Environmental Objectives (SEOs) are methodological measures developed from policies which generally govern environmental protection objectives established at International, Community or Member State level and are used as standards against which the provisions of the Proposed Material Alterations and the alternatives can be evaluated in order to help identify which provisions would be likely to result in significant environmental effects and where such effects would be likely to occur, if - in the case of adverse effects - unmitigated.

Section 1 SEA: Introduction and Benefits

1.1 Introduction

This is the Strategic Environmental Assessment (SEA) Environmental Report for relevant Proposed Material Alterations to the Draft Offaly County Development Plan 2021-2027. It has been undertaken by CAAS Ltd. on behalf of Offaly County Council. The purpose of this report is to provide a clear understanding of the likely environmental consequences of decisions regarding the Proposed Material Alterations.

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

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

1.2 Implications for the Planning Authority

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 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 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.

1.3 Why SEA? The Benefits

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

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

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

An overlay of environmental sensitivities in County Offaly are shown on Figure 1.1.

The most sensitive areas in the County include:

- Upland areas, including the Slieve Bloom Mountains and Croghan Hill - on account of ecological and land cover sensitivities, areas of high amenity designation and/or nutrient sensitivity in surface waters;
- The Callows of the River Shannon and Little Brosna - on account of ecological and land cover sensitivities, areas of high amenity designation, nutrient sensitivity in surface waters and surface waters that supply drinking water;
- Individual rivers throughout the County;
- Raised bogs across lowlands and blanket bogs in the Slieve Blooms; and
- Areas of elevated groundwater vulnerability throughout the County, including areas of extreme vulnerability in the uplands in the south-east of the County.

The Draft Plan to which the Proposed Material Alterations relate directs incompatible

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

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

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

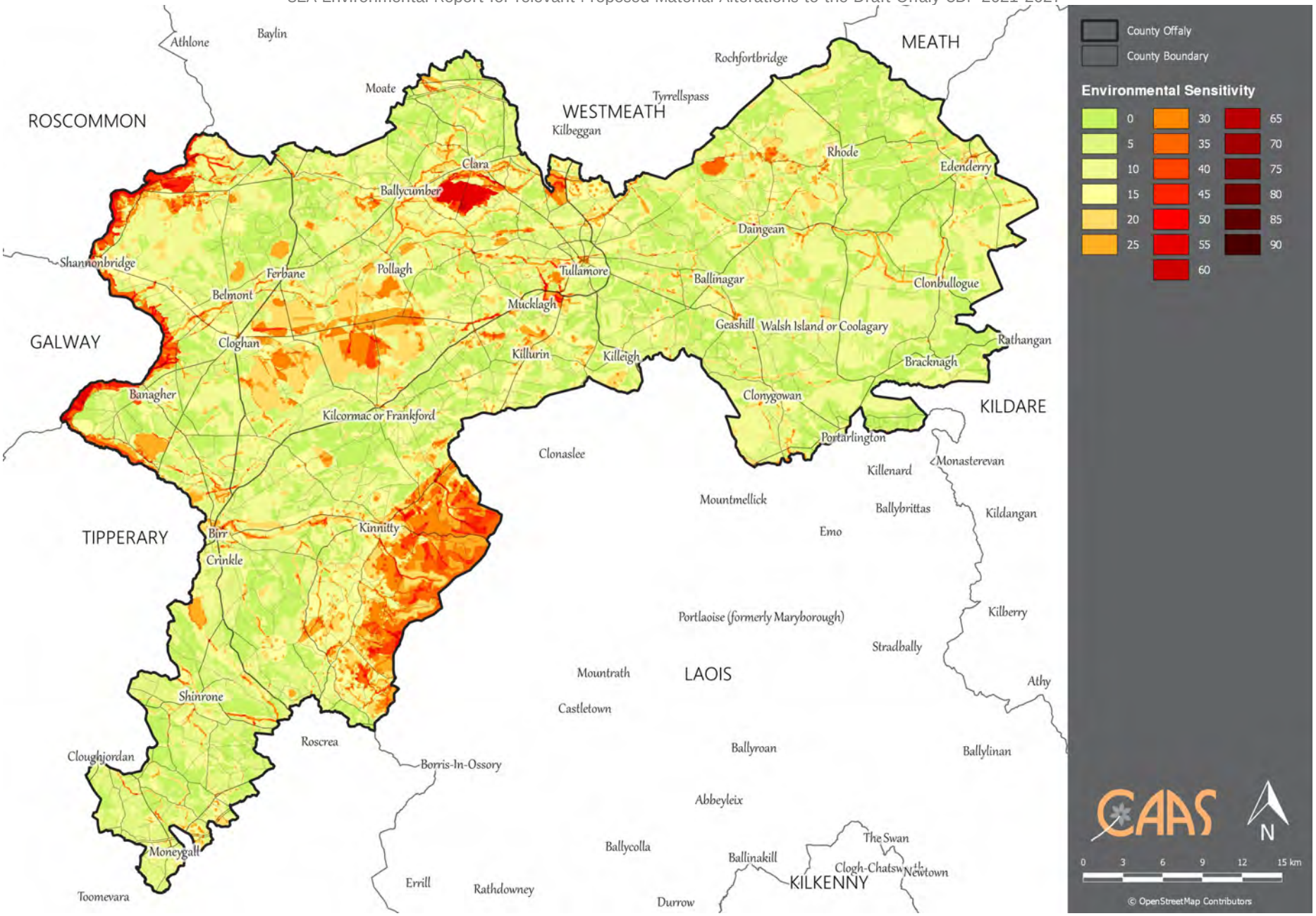

Figure 1.1 Environmental Sensitivities that the County Development Plan directs incompatible development away from

Section 2 The Draft Plan and associated Proposed Material Alterations

2.1 Introduction

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

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

The Written Statement in the Draft Plan[1] is divided into 13 separate chapters setting out various policies and objectives under the headings of:

- Chapter 1 Introduction
- Chapter 2 Core Strategy, Settlement Strategy, Housing Strategy
- Chapter 3 Climate Action and Energy
- Chapter 4 Biodiversity and Landscape
- Chapter 5 Economic Development
- Chapter 6 Tourism and Recreational Development
- Chapter 7 Retail and Town Centre Strategy and Regeneration
- Chapter 8 Sustainable Mobility and Accessibility
- Chapter 9 Social Inclusion, Community and Cultural Development
- Chapter 10 Built Heritage
- Chapter 11 Water Services and Environment
- Chapter 12 Land Use Objectives
- Chapter 13 Development Management Standards

[1] Note that the Proposed Material Alterations include updates to these titles as follows: Chapter 5 retitled to Economic Development Strategy; and Chapter 8 retitled to Sustainable Transport Strategy.

2.3 Strategic Vision

The Plan's Strategic Vision is:

> *To create a sustainable and competitive county that supports the health and wellbeing of our people and places, from urban to rural, with access to employment opportunities supported by high quality housing and physical, social and community infrastructure for all, in a climate resilient manner and with respect for our biodiversity.*

2.4 Strategic Objectives

The Development Plan presents an opportunity to shape the future growth of Offaly to plan for and support the sustainable long-term development of the county. The Plan aims to build on our previous successes and to strengthen our strategic advantages as a County, to ensure that we utilise the strengths of our citizens, communities, built and natural heritage, infrastructure and tourism to their full potential. The Strategic Objectives of the County are to:

i. Plan for a population increase in County Offaly during the plan period of 9,239 persons.
ii. Consolidate settlements to avoid undesirable and inefficient sprawl. This will be achieved through targeting a significant proportion of future development on infill/ brownfield/ underutilised sites within the existing built-up footprint of all settlements in accordance with the principle of Compact Growth set out in the National Planning Framework.
iii. Ensure better alignment between the location of population growth and employment growth. This will allow settlements to become more self-sustaining, sustainable and balanced rather than based on long distance commuter driven activity.
iv. Reduce car dependency, and increase the use of sustainable mobility such as walking, cycling and public transport through planning for and encouraging integrated transportation and landuse.
v. Direct a significant proportion of the county's development and population growth into Tullamore a Key Town as designated in the Regional Spatial and Economic Strategy in order to build up its critical mass and fulfil its role as a key growth driver of the county and midland region.

vi. Reverse the decline / stagnation of towns and villages through renewal and regeneration, and create healthy place-making by improving the attractiveness, quality, design, viability, vibrancy and liveability of the county's settlements. Also to manage urban generated growth in Rural Areas under Strong Urban Influence and Stronger Rural Areas.
vii. Protect and enhance Offaly's natural assets of clean water, biodiversity, landscape, green infrastructure, heritage and agricultural land.
viii. Provide high quality housing of a sufficient scale, mix, tenure, sequence and density, located in optimum locations and aligned with adequate infrastructure, services and amenities.
ix. Make more efficient use of key resources such as land, water, energy, waste and transportation infrastructure.
x. Create a competitive business environment supporting economic development, job creation, tourism and prosperity for all.
xi. Achieve transition to a competitive, low carbon, climate resilient and environmentally sustainable economy. This should be facilitated through reducing the need to travel, by integrating land use and sustainable modes of transport, and by reducing the use of non-renewable resources. In line with this, promote active and healthy lifestyles through increased opportunities for walking, cycling and active sport recreation.
xii. Encourage inclusive and active sustainable communities based around a strong network of community facilities and amenities.
xiii. Contribute, as practicable, towards achievement of the 17 Sustainable Development Goals of the 2030 Agenda for Sustainable Development as outlined in Figure 1.2 in the Draft Plan.

2.5 Principles for Growth

The Development Plan identifies the following list as *principles for growth* upon which to encourage the focus of new development:

i. **Compact growth**, by targeting at least 30% of all new homes that are proposed in settlements within their existing built-up footprints, with a focus on **infill / brownfield** lands, rather than continually sprawling outwards;
ii. Making better use of under-utilised land and buildings including **vacant**, derelict and under-occupied buildings;
iii. Supporting, facilitating and promoting a transition to a **low carbon society**;
iv. Strengthening **town and village centres** to meet their full potential;
v. **Aligning** population, employment, community and housing growth in a balanced fashion;
vi. Renewal and rejuvenation of all settlements by identifying significant **regeneration areas** in the existing built up areas of our towns and villages as well as rural regeneration opportunities;
vii. Moving towards **self-sustaining rather than long distance commuter driven** activity;
viii. In order to achieve more **balanced and sustainable** development, some settlements need to attract increased population, whereas others need more jobs, amenities or better transport links;
ix. Addressing the legacy of rapid unplanned growth, by facilitating amenities, jobs and services **catch-up**, together with a slower rate of population growth in recently expanded commuter settlements;
x. **Sequential** provision of housing and infrastructure;
xi. Managing **urban generated growth** in rural areas under strong urban influence and stronger rural areas and **reverse the decline** or stagnation of many rural villages;
xii. Developing the designated **Key Town of Tullamore** of sufficient scale and quality to be a driver of regional growth, investment and prosperity, followed by Self-Sustaining Growth Towns and Self-Sustaining Towns to grow to a sustainable level. Other towns need to be promoted for regeneration, local employment and managed levels of growth, and the rural area which includes smaller towns, villages, Sráids and the open countryside, shall be promoted for regeneration and local employment and services with targeted rural housing policies;
xiii. Developing **serviced zoned land and serviceable zoned land** within the life of this County Development Plan;
xiv. Compliance with **government policy and section 28 Ministerial Guidelines** including specific planning policy requirements;
xv. Reducing car dependency, promoting sustainable mobility and regional accessibility, and **integrating transportation and landuse;**
xvi. Towns and villages to become more attractive, well-designed, of high quality design and 'liveable' through **healthy place-making**;
xvii. Promoting **economic development** and enterprise activity;
xviii. Protecting assets by **preserving the quality of the landscape**, open space, recreational resources, biodiversity, architectural, archaeological and cultural heritage and material assets in the county;
xix. Promoting **social inclusion**; and
xx. **Collaboration** between key stakeholders in land amalgamation and coordination.

These principles stem from the National Planning Framework and Regional Spatial and Economic Strategy and are significant guiding principles for the County Development Plan.

2.6 Proposed Material Alterations

The Proposed Material Alterations are outlined in detail in the accompanying Proposed Material Alteration document. There are 444 (no.) numbered alterations. 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 38 (no.) Alterations 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 Report[2] are as follows:

Alteration Ref.	Alteration Ref.
MA18	MA352
MA27	MA368
MA30	MA395
MA33	MA401
MA108	MA403
MA109	MA404
MA111	MA405
MA160	MA406
MA173	MA408
MA262	MA409
MA263	MA422
MA264	MA423
MA265	MA424
MA274	MA425
MA276	MA426
MA277	MA435
MA299	MA437
MA330	MA440
MA349	MA444

[2] For detail please refer to Proposed Material Alterations document.

2.7 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, 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 within the County.

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

- Strategic Environmental Assessment;
- Appropriate Assessment;
- Strategic Flood Risk Assessment;
- Record of Protected Structures;
- Core Strategy;
- Housing Strategy including a Housing Need Demand Assessment;
- Economic Development;
- Wind Energy Strategy;
- Climate Action; and
- Transport.

The undertaking of this SEA process and associated Appropriate Assessment and Strategic Flood Risk Assessment processes were part of this strategic work and contributed towards the integration of environmental considerations into individual Plan provisions as detailed in Section 9 of this report.

2.8 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[3] (see also, Section 4 "Environmental Baseline", Section 5 "Strategic Environmental Objectives", Section 6 "Description of Alternatives" and Section 9 "Mitigation Measures"). These documents have been subject to their own environmental assessment processes, as relevant.

The National Planning Framework (NPF) sets out Ireland's planning policy direction 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 & 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 & Midlands Region. The County Development Plan will, in turn, guide lower level strategic actions, such as the Tullamore, Birr, Edenderry and Portarlington 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.

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

Section 3 SEA Methodology

3.1 Introduction to the Iterative Approach

Figure 3.1 provides an overview of the integrated Plan preparation, SEA, Appropriate Assessment (AA) and Strategic Flood Risk Assessment (SFRA) processes. The preparation of the Plan, SEA, AA and SFRA have taken place concurrently and the findings of the SEA, AA and SFRA have informed the Plan. The process is currently at a stage where the findings of this report will be placed on public display as part of the required statutory public consultations. AA and SFRA documents will also accompany the Plan on public display. Submissions made on the Plan and associated documents, including SEA and AA documents, will be responded to and updates made to the documents where relevant.

Submissions made on the Plan will be responded to and the Plan will be updated as appropriate. When the Plan is finalised, the SEA, AA and SFRA documents will be finalised. Final documents will include an SEA Statement, which will include information on how environmental considerations were integrated into the Plan, and an AA Conclusion Statement. The Plan will be implemented and environmental monitoring – as well as planning and project development and associated environmental assessments and administrative consent of projects – will be undertaken.

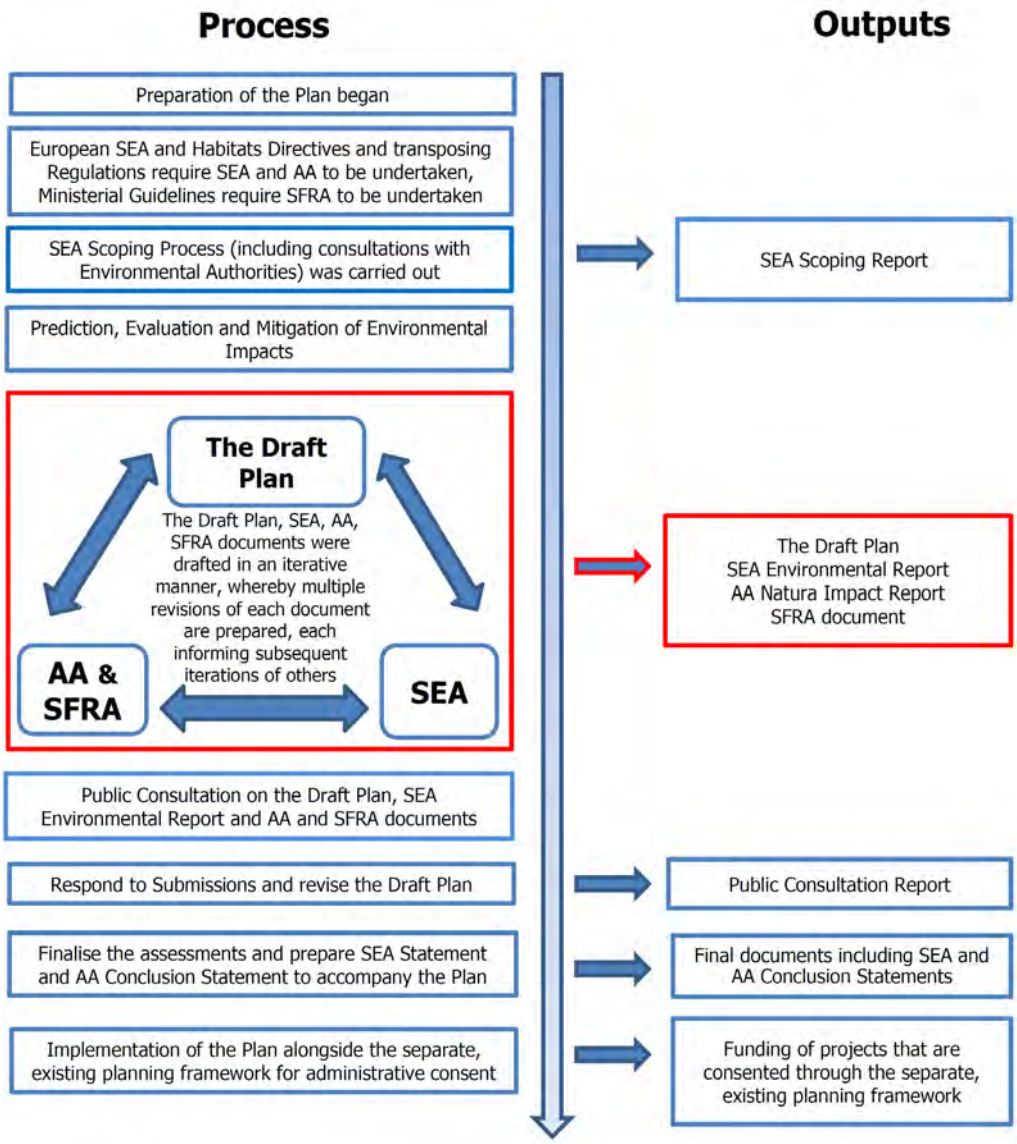

Figure 3.1 Overview of the SEA/AA/SFRA Plan-preparation Processes

3.2 Appropriate Assessment and Integrated Biodiversity Impact Assessment

3.2.1 Appropriate Assessment

Appropriate Assessment (AA) Screening and Stage 2 AA 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.[4]

The Proposed Material Alterations are accompanied by an AA Natura Impact Report, which has informed this SEA Environmental Report.

3.2.2 Integrated Biodiversity Impact Assessment

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

Scoping

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

Baseline

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

Alternatives

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

Impact assessment

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

Mitigation and monitoring

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

Reporting

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

Communication and consultation

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

3.3 Strategic Flood Risk Assessment

SFRA is being to inform the preparation of the Draft Plan and the Proposed Material Alterations.

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).

As Rahan is proposed to be changed from a Sráid to a Village, land use zoning is included in the Proposed Material Alterations, necessitating groundtruthing of flood risk indicators and the delineation of Flood Zones at this settlement. This mapping is provided in the SEA Screening Report. In addition to the map for Rahan, a revised Flood Zone map is also provided for Moneygall as time constraints in advance of public display of the Draft Plan meant that the groundtruthing of flood indicators was not previously possible at this settlement.

[4] Except as provided for in Article 6(4) of the Habitats Directive, viz. There must be:
(a) no alternative solution available,
(b) imperative reasons of overriding public interest for the plan to proceed; and
(c) adequate compensatory measures in place.

3.4 Scoping

The scope of environmental issues to be dealt with by the SEA of the Plan together with the level of detail to which they are addressed was broadly decided upon taking into account the collection of environmental baseline data and input from environmental authorities. Scoping allowed the SEA to become focused upon key issues relevant to the environmental components that are specified under the SEA Directive[5].

All relevant environmental authorities identified under the SEA Regulations as amended, were sent SEA scoping notices by the Council (as part of the SEA scoping process at pre-Draft Plan stage) indicating that submissions or observations in relation to the scope and level of detail of the information to be included in the environmental report could be made to the Council[6].

As the Plan is not likely to have significant effects on the environment in another Member State, transboundary consultations as provided for by Article 7 of the SEA Directive were not undertaken.

A submission made by the Environmental Protection Agency influenced the scope of the assessment undertaken, the findings of which are included in this report.

3.5 Alternatives

The SEA Directive requires that reasonable alternatives (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. In accordance with this requirement, alternatives for the Plan are identified and assessed in Sections 6 and 7.

[5] These components comprise biodiversity, fauna, flora, population, human health, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.

[6] The following authorities were notified: Department of Agriculture, Food and the Marine; Department of Culture, Heritage, and the Gaeltacht; Department of Communications, Climate Action and Environment; Environmental Protection Agency; Meath County Council; Westmeath County Council; Roscommon County Council; Galway County Council; Tipperary County Council; Laois County Council; and Kildare County Council.

3.6 Environmental Report

This SEA Environmental Report predicts and evaluates the likely significant effects of the Proposed Material Alterations and the alternatives.

The Environmental Report provides Offaly County Council, stakeholders and the public with a clear understanding of the likely environmental consequences of implementing the Proposed Material Alterations.

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

This Environmental Report has been informed by recommendations contained in submissions to date. 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 this SEA Environmental Report.

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

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

3.7 SEA Statement

On finalisation of the Plan, an SEA Statement will be prepared that will include information on:

- How environmental considerations have been integrated into the Plan, highlighting the main changes to the Plan that resulted from the SEA process;

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

Table 3.1 Checklist of Information included in this Environmental Report

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

Section 4 Environmental Baseline

4.1 Introduction

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

This description includes information that is relevant to lower tier planning, environmental assessments and decision-making[7].

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

4.2 National Reporting on the Environment

The EPA's *"Ireland's Environment – An Assessment 2016"* report provides an integrated assessment of the overall quality of Ireland's environment, the pressures being placed on it and the societal responses to current and emerging environmental issues. This report has informed various parts of the environmental baseline provided below. The key environmental challenges or messages identified by the report are:

Environment and Health and Wellbeing
Recognising the benefits of a good quality environment to health and wellbeing.

Climate Change
Accelerating mitigation actions to reduce greenhouse gas emissions and implement adaptation measures to increase resilience in dealing with adverse climate impacts.

Implementation of Legislation
Improving the tracking of plans and policies and the implementation and enforcement of environmental legislation to protect the environment.

Restore and Protect Water Quality
Implementing measures that achieve ongoing improvement in the environmental status of water bodies from source to the sea.

Sustainable Economic Activities
Integrating environmental sustainability ideas and performance accounting across economic sectors and sectoral plans should be a key policy for growth.

Nature and Wild Places
Protecting pristine and wild places that act as biodiversity hubs, contributing to health and wellbeing, and providing tourism opportunities

Community Engagement
Informing, engaging and supporting communities in the protection and improvement of the environment.

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

4.3 Sustainable Development Goals

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

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

[7] Note that Article 5 of the SEA Directive, in accordance with the established European principle of subsidiarity, requires that the Environmental Report includes the information that may reasonably be required taking into account, inter alia, the extent to which certain matters are more appropriately assessed at different levels in that process in order to avoid duplication of the assessment.

- Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

4.4 Likely Evolution of the Environment in the Absence of a new Plan and Material Alterations

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

The 2014-2020 Plan has contributed towards environmental protection within County Offaly. If the 2014-2020 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.

As a result, there would be a decreased likelihood in the extent, magnitude and frequency of positive effects occurring, including:

- Contribution towards protection of ecology (including designated sites, ecological connectivity, habitats) by facilitating development of lands (including those within and adjacent to the County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond.
- Contribution towards the maintenance of existing green infrastructure and associated ecosystem services, listed species, ecological connectivity and non-designated habitats.
- Contribution towards protection and/or maintenance of biodiversity and flora and fauna by contributing towards the protection of natural capital including the environmental vectors of air, water and soil. Biodiversity and flora and fauna includes biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species (including birds and bats), listed/protected species, ecological connectivity and non-designated habitats (including terrestrial and aquatic habitats), and disturbance to biodiversity and flora and fauna – including terrestrial and aquatic biodiversity and flora and fauna.
- Sustains existing sustainable rural management practices – and the communities who support them – to ensure the continuation of long-established managed landscapes and the flora and fauna that they contain.
- Promotion of economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management.
- Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands (including those within and adjacent to the County's settlements) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the County and beyond
- Contribution towards the protection of human health by facilitating development of lands (including those within and adjacent to the County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond.
- Contributes towards protection of human health as a result of contributing towards the protection of natural capital including environmental vectors, including air and water.
- Contribution towards the protection of soils (including those used for agriculture) and designated sites of geological heritage by facilitating development of lands (including those within and adjacent to the County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond.
- Contribution towards the protection of the environment from contamination the highest standards of remediation, and where appropriate to consultations with the EPA and other relevant bodies, will be required to resolve any instances of environmental pollution created by contaminated land.
- Contribution towards the protection of water by facilitating development of lands (including those within and adjacent to the County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond.
- Contributions towards the protection of water resources including the status of surface and groundwaters and water-based designations.
- Contribution towards flood risk management and appropriate drainage.
- Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands (including those within and adjacent to the County's settlements) that are served (or can be more easily served) by infrastructure and services, thereby helping to

avoid the need to develop less well-serviced lands elsewhere in the County and beyond.

- Contribution towards compliance with national and regional water services and waste management policies.
- Contribution towards increase in renewable energy use by facilitating renewable energy and electricity transmission infrastructure developments.
- Contribution towards limits in increases in energy demand from the transport sector by facilitating sustainable compact growth.
- Contribution towards reductions in average energy consumption per capita including promoting energy efficient buildings, retrofitting, smart buildings, cities and grids.
- Contribution towards climate mitigation and adaptation by facilitating compact development of lands (including those within and adjacent to the County's settlements) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the County and beyond.
- In combination with other plans, programmes etc., contribution towards the objectives of the wide policy framework relating to climate mitigation and adaptation, and associated contribution towards maintaining and improving air quality and managing noise levels, including through measures relating to:
    - Sustainable compact growth;
    - Sustainable mobility, including walking, cycling and public transport;
    - Drainage, flood risk management and resilience;
    - Sectors including agriculture, residential heating and infrastructure;
- Sustainable infrastructure design solutions including energy efficient buildings; green infrastructure).
- Contributes towards protection of cultural heritage elsewhere in the County by facilitating development within existing settlements.
- Contributes towards protection of cultural heritage within existing settlements by facilitating brownfield development and regeneration.
- Contributes towards protection of wider landscape and landscape designations by facilitating development within existing settlements.

As a result, there would be an increased likelihood in the extent, magnitude and frequency of adverse effects on all environmental components occurring, including:

- Arising from both construction and operation of development and associated infrastructure:
    - Loss of/damage to biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance to biodiversity and flora and fauna;
    - Habitat loss, fragmentation and deterioration, including patch size and edge effects; and
    - Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species such as birds and bats.
- Potential 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 agricultural waste and soil, water, biodiversity and human health – including as a result of emissions of ammonia from agricultural activities (e.g. manure handling, storage and spreading) and the production of secondary inorganic particulate matter.
- Potential conflict between development under the Plan and aiming to reduce carbon emissions in line with local, national and European environmental objectives.
- Potential conflicts between transport emissions, including those from cars, and air quality.
- Potential conflicts between increased frequency of noise emissions and protection of sensitive receptors.
- Potential conflicts with climate adaptation measures including those relating to flood risk management.
- Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities.
- Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape.

4.5 Natural Capital and Ecosystem Services[8]

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

In recognition of the need to manage natural capital, provisions have been integrated into the Plan that will contribute towards management of air quality, noise pollution, light pollution, water quality and integrated catchment management.

Ecosystems are multifunctional communities of living organisms interacting with each other and their environment. Ecosystems provide a series of services for human well-being (ecosystem services) either directly or indirectly contributing towards human wellbeing. There are four main types; provisioning, regulating, supporting and cultural services. Provisioning services are the products obtained from ecosystems such as food, fresh water, wood, fibre, genetic resources and medicines. Regulating services are defined as the benefits obtained from the regulation of ecosystem processes such as climate regulation, natural hazard regulation, water purification and waste management, pollination or pest control. Support services highlight the importance of ecosystems to provide habitat for migratory species and to maintain the viability of gene-pools. Cultural services include non-material benefits that people obtain from ecosystems such as spiritual enrichment, intellectual development, recreation and aesthetic values[9].

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

a) Consideration of natural systems - by using knowledge of interactions in nature and how ecosystems function (including at Plan Chapters 2 "Climate Action and Energy", 4 "Biodiversity and Landscape", 6 "Tourism and Recreational Development" and 11 "Water Services and Environment")
b) Taking into account of the services that ecosystems provide - including those that underpin social and economic well-being, such as flood and climate regulation (including at Plan Chapter 3 "Climate Action and Energy"), resources for food, fibre or fuel (including at Chapter "5 Economic Development"), or for recreation, culture and quality of life (including at Plan Chapters 4 "Biodiversity and Landscape", 6 "Tourism and Recreational Development" and 10 "Built Heritage")
c) Involving people - those who benefit from the ecosystem services and those managing them need to be involved in decisions that affect them (public consultation has informed the preparation of the Draft Plan which will be further refined before adoption, taking into account submissions/observations made on the Draft Plan during public display).

The following natural capital and ecosystem services issues are relevant to this SEA and have been taken into account in the provisions of the Draft Plan:

- Pollination;
- Air quality;
- Noise pollution;
- Light pollution;
- Water quality and integrated catchment management including interactions with soil;
- Soil and vegetation carbon, which helps to regulate greenhouse gas emissions;
- Soil/geological storage of water, contributing towards flood control;
- Land supporting food production; and
- Natural resources supporting energy production and recreation.

[8] This section includes content taken from the Eastern and Midlands Regional Spatial and Economic Strategy (Eastern and Midlands Regional Assembly, 2019)

[9] https://biodiversity.europa.eu/topics/ecosystem-services

4.6 Biodiversity and Flora and Fauna

4.6.1 Overview

Information on biodiversity and flora and fauna which is relevant to project planning and development and associated environmental assessment and administrative consent of projects includes available information on designated ecological sites and protected species, ecological connectivity (including stepping stones and corridors) and non-designated habitats.

Ecologically sensitive areas in Offaly include: the Slieve Bloom Mountains and Croghan Hill; raised bogs across lowlands; Callows of the River Shannon and Little Brosna; the salmonid River Boyne; woodlands; grasslands; eskers; trees; and hedgerows. These habitats support a variety of species and ecosystems that contribute to the unique biodiversity of County Offaly.

Ecological designations in County Offaly include:

- Special Protection Areas[10];
- Special Areas of Conservation[11];
- Natural Heritage Areas[12] and Proposed Natural Heritage Areas[13];
- Nature Reserves;
- Biogenetic Reserves[14];
- Certain entries to the Water Framework Directive Register of Protected Areas[15];
- RAMSAR sites;
- Tentative UNESCO World Heritage Site[16];
- Salmonid River Regs (S.I. 293 only)[17];
- Freshwater Pearl Mussel Areas;
- Wildfowl Sanctuary[18];
- Flora Protection Order[19] sites;
- Tree Preservation Orders (TPOs);
- Ecological connectivity and networks;
- CORINE Landcover[20];
- Peatlands, lakes, canals, woodlands, wetlands, grasslands, eskers and hedgerows; and
- Other sites of high biodiversity value or ecological importance.

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

4.6.2 European Sites

European Sites in the County occur in the greatest concentrations along the in upland areas. European Sites comprise:

- Special Areas of Conservation[21] (SACs); and

[10] For more detail refer to Section 4.6.

[11] For more detail refer to Section 4.6.

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

[13] pNHAs were published on a non-statutory basis in 1995, but have not since been statutorily proposed or designated. These sites are of significance for wildlife and habitats.

[14] The Council of Europe launched the concept of a European Network of Biogenetic Reserves in 1973, the programme was started in 1976. Section I of the Annex to the Resolution (76) 17 (of the 1976 European Ministerial Conference on the Environment, Vienna) defines a Biogenetic Reserve as protected areas enjoying legal status and characterised by one or more typical, unique, endangered or rare habitats, biocenoses or ecosystems. **Slieve Bloom Mountains, Mongan Bog, Clara Bog and Raheenmore Bog are a designated Council of Europe Biogenetic Reserve.**

[15] In response to the requirements of the Water Framework Directive a number of water bodies or parts of water bodies which must have extra controls on their quality by virtue of how their waters are used by wildlife have been listed on Registers of Protected Areas (RPAs). RPAs include those for Protected Habitats or Species, Shellfish, Salmonid, Nutrient Sensitive Areas, Recreational Waters and Drinking Water.

[16] A Tentative List is an inventory of properties which a country intends to consider for nomination to the World Heritage List. **One site in Offaly has been included on the Tentative List: The Monastic City of Clonmacnoise and its Cultural Landscape.**

[17] Salmonid waters are designated and protected as under the European Communities (Quality of Salmonid Waters) Regulations 1988 (SI No. 293 of 1988). Designated Salmonid Waters are capable of supporting salmon (*Salmo salar*), trout (*Salmo trutta*), char (*Salvelinus*) and whitefish (*Coregonus*). **The River Boyne is designated as Salmonid River under these regulations.**

[18] Areas that have been excluded from the 'Open Season Order' so that game birds can rest and feed undisturbed. **There is one Wildfowl Sanctuary partially located within County Offaly: WFS-43 Little Brosna.**

[19] The current list of plant species protected by Section 21 of the Wildlife Act, 1976 is set out in the Flora (Protection) Order, 1999.

[20] Land cover is the observed physical cover, as seen from the ground or through remote sensing, including for example natural or planted vegetation, water and human constructions which cover the earth's surface.

[21] 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

- Special Protection Areas[22] (SPAs).

The SEA uses the same zone of influence cited in the AA; a 15 km buffer around the County (see sites within this zone listed on Table 4.1 and mapped on Figure 4.1). The AA review of all sites within this zone has allowed a determination to be made that in the absence of significant hydrological links the characteristics of the Plan will not impose effects beyond the 15 km buffer. European sites connected to the County but beyond the 15 km buffer are mapped on Figure 4.2.

There are 18 SACs and 6 SPAs designated within and adjacent to the County, including:

- River Shannon Callows SAC[23];
- Clara Bog SAC[24];
- Island Fen SAC[25];
- Slieve Bloom Mountains SAC[26];
- River Barrow and River Nore SAC[27];
- All Saints Bog SPA[28];
- Dovegrove Callows SPA[29];
- Middle Shannon Callows SPA[30];
- Mongan Bog SPA[31];
- River Little Brosna Callows SPA[32]; and
- Slieve Bloom Mountains SPA[33].

Table 4.1 European Sites within the County

European Sites		
Designation	**Site Code**	**Site Name**
SAC (18 sites)	000566	All Saints Bog and Esker SAC
	000571	Charleville Wood SAC
	000572	Clara Bog SAC
	000859	Clonaslee Eskers and Derry Bog SAC
	000575	Ferbane Bog SAC
	000576	Fin Lough (Offaly) SAC
	002236	Island Fen SAC
	002147	Lisduff Fen SAC
	000580	Mongan Bog SAC
	000581	Moyclare Bog SAC
	001176	Pilgrim's Road Esker SAC
	000582	Raheenmore Bog SAC
	000919	Ridge Road, SW of Rapemills SAC
	021062	River Barrow and River Nore SAC
	000585	Sharavogue Bog SAC
	000412	Slieve Bloom Mountains SAC
	000925	The Long Derries, Edenderry SAC
	000216	River Shannon Callows SAC
SPA (6 sites)	004103	All Saints Bog SPA
	004137	Dovegrove Callows SPA
	004096	Middle Shannon Callows SPA
	004017	Mongan Bog SPA
	004086	River Little Brosna Callows SPA
	004160	Slieve Bloom Mountains SPA

For more detail on European Sites please refer to the AA Natura Impact Report that accompanies the Proposed Material Alterations and this SEA Environmental Report.

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.

[22] 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.

[23]**Sensitive features include:** molinia meadows; lowland hay meadows; limestone pavement; alluvial forests; and Otter.

[24]**Sensitive features include:** orchid-rich calcareous grassland; active raised bog; Rhynchosporion vegetation and bog woodland.

[25]**Sensitive features include:** juniper scrub and alkaline fens.

[26]**Sensitive features include:** wet heath; active blanket bogs; and alluvial forests.

[27]**Sensitive features include:** estuaries; reefs; Atlantic salt meadows; Mediterranean salt meadows; dry heat; petrifying springs; Killarney fern; Freshwater pearl mussel; and Atlantic salmon.

[28]**Sensitive features include**: Greenland white-fronted goose.

[29]**Sensitive features include:** Greenland white-fronted goose.

[30]**Sensitive features include:** whooper swan; wigeon; corncrake; Golden Plover; lapwing; black-tailed godwit; black-headed gull; and wetland and waterbirds.

[31]**Sensitive features include** Greenland white-fronted goose.

[32]**Sensitive features include:** whooper Swan; wigeon; teal; pintail; shoveler; golden plover; lapwing; black-tailed godwit; black-headed gul; Greenland white-fronted goose; and wetland and waterbirds.

[33] **Sensitive features include:** Hen harrier.

4.6.3 Natural Heritage Areas and Proposed Natural Heritage Areas

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

There are 7 NHAs[34] and 51 pNHAs[35] designated within or adjacent to the County. These sites are mapped on Figure 4.3.

4.6.4 Land Cover Mapping

CORINE[36] land cover mapping for the County is shown on Figure 4.4. The most dominant land cover types are pastures and peat bogs.

Categories from CORINE mapping that may indicate areas likely to contain Annex I habitats (see Figure 4.5), include:

- Peat bogs;
- Natural grassland;
- Water bodies;
- Mixed forests;
- Coniferous forest;
- Broad-leaved forests;
- Stream courses;
- Moors and heats;
- Transitional woodland and scrub; and
- Land principally occupied by agriculture with areas of natural vegetation.

4.6.5 Other Designations

Other designations mapped on Figure 4.5 include Nature Reserves, Freshwater Pearl Mussel Catchments.

Nature Reserves are areas of importance to wildlife, which is protected under Ministerial order. There are currently 78 Statutory Nature Reserves in Ireland. Most are owned by the State but some are owned by organisations or private landowners. There are four Nature Reserves in County Offaly: Slieve Bloom Mountains Nature Reserve; Clara Bog Nature Reserve; Mongan Bog Nature Reserve; and Raheenmore Bog Nature Reserve.

The Convention of Wetlands of International Importance, especially as Water Fowl Habitat, was established at Ramsar in 1971 and ratified by Ireland in 1984. The main aim of the Convention is to secure the designation by each contracting state of wetlands in its territory for inclusion in a list of wetlands of international importance for waterfowl. This entails the commitment of each contracting state to a policy of protection and management of the designated wetlands, and of formulating and implementing planning so as to promote the conservation of designated wetlands and, as far as possible, the wise use of wetlands in its territory. Ireland presently has 45 sites designated as Wetlands of International Importance, with surface areas of 66,994 hectares. There are four Ramsar Sites designated in County Offaly: Mongan Bog; Slieve Bloom Mountains; Raheenmore Bog; and Clara Bog.

[34] Black Castle Bog, Cangort Bog, Clonydonnin Bog, Daingean Bog, Hawkswood Bog, River Little Brosna Callows and Screggan Bog

[35] Dovegrove Callows, River Shannon Callows, Slieve Bloom Mountains, Annaghmore Lough Fen (Offaly), All Saints Bog and Esker, Banagher, Birr (Domestic Dwelling No.2), Birr Domestic Dwelling No.1, Charleville Wood, Clara Bog, Clonad Wood, Ferbane Bog, Fin Lough (Offaly), Kinnitty, Mongan Bog, Moyclare Bog, Raheenmore Bog, Roscrea Bog, Sharavogue Bog, Woodfield Bog, Ballintemple Bog, Miltown (Shinrone), Ballyduff Esker, Camcor Wood, Clonfinlough Esker, Clonlyon Glebe Bog, Clorhane Wood, Derrykeel Meadows, Drumakeenan, Eagle Hill and Perry's Mill, Golden Grove Woods, Kilcormac Esker, Lough Coura, Lough Nanag Esker, Mount St.Joseph Woods, Pallas Lough, Raheen Lough, Ridge Road (SW of Rapemills), Ross and Glenns Eskers, The Long Derries (Edenderry), Woodville Woods, Lough Nahinch (Tipperary), Lough Boora,
Murphy's Bridge Esker, Pilgrim's Road Esker, Ballyduff Wood, Doon Esker Wood, Bracken's Dwelling (near Whiteford), Cloghanbeg, St.Joseph's (Mountheaton), Drumakeenan National School and Grand Canal.

[36] 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.

Freshwater pearl mussel is a globally threatened, long-lived and extremely sensitive species that can be impacted by many forms of pollution, particularly sediment and nutrient pollution and by hydrological and morphological changes, which may arise from developments, activities or changes in any part of the catchment. Categories of Fresh Pearl Mussel Catchments (Margaritifera Sensitive Areas) are identified within the County include:

- Catchments of SAC populations listed in S.I. 296 of 2009 (Nore Upper catchment); and
- Catchments with previous records of Margaritifera, but current status unknown (Barrow catchment).

The River Boyne is designated as a Salmonid River (SI No. 293 of 1988).

4.6.6 Register of Protected Areas

In response to the requirements of the Water Framework Directive a number of water bodies or parts of water bodies that must have extra controls on their quality by virtue of how their waters are used by people and by wildlife have been listed on Registers of Protected Areas (RPAs). These are mapped on Figure 4.6.

There are various water bodies within the County that are used for drinking water abstraction in accordance with European Communities (Drinking Water) (No. 2) Regulations 2007 (SI No. 278/2007). These water bodies are identified on the RPAs for Drinking Water Ground or Surface Water Bodies). Rivers listed include: Shannon (Lower); Shannon (Upper); Boor; Brosna; Gageborough; Figile; Camcor; Barrow; Castlejordan; and Glenfelly Stream. The groundwater underlying the County is also included.

Nutrient Sensitive Areas in the County include lakes and rivers, such as: the River Brosna, the River Tullamore; the River Barrow; the Little Brosna River; and the River Shannon[37].

[37] Nutrient sensitive areas are those waterbodies listed in accordance with the Urban Waste Water Treatment (UWWT) Directive 91/271/EEC on Urban Waste Water Treatment and transposing Regulations. The waterbody containing the sensitive area is used to represent the nutrient sensitive area.

The River Boyne is designated as a Salmonid River under SI No. 293 of 1988 and is therefore included on the Salmonid Waters RPA.

4.6.7 Other Sites of Biodiversity Value

Other sites of biodiversity value include those mapped on Figure 4.7 and include eskers, Tree Preservation Orders (TPOs), Trees and Groups of Trees of Special Amenity Value, waterways, wetlands and lakes.

An esker is a long narrow ridge comprising of sand, gravel and boulders, which were deposited by a stream flowing on, within, or beneath a glacier. There are twenty esker systems in Offaly.

TPOs are a planning mechanism whereby individual trees or groups of trees can be identified as important and protected by the Order. Trees and Groups of Tress that Contribute to Amenity are considered by the Council as groups of trees of significant value to environment that should be protected where necessary. There are seven TPOs and twenty-four Trees and Groups of Trees of Special Amenity Value in County Offaly.

County Offaly contains a number of rivers, canals, lakes and wetlands that are of amenity and biodiversity value, including the following: River Shannon; River Barrow; Grand Canal; Natural Lake; Pallas Lake; Shannon Callows and Bord Na Mona Wetlands; Turraun Wetlands; Leabeg Wetlands; and Drinagh Wetlands.

4.6.8 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.

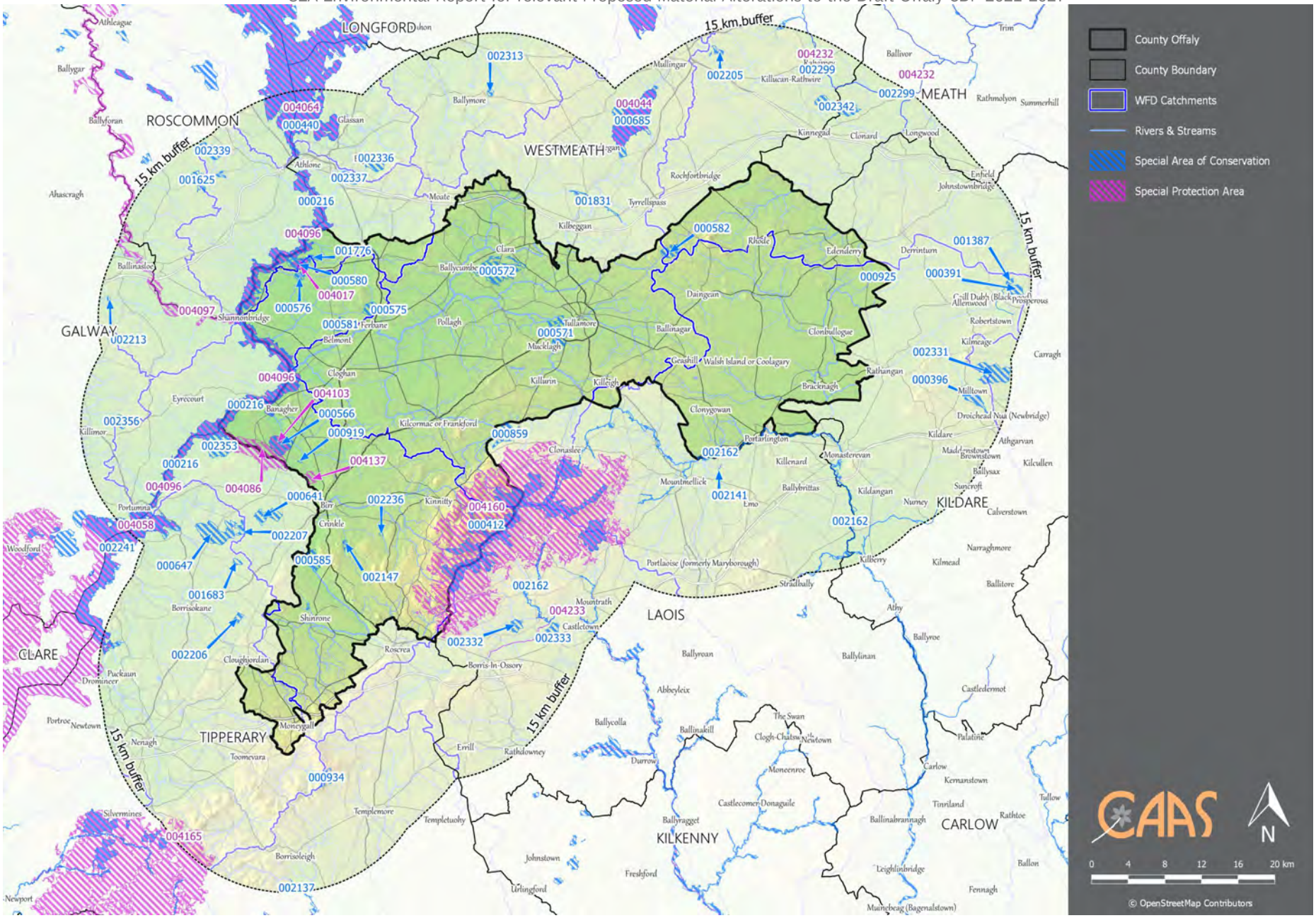

Figure 4.1 European Sites within and within 15 km of the County

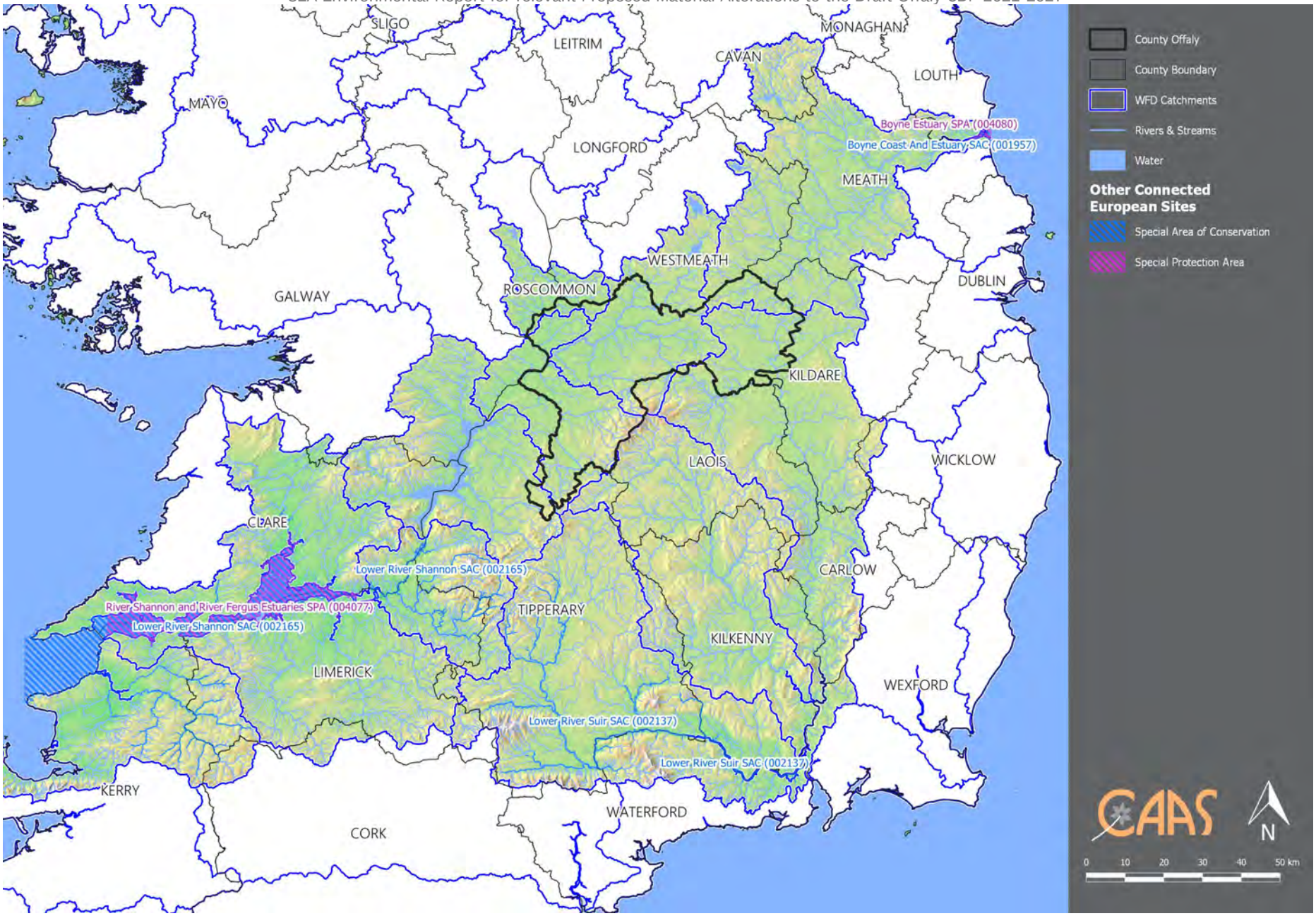

Figure 4.2 European Sites connected to the County but beyond 15 km of the County

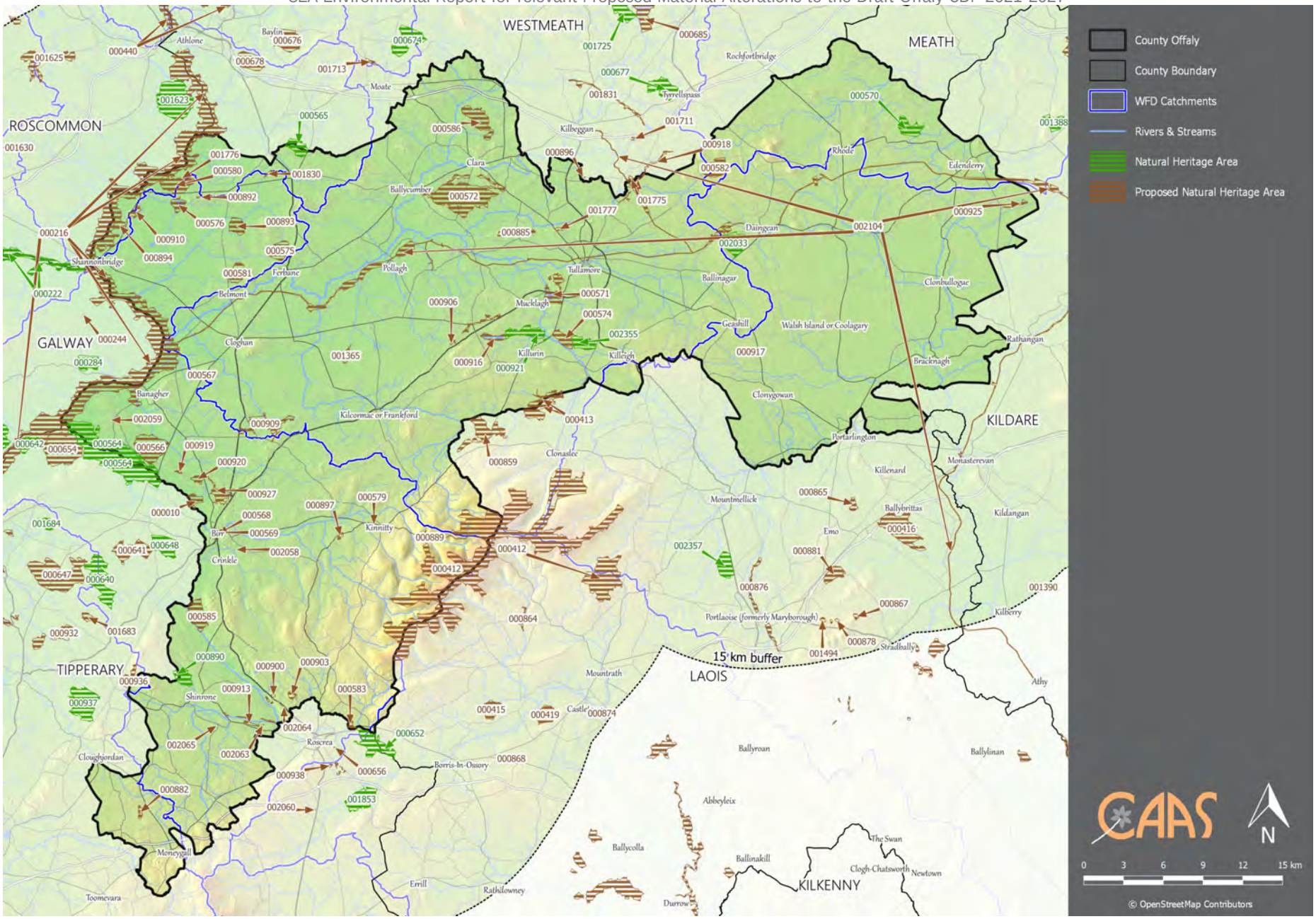

Figure 4.3 Natural Heritage Areas and Proposed Natural Heritage Areas

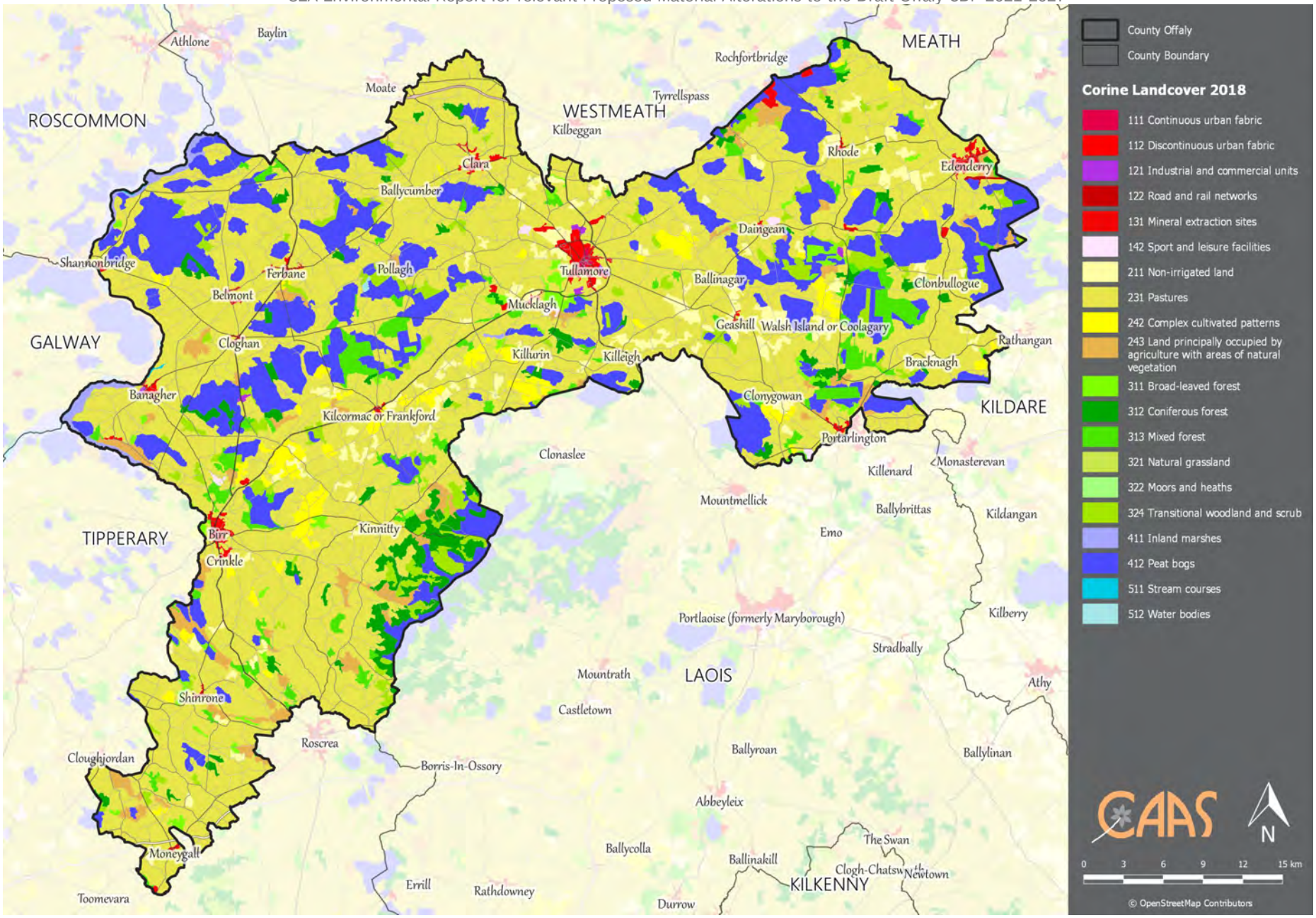

Figure 4.4 CORINE Land Cover 2018

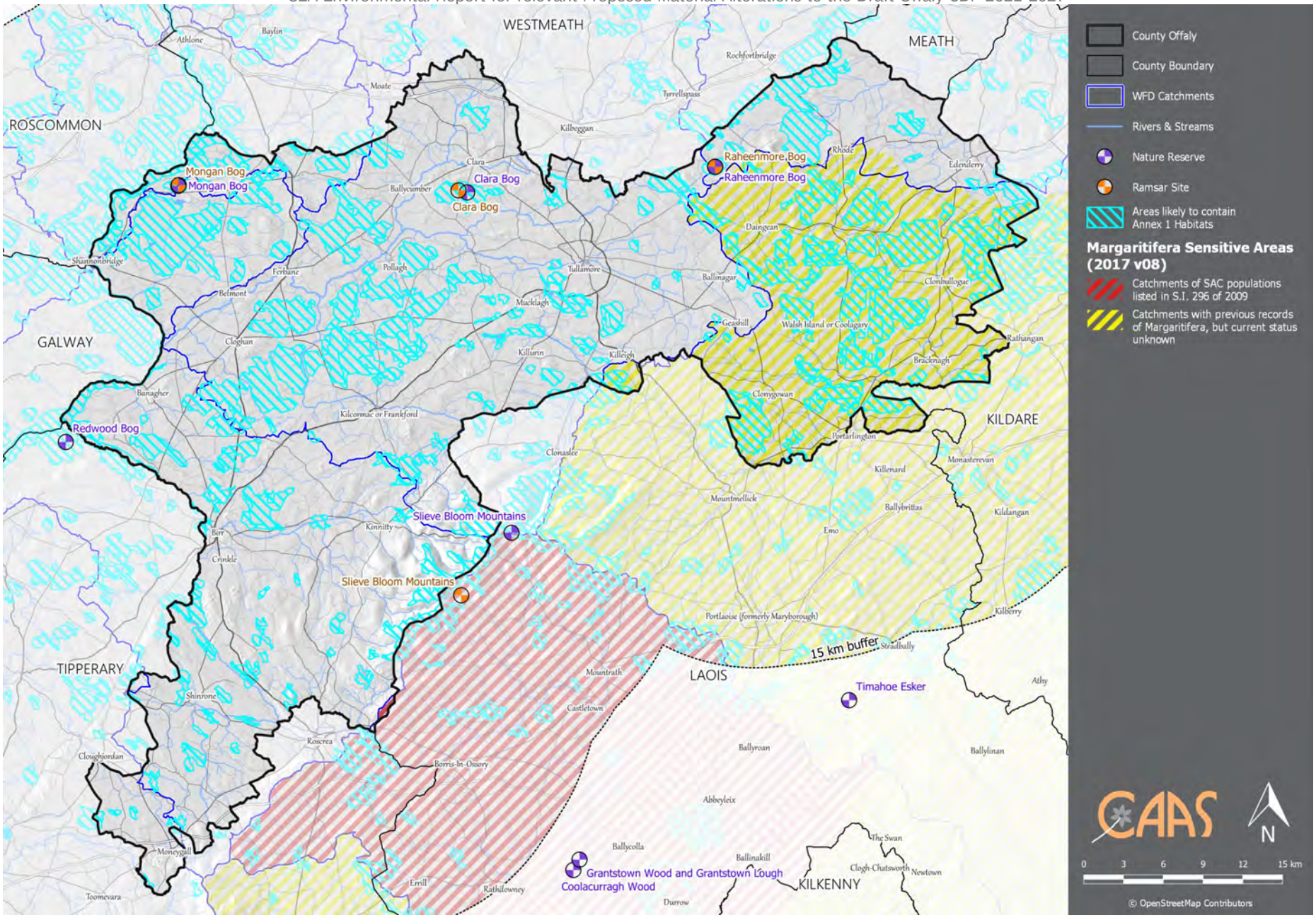

Figure 4.5 Other Ecological Designations within and adjacent to the County

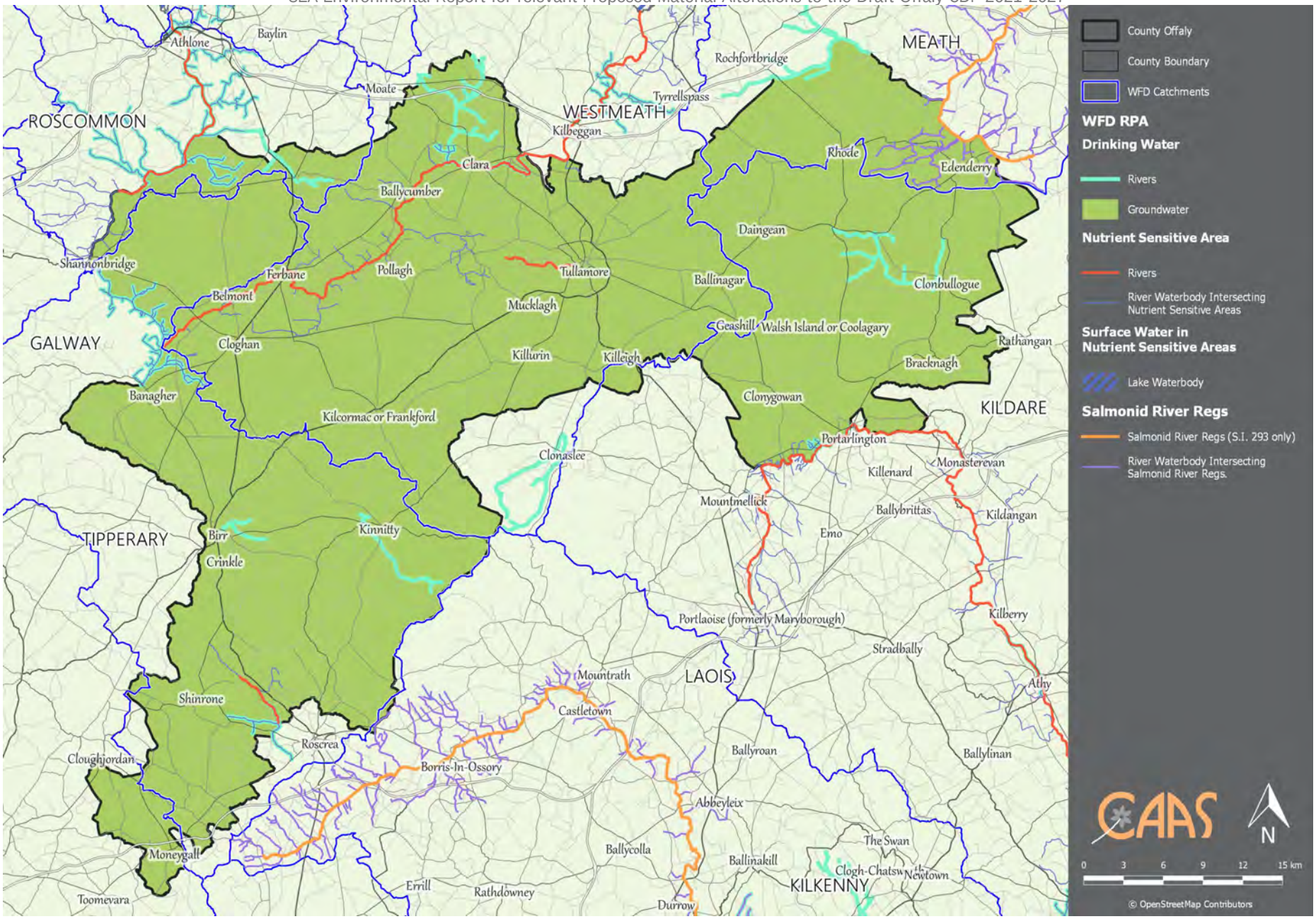

Figure 4.6 WFD Register of Protected Areas

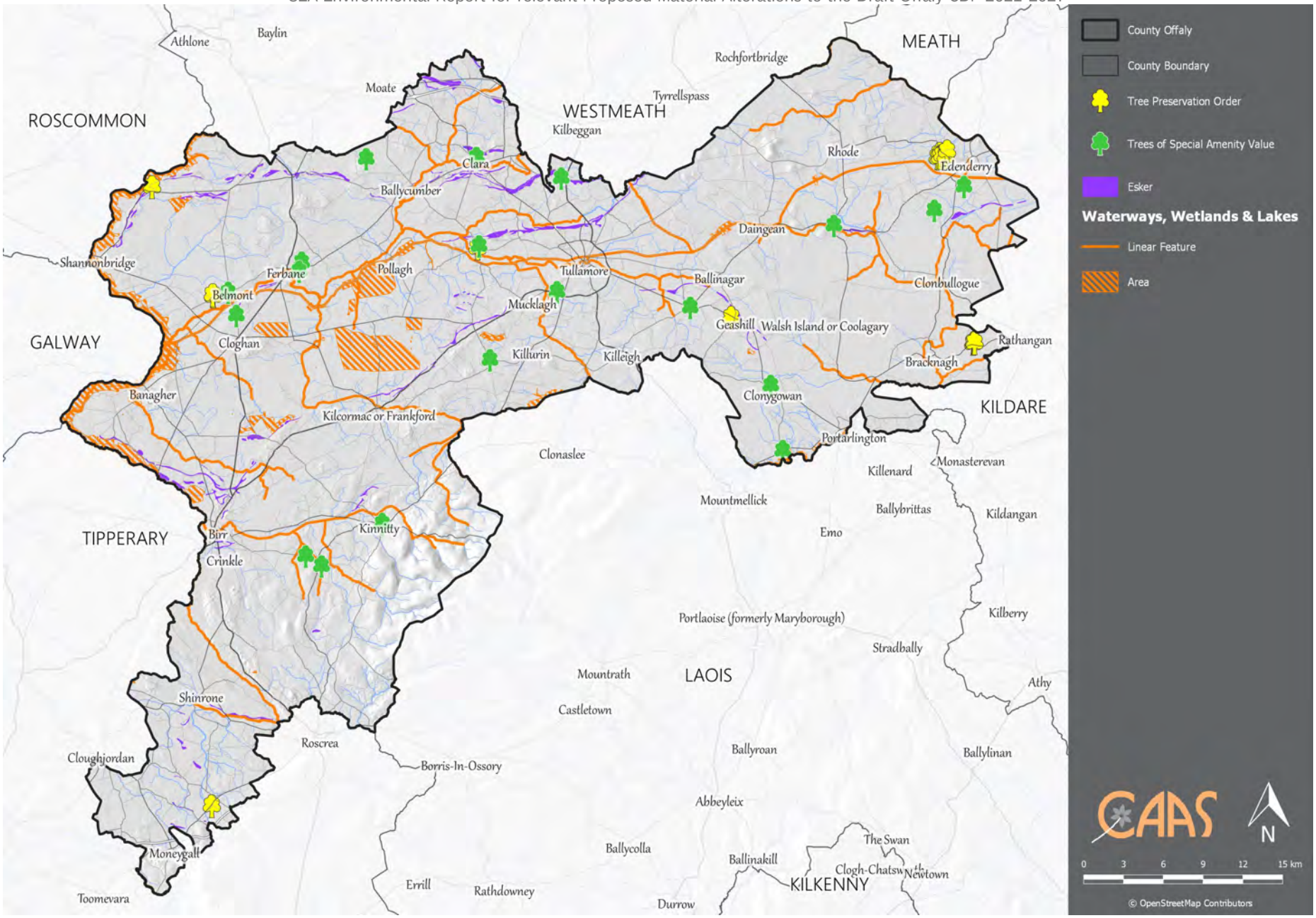

Figure 4.7 Other Sites of Biodiversity Value

4.7 Population and Human Health

4.7.1 Population

The Census 2016 results show that Offaly's population has grown by 1,274 persons, or by 1.6%, since Census 2011, to 77,961 persons (Central Statistics Office, 2017). The provision of additional housing over the Plan period is dictated by the Core Strategy that guides where new development should be allocated in accordance with national and regional strategies and policies, including the National Planning Framework and the Regional Spatial and Economic Strategy for Eastern and Midland Region.

County Offaly contains a hierarchy of settlements as set out in the Draft Plan and associated Proposed Material Alterations. This includes:

- Key Town (Tullamore);
- Self-Sustaining Growth Town (Birr, including Crinkill); and
- Self-Sustaining Towns (Edenderry and Portarlington on Offaly side).

Tullamore is identified as a Key Town by the Eastern and Midland Regional Spatial and Economic Strategy 2019-2031 and it acts as a key population and employment centre for the surrounding hinterland.

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

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

4.7.2 Human Health

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

4.7.3 Existing Problems

There is historic and predictive evidence of flooding in various locations across the County (see information on Strategic Flood Risk Assessment at Section 4.9.8).

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. It accounts for more than half of the total radiation dose received by the Irish population. As a known carcinogen, in the same category as tobacco smoke and asbestos it is a cause of lung cancer. Exposure to radon for long periods or at high concentrations can lead to lung cancer. The number of homes within the County with radon levels above the reference level is within the normal range experienced in other locations across the country[38].

Information on the status of groundwaters and surface waters is provided under Section 4.9 while compliance issues in relation to water services are detailed under Section 4.11.8.

4.8 Soil

Soil is the top layer of the earth's crust. It is formed by mineral particles, organic matter, water, air and living organisms. Soil can be considered as a non-renewable natural resource because it develops over very long timescales. It is an extremely complex, variable and living medium and performs many vital functions including: food and other biomass production, storage, filtration and transformation of many substances including water, carbon, and nitrogen. Soil has a role as a habitat and gene pool, serves as a platform

[38] Mapping available at http://www.epa.ie/radiation/radonmap

for human activities, landscape and heritage and acts as a provider of raw materials. Such functions of soil are worthy of protection because of their socio-economic as well as environmental importance. Soils in any area are the result of the interaction of various factors, such as parent material, climate, vegetation and human action.

To date, there is no legislation which is specific to the protection of soil resources. Although a proposal for a Soil Framework Directive was withdrawn in 2014, the importance of sustainable soil management was recognised in the Seventh Environment Action Programme, where sustainable land management is to be achieved by 2020.

Luvisols[39] and peat soils are the two most dominant soil types across the County (see Figure 4.8). Other soil types identified include:

- Alluvial soils[40] (in the flood plains of the rivers and streams);
- Groundwater and Surface Water Gleys[41] (in depressions in the upper reaches of river valleys in both uplands and lowlands); and
- Brown earths[42] (in the south, south-west and north of the County).

Peatlands are a very characteristic habitat in County Offaly, with groundwater and rain fed peat soils being a prominent and typical feature in the landscape. Rain-fed (ombrotrophic) and groundwater-fed (minerotrophic) peat soils occurring in the County are often subject to ecological designations (see Section 4.6). Clara Bog is an internationally renowned raised bog, which is a designated Nature Reserve. Raheenmore Bog is considered to be the deepest remaining raised bog in Ireland. It has a well-developed hummock and hollow system and is an important habitat for many bird species.

Esker systems within the County provide for high habitat diversity and their thin, alkaline soils support rare plants species.

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

[40] These are associated with alluvial (clay, silt or sand) river deposits.

[41] Surface Water Gleys are wetland soils with slowly permeable horizons resulting in seasonal waterlogging.

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

4.8.1 Geological Sites

Geological Survey Ireland coordinate the Irish Geological Heritage Programme, whereby an objective has been set to identify and select sites of geological interest within each county across the country. The audit of County Geological Sites in County Offaly was completed in 2016. There are 28 County Geological Sites in County Offaly, as mapped on Figure 4.9, with a concentration of these in the north-west parts of the County[43]. Many of these County Geological Sites include 'mushroom stones', an important geomorphological and archaeological feature.

4.8.2 Potentially contaminated lands and landfill sites

In the absence of mitigation, contaminated materials have the potential to adversely impact upon human health, water quality and habitats and species.

As is the case with other urban and semi-urban areas across the country, there is potential for contamination at sites within County Offaly, especially where land uses occurred in the past in the absence of environmental protection legislation.

4.8.3 Source Protection Areas

Source Protection Area delineation provides an assessment of the land area that contributes groundwater to a borehole or spring. Source reports have been undertaken by the GSI on behalf of Local Authorities since the mid-1990s. Source Protection Areas in County Offaly are shown on Figure 4.9.

4.8.4 Existing Problems

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

[43] Individual audited site reports for County Offaly are available from the GSI (www.gsi.ie).

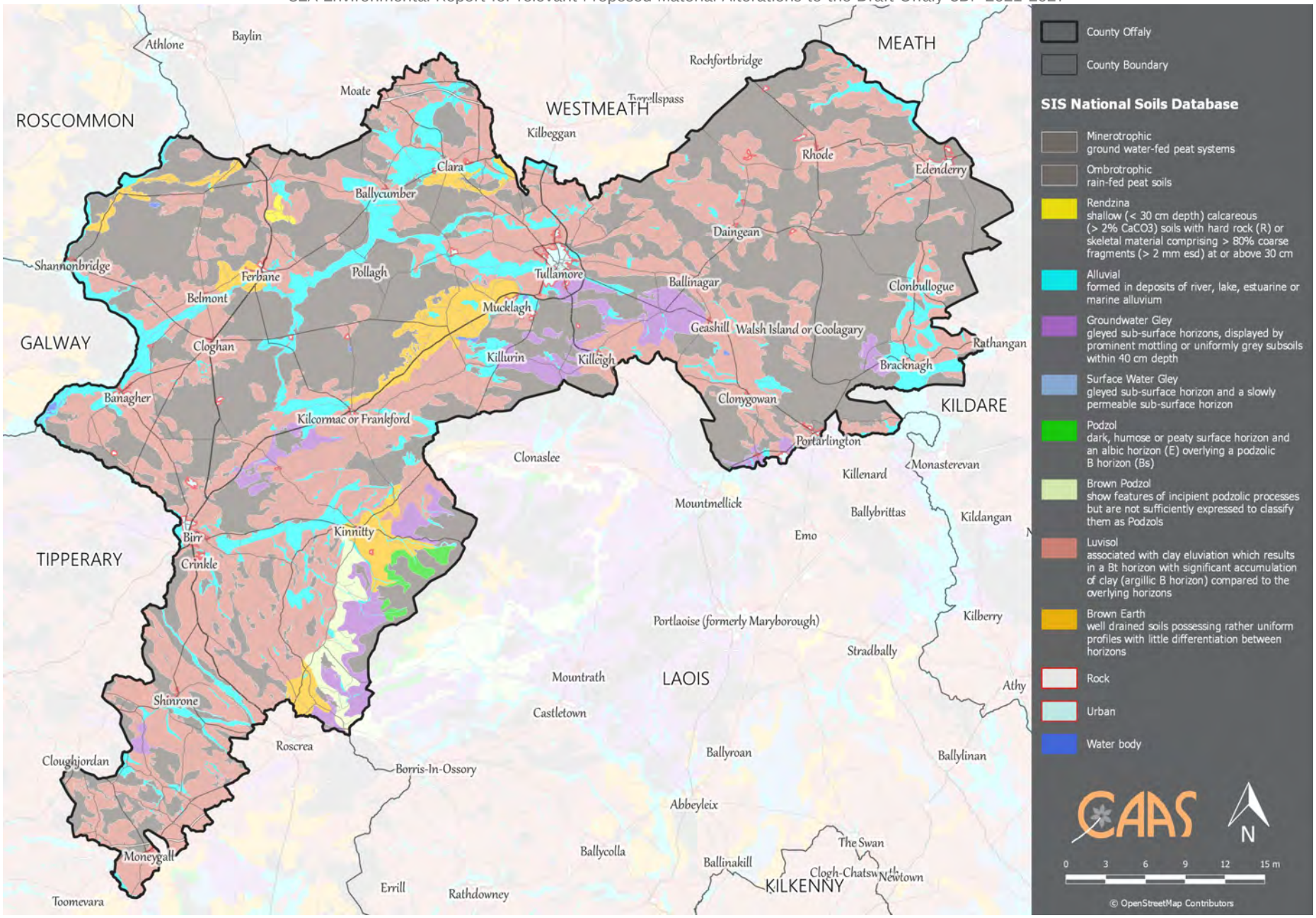

Figure 4.8 Soil Type

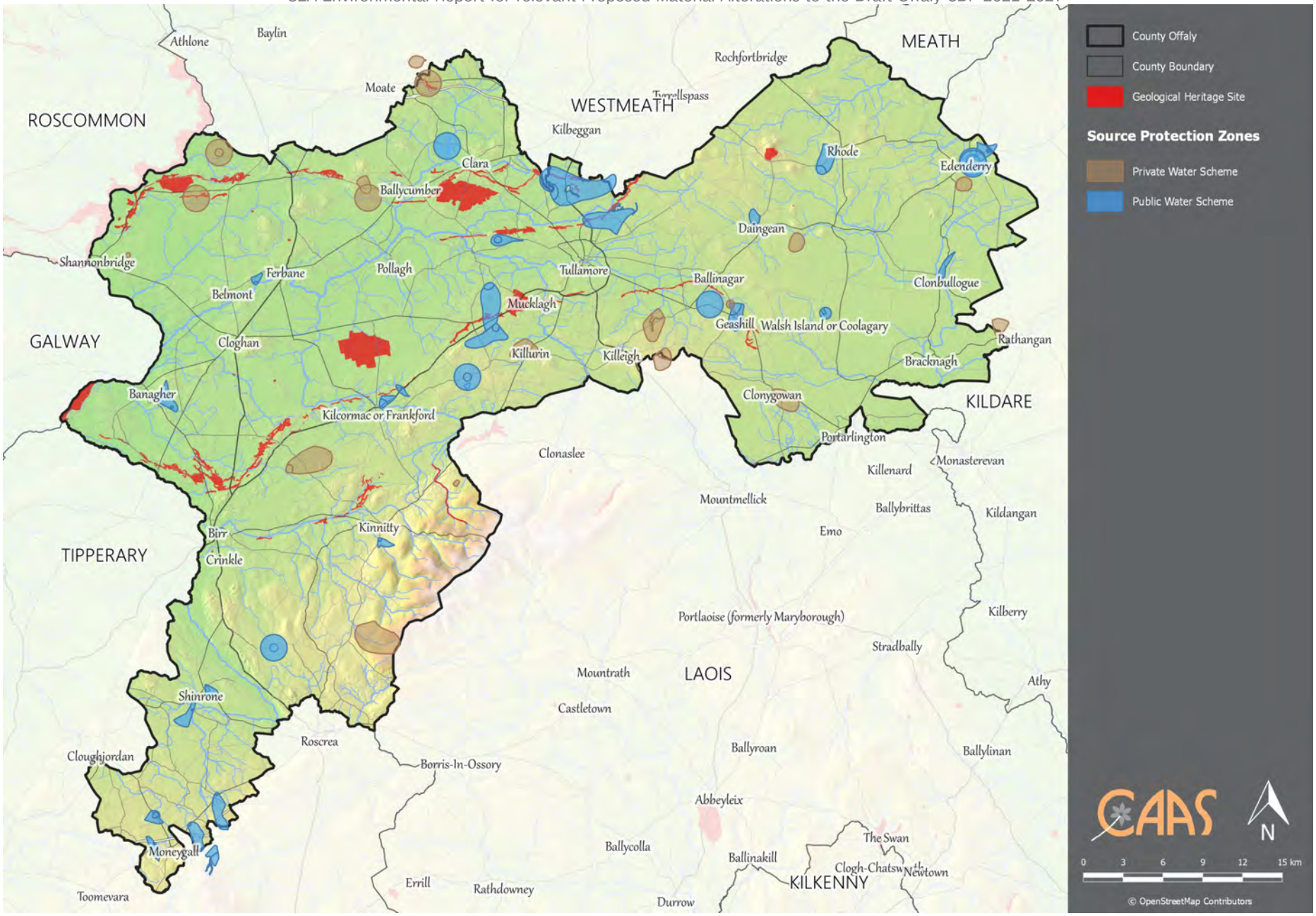

Figure 4.9 Source Protection Areas and County Geological Sites

4.9 Water

4.9.1 The Water Framework Directive

Since 2000, Water Management in the EU has been directed by the Water Framework Directive 2000/60/EC (WFD). The WFD requires that all Member States implement the necessary measures to prevent deterioration of the status of all waters - surface, ground, estuarine and coastal - and protect, enhance and restore all waters with the aim of achieving good status. All public bodies are required to coordinate their policies and operations so as to maintain the good status of water bodies which are currently unpolluted and improve polluted water bodies to good status.

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

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

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

4.9.2 Zone of Influence

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

4.9.3 Surface Water Drainage

A catchment is an area of land contributing to a waterbody, with all the water ultimately running off to a single outlet. The WFD requires water quality management to be based on natural river catchments i.e. by reference to the natural, environmental unit rather than by reference to administrative or legal boundaries, which often fragment river catchments.

Most of the County is located within the Shannon catchment. Parts of the south-east of the County are located within the Nore catchment and parts of the north-east of the County are located within the Boyne catchment.

4.9.4 Surface Water Status

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

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

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

The WFD surface water status (2013-2018), within and surrounding the County is shown

on Figure 4.10. The status of the sections[44] of rivers are identified on Table 4.2.

Table 4.2 WFD River Status

WFD Status (2013 -2018)	Waterbody Name
High	Roscomore Stream_010 Enaghan Stream_010 Camcor_10
Good	Castlejordan_020 Castlejordan_030 Esker Stream_020 Figile_050 Figile_060 Cushina_030 Clodiagh (Tullamore)_030 Clodiagh (Tullamore)_010 Silver (Tullamore)_020 Silver (Tullamore)_030 Silver (Kilcormac)_010 Camcor_030 Camcor_050 Glenfelly Stream_010 Breaghmore_030 Little Brosna_030 Keeloge Stream_010 Ollatrim_030
Moderate	Boyne_020 Figile_030 Figile_040 Yellow (Castlejorden)_010 Tullamore_10 Cushina_010 Brosna_100 Silver (Kilcormac)_020 Brosna_130 Brosna_140 Rapemills_010 Rock (Birr)_020 Clareen Stream/ Fuarawn_010 Golden Grove Stream_010 Golden Grove_020 Keeloge Stream_020 Ballyfinboy_010
Poor	Clodiagh (Tullamore)_050 Tullamore_040 Shannon (Upper)_120 Daingean_010 Daingean_020 Daingean_030

In addition, there are a number of *unassigned*[45] rivers across the County.

4.9.5 Ground Water

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

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

The WFD status (2013-2018) of most of groundwater underlying the County is identified as being of *good status*, meeting the objectives of the WFD (as shown on Figure 4.11). The area including and around Clara Bog is identified as being of *poor* groundwater body status.

4.9.6 Aquifer Vulnerability and Productivity

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

Aquifer vulnerability refers to the ease with which pollutants of various kinds can enter into groundwater. The aquifers underlying most the County are generally classified as being of *high* or *moderate vulnerability. Areas of extreme* or *low vulnerability* are found across smaller areas (shown on Figure 4.12).

Aquifer vulnerability refers to the ease with which pollutants of various kinds can enter into groundwater. The vulnerability of aquifers underlying the County are mapped on Figure 4.12 and generally classified as being of:

- *High and Moderate vulnerability*, in most of the County*;*
- *Extreme vulnerability* and *Extreme (Rock at or near surface or karst)*, in the south-east of the County at the Slieve Bloom Mountains; and
- *Low vulnerability*, in other areas throughout the County.

The GSI also rates aquifers based on the hydrogeological characteristics and on the value of the groundwater resource. This is referred to as aquifer productivity and is

[44] As per EPA classification system (gis.epa.ie/EPAMaps)

[45] There is a data gap relating to WFD surface water status data. Overall status is currently not assigned and the term *"unassigned status"* applies in respect of these waterbodies.

mapped on Figure 4.13. Productivity is generally classified as being:

- *Locally important bedrock aquifer, with moderately productive bedrock in local zones*, across much of the County;
- *Locally important aquifer bedrock which is generally moderately productive*, in the north-east of the County;
- *Regionally important aquifer karsified*, along a band stretching north to south-west in the centre of the County;
- *Regionally important aquifer fissured bedrock*, along a band in the south-east of the County;
- *Regionally important gravel aquifer* in the south-east of the County; and
- *Locally important gravel aquifer* in the north-west, south-west and west of the County.

4.9.7 WFD Registers of Protected Areas

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

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

Entries to the RPAs within and adjacent to the County include:

- All groundwater and surface waters sustaining areas designated as SACs and SPAs (these European sites are mapped on Figure 4.1);
- A number of rivers are designated as Nutrient Sensitive Areas (as shown on Figure 4.6Figure 4.7)
- Groundwater across the County is included on the RPA for Groundwater Drinking Water (see Figure 4.6);
- A number of rivers are included on the RPA for Drinking Water Rivers (see Figure 4.6); and
- The River Boyne is designated as Salmonid River Regs (SI No. 293 of 1988) as shown on Figure 4.6.

It is noted that Source Protection Areas are described in Section 4.8.3 and mapped on Figure 4.9.

4.9.8 Flooding

Certain areas across the County are at risk from groundwater, pluvial and fluvial flooding. Historical flooding is documented at various locations across the County, including at settlements along the Rivers Shannon and Brosna.

Predictive flood risk mapping is available from the Office of Public Works (OPW) for rivers across the County.

Areas with the greatest level of flood risk in the County include:

- Tullamore;
- Birr;
- Clara;
- Ferbane;
- Banagher;
- Daingean;
- Ballycumber;
- Belmont;
- Bracknagh;
- Clonbullogue;
- Mucklagh;
- Pollagh / Lemanaghan;
- Riverstown;
- Shannon Harbour; and
- Shannonbridge.

A Strategic Flood Risk Assessment (SFRA), as required by 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (DEHLG and OPW, 2009), is being undertaken alongside the preparation of the SEA and the preparation of the Plan. This assessment considers available and emerging information on flood risk indicators including the OPW's Flood Hazard and Risk Mapping.

4.9.9 Existing Problems

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

The Draft Plan includes provisions that will contribute towards improvements in the status of waters.

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

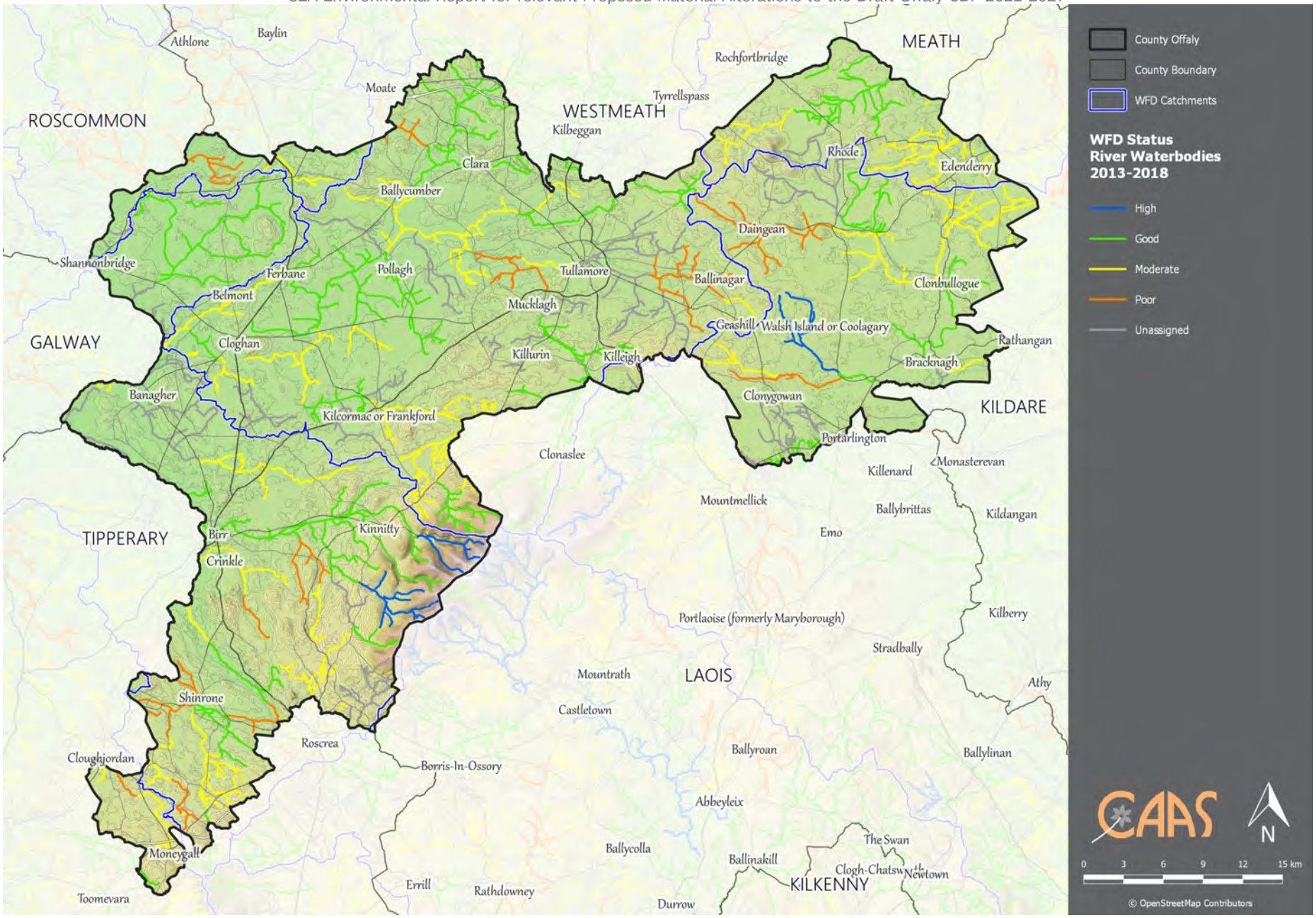

Figure 4.10 WFD Surface Water Status (2013-2018)

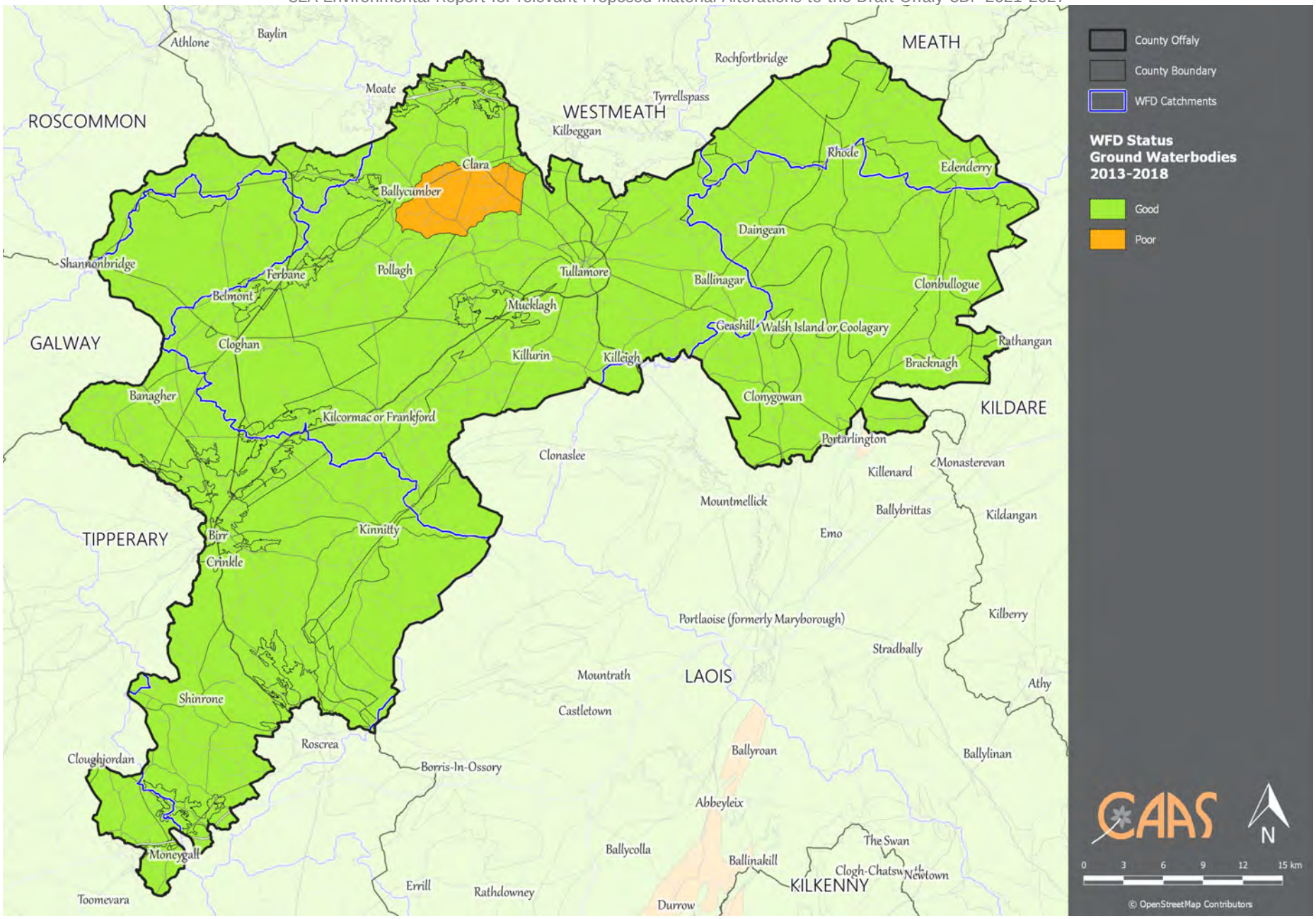

Figure 4.11 WFD Groundwater Status (2013-2018)

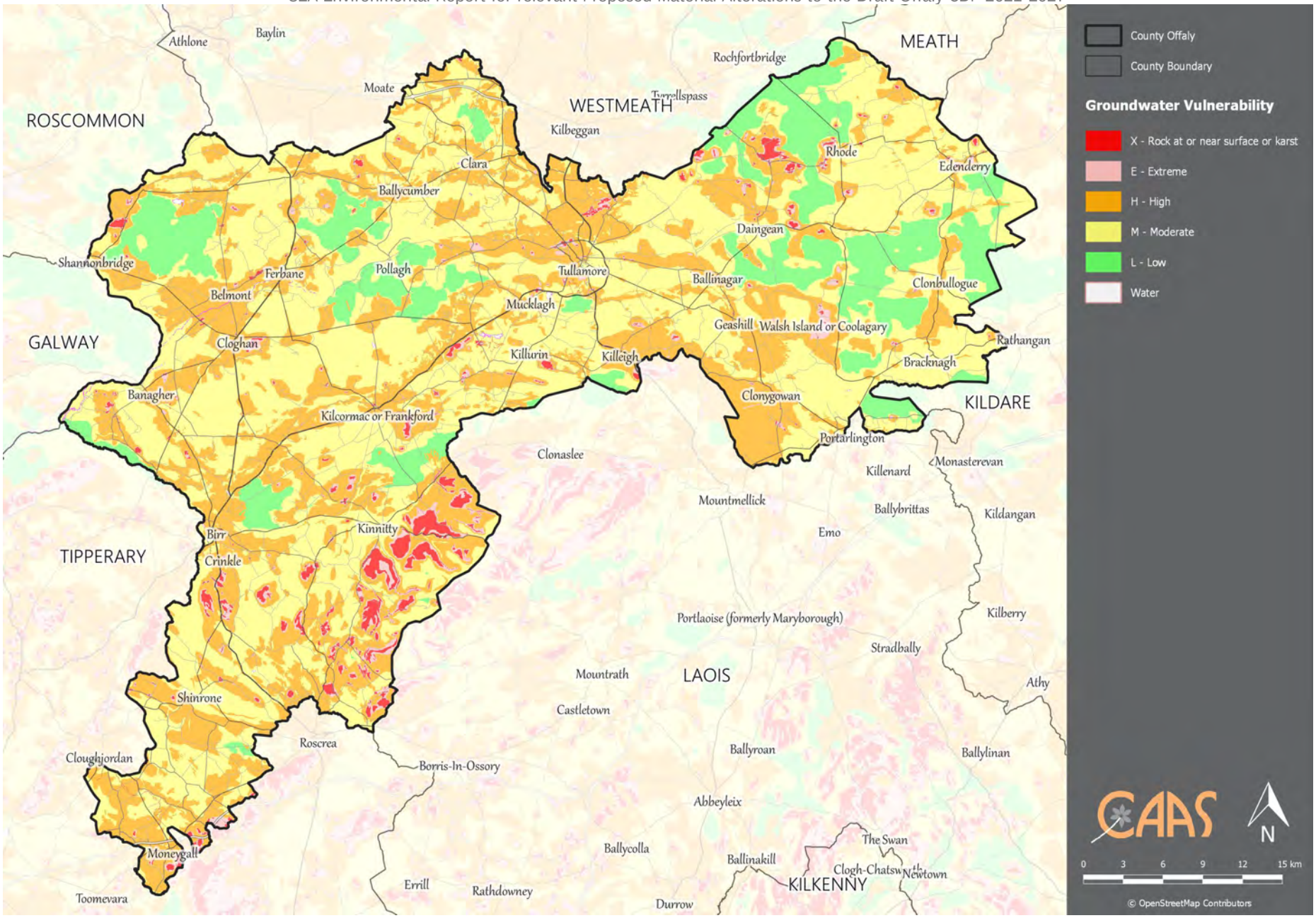

Figure 4.12 Groundwater Vulnerability

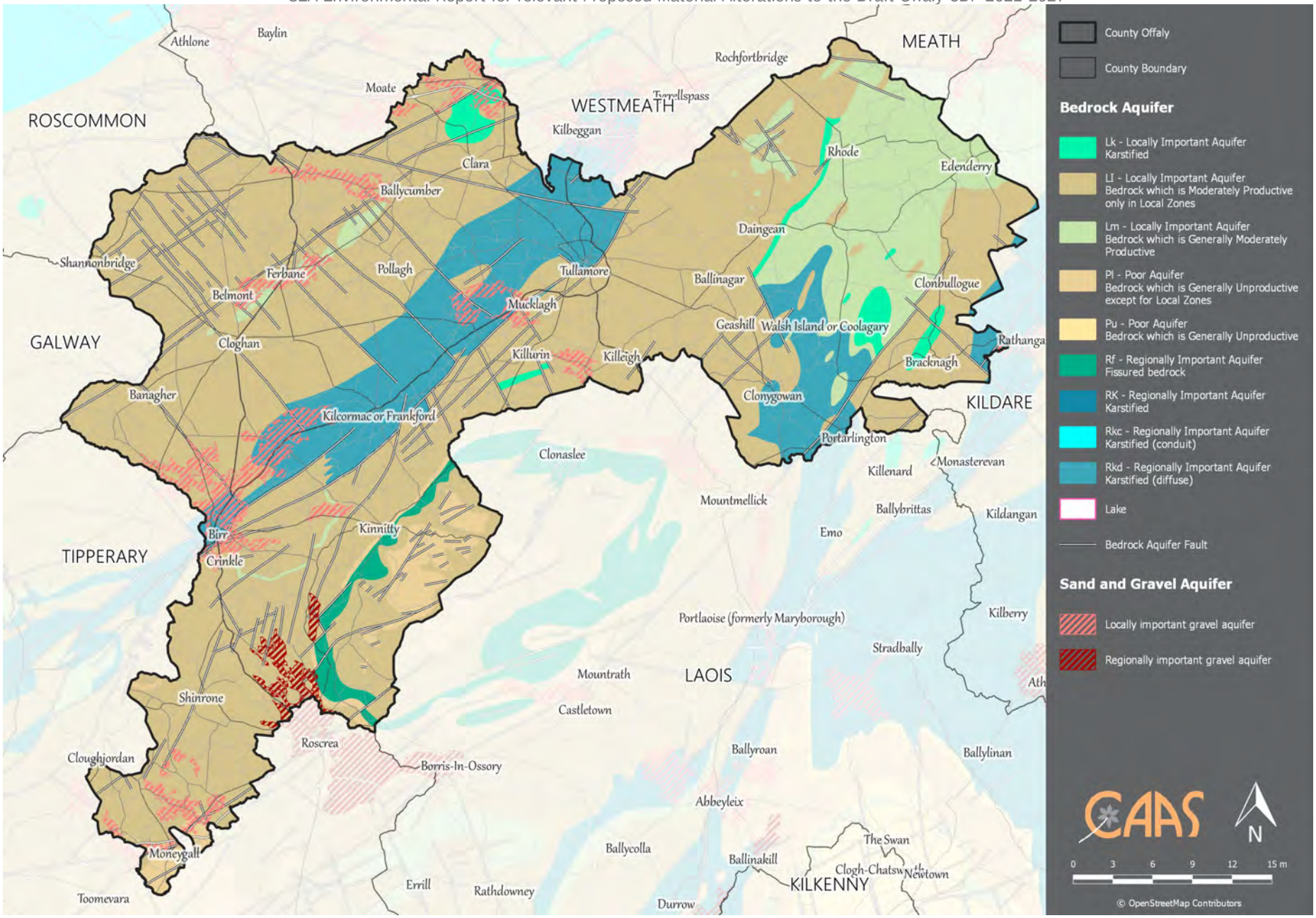

Figure 4.13 Groundwater Productivity

4.10 Air and Climatic Factors

4.10.1 Introduction

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

Ireland's Provisional Greenhouse Gas Emissions 1990-2017 (EPA, 2018) details provisional estimates of greenhouse gas emissions for the period 1990-2017. For 2017, total national greenhouse gas emissions are estimated to be 60.75 million tonnes carbon dioxide equivalent (Mt CO_2eq). This is 0.9% lower (0.53 Mt CO_2eq) than emissions in 2016.

The EPA's 2019 publication *Ireland's Greenhouse Gas Emission Projections 2018-2040* provides an assessment of Ireland's progress towards achieving its emission reduction targets set down under the EU Effort Sharing Decision (Decision No 406/2009/EC) for the years 2013-2020 and a longer-term assessment based on current projections. Ireland's 2020 target is to achieve a 20% reduction of non-Emission Trading Scheme (non-ETS) sector emissions (i.e. agriculture, transport, the built environment, waste and non-energy intensive industry) on 2005 levels with annual limits set for each year over the period 2013-2020.

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

- For 2017, the total national GHG emissions are estimated to be 60.74 million tonnes carbon dioxide equivalent (Mt CO_2eq), 0.9% lower than 2016.
- In the last 3 years, national total emissions have increased by 6.4%. In the same period, emissions in the ETS[46] sector have increased by 5.9%.
- Agriculture emissions increased by 2.9% in 2017 (driven by higher dairy cow numbers and increases in milk production).
- GHG emissions from the Transport sector decreased by 2.4% in 2017. This is the first year of decreased emissions after four successive years of increases in transport emissions.
- Agriculture and Transport accounted for 73.5% of total ESD emissions in 2017.
- Emissions in the Energy Industries sector show a decrease of 6.9% which is attributable to a 5.9% decrease in fossil fuel consumption and an increase of 21.1% and 1.6% in electricity generated from wind and hydro, respectively, in 2017. Renewables now account for 30.1% of electricity generated in 2017, an increase of 3.3% from 2016 figures. Ireland continued to be a net exporter of electricity in 2017. However, exported electricity saw a 4.7% reduction in 2017 to previous 2016 figures.
- Emissions from the Manufacturing Combustion[47] sector increased by 3.1% in 2017.
- The Industrial Processes sector emissions increased by 4.1%, mainly from increased cement production. Cement process emissions increased by 2.6% in 2017.
- GHG emissions from the Residential sector decreased by 5.0%. This can be attributed to a milder winter.
- Emissions from the Waste sector decreased by 2.5% in 2017.

The EPA 2019 publication *Ireland's Greenhouse Gas Emission Projections 2018-2040* provides an assessment of Ireland's total projected greenhouse gas emissions out to 2040 which includes an assessment of progress towards achieving its emission reduction targets out to 2020 and 2030 set under the EU Effort Sharing Decision (Decision No 406/2009/EU) and Effort Sharing Regulation (Regulation (EU) 2018/842). Ireland's 2020 target is to achieve a 20% reduction of non-Emission Trading Scheme (non-ETS) sector emissions (i.e. agriculture, transport, the built environment, waste and non-energy intensive industry) on 2005 levels with annual limits set for each year over the period 2013-2020. Ireland's 2030 target under the Effort Sharing Regulation is a 30% reduction of emissions compared to 2005 levels by 2030. There will be binding annual limits over the 2021-2030 period to meet that target. Key Insights identified as part of the report's package of documents are that:

- There is a long-term projected decrease in greenhouse gas emissions as a result of

[46] The EU emissions trading system (EU ETS) was launched in 2005 as the world's first international company-level 'cap-and trade' system for reducing emissions of greenhouse gases cost-effectively. The cap makes sure that CO_2 becomes a product and, thus, CO_2 is valued at a price, which is determined by the supply and demand at the (trading) market.

[47] Manufacturing Combustion; includes combustion of fuels in Industry and Construction, both in ETS and non-ETS

inclusion of new climate mitigation policies and measures that formed part of the 2018-2027 National Development Plan, which was published in 2018. This is evident in the With Additional Measures scenario which assumes full implementation of the programmes, policies and measures included in the National Development Plan.

- Fossil fuels such as coal, peat and gas continue to be key contributors to emissions from the power generation sector. However, a significant reduction in emissions over the longer term is projected as a result of the expansion of renewables (e.g. wind), assumed to reach 41-54% by 2030, with a move away from coal and peat.
- A growth in emissions from the transport sector continues to be projected which is largely attributed to fuel consumption from diesel cars and diesel freight. A decrease in emissions over the longer term, most notably in the With Additional Measures scenario, is largely attributed to assumed accelerated deployment of 500,000 electric vehicles and the impact of greater biofuel uptake.
- Agriculture emissions are projected to continue to grow steadily over the period which is mainly a result of an increase in animal numbers particularly for the dairy herd.
- The implementation of additional energy efficiency measures included in the National Development Plan will see a significant reduction in emissions in the residential, commercial/public services and manufacturing sectors over the projected period.

4.10.2 Climate Mitigation

The National Mitigation Plan (Department of Communications, Climate Action and Environment, 2017), represents an initial step to set Ireland on a pathway to achieve the level of decarbonisation required. It is a whole-of-Government Plan, reflecting in particular the central roles of the key Ministers responsible for the sectors covered by the Plan – Electricity Generation, the Built Environment, Transport and Agriculture, as well as drawing on the perspectives and responsibilities of a range of other Government Departments.

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

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

The Climate Change Advisory Council's Annual Review 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.

4.10.3 Ambient Air Quality

In order to protect human health, vegetation and ecosystems, EU Directives set down air quality standards in Ireland and the other Member States for a wide variety of pollutants. These pollutants are generated through fuel combustion, in space heating, traffic, electricity generation and industry and, in sufficient amounts, could affect the well-being

of the areas inhabitants. The EU Directives include details regarding how ambient air quality should be monitored, assessed and managed.

The principles to this European approach are set out in the Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive (2008/50/EC) (which replaces the earlier Air Quality Framework Directive 1996 and the first, second and third *Daughter Directives*; the fourth *Daughter Directive* will be included in CAFE at a later stage).

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

The EPA's (2019) *Air Quality in Ireland 2018* identifies that:

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

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

With regards to solutions, the report identifies that:

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

In order to apply with European Directives relating to air quality, the EPA manages the National Ambient Air Quality Network and measures the levels of a number of atmospheric pollutants at locations across the country. The current[48] air quality in the Leinster Air Quality Region is identified by the EPA as being *good*.

4.10.4 Noise

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

4.10.5 Existing Problems

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

4.11 Material Assets[49]

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

4.11.1 Public Assets and Infrastructure

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

4.11.2 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

[48] 07/04/2020 (http://www.epa.ie/air/quality/)
[49] Much of the information contained in this section is taken from the Draft Plan

and associated potential adverse environmental effects. Brownfield lands are generally located within urban/suburban areas.

4.11.3 Agriculture

Much of the land throughout the County is used for agriculture, as indicated by the agricultural related land covers shown on Figure 4.4 on page 25. Agriculture is a strong employer and a significant source of economic activity in the County. It contributes to exports, provides the raw materials for the food processing industry and has potential for providing more added value in the artisan food sector.

4.11.4 Forestry

Various extents and types of forestry exist across the County, as indicated on Figure 4.4 on page 25. Much of the forested land is owned by Coillte. Woodlands provide recreational opportunities in addition to their heritage and economic benefits. They are also important as links in the county's green infrastructure network.

4.11.5 Peatlands

There are significant peatland areas throughout the County, as indicated on Figure 4.4 on page 25. These include Clara Bog, All Saints Bog, Sharavogue Bog, Slieve Bloom Blanket Bog and Raheenmore Bog. These provide a valuable natural and archaeological resource. Cutaway bogs have the potential to facilitate landuses such as employment, renewable energy generation, waste management, industrial and tourism/recreation.

4.11.6 Renewable Energy Potential

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

4.11.7 Transport

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

Due to its strategic location in the middle of the country, Offaly and its main urban centres are particularly well served by a hierarchy of roads including sections of motorways, national roads, regional roads and local roads. The M6 (Dublin to Galway) and M7 (Dublin to Limerick) motorways and the N52, N62 and N80 national primary routes traverse the County providing important linkages and networks within, into and out of the County. Offaly is where many routes interconnect making them fundamental in providing connections with other urban centres in the midlands. Both 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.

County Offaly is centrally located along national interconnecting strategic rail corridors. Tullamore and Clara are both accessible by rail and are positioned on the Galway/Dublin /Westport rail lines. Irish Rail and Bus Éireann operate on number of routes several times daily.

4.11.8 Water Services

4.11.8.1 Waste Water

The EPA's 2019 report *'Urban Waste Water Treatment in 2018'* identified that:

- Waste water treatment at 21 large urban areas did not meet European standards;
- Raw sewage is released into the environment from 36 urban areas;
- Waste water from 57 areas is the sole threat to waters at risk of pollution;
- Waste water contributed to poor quality bathing waters at three beaches in 2018;
- Discharges from 13 areas must improve to protect freshwater pearl mussels;
- Disinfection systems must be installed at two villages to safeguard shellfish; and
- Eight waste water collection systems have been found non-compliant with European Union requirements.

Based on the EPA's assessment of monitoring information provided by Irish Water and the enforcement activities carried out by the EPA, this report identifies urban areas with the most important environmental issues with respect to waste water infrastructure that must be addressed.

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

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

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

Offaly County Council operates 27 public waste water treatment plants[50]. In unserviced areas and outside the main towns and villages, the main method of sewage disposal is by means of individual septic tanks and proprietary waste water treatment systems.
Two of the 27 plants service urban areas that are listed as Priority Areas where improvements are required to resolve urgent environmental issues with respect to waste water treatment (EPA, 2019):

- Tullamore (waste water discharges cause a significant pressure on the River Tullamore); and
- Kilcormac (where waste water discharges cause a significant pressure on the River Silver).

Table 4.3 provides information on waste water treatment plant performance sourced from the EPA's 2018 Annual Environmental Reports (published in February 2019) on waste water compliance for these two Priority Areas. Both of the settlements for which there is information failed on at least one parameter tested.

Irish Water has provided the Waste Water Treatment Capacity Register for County Offaly (see Table 4.4) to assist the planning authority in the preparation of the new County Development Plan by indicating where there may be waste water treatment capacity available to accommodate growth ("headroom") in terms of population equivalent[51] (PE) in each settlement serviced by a public waste water treatment plant. Spare treatment capacity is available now or is expected to be delivered by 2022 in most of these settlements, except for Rahan and Walsh Island. The highest levels of headroom (PE) is available at Tullamore (21,712 PE); Clara (4,667 PE); and Ferbane (1,665 PE).

Irish Water is responsible for the treatment and disposal of the sludge that is generated from both its water and waste water treatment plants. Irish Water has prepared a National Waste water Sludge Management Plan 2016-2021 that outlines Irish Water's strategy to

[50] Ballinagar, Banagher, Birr, Bracknagh, Clara, Cloghan, Clonbullogue, Cloneygowan, Coolderry, Edenderry, Ferbane, Geashill, Daingean, Kilcormac, Killeigh, Kinnitty, Leamanaghan, Moneygall, Mountbolus, Mucklagh, Shannonharbour, Rahan, Rhode, Shannonbridge, Shinrone, Walsh Island and Tullamore.

[51] As identified in Irish Water's Water Services Strategic Plan, wastewater treatment plants are described in terms of their designed treatment capacity, which is generally expressed as population equivalent (PE). This is a measurement of total organic biodegradable load, including industrial, institutional, commercial and domestic organic load, on a wastewater treatment plant, converted to the equivalent number of PEs. One person is considered to generate 60g of five day Biochemical Oxygen Demand (BOD) per day. 1 PE is defined as being equivalent to 60g of BOD per day.

ensure a nationwide standardised approach for managing waste water sludge over a 25-year period. A separate plan will be prepared in relation to sludge produced at drinking water plants.

The Sludge Management Plan proposes to develop a Sludge Hub Centre and Satellite Dewatering Site network for waste water sludge treatment, optimised on a regional rather than county basis. Tullamore waste water treatment plant is currently under consideration by Irish Water as a potential site for a Sludge Hub Centre on a regional basis.

4.11.8.2 Water Supply

Irish Water is responsible for providing and maintaining adequate public water supply infrastructure throughout the County. There are 24 Public Water Supply Schemes in County Offaly[52], 14 Public Group Water Schemes[53] and 15 Private Group Water Schemes[54]. Private water supplies provide an alternative for areas that are not served by public water supply infrastructure and comprise mainly of wells and group water schemes.

Under Section 58 of the Environmental Protection Agency Act 1992, the EPA is required to collect and verify monitoring results for all water supplies in Ireland covered by the European Communities (Drinking Water) Regulations, 2000. The EPA publishes their results in annual reports that are supported by Remedial Action Lists (RALs). The RAL identifies water supplies that are not in compliance with the Regulations mentioned above.

The Clara/Ferbane Regional Public Supply Scheme is listed on the most recent EPA Remedial Action List (Q4 of 2019) due to elevated levels of THMs above the standard in the Drinking Water Regulations. This Water Supply Scheme has a supply volume of 5,145 m^3/day, serving a population of 7,467 people. The proposed plan of action to remedy this issue is an upgrade of coagulation process at Clara water treatment plant by December 2024.

4.11.8.3 Surface Water Drainage

The Council is responsible for surface water drainage in the County. Sustainable urban Drainage systems (SuDS) is a method to minimise the quantity and increase the quality of surface water runoff and to mitigate adverse impacts of climate change. SuDS can also provide amenity and biodiversity benefits. The Council seeks to ensure the sustainable management of surface water discharges in urban areas through the use of SuDS.

4.11.9 Waste Management

The Eastern-Midlands Waste Management Plan 2015-2021 provides the framework for solid waste management in the region and sets out a range of policies and actions to meet specified mandatory and performance-based targets.

The Eastern and Midland Waste Region comprises 12 local authority areas of Dublin City, Fingal, Dún Laoghaire-Rathdown, Kildare, Laois, Longford, Louth, Offaly, Meath, Wicklow, Westmeath and South Dublin.

4.11.10 Existing Problems

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

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

[52] Banagher, Birr, Clara/Ferbane, Clonbullogue, Coolderry, Daingean, Dungar, Dunkerrin, Edenderry, Geashill, Horseleap, Kilcormac, Kinnitty, Moneygall, Mountbolus, Moyclare, Portarlington, Rahan–Agall /Holmshill, Rahan Tully, Rhode, Shinrone/Brosna, Tullamore South (Clonaslee), Tullamore North (Ardan) and Walsh Island.

[53] Ballindarra, Mile Tree, Ballycommon / Kilclonfert, Bishopstown, Shandra Lane, Leamore Leabeg, Durrow, Endrim, Erryarmstrong, Rashina/Kilnagarnagh, Townspark, Bog Road, Cushina / Kilnacarragh and Kilnacarra.

[54] Clareen/Aghancon, Ballinagar, Ballyboy, Ballyfore / Ballykilleen, Bloomhill, Boher, Bracknagh, Cadamstown, Clondelara, Clonfinlough, Killeigh/Cloneygowan, Meelaghans, Mountlucas, Tober and Rath.

Table 4.3 Waste Water Treatment Plant Performance[55]

Plant name and Reference	Treatment Provided	Overall Compliance (Pass/Fail)	Parameter Failed	Cause of Exceedances and Significance of Results (Water Quality)	Organic Capacities (PE)		
					As Constructed	Collected Load (peak week)	Remaining
Tullamore D0039-01	Preliminary Treatment (including screening and grit removal) Secondary Treatment (Conventional activated sludge) Nutrient Removal (Chemical dosing for phosphorus removal) Tertiary Treatment (Disk Filters)	Fail	Total Phosphorus (as P) mg/l	Cause: Inadequate Operational Procedures • The plant's discharge was not compliant with the Emission Limit Values set in the waste water discharge licence. • The ambient monitoring results meet the required Environmental Quality Standards. Where the ambient monitoring results meet the required Environmental Quality Standards this relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009. • The discharge from the waste water treatment plant does not have an observable negative impact on the water quality. • The discharge from the plant is considered not to be having an observable negative impact on the Water Framework Directive status. The WFD status is Unassigned at the upstream monitoring point, however the WFD status is Poor approx. 50m downstream of this point. The WFD status is Poor downstream of the plant	45000	21771	23229
Kilcormac D0225-01	Preliminary Treatment (screening) Primary (Imhoff Tanks/ settlement tanks) Secondary Treatment (Trickling filters and final settlement)	Fail	Ortho-phosphate (as P)-unspecified COD -Cr Suspended Solids Ammonia-Total (as N)	Cause: Plant or equipment maintenance at the plant • The plant's discharge was not complaint with the Emission Limit Values set in the waste water discharge licence T • The ambient monitoring results meet the required Environmental Quality Standards. • The discharge from the waste water treatment plant does not have an observable negative impact on the water quality. • The discharge from the plant has no observable negative impact on the WFD status • It is noted that consistent achievement with the Emission Limit Values would benefit the quality of the receiving water.	2000	1130	870

[55] Source: EPA Annual Environmental Reports for 2018, 2019

Table 4.4 Waste Water Treatment Capacity Register (Irish Water 29/04/20) [56,57,58,59,60,61,62]

Region	County	Settlement	Census pop. (2016)	Wastewater Treatment Plant (WWTP)	Reg #	Serves other areas?	WWTP Capacity (PE)		Load (PE) 2019	Headroom (PE)		Current project completion year
							Today	Upon works completion		WWDL ELV Capability	UWW Standards Capability (not WWDL ELVs)	
EM	Offaly	**Tullamore**	14,607	Tullamore WWTP	D0039	No	45,000	=	23,288	21,712		
EM	Offaly	**Edenderry**	7,359	Edenderry WWTP	D0110	No	9,800	12,500	9,288	512		Post 2024
EM	Offaly	**Birr**	4,370	Birr WWTP	D0109	No	12,000	=	11,011	989		
EM	Offaly	**Clara**	3,336	Clara WWTP	D0142	No	9,000	=	4,333	4,667		
EM	Offaly	**Banagher**	1,760	Banagher WWTP	D0141	No	3,000	=	2,290	710		
EM	Offaly	**Ferbane**	1,191	Ferbane WWTP	D0147	No	3,184	=	1,519	1,665		
EM	Offaly	**Daingean**	1,077	Daingean WWTP	D0226	No	1,200	=	1,092	108		
EM	Offaly	**Kilcormac**	935	Kilcormac WWTP	D0225	No	1,500	=	1,145	355		
EM	Offaly	**Mucklagh**	826	Mucklagh WWTP	D0364	No	1,100	=	825	275		
EM	Offaly	**Rhode**	811	Rhode WWTP	D0227	No	1,000	=	939	61		
EM	Offaly	**Shinrone**	645	Shinrone WWTP	D0365	No	1,000	=	658	342		
EM	Offaly	**Cloghan**	601	Cloghan WWTP	D0369	No	1,100	=	756	344		
EM	Offaly	**Ballinagar**	453	Ballinagar WWTP	D0362	No	1,000	=	449	551		
EM	Offaly	**Kinnitty**	381	Kinnitty WWTP	D0363	No	750	=	386	364		
										CoA Headroom (PE)		
EM	Offaly	**Bracknagh**	Unavailable	Bracknagh WWTP	A0172	No	350	=	258	92		
EM	Offaly	**Clonbullogue**	439	Clonbullogue WWTP	A0168	No	700	=	366	334		
EM	Offaly	**Cloneygowan**	Unavailable	Cloneygowan WWTP	A0167	No	450	=	257	193		
EM	Offaly	**Coolderry**	Unavailable	Coolderry WWTP	A0166	No	150	=	103	47		
EM	Offaly	**Geashill**	395	Geashill WWTP	A0177	No	750	=	435	315		
EM	Offaly	**Killeigh**	212	Killeigh WWTP	A0163	No	460	=	288	172		
EM	Offaly	**Leamonaghan**	Unavailable	Leamonaghan WWTP	A0174	No	400	=	175	225		
EM	Offaly	**Moneygall**	313	Moneygall WWTP	A0169	No	500	=	372	128		
EM	Offaly	**Mountbolus**	Unavailable	Mountbolus WWTP	A0170	No	350	=	119	231		
EM	Offaly	**Rahan**	Unavailable	Rahan WWTP	A0173	No	-	=	87			
EM	Offaly	**Shannon Harbour**	Unavailable	Shannon Harbour WWTP	A0162	No	200	=	46	154		
EM	Offaly	**Shannonbridge**	175	Shannonbridge WWTP	A0171	No	500	=	217	283		
EM	Offaly	**Walsh Island**	Unavailable	Walsh Island WWTP	A0175	No	340	=	492			

[56] Waste Water Discharge Licences (WWDL) and Certificates of Authorisation (CoA)

[57] WWTP Capacity (PE) Today = Overall design capacity of the wastewater treatment plant (WWTP) in population equivalents (PE) today (the date at the top of this table).

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

[59] Load (PE) 2019 = Wastewater load arising from the settlement(s) being served entering the WWTP in 2019.

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

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

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

4.12 Cultural Heritage

4.12.1 Archaeological Heritage

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

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

The Record of Monuments and Places (RMP) is an inventory, put on a statutory basis by amendment to the National Monuments Act 1994, of sites and areas of archaeological significance, numbered and mapped. It is available from the National Monuments Service and at archaeology.ie.

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

A recorded monument is a monument included in the list and marked on the map, which comprises the RMP set out county by county under Section 12 of the National Monuments (Amendment) Act, 1994 by the Archaeological Survey of Ireland. The definition includes Zones of Notification within which requirements for notifications of proposed works apply. There are five Zones of Notification in County Offaly at: Banagher; Birr; Daingean; Dunkerrin; and Seir Kieran.

Figure 4.14 shows the spatial distribution of recorded monuments in the County. Clusters of monuments in County Offaly are located within the County's settlements.

There are ten Monuments in State Care (eight in State Ownership and two in State Guardianship)[63] in County Offaly:

- Cadamstown;
- Cannakill;
- Kinnity Cross;
- Seirkieran;
- Clonfinlough;
- Clonin;
- Clonmacnoise;
- Durrow;
- Gallen Abbey; and
- Rahan.

There are also number of Monuments Protected by Preservation Order in County Offaly, including: ecclesiastical remains in Clonmacnoise; cemetery and enclosure in Derryvilla; Motte castle earthworks in Rathlilhen; Clonony castle; and Coole castle.

County Offaly has a significant archaeological heritage, with over 4,000 archaeological sites dating back to the Mesolithic period, around 7,000 B.C as documented by the National Monuments Service. These sites include 23 recorded Early Christian Monasteries in the County, such as Clonmacnoise, Leamanaghan, Durrow, Rahan and Killeigh.

Clonmacnoise is an example of an early medieval ecclesiastical site of national and

[63] This list of National Monuments in State care includes those which are in the ownership and guardianship of the Minister for the Environment, Heritage and Local Government.

international importance as a spiritual, historic, archaeological and cultural centre. The site is located on the River Shannon and is representative of a significant stage in the development of Early Medieval Christianity. The Monastic City of Clonmacnoise and its cultural landscape is currently listed as a Tentative World Heritage Site by UNESCO[64].

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

Rivers and lakes within the County may contain many features and finds associated with riverine heritage such as shipwrecks, piers, quay walls, fords, stepping stones and associated archaeological objects and features.

4.12.2 Architectural Heritage

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

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

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

- The interior of the structure;
- The land lying within the curtilage[65] of the structure;
- Any other structures lying within that curtilage and their interiors; and,
- All fixtures and features that form part of the interior or exterior of any structure or structures referred to in subparagraph (i) or (iii).

Similar to the general spatial spread of archaeological heritage, clusters of architectural heritage are indicated within the County's settlements as shown on Figure 4.15. There are over 1,400 entries to the Record of Protected Structures within the County, including include castles, bridges, schools, fine historic houses and their associated demesne lands. Notable buildings include Frankfort Castle, D.E. Williams House, Tullamore Townhall, Birr Castle and St. Brendan's Church.

In addition to Protected Structures, the Planning and Development Act, 2000 provides the legislative basis for the protection of Architectural Conservation Areas (ACAs). An ACA is a place, area or group of structures or townscape that is of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest or value, or contributes to the appreciation of protected structures, whose character it is an objective

[64] A Tentative List is an inventory of properties which a country intends to consider for nomination to the UNESCO World Heritage List.

[65] Curtilage is normally taken to be the parcel of ground immediately associated with the Protected Structure, or in use for the purposes of the structure. Protection extends to the buildings and land lying within the curtilage. While the curtilage sometimes coincides with the present property boundary, it can originally have included lands, features or even buildings now in separate ownership, e.g. the lodge of a former country house, or the garden features located in land subsequently sold off. Such lands are described as being attendant grounds, and the protection extends to them just as if they were still within the curtilage of the Protected Structure.

to preserve in a development plan. The ACA designation requires that planning permission must be obtained before significant works can be carried out to the exterior of a structure in the ACA that might alter the character of the structure or the ACA. There is one ACA designated within County Offaly, that of Geashill Village (as shown on Figure 4.12).

The National Inventory of Architectural Heritage (NIAH) is a State initiative under the administration of the Department of Culture, Heritage and the Gaeltacht and was established on a statutory basis under the provisions of the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999. The purpose of the NIAH is to identify, record, and evaluate the post-1700 architectural heritage of Ireland, uniformly and consistently as an aid in the protection and conservation of the built heritage. NIAH surveys provide the basis for the recommendations of the Minister of Culture, Heritage and the Gaeltacht to the local authorities for the inclusion of particular structures in their Record of Protected Structures. The NIAH includes historic gardens and designed landscapes. Figure 4.15 shows entries to NIAH in County Offaly. Similar to the general spatial spread of archaeological heritage, clusters of architectural heritage are indicated within already developed urban and suburban areas.

4.12.3 Existing Problems

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

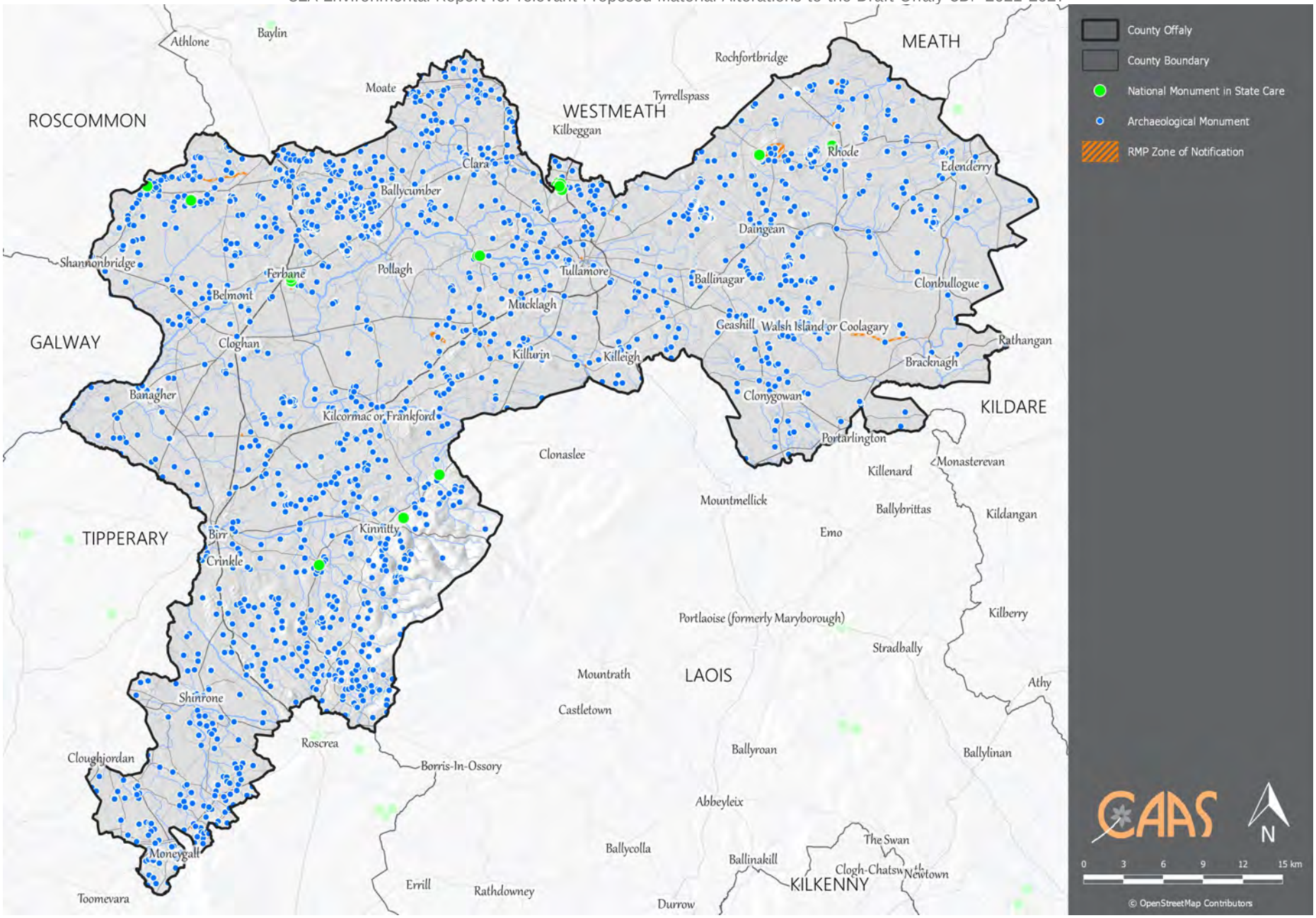

Figure 4.14 Archaeological Heritage

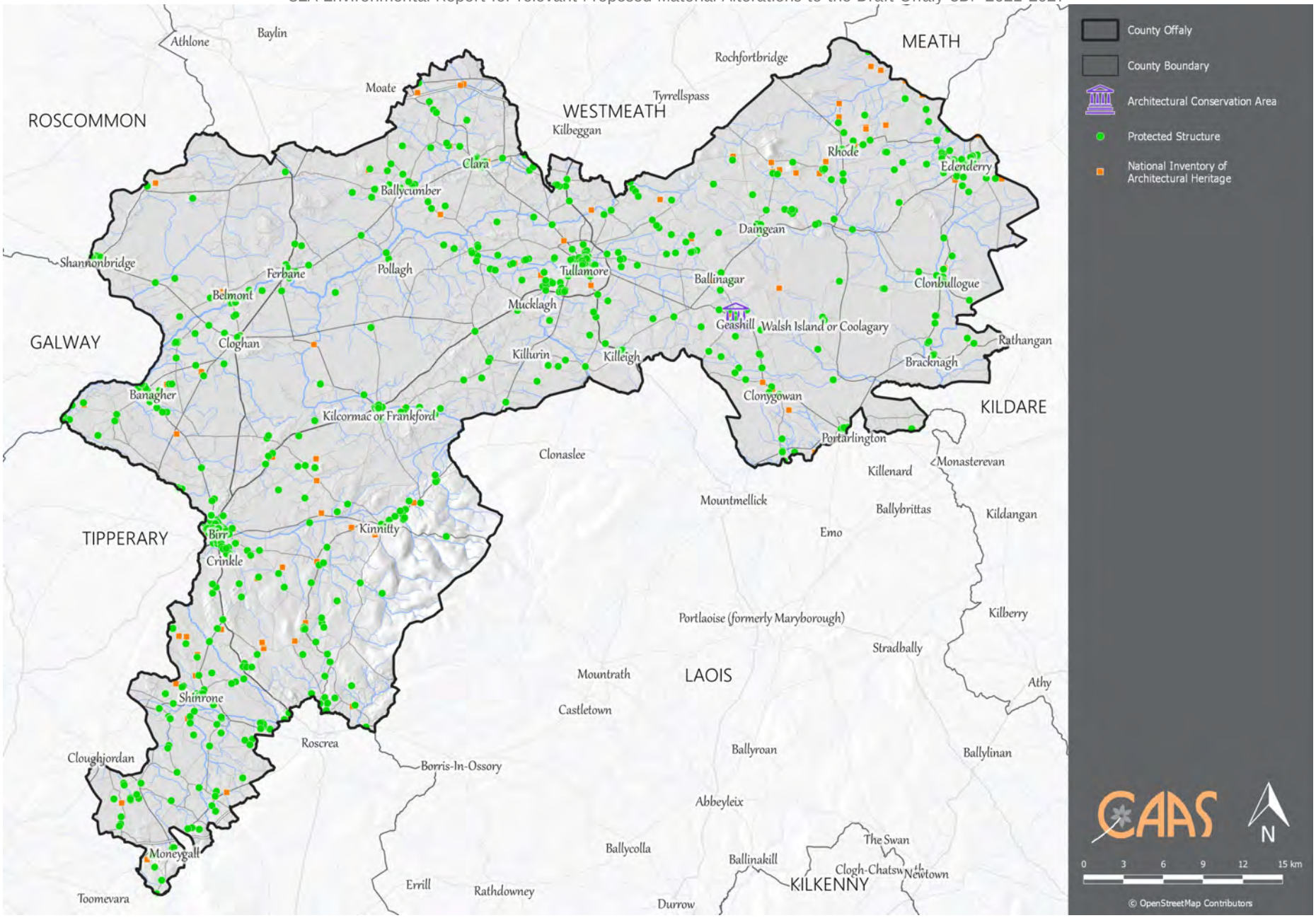

Figure 4.15 Architectural Heritage

4.13 Landscape

4.13.1 Introduction

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

Offaly has a diverse landscape, with Slieve Bloom Mountains in the south-west, River Shannon Callows in the west and many peatlands, grasslands, woodlands, eskers and wetlands in various locations across the County. There are a range of different landscapes found in Offaly, 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.

4.13.2 Landscape Character Areas

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

The purpose of landscape character assessment is to provide the foundation for policy formulation and decision making for landscape management. The County Offaly Landscape Character Assessment has identified the following 10 Landscape Character Areas:

- Rural and Agricultural Areas;
- Cutaway Bog;
- The River Shannon and Callows;
- The Grand Canal Corridor;
- Wetlands;
- Slieve Bloom Upland Area;
- Croghan Hill and its Environs;
- Bogland Areas;
- The Esker Landscape; and
- Archaeological and Historical Landscapes.

4.13.3 Landscape Sensitivities

The sensitivity of a landscape is the measure of its ability to accommodate change or intervention without suffering unacceptable effects to its character and values. The sensitivity of the landscapes of County Offaly varies and is classified within the following sensitivity classes: low, moderate and high (as mapped on Figure 4.16).

High sensitivity areas within the County include:

- The River Shannon and Callows;
- The Grand Canal Corridor;
- Wetlands;
- Slieve Bloom Upland Area;
- Croghan Hill and its Environs;
- Raised and Blanket Bogland Areas;
- The Esker Landscape; and
- Archaeological and Historical Landscapes.

These areas are the most sensitive to development and therefore developments which are likely to create a significant environmental and particularly visual impact will best be absorbed in areas where the landscape is most robust, i.e. has the capacity to absorb development without significantly changing its character.

4.13.4 Areas of High Amenity

Areas of High Amenity have been identified by the Council to facilitate the protection and enhancement of areas of scenic and amenity value in County Offaly that are worthy of special protection in order to preserve their uniqueness and amenity value. These include the following:

- Waterways and Wetlands (including River Shannon and Callows, Grand Canal, Lough Boora Discovery Park and Pallas Lake);
- Upland Areas (Slieve Bloom Mountains and Croghan Hill);
- Peatlands (Clara Bog and Raheenmore Bog);
- Eskers (Eiscir Riada, Clara Eskers and Other Eskers); and

- Archaeological and Historical (Clonmacnoise and Durrow Monastic Site and Demesne).

Areas of High Amenity are mapped on Figure 4.17.

4.13.5 Protected View Points and Key Amenity Routes

The Council recognises the need to protect the character of the County by protecting Key Scenic Views and Key Prospects. There are 19 Protected Views identified in the County.

In addition, County Offaly contains a number of Key Amenity Routes that offer a very attractive cross-sectional view and overall impression of differing landscapes within Offaly as one traverses the County. These routes include the following:

- R357 Blueball to Shannonbridge; and
- R440 Birr to Kinnitty and R421 Kinnitty to Ballard.

Existing View Points and Key Amenity Routes are mapped on Figure 4.17.

4.13.6 Existing Environmental Problems

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

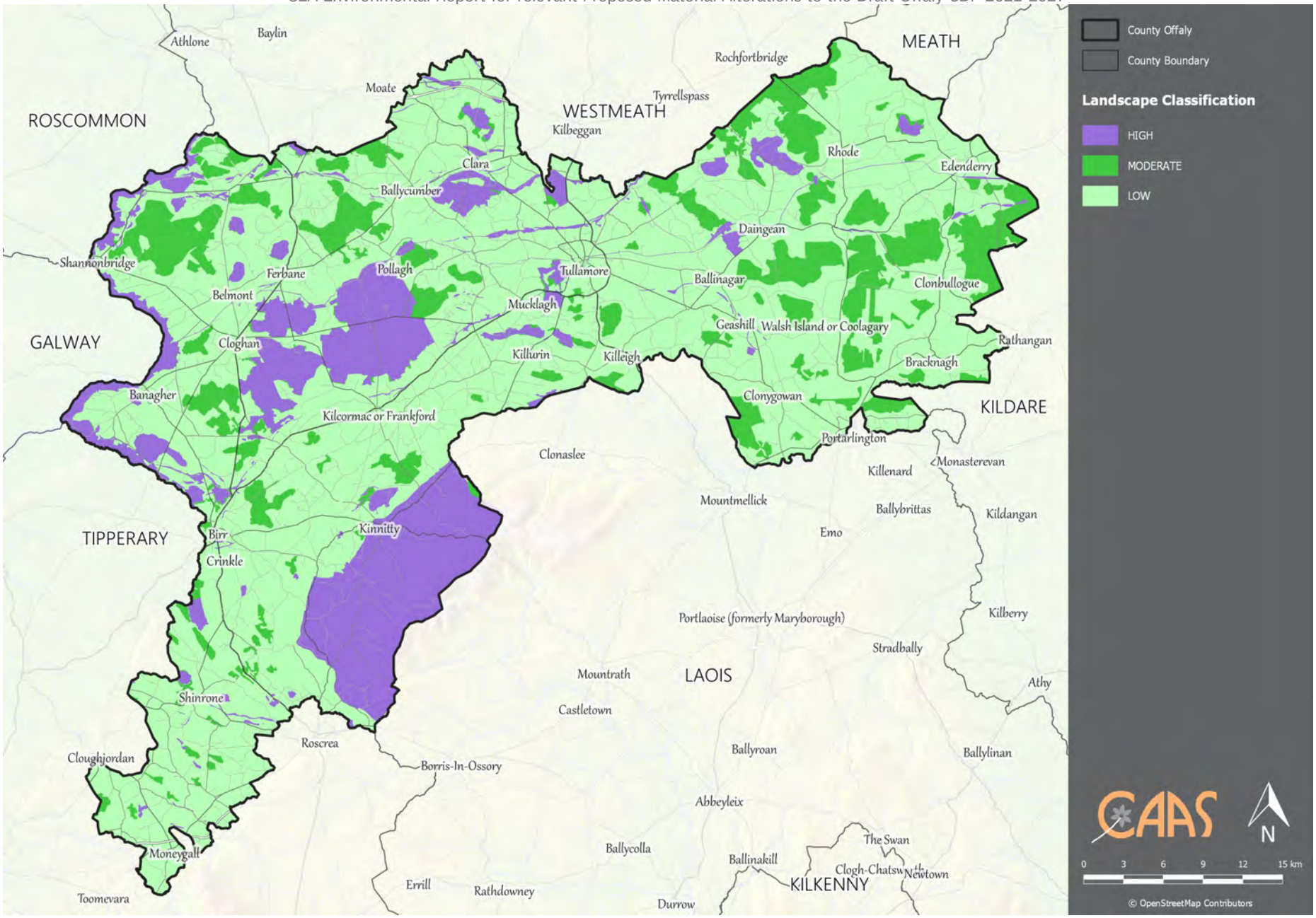

Figure 4.16 Landscape Sensitivity

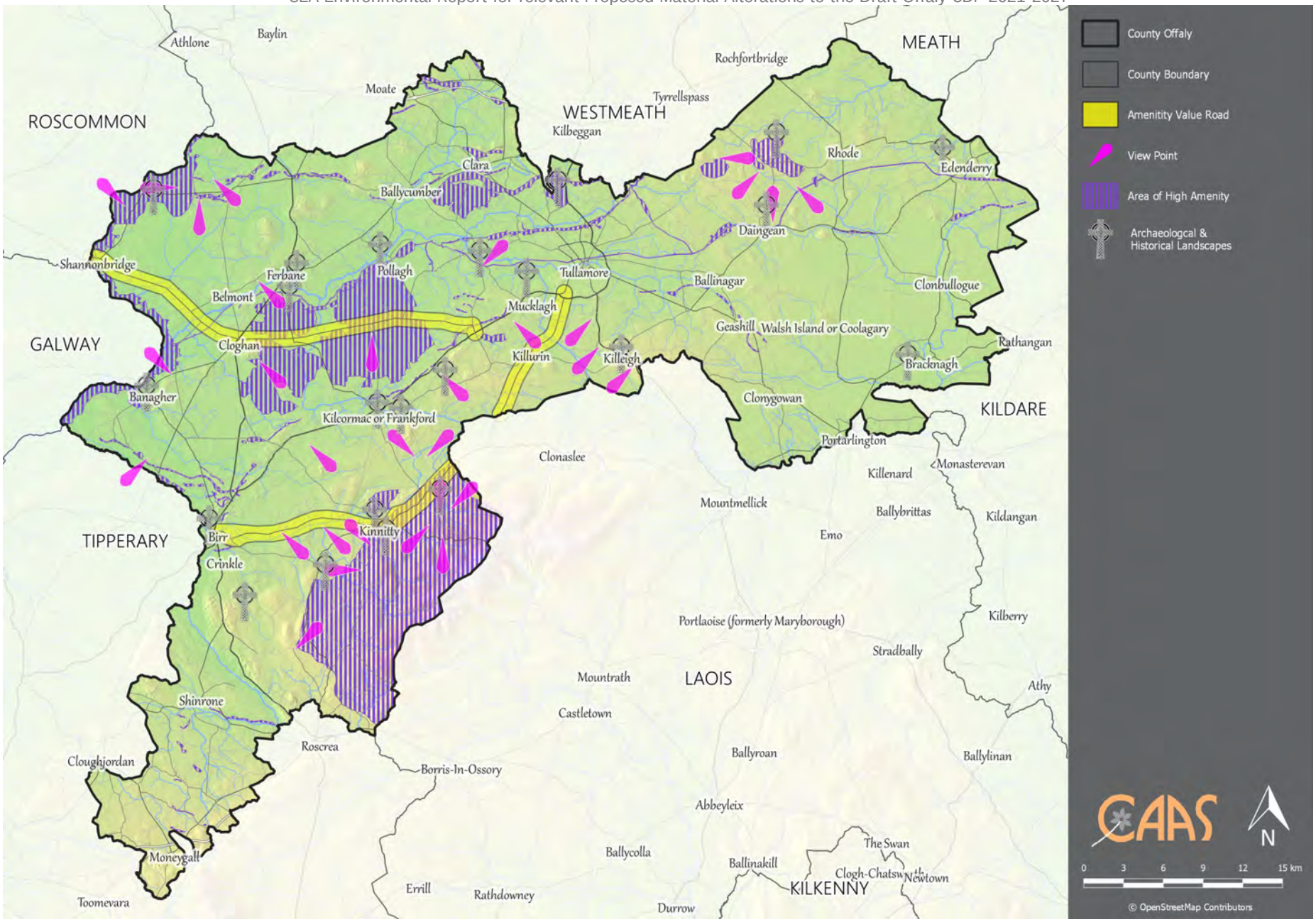

Figure 4.17 Landscape Designations

4.14 Overlay of Environmental Sensitivity Mapping

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

Figure 4.18 provides an Overlay of Environmental Sensitivities in the County. Environmental sensitivities are indicated by colours which range from higher to lower sensitivity. The map was prepared using Geographical Information System (GIS) software that allowed for a weighting system to be applied with differentiation in certain layers as follows:

- European Sites – SACs and SPAs (10 points);
- Other Ecological designations – NHAs, pNHAs and Fens (5 points);
- Sensitive Landcover Categories (10 points);
- WFD Status of Surface unassigned ecological status (5 points);
- WFD Status of Surface water poor ecological status (10 points);
- WFD Status of Surface water bad ecological status (15 points);
- WFD Status of Groundwater water poor ecological status (10 points);
- Groundwater vulnerability ("extreme" or "extreme – rock at or near surface or karst" 10 points, "high" 5 points);
- Source Protection Areas (10 points);
- WFD RPA Nutrient Sensitive Rivers (10 points) and Rivers in Nutrient Sensitive Areas (5 points);
- Preliminary Flood Risk Assessment Fluvial and Pluvial mapping highest (10 points) and moderate risk (5 points);
- Cultural Heritage including Architectural Conservation Areas, entries to the Record of Protected Structures, entries to the Record of Monuments and Places, National Monuments in State Care and entire to the National Inventory of Architectural Heritage (10 points);
- Areas of High Amenity (10 points); and
- Amenity routes and scenic views (10 points).

Where the mapping shows a concentration of environmental sensitivities there is an increased likelihood that development will conflict with these sensitivities and cause environmental deterioration. However, the occurrence of environmental sensitivities does not preclude development; rather it flags at a strategic level that the mitigation measures - which have been integrated into the Plan - will need to be complied with in order to ensure that the implementation of the Plan contributes towards environmental protection.

Most of the County is identified as having low to moderate levels of sensitivity.

The most sensitive areas in the County include:

- Upland areas, including the Slieve Bloom Mountains and Croghan Hill - on account of ecological and land cover sensitivities, areas of high amenity designation and/or nutrient sensitivity in surface waters;
- The Callows of the River Shannon and Little Brosna - on account of ecological and land cover sensitivities, areas of high amenity designation, nutrient sensitivity in surface waters and surface waters that supply drinking water;
- Individual rivers throughout the County;
- Raised bogs across lowlands and blanket bogs in the Slieve Blooms; and
- Areas of elevated groundwater vulnerability throughout the County, including areas of extreme vulnerability in the uplands in the south-east of the County.

The EPA-funded Environmental Sensitivity Mapping Web Tool www.enviromap.ie, is available to assist in lower tier consideration of plans and projects.

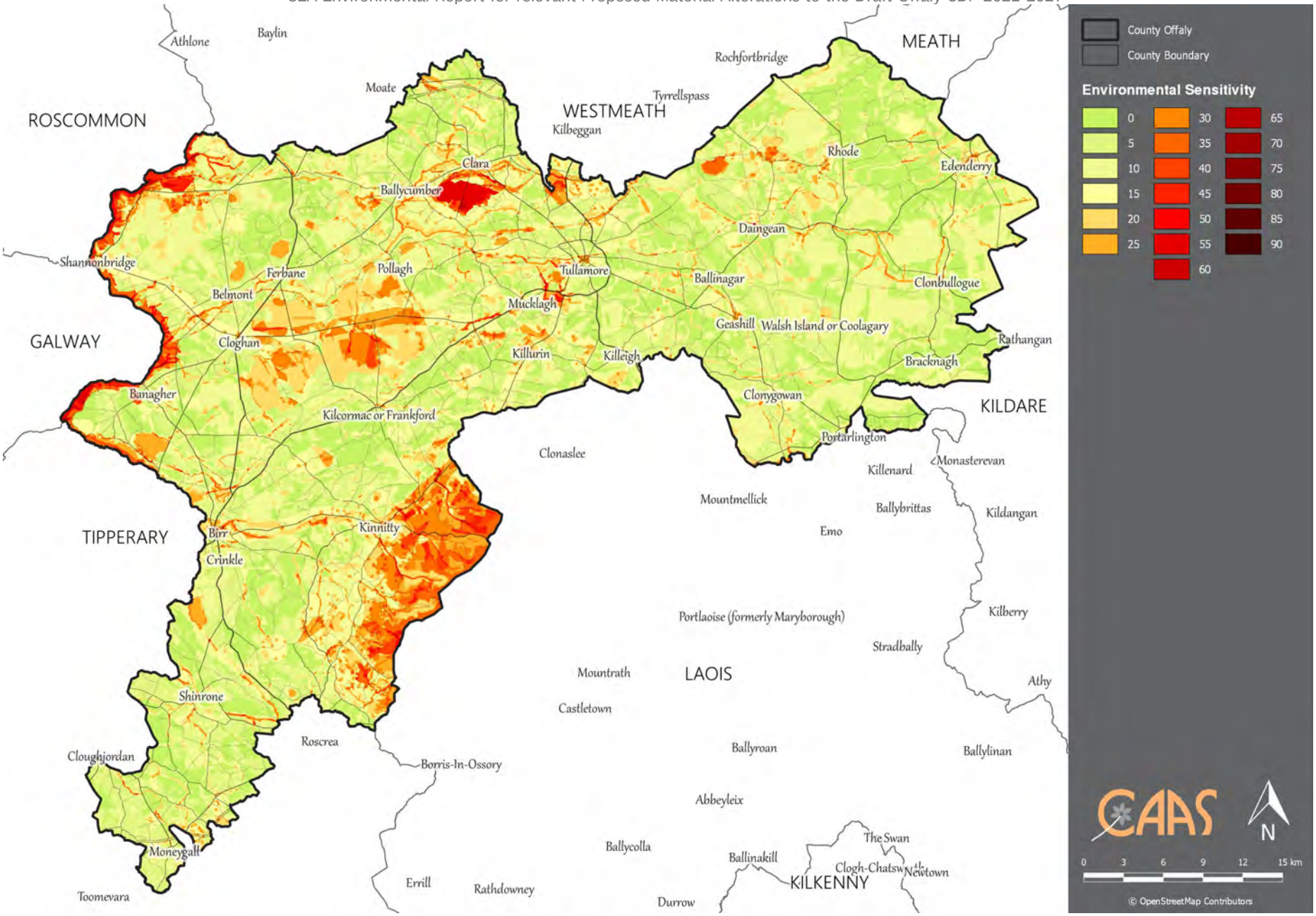

Figure 4.18 Overlay of Environmental Sensitivities in County Offaly

Section 5 Strategic Environmental Objectives

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

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

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

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

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

Given the position of the Development Plan in the land use planning hierarchy beneath the Eastern and Midland RSES, the measures identified in that RSES SEA have been used – as they are or having been slightly modified – in most instances. This consistency across the hierarchy of land use plans will improve the efficiency and effectiveness of future monitoring.

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

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives	Indicators	Targets
Biodiversity, Flora and Fauna	**BFF**	No net contribution to biodiversity losses or deterioration	• 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	• 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 4 "Biodiversity and Landscape"	• 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 Chapter 4 "Biodiversity and Landscape"
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	• 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	• Implementation of Plan measures relating to the promotion of economic growth as provided for by Chapter 5 "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	• For review of progress on implementing Plan objectives to demonstrate successful implementation of measures relating to the promotion of economic growth as provided for by Chapter 5 "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
Soil (and Land)	**S**	Ensure the long-term sustainable management of land	• 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	• 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	• Maintain built surface cover nationally to below the EU average of 4%. • Achieve the 40% target for growth on infill as per NPF.

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives	Indicators	Targets
Water	**W**	Protection, improvement and sustainable management of the water resource	• 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	• Status of water bodies as reported by the EPA Water Monitoring Programme for the WFD • Number of incompatible developments permitted within flood risk areas	• 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
Material Assets	**MA**	Sustainable and efficient use of natural resources	• 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	• 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	• 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

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives	Indicators	Targets
Air	**A**	Support clean air policies that reduce the impact of air pollution on the environment and public health	• 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.	• 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	• 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

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives	Indicators	Targets
Climatic Factors	**C**	Achieving transition to a competitive, low carbon, climate-resilient economy that is cognisant of environmental impacts	• 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[66]. • Promote development resilient to the effects of climate change • Promote the use of renewable energy, energy efficient development and increased use of public transport	• 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 Action and Energy" • 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	• 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 Action and Energy" • 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 (CO_2) 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

[66] Please also refer to relevant legislation and requirements under Section 4.10, Section 8.8.11 and Appendix I. Targets under the national Climate Action Plan include:

Electricity
- Reduce CO_2 eq. emissions from the sector by 50–55% relative to 2030 Pre-NDP projections.
- Deliver an early and complete phase-out of coal- and peat-fired electricity generation.
- Increase electricity generated from renewable sources to 70%, indicatively comprised of: at least 3.5 GW of offshore renewable energy; up to 1.5 GW of grid-scale solar energy; and up to 8.2 GW total of increased onshore wind capacity

Built Environment
- Reduce CO_2 eq. emissions from the sector by 40–45% relative to 2030 pre-NDP projections.
- Sharply reduce fossil fuel use, given the current heavy reliance on gas, oil, coal and peat in the sector.
- Increase the number of Sustainable Energy Communities to 1,500.
- Complete the rollout of the Support Scheme for Renewable Heat (SSRH), including support for biomass and anaerobic digestion heating systems.

Transport
- Reduce CO_2 eq. emissions from the sector by 45–50% relative to 2030 pre-NDP projections.
- Increase the number of EVs to 936,000.
- Build the EV charging network to support the growth of EVs at the rate required, and develop our fast-charging infrastructure to stay ahead of demand.

Agriculture, Forestry & Land Use
- Deliver 16.5-18.5 $MtCO_2$eq. cumulative abatement.
- Achieve 26.8 $MtCO_2$eq. abatement through LULUCF actions over the period 2021 to 2030, comprised of: an average of 8,000 ha per annum of newly planted forest, and sustainable forest management of existing forests (21 $MtCO_2$eq. cumulative abatement) at least 40,000 ha per annum of reduced management intensity of grasslands on drained organic soils (4.4 $MtCO_2$eq. cumulative abatement); and better management of grasslands, tillage land and non-agricultural wetlands (1.4 $MtCO_2$eq. cumulative abatement).

Enterprise
- Reduce Ireland's ETS industry emissions by 10-15% by 2030, relative to 2030 projections.
- Enterprise must contribute to the more ambitious targets for buildings (20-25%) and transport (45-50%).

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives	Indicators	Targets
Cultural Heritage	**CH**	Safeguard cultural heritage features and their settings through responsible design and positioning of development	• Protect places, features, buildings and landscapes of cultural, archaeological or architectural heritage	• 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	• 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
Landscape	**L**	Protect and enhance the landscape character	• To implement the Plan's framework for identification, assessment, protection, management and planning of landscapes having regard to the European Landscape Convention	• 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	• 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

Section 6 Description of Alternatives

6.1 Introduction

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

Whether or not alternatives for the County Development Plan are available has been identified by Offaly County Council under Tiers 1 to 5 detailed below. These alternatives are assessed in Section 7.

The Proposed Material Alterations – whether adopted as part of the Draft Plan or not – will not affect the consideration of reasonable alternatives for the Draft Plan that are reproduced (originally included in the June 2020 SEA Environmental Report for the Draft Plan) in this section and assessed in Section 7.

As Rahan is proposed to be changed from a Sráid to a Village, land use zoning is included in the Proposed Material Alterations. There are no reasonable alternatives for land use zoning identified in Rahan. The executive recommended that the settlement is retained as a Sráid. The findings of this SEA (including that provided at Section 8) support that recommendation.

6.2 Limitations in Available Alternatives

The Plan is required to be prepared by the Planning and Development Act 2000 (as amended), which specifies various types of objectives that must be provided for by the Plan.

The alternatives available for the Plan are limited by the provisions of higher-level planning objectives, including those of the National Planning Framework (NPF) and the Regional Spatial and Economic Strategy (RSES) for the Eastern and Midland Region. 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 rural areas.

6.3 Tier 1: Alternatives for Positioning under the Settlement Hierarchy

The Council have confirmed that no significant realistic alternatives are available for placing of individual settlements under alternative typologies, taking into account the objectives of the higher-level NPF and Eastern and Midland RSES.

6.4 Tier 2: 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 Self-Sustaining Towns of Edenderry or Portarlington or to the County's Key Town of Tullamore or Self Sustaining Growth Town of Birr.

A. Provide additional extent of growth to Tullamore or Birr; or

B. Provide additional extent of growth to Edenderry or Portarlington.

6.5 Tier 3: Rural Areas

Tier 3(i): Alternatives for Areas under Strong Urban Influence

A. Include a "Housing in Rural Areas under Strong Urban Influence and Stronger Rural Areas[67], & Areas of Special Control[68]" policy that considers a single dwelling for the permanent occupation of an applicant where a number of criteria can be demonstrated.

B. Do not include a "Housing in Rural Areas under Strong Urban Influence and Stronger Rural Areas, & Areas of Special Control" policy that provides for a presumption in favour of applications for single houses by applicants, subject to various criteria being met.

Tier 3(ii): Alternatives for consideration of Sráids in Rural Areas

A. Provide focus to and targeted policies/objectives for Sráids as part of Rural Tier of Settlement Hierarchy.

B. Sráids are included within the wider open countryside but there is no focus or no targeted provisions for these locations.

6.6 Tier 4: Alternatives for Densities

The Council have confirmed that no realistic alternatives are available for proportionate densities across the settlement hierarchy, taking into account the objectives of the higher-level NPF and Eastern and Midlands RSES.

6.7 Tier 5: Alternatives for Land Use Zoning

Land use zoning has been applied in a way that primarily seeks to achieve sustainable and compact growth, taking into account the various requirements set out in the higher-level NPF and Eastern and Midlands RSES. Requirements relating to land use zoning provided for by the NPF and RSES limit the availability of alternatives for various settlements.

The Council have identified reasonable alternatives for certain settlements, where these are available.

The findings of the examination of available reasonable land use zoning alternatives for settlements is provided at Table 6.1.

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[67] Areas under Strong Urban Influence & Stronger Rural Areas include:

- Electoral Divisions where at least 15% of their workforce commute to a town of population over 10,000 or a town with more than 2,500 jobs

[68] Areas of Special Control include:

- National/International Conservation Designations (Special Protection Areas, Special Areas of Conservation, Natural Heritage Areas)
- Areas of High Amenity
- Source Protection Zones
- Restricted Regional Roads

There are existing Local Area Plans (LAPs) in existence for Edenderry and Portarlington. These LAPs, including land use zoning, will need to be varied after adoption of the County Plan in order to bring them in line with the Core Strategy and any relevant policies/objectives of the new County Plan.

Table 6.1 Screening for Available Reasonable Alternatives

Settlements	Available Reasonable Alternatives		
	Not applicable	**Not available – taking into account high-level planning objectives**	**Assessable Alternatives**
Tullamore			
Birr, including Crinkill			✓
Edenderry	✓ **LAP to be varied**		
Portarlington	✓ **LAP to be varied**		
Banagher			✓
Clara			✓
Daingean			✓
Ferbane			✓
Kilcormac			✓
Ballinagar			✓
Ballycumber			✓
Belmont			✓
Bracknagh		✓	
Cloghan			✓
Clonbullogue			✓
Cloneygowan		✓	
Coolderry			✓
Geashill			✓
Killeigh			✓
Kinnitty			✓
Moneygall			✓
Mountbolus		✓	
Mucklagh			✓
Pollagh/ Lemanaghan			✓
Rhode			✓
Riverstown			✓
Shannon Harbour		✓	
Shannonbridge			✓
Shinrone			✓
Walsh Island			✓
Rahan		✓ - refer to Section 6.1	

A description of assessable alternatives, where available, are provided on Table 6.2. Maps for each of these alternatives are provided in Appendix II "Indicative Mapping of Land Use Zoning Alternatives".

Table 6.2 Description of Assessable Alternatives Available

Settlements	Available Reasonable Alternatives Set 1	Available Reasonable Alternatives Set 2
Tullamore	New residential zoning: **A.** Less compact **or** **B.** More compact	Green buffer along the bypass and canal and train lines: **A.** Provide **or** **B.** Do not provide
Birr, including Crinkill	New residential zoning: **A.** Less compact **or** **B.** More compact	Green belt between Crinkill Village and Birr Town: **A.** Provide **or** **B.** Do not provide

Settlements	Available Reasonable Alternatives Set 1	Available Reasonable Alternatives Set 2
Banagher	New residential zoning: **A.** Less compact **or** **B.** More compact	n/a
Clara	New residential zoning: **A.** Less compact **or** **B.** More compact	n/a
Daingean	Industrial zoning: **A.** Less compact - include land to the south of the town **or** **B.** More compact - omit land to the south of the town	n/a
Ferbane	New residential zoning: **A.** Less compact **or** **B.** More compact	n/a
Kilcormac	Open Space, Amenity and Recreation zonings: **A.** Provide **or** **B.** Do not provide	n/a
Ballinagar	New residential and enterprise and employment zonings: **A.** Less compact **or** **B.** More compact	n/a
Ballycumber	Open Space, Amenity and Recreation zoning along river and park/playground: **A.** Provide **or** **B.** Do not provide	Opportunity vacant site in the south east of the town: **A.** Provide **or** **B.** Do not provide
Belmont	New residential and enterprise and employment zonings: **A.** Less compact **or** **B.** More compact	n/a
Cloghan	New residential zoning: **A.** Less compact **or** **B.** More compact	n/a
Clonbullogue	New residential and enterprise and employment zonings: **A.** Less compact **or** **B.** More compact	n/a
Coolderry	Employment zoning: **A.** Less compact **or** **B.** More compact	n/a
Geashill	New residential zoning to be provided: **A.** Behind existing residential development on the west side of the village **or** **B.** To the north of the R420 Regional Road	n/a
Killeigh	New residential zoning: **A.** Less compact **or** **B.** More compact	n/a
Kinnitty	New residential and enterprise and employment zonings: **A.** Less compact **or** **B.** More compact	Open Space, Amenity and Recreation zoning at the Rectory: **A.** Provide **or** **B.** Do not provide

Settlements	Available Reasonable Alternatives Set 1	Available Reasonable Alternatives Set 2
Moneygall	Enterprise and employment zonings: **A.** Less compact **or** **B.** More compact	n/a
Mucklagh	New residential and enterprise and employment zonings: **A.** Less compact **or** **B.** More compact	n/a
Pollagh/ Lemanaghan	New residential and enterprise and employment zonings: **A.** Less compact **or** **B.** More compact	Additional Open Space, Amenity and Recreation zoning in Lemanaghan: **A.** Provide **or** **B.** Do not provide
Rhode	New residential and enterprise and employment zonings: **A.** Less compact **or** **B.** More compact	n/a
Riverstown	New residential zoning: **A.** Less compact **or** **B.** More compact	n/a
Shannonbridge	Enterprise and employment zonings: **A.** Less compact, further from village centre **or** **B.** More compact, closer to village centre	n/a
Shinrone	New residential zoning: **A.** Less compact **or** **B.** More compact	n/a
Walsh Island	New residential and enterprise and employment zonings: **A.** Less compact **or** **B.** More compact	n/a

Section 7 Evaluation of Alternatives

7.1 Introduction

This section provides a comparative evaluation of the likely significant environmental effects[69] of implementing available alternatives that are described in Section 6. This determination sought to understand whether each alternative was likely to improve conflict with or have a neutral interaction with the receiving environment.

The Proposed Material Alterations – whether adopted as part of the Draft Plan or not – will not affect the consideration of reasonable alternatives for the Draft Plan that are assessed in this section and described in Section 7.

7.2 Methodology

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

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

Table 7.1 Strategic Environmental Objectives[70]

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
Biodiversity, Flora and Fauna	**BFF**	No net contribution to biodiversity losses or deterioration	• 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	• 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	• 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	• 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

[69] These effects include secondary, cumulative (see also Section 8.2), synergistic, short, medium and long-term permanent and temporary, positive and negative effects.
[70] See also Section 5

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
Material Assets	**MA**	Sustainable and efficient use of natural resources	• 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	• 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	• 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
Cultural Heritage	**CH**	Safeguard cultural heritage features and their settings through responsible design and positioning of development	• Protect places, features, buildings and landscapes of cultural, archaeological or architectural heritage
Landscape	**L**	Protect and enhance the landscape character	• To implement the Plan's framework for identification, assessment, protection, management and planning of landscapes having regard to the European Landscape Convention

7.3 Detailed Assessment of Alternatives

7.3.1 Effects Common to all Alternatives

Each of the alternatives envisage – in compliance with the robust policy framework in place at national, regional and local level – sustainable development and compact growth in County Offaly. As such, various potential environmental effects are common to each of the alternatives. The environmental effects detailed on would be present, some to varying degrees, under the different alternatives.

Table 7.2 Effects Common to All Alternatives

Environmental Component	Significant Positive Effect, likely to occur	Potentially Significant Adverse Environmental Effects, if unmitigated
Biodiversity and Flora and Fauna	• Contribution towards protection of ecology (including designated sites, ecological connectivity, habitats) by facilitating development of lands (including those within and adjacent to the County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond. • 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.	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.
Population and Human Health	• Promotion of economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management. • Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands (including those within and adjacent to the County's settlements) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the County and beyond • Contribution towards the protection of human health by facilitating development of lands (including those within and adjacent to the County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond.	• Potential adverse effects arising from flood events. • Potential interactions if effects arising from environmental vectors.
Soil	• Contribution towards the protection of soils (including those used for agriculture) and designated sites of geological heritage by facilitating development of lands (including those within and adjacent to the County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond.	• 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.

Environmental Component	Significant Positive Effect, likely to occur	Potentially Significant Adverse Environmental Effects, if unmitigated
Water	• Contribution towards the protection of water by facilitating development of lands (including those within and adjacent to the County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond.	• 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.
Material Assets	• Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands (including those within and adjacent to the County's settlements) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the County and beyond. • Contribution towards limits in increases in energy demand from the transport sector by facilitating sustainable compact growth.	• 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.
Air and Climatic Factors	• Contribution towards climate mitigation and adaptation by facilitating compact development of lands (including those within and adjacent to the County's settlements) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the County and beyond.	• 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.
Cultural Heritage	• Contributes towards protection of cultural heritage elsewhere in the County by facilitating development within existing settlements.	• Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities.
Landscape	• Contributes towards protection of wider landscape and landscape designations by facilitating development within existing settlements.	• Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape.

7.3.2 Assessment of Tier 2: 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 Self-Sustaining Towns of Edenderry or Portarlington or to the County's Key Town of Tullamore or Self Sustaining Growth Town of Birr. The two alternatives under Tier 2 are therefore:

A. Provide additional extent of growth to Tullamore or Birr; or

B. Provide additional extent of growth to Edenderry or Portarlington.

Edenderry and Portarlington have experienced rapid population growth with high levels of commuter focused residential expansion without equivalent increase in jobs and services. They have been identified by the Planning Department as needing consolidation and targeted 'catch up' investment in services, infrastructure, suitable transport options, amenities and local employment to become more self-sustaining.

Consequently, the key environmental differential factor between the two alternatives as a result of providing an additional extent of unquantified population allocation to either Tullamore or Birr (Alternative A) or Edenderry or Portarlington (Alternative B) relates to transport and associated emissions (interacting with Population and Human Health, Material Assets, Air and Climatic Factors – see Table 7.1 and Table 7.2 above).

Allocation of an additional extent of growth to Edenderry or Portarlington would potentially hinder the aforementioned needs being met and would be likely to result in higher levels of commuting, potentially conflicting with both efforts to improve sustainable mobility and greenhouse gas emission reduction targets the most.

Allocation of an additional extent of growth to Tullamore or Birr would be likely to result in lower levels of commuting, potentially conflicting with both efforts to improve sustainable mobility and greenhouse gas emission reduction targets the least.

All other environmental effects would be considered to be mitigated to similar degrees. It is noted that both Tullamore and Portarlington are identified by the EPA (2019[71]) as Priority Areas with respect to the European Urban Wastewater Treatment Directive, that is waste water discharges from these plants are the sole significant pressure on water bodies at risk of pollution. However, the EPA also identify that Irish Water has improved waste water treatment at both Tullamore and Portarlington and that the EPA is monitoring surface waters in these areas to determine if the risk of pollution from waste water discharges has been satisfactorily resolved.

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

[71] Urban Waste Water Treatment in 2018

Table 7.3 Assessment[72] of Tier 2 Alternatives against Strategic Environmental Objectives

Alternative	Likely to **Improve** status of SEOs		**Potential Conflict** with status of SEOs – likely to be mitigated	
	to a **Greater** degree	to a **Lesser** degree	to a **Lesser** degree	to a **Greater** degree
A. Provide additional extent of growth to Tullamore or Birr	**PHH MA A C BFF S W CH L**		**PHH MA A C BFF S W CH L**	
B. Provide additional extent of growth to Edenderry or Portarlington	**BFF S W CH L**	**PHH MA A C**	**BFF S W CH L**	**PHH MA A C**

Selected Alternative

Taking into account, inter alia, the issues identified above, it was decided to allocate the additional extent of growth to Tullamore or Birr (Alternative A).

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

The interactions identified are reflective of likely significant environmental effects:

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

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

7.3.3 Assessment of Tier 3: Rural Areas

Tier 3(i): Alternatives for Areas under Strong Urban Influence

A. Include a "Housing in Rural Areas under Strong Urban Influence and Stronger Rural Areas[73], & Areas of Special Control[74]" policy that considers a single dwelling for the permanent occupation of an applicant where a number of criteria can be demonstrated.

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

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

B. Do not include a "Housing in Rural Areas under Strong Urban Influence and Stronger Rural Areas, & Areas of Special Control" policy that provides for a presumption in favour of applications for single houses by applicants, subject to various criteria being met.

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

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

Tier 3(i) alternatives are assessed against Strategic Environmental Objectives on Table 7.4.

Table 7.4 Assessment of Tier 3(i) Alternatives against Strategic Environmental Objectives

Alternative	Likely to **Improve** status of SEOs		**Potential Conflict** with status of SEOs – likely to be mitigated	
	to a **Greater** degree	to a **Lesser** degree	to a **Lesser** degree	to a **Greater** degree
A. Include a Policy for "Housing in Rural Areas under Strong Urban Influence and Stronger Rural Areas, & Areas of Special Control"	**BFF PHH S W MA A C CH L**		**BFF PHH S W MA A C CH L**	

[73] Areas under Strong Urban Influence & Stronger Rural Areas include:
- Electoral Divisions where at least 15% of their workforce commute to a town of population over 10,000 or a town with more than 2,500 jobs

[74] Areas of Special Control include:
- National/International Conservation Designations (Special Protection Areas, Special Areas of Conservation, Natural Heritage Areas)
- Areas of High Amenity
- Source Protection Zones
- Restricted Regional Roads

B. Do not include a Policy for "Housing in Rural Areas under Strong Urban Influence and Stronger Rural Areas, & Areas of Special Control"		**BFF PHH S W MA A C CH L**		**BFF PHH S W MA A C CH L**

Selected Alternative

Alternative A. Include a Policy for "Housing in Rural Areas under Strong Urban Influence and Stronger Rural Areas, & Areas of Special Control" was selected for the Plan.

Tier 3(ii): Alternatives for consideration of Sráids in Rural Areas

A. Provide focus to and targeted policies/objectives for Sráids as part of Rural Tier of Settlement Hierarchy.

Providing focus to and targeted policies/objectives for Sráids as part of Rural Tier of Settlement Hierarchy would provide a viable alternative to one-off housing in the open countryside. Development within Sráids would be more likely to be served by infrastructure (including water services infrastructure) and more likely to protect the environment including the status of ground and surface waters, water used for drinking water, human health, biodiversity and flora and fauna and the landscape. Development would be required to be subject to siting, design, protection of residential amenities and normal development management criteria, subject to the satisfactory provision of infrastructure and services and in keeping with the character of the settlement.

B. Sráids are included within the wider open countryside but there is no focus or no targeted provisions for these locations.

Not providing a focus to and targeted policies/objectives for Sráids as part of Rural Tier of Settlement Hierarchy would be less likely to provide a viable alternative to one-off housing in the open countryside. Development within the open countryside would be less likely to be served by infrastructure (including water services infrastructure) and less likely to protect the environment including the status of ground and surface waters, water used for drinking water, human health, biodiversity and flora and fauna and the landscape.

Table 7.5 Assessment of Tier 3(ii) Alternatives against Strategic Environmental Objectives

Alternative	Likely to **Improve** status of SEOs		**Potential Conflict** with status of SEOs – likely to be mitigated	
	to a **Greater** degree	to a **Lesser** degree	to a **Lesser** degree	to a **Greater** degree
A. Provide focus to Sráids as part of Rural Tier of Settlement Hierarchy, supporting housing as a viable alternative to one-off housing in the open countryside	**BFF PHH S W MA A C CH L**		**BFF PHH S W MA A C CH L**	
B. Sráids are included within the wider open countryside but there are no targeted provisions for these locations		**BFF PHH S W MA A C CH L**		**BFF PHH S W MA A C CH L**

7.3.4 Assessment of Tier 5: Alternatives for Land Use Zoning

Tier 5 alternatives are assessed on Table 7.6.

Table 7.6 Assessment of Tier 5 Alternatives

Town	Alternative (selected alternatives in **bold**)	Likely to **Improve** status of SEOs			**Potential Conflict** with status of SEOs – likely to be mitigated			Commentary
		to a **Greater** degree	to a **Moderate** degree	to a **Lesser** degree	to a **Lesser** degree	to a **Moderate** degree	to a **Greater** degree	
Tullamore (Set 1)	New residential zoning: A. Less compact			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	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.
	New residential zoning: B. More compact	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			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.
Tullamore (Set 2)	**Green buffer along the bypass and canal and train lines: A. Provide**	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			A green buffer along the bypass and train lines would help to protect future residential and employment populations from emissions to air including noise. Buffers along the canal would help to facilitate the protection of this amenity asset from visually intrusive developments. The green buffers would also contribute towards the protection of ecological connectivity, water management and protected structures and their context. The absence of a green buffer would make adverse impacts upon the aforementioned sensitivities more likely.
	B. Green buffer along the bypass and canal and train lines: Do not provide			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	
Birr, including Crinkill (Set 1)	New residential zoning: A. Less compact			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	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.
	New residential zoning: B. More compact	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			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

Town	Alternative (selected alternatives in **bold**)	Likely to **Improve** status of SEOs			**Potential Conflict** with status of SEOs – likely to be mitigated			Commentary
		to a **Greater** degree	to a **Moderate** degree	to a **Lesser** degree	to a **Lesser** degree	to a **Moderate** degree	to a **Greater** degree	
								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.
Birr, including Crinkill (Set 2)	**Green belt between Crinkill Village and Birr Town: A. Provide**	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			A green belt between Crinkill would facilitate the protection of the character of Crinkill village mature trees (some of which are the subject of Tree Preservation Orders), non-designated biodiversity, an Esker between Crinkill and Birr Town which has been previously identified as an Area of High Amenity and the context of various structures of architectural value. The absence of a greenbelt would facilitate sprawl from the south of Birr town, and associated effects, and impacts upon the aforementioned sensitivities.
	Green belt between Crinkill Village and Birr Town: B. Do not provide			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	
Banagher (Set 1)	New residential zoning: A. Less compact			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	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.
	New residential zoning: B. More compact	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			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.
Clara	New residential zoning: A. Less compact			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	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.
	New residential zoning: B. More compact	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			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.

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		to a **Greater** degree	to a **Moderate** degree	to a **Lesser** degree	to a **Lesser** degree	to a **Moderate** degree	to a **Greater** degree	
Daingean	Industrial zoning: A. Less compact - omit land to the south			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	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.
	Industrial zoning: B. More compact - include land to the south of the town	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			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.
Ferbane	New residential zoning: A. Less compact			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	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.
	New residential zoning: A. More compact	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			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.
Kilcormac	**Open Space, Amenity and Recreation zonings: A. Provide**	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			The two areas of Open Space, Amenity and Recreation zonings would provide for needed sporting/athletic facilities, at both local and regional levels. Such facilities are necessary in making settlements more desirable places to live – so that they maintain populations and services. 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 sporting/athletic facilities would present potential local impacts; residual impacts would be mitigated by the measures integrated into the Plan.
	Open Space, Amenity and Recreation zonings: B. Do not provide			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	
Ballinagar	New residential and enterprise and employment zonings: A. Less compact			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	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

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								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.
	New residential and enterprise and employment zonings: B. More compact	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			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.
Ballycumber (Set 1)	**Open Space, Amenity and Recreation zoning along river and park/playground: A. Provide**	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			The Open Space, Amenity and Recreation zoning would contribute towards the protection of architectural heritage at the Ballycumber House and the natural heritage of the River Brosna and its adjacent lands. Furthermore this zoning could help to facilitate recreational activities along the canal and adjacent to Ballycumber House. Allowing for such activities are necessary in making settlements more desirable places to live – so that they maintain populations and services. 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. Facilitating recreational activities would present potential local impacts; residual impacts would be mitigated by the measures integrated into the Plan.
	Open Space, Amenity and Recreation zoning along river and park/playground: B. Do not provide							
Ballycumber (Set 2)	**Opportunity vacant site in the south east of the town: A. Provide**	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			Encouraging the re-development of the Opportunity Site, which is a visually prominent site at the entry into the village, would reduce the need to develop less well serviced, less well connected sites elsewhere. Re-development of this site would make the village a more desirable place to live. 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. Facilitating re-development of the site would present potential local impacts; residual impacts would be mitigated by the measures integrated into the Plan.
	Opportunity vacant site in the south east of the town: B. Do not provide			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	
Belmont	New residential and enterprise and employment zonings: A. Less compact			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	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.
	New residential and enterprise and employment zonings: B. More compact	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			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

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								the protection of multiple environmental components.
Cloghan	New residential zoning: A. Less compact			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	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.
	New residential zoning: B. More compact	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			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.
Clonbullogue	New residential and enterprise and employment zonings: A. Less compact			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	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.
	New residential and enterprise and employment zonings: B. More compact	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			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.
Coolderry	Employment zoning: A. Less compact			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	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.
	Employment zoning: A. More compact	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			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

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								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.
Geashill	New residential zoning to be provided: A. Behind existing residential development on the west side of the village			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	The potential environmental effects that could arise as a result of developments at the alternative sites are similar. Access to the site behind the existing residential development is constrained due to distance from the road and adjacent development/ownership. As a result, it is less likely, all other factors being equal, that this land parcel would be developed for the residential development provided for, thereby making the proper planning and sustainable development of this settlement less likely under this alternative and potentially resulting in increased demand for housing in sites that are less well serviced and further away from the village.
	New residential zoning to be provided: B. To the north of the R420 Regional Road	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			The potential environmental effects that could arise as a result of developments at the alternative sites are similar. Access to the site to the north of the R420 is not significantly constrained. As a result, it is more likely, all other factors being equal, that this land parcel would be developed for the residential development provided for, thereby making the proper planning and sustainable development of this settlement more likely under this alternative, meeting demand for housing and reducing the need to develop sites that are less well serviced and further away from the village.
Killeigh	New residential zoning: A. Less compact			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	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.
	New residential zoning: B. More compact	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			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.
Kinnitty (Set 1)	New residential and enterprise and employment zonings: A. Less compact			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	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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		to a **Greater** degree	to a **Moderate** degree	to a **Lesser** degree	to a **Lesser** degree	to a **Moderate** degree	to a **Greater** degree	
	New residential and enterprise and employment zonings: B. More compact	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			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.
Kinnitty (Set 2)	**Open Space, Amenity and Recreation zoning at the Rectory: A. Provide**	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			The Open Space, Amenity and Recreation zoning would contribute towards the protection of built and natural heritage at and surrounding the Rectory. Furthermore, this zoning would help to facilitate recreational activities around this site of architectural significance in Kinnitty. Allowing for such activities are necessary in making settlements more desirable places to live – so that they maintain populations and services. 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. Facilitating recreational activities would present potential local impacts; residual impacts would be mitigated by the measures integrated into the Plan.
	Open Space, Amenity and Recreation zoning at the Rectory: B. Do not provide			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	
Moneygall	Enterprise and employment zonings: A. Less compact			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	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.
	Enterprise and employment zonings: B. More compact	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			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.

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		to a **Greater** degree	to a **Moderate** degree	to a **Lesser** degree	to a **Lesser** degree	to a **Moderate** degree	to a **Greater** degree	
Mucklagh	New residential and enterprise and employment zonings: A. Less compact			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	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.
	New residential and enterprise and employment zonings: B. More compact	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			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.
Pollagh/ Lemanaghan (Set 1)	New residential and enterprise and employment zonings: A. Less compact			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	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.
	New residential and enterprise and employment zonings: B. More compact	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			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.
Pollagh/ Lemanaghan (Set 2)	**Additional Open Space, Amenity and Recreation zoning in Lemanaghan: A. Provide**	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			The Open Space, Amenity and Recreation zoning would provide for needed sporting facilities. Such facilities are necessary in making settlements more desirable places to live – so that they maintain populations and services. 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 sporting facilities would present potential local impacts; residual impacts would be mitigated by the measures integrated into the Plan.
	Additional Open Space, Amenity and Recreation zoning in Lemanaghan: B. Do not provide			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	

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Rhode	New residential and enterprise and employment zonings: A. Less compact			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	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.
	New residential and enterprise and employment zonings: B. More compact	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			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.
Riverstown	New residential zoning: A. Less compact			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	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.
	New residential zoning: B. More compact	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			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.
Shannonbridge	Enterprise and employment zonings: A. Less compact, further from village centre			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	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.
	Enterprise and employment zonings: B. More compact, closer to village centre	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			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

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								(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.
Shinrone	New residential zoning: A. Less compact			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	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.
	New residential zoning: B. More compact	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			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.
Walsh Island	New residential and enterprise and employment zonings: A. Less compact			**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**	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.
	New residential and enterprise and employment zonings: B. More compact	**BFF PHH S MA A C CH L**			**BFF PHH S MA A C CH L**			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.

7.4 Selected Alternatives for the Plan

Selected alternatives for the Plan that emerged from the planning/SEA process are indicated on Table 7.7 below.

These alternatives have been selected and developed by the Planning Team and placed on public display by the Council having regard to both:

1. The environmental effects which were identified by the SEA and are detailed above; and
2. Planning – including social and economic – effects that also were considered by the Council.

Table 7.7 Selected Alternatives for the Draft Plan

Tier	Alternatives Considered	Selected Alternative
Tier 1: Alternatives for Positioning under the Settlement Hierarchy	Not available – refer to Section 6	n/a
Tier 2: Alternatives for Population Allocations	A. Provide additional extent of growth to Tullamore or Birr or B. Provide additional extent of growth to Edenderry or Portarlington	A. Provide additional extent of growth to Tullamore or Birr
Tier 3: Alternatives for Rural Areas	(i) Alternatives for Alternatives for Areas under Strong Urban Influence A. Include a Policy for "Housing in Rural Areas under Strong Urban Influence and Stronger Rural Areas, & Areas of Special Control" or B. Do not include a Policy for "Housing in Rural Areas under Strong Urban Influence and Stronger Rural Areas, & Areas of Special Control"	A. Include a Policy for "Housing in Rural Areas under Strong Urban Influence and Stronger Rural Areas, & Areas of Special Control"
	(ii) Alternatives for consideration of Sráids in Rural Areas A. Provide focus to Sráids as part of Rural Tier of Settlement Hierarchy, supporting housing as a viable alternative to one-off housing in the open countryside or B. Sráids are included within the wider open countryside but there are no targeted provisions for these locations	A. Provide focus to Sráids as part of Rural Tier of Settlement Hierarchy, supporting housing as a viable alternative to one-off housing in the open countryside
Tier 4: Alternatives for Densities	Not available – refer to Section 6	n/a
Tier 5: Land Use Zoning	**Tullamore** (Set 1 of 2) New residential zoning: A. Less compact or B. More compact	B. More compact
	Tullamore (Set 2 of 2) Green buffer along the bypass and canal and train lines: A. Provide or B. Do not provide	A. Provide
	Birr, including Crinkill (Set 1 of 1) New residential zoning: A. Less compact or B. More compact	B. More compact
	Birr, including Crinkill (Set 2 of 2) Green belt between Crinkill Village and Birr Town: A. Provide or B. Do not provide	A. Provide
	Banagher (Set 1 of 1) New residential zoning: A. Less compact or B. More compact	B. More compact

Tier	Alternatives Considered	Selected Alternative
	Clara (Set 1 of 1) New residential zoning: A. Less compact or B. More compact	B. More compact
	Daingean (Set 1 of 1) Industrial zoning: A. Less compact – include land to the south of the town or B. More compact - omit land to the south of the town	B. More compact - omit land to the south of the town
	Ferbane (Set 1 of 1) New residential zoning: A. Less compact or B. More compact	B. More compact
	Kilcormac (Set 1 of 1) Open Space, Amenity and Recreation zonings: A. Provide or B. Do not provide	A. Provide
	Ballinagar (Set 1 of 1) New residential and enterprise and employment zonings: A. Less compact or B. More compact	B. More compact
	Ballycumber (Set 1 of 2) Open Space, Amenity and Recreation zoning along river and park/playground: A. Provide or B. Do not provide	A. Provide
	Ballycumber (Set 2 of 2) Opportunity vacant site in the south east of the town: A. Provide or B. Do not provide	A. Provide
	Belmont (Set 1 of 1) New residential and enterprise and employment zonings: A. Less compact or B. More compact	B. More compact
	Cloghan (Set 1 of 1) New residential zoning: A. Less compact or B. More compact	B. More compact
	Clonbullogue (Set 1 of 1) New residential and enterprise and employment zonings: A. Less compact or B. More compact	B. More compact
	Coolderry (Set 1 of 1) Employment zoning: A. Less compact or B. More compact	B. More compact
	Geashill (Set 1 of 1) New residential zoning to be provided: A. Behind existing residential development on the west side of the village or B. To the north of the R420 Regional Road	B. To the north of the R420 Regional Road
	Killeigh (Set 1 of 1) New residential zoning: A. Less compact or B. More compact	B. More compact
	Kinnitty (Set 1 of 2) New residential and enterprise and employment zonings: A. Less compact or B. More compact	B. More compact

Tier	Alternatives Considered	Selected Alternative
	Kinnitty (Set 2 of 2) Open Space, Amenity and Recreation zoning at the Rectory: A. Provide or B. Do not provide	A. Provide
	Moneygall (Set 1 of 1) Enterprise and employment zonings: A. Less compact or B. More compact	B. More compact[75]
	Mucklagh (Set 1 of 1) New residential and enterprise and employment zonings: A. Less compact or B. More compact	B. More compact
	Pollagh/ Lemanaghan (Set 1 of 2) New residential and enterprise and employment zonings: A. Less compact or B. More compact	B. More compact
	Pollagh/ Lemanaghan (Set 2 of 2) Additional Open Space, Amenity and Recreation zoning in Lemanaghan: A. Provide or B. Do not provide	A. Provide
	Rhode (Set 1 of 1) New residential and enterprise and employment zonings: A. Less compact or B. More compact	B. More compact[76]
	Riverstown (Set 1 of 1) New residential zoning: A. Less compact or B. More compact	B. More compact
	Shannonbridge (Set 1 of 1) Enterprise and employment zonings: A. Less compact, further from village centre or B. More compact, closer to village centre	B. More compact, closer to village centre
	Shinrone (Set 1 of 1) New residential zoning: A. Less compact or B. More compact	B. More compact[77]
	Walsh Island (Set 1 of 1) New residential and enterprise and employment zonings: A. Less compact or B. More compact	B. More compact

[75] Note that the zoning in the Draft Plan most resembles this alternative, however an additional area of Enterprise and Employment Zoning was added following consideration of the pre-Draft Plan by the Elected Members.

[76] Note that the zoning in the Draft Plan most resembles this alternative, however: the New Residential zoning in the south east of the Plan area shown by this alternative and included in the pre-Draft Plan was removed; and New Residential Zoning was added in the north east for the Draft Plan.

[77] Note that the zoning in the Draft Plan most resembles this alternative, however: the New Residential zoning in the north east of the Plan area at Rathbaun shown by this alternative and included in the pre-Draft Plan was replaced by a smaller extent of Existing Residential as these lands surround an unfinished housing estate; and lands to the east of the Village centre, previously not included in the pre-Draft Plan were added to compensate for the aforementioned change at Rathbaun.

Section 8 Evaluation of Draft Plan and Proposed Material Alterations

8.1 Introduction

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

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

Table 8.1 Strategic Environmental Objectives[78]

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
Biodiversity, Flora and Fauna	**BFF**	No net contribution to biodiversity losses or deterioration	• 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	• 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	• 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	• 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	• 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

[78] See also Section 5

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
Air	**A**	Support clean air policies that reduce the impact of air pollution on the environment and public health	• 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	• 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
Cultural Heritage	**CH**	Safeguard cultural heritage features and their settings through responsible design and positioning of development	• Protect places, features, buildings and landscapes of cultural, archaeological or architectural heritage
Landscape	**L**	Protect and enhance the landscape character	• To implement the Plan's framework for identification, assessment, protection, management and planning of landscapes having regard to the European Landscape Convention

8.2 Cumulative Effects

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

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

- Potential *intra-Plan* cumulative effects - these arise from the interactions between different types of potential environmental effects resulting from a plan, programme, etc. Where there are elevated levels of environmental sensitivities (such as those identified under Section 4), future development could result in environmental conflicts and lead to a deterioration in environmental integrity. The interrelationships between environmental components that help determine these potential effects are identified on Table 8.2 e.g. interrelationships between: human health and water quality; human health and air quality; human health and flood risk; and ecology and water quality.
- Potential *inter-Plan* cumulative effects - these arise when the effects of the implementation of one plan occur in combination with those of other plans, programmes, developments, etc.

Effects that may arise as a result of implementing the Plan have been mitigated to the extent that the only residual adverse effects likely to occur as a result of implementation of the Plan are those which are identified under Table 8.3.

Other policies, plans and programmes that have been considered by the assessment of effects include those which are detailed under Section 2.8 (and associated Appendix I "Relationship with Legislation, Plans and Programmes"), Section 4 and Section 5. Plans and programmes from various sectors will interact with the Plan, including those relating to land use planning. These plans and programmes are subject to their own environmental assessment requirements as relevant. Examples include:

- Land use policy, plans and programmes (e.g. the National Planning Framework, the Eastern and Midland Regional Spatial and Economic Strategy, adjoining County Development Plans and Local Area Plans)

- Offaly Local Economic and Community Plan and the Local Economic and Community Plans of adjoining counties;
- Energy policy, plans and programmes (e.g. Grid25 and associated Implementation Programme, Ireland's National Renewable Energy Action Plan 2010, Strategy for Renewable Energy 2012-2020, Offshore Renewable Energy Development Plan, Draft National Energy and Climate Plan 2021-2030 and the Renewable Electricity Policy and Development Framework);
- Climate related policy, plans and programmes (e.g. the National Climate Policy Position and Climate Action 2014, Low Carbon Development Act 2015 and White Paper Ireland's Transition to a Low Carbon Energy Future 2015, Climate Action Plan 2019, National Mitigation Plan 2017, the National Adaptation Framework 2018 and the Offaly Climate Change
- Adaptation Strategy 2019-2024);
- Water services, waste management, transport and energy infrastructure plans (e.g. Irish Water's Water Services Strategic Plan and associated Capital Investment Plan, Eastern-Midlands Regional Waste Management Plan and Transportation Policies and Strategies); and
- Environmental protection and management plans (e.g. River Basin Management Plans and Flood Risk Management Plans).

Potential cumulative/in combination effects include:

- Contributions towards reductions in travel related greenhouse gas and other emissions to air, reductions in consumption from non-renewables and associated achievement of legally binding targets (in combination with plans and programmes from all sectors, including energy, transport and land use planning) as a result of facilitating:
    - sustainable compact growth;
    - sustainable mobility/a shift from motorised transport modes to more sustainable and non-motorised transport modes; and
    - renewable energy development.
- Contributions towards travel related greenhouse gas and other emissions to air (in combination with plans and programmes from all sectors, including transport and land use planning) as a result of facilitating development which must be accompanied by road capacity;
- Facilitation of new development that is accompanied by appropriate levels of water services thereby contributing towards environmental protection;
- Need for and use of water and waste water treatment capacity arising from new developments and associated potential adverse effects;
- Potential cumulative effects upon surface and ground water status as a result of housing, employment, agricultural and forestry – loadings and abstractions;
- Potential cumulative effects (habitat damage, enhancing ecological connectivity, contributing towards sustainable mobility) arising from linear developments, such as those relating to Green Infrastructure, including beyond the County border;
- Potential cumulative effects on flood risk by, for example, development of greenfield lands or obstruction of flood paths; and
- In combination with plans and programmes from all sectors potential adverse effects on all environmental components arising from all development in greenfield and brownfield areas (e.g. infrastructural, residential, economic, agricultural etc.). The type of these effects are consistent with those described on Table 8.3. These plans and programmes are required to comply with environmental legislation and undergo SEA and AA as relevant comply with environmental legislation while projects are subject to EIA and AA, as relevant.

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

A variety of the issues covered by the Draft Plan provisions are regional issues which are considered: at Regional Assembly level, in the Eastern and Midland RSES and by planning authorities across the Region. The solutions to these issues are often regional solutions which are subject their own consenting procedures. Works arising outside of the Plan as a result of providing for new development within the County including those arising as a result of the cumulative provision of development in the wider Eastern and Midland region would potentially conflict with a number of environmental components, across the wider Eastern and Midland region and beyond, including:

ecology, soil function, the status of water bodies and the landscape. Some of these conflicts would be mitigated by measures which will be integrated into the Plan while some will be mitigated by measures arising out of separate consent procedures.

The EPA's guidance note 'Good Practice Guidance note on cumulative effects assessment in SEA', has been considered in the assessment.

8.3 Appropriate Assessment and Strategic Flood Risk Assessment

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.[79]

The Proposed Material Alterations are accompanied by an AA Natura Impact Report, which has informed this SEA Environmental Report.

SFRA is being undertaken to inform the preparation of the Draft Plan and the Proposed Material Alterations.

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).

As Rahan is proposed to be changed from a Sráid to a Village, land use zoning is included in the Proposed Material Alterations, necessitating groundtruthing of flood risk indicators and the delineation of Flood Zones at this settlement. This mapping is provided in the SEA Screening Report. In addition to the map for Rahan, a revised Flood Zone map is also provided for Moneygall as time constraints in advance of public display of the Draft Plan meant that the groundtruthing of flood indicators was not previously possible at this settlement.

8.4 Interrelationship between Environmental Components

The SEA Directive requires the Environmental Report to include information on the likely significant effects on the environment, including on issues such as biodiversity, fauna, flora, population, human health, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.

Likely significant effects on environmental components which are identified include those which are interrelated; implementation of the Plan and associated Proposed Material Alterations will not affect the interrelationships between these components. The presence of significant interrelationships between environmental components is identified on Table 8.2.

[79] Except as provided for in Article 6(4) of the Habitats Directive, viz. There must be:
(a) no alternative solution available,
(b) imperative reasons of overriding public interest for the plan to proceed; and
(c) adequate compensatory measures in place.

Table 8.2 Presence of Interrelationships between Environmental Components

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

8.5 Overall Evaluation of Draft Plan Provisions to which the Proposed Material Alterations Relate (from SEA Environmental Report June 2020)

Offaly County Council have integrated various recommendations arising from the SEA, AA and SFRA processes into the Draft Plan (see Section 9). Table 8.3 provides a detailed overall evaluation of the environmental effects arising from the Plan. The effects encompass all in-combination/cumulative effects arising from implementation of the Plan. The potentially significant adverse environmental effects (if unmitigated) arising from implementation of the Plan are detailed as are residual effects, taking into account mitigation through both provisions integrated into the Plan – see Section 9.

Effects that may arise as a result of implementing the Draft Plan have been mitigated to the extent that the only residual adverse effects likely to occur as a result of implementation of the Draft Plan are those which are identified under Table 8.3.

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

Table 8.3 Overall Evaluation – Effects arising from the Draft Plan

Environmental Component	Environmental Effects, in combination with the wider planning framework Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP 2018, the Eastern and Midland RSES, adjacent Development Plans and lower-tier land use plans.			SEO Codes
	Significant Positive Effect, likely to occur	**Potentially Significant Adverse Environmental Effects, if unmitigated**	**Likely Residual Adverse Non-Significant Effects**	
Biodiversity and Flora and Fauna	• Contribution towards protection of ecology (including designated sites, ecological connectivity, habitats) by facilitating development of lands (including those within and adjacent to the County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond. • 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.	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.	• 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**

Environmental Component	Environmental Effects, in combination with the wider planning framework Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP 2018, the Eastern and Midland RSES, adjacent Development Plans and lower-tier land use plans.			SEO Codes
	Significant Positive Effect, likely to occur	**Potentially Significant Adverse Environmental Effects, if unmitigated**	**Likely Residual Adverse Non-Significant Effects**	
Population and Human Health	• Promotion of economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management. • Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands (including those within and adjacent to the County's settlements) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the County and beyond • Contribution towards the protection of human health by facilitating development of lands (including those within and adjacent to the County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond. • Contributes towards protection of human health as a result of contributing towards the protection of natural capital including environmental vectors, including air and water.	• Potential adverse effects arising from flood events. • Potential interactions if effects arising from environmental vectors.	• 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	• Contribution towards the protection of soils (including those used for agriculture) and designated sites of geological heritage by facilitating development of lands (including those within and adjacent to the County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond. • Contribution towards the protection of the environment from contamination the highest standards of remediation, and where appropriate to consultations with the EPA and other relevant bodies, will be required to resolve any instances of environmental pollution created by contaminated land.	• 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.	• Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces.	**S**

Environmental Component	Environmental Effects, in combination with the wider planning framework Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP 2018, the Eastern and Midland RSES, adjacent Development Plans and lower-tier land use plans.			SEO Codes
	Significant Positive Effect, likely to occur	**Potentially Significant Adverse Environmental Effects, if unmitigated**	**Likely Residual Adverse Non-Significant Effects**	
Water	• Contribution towards the protection of water by facilitating development of lands (including those within and adjacent to the County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond. • Contributions towards the protection of water resources including the status of surface and groundwaters and water-based designations. • Contribution towards flood risk management and appropriate drainage.	• 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.	• 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	• Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands (including those within and adjacent to the County's settlements) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the County and beyond. • Contribution towards compliance with national and regional water services and waste management policies. • Contribution towards increase in renewable energy use by facilitating renewable energy and electricity transmission infrastructure developments. • Contribution towards limits in increases in energy demand from the transport sector by facilitating sustainable compact growth. • Contribution towards reductions in average energy consumption per capita including promoting energy efficient buildings, retrofitting, smart buildings, cities and grids.	• 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.	• 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**

Environmental Component	Environmental Effects, in combination with the wider planning framework Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP 2018, the Eastern and Midland RSES, adjacent Development Plans and lower-tier land use plans.			SEO Codes
	Significant Positive Effect, likely to occur	**Potentially Significant Adverse Environmental Effects, if unmitigated**	**Likely Residual Adverse Non-Significant Effects**	
Air and Climatic Factors	• Contribution towards climate mitigation and adaptation by facilitating compact development of lands (including those within and adjacent to the County's settlements) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the County and beyond. • In combination with other plans, programmes etc., contribution towards the objectives of the wide policy framework relating to climate mitigation and adaptation, and associated contribution towards maintaining and improving air quality and managing noise levels, including through measures relating to: o Sustainable compact growth; o Sustainable mobility, including walking, cycling and public transport; o Drainage, flood risk management and resilience; o Sectors including agriculture, residential heating and infrastructure; o Sustainable infrastructure design solutions including energy efficient buildings; green infrastructure).	• 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.	• 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	• Contributes towards protection of cultural heritage elsewhere in the County by facilitating development within existing settlements. • Contributes towards protection of cultural heritage within existing settlements by facilitating brownfield development and regeneration.	• Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities.	• Potential effects on known architectural and archaeological heritage and unknown archaeology however, these will occur in compliance with legislation.	**CH**
Landscape	• Contributes towards protection of wider landscape and landscape designations by facilitating development within existing settlements.	• Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape.	• 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**

8.6 Detailed Evaluation of Individual Proposed Material Alterations [80]

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

Alteration Ref.		Likely to **Improve** status of SEOs	Probable **Conflict** with status of SEOs – unlikely to be fully mitigated	**Mitigated Conflicts**	**No Likely** interaction with status of SEOs
MA18 MA27 MA30 MA33 MA173 MA403 MA404 MA405 MA406	With regard to changing Daingean, Ferbane and Kilcormac from Towns to Small Towns, this part of the alteration would further contribute towards provisions related to these towns already contained within the Draft Plan. 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, it is determined that all potential effects arising from this Proposed Alteration: either are present already (beneficial) and will be further contributed towards; and/or will be mitigated so as not to be significant (adverse). With regard to the amendment of Rahan's typology from a Sráid to a Village, as identified in the Chief Executive's Report: "For the purpose of the county development plan settlement hierarchy, the distinction made between Villages and Sráids is that Villages are serviced by mains wastewater treatment, whereas Sráids are not. Without mains wastewater treatment, a settlement is dependent on individual on-site effluent treatment systems and therefore cannot develop at a sustainable rate. Rahan has no mains wastewater treatment plant. College View housing estate is served by a shared septic tank system and the remainder of the properties in the Sráid have individual effluent treatment systems. The policy approach for Sráids is the promotion of balanced sustainable development, in an incremental and consolidated manner with the emphasis on small scale development over a medium to long term period, in keeping with the character of the settlement. The Rahan Sráid Plan includes a variety of objectives to support local facilities and amenities, including the development of facilities to improve tourism potential (see also response to Submissions Ref. CDP/D/28). It is recommended that Rahan is designated as a Sráid under the county settlement hierarchy, thus no change to the draft Plan." Taking the above into account, there is potential for significant adverse environmental effects, including on water resources, ecology and human health, to occur as a result of lack of water services infrastructure – which could result in increased pressure for development in surrounding less well serviced and connected rural areas.		**BFF PHH S W MA A C CH L**		
MA108 MA109 MA111 MA160 MA435 MA437	These Alterations could be considered mitigation with the objective of protecting European sites and their sustaining resources. These alterations could benefit the protection and management of various environmental components.	**BFF PHH S W MA C L**			**A CH**

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

The interactions identified are reflective of likely significant environmental effects:

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

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

Alteration Ref.		Likely to **Improve** status of SEOs	Probable **Conflict** with status of SEOs – unlikely to be fully mitigated	**Mitigated Conflicts**	**No Likely** interaction with status of SEOs
MA262 MA263 MA264 MA265 MA274 MA276 MA277 MA299 MA330 MA349 MA352 MA368 MA395 MA401 MA408 MA409	There is no planning justification for these Proposed Alterations, they would not align with objectives relating to sustainable development, relate to greenfield lands in many cases and would present additional, unnecessary and potentially significant adverse effects on various environmental components. Potentially significant adverse effects, alone and/or in-combination with other similar changes alterations to zoning, would be likely to include: • Effects on ecology and ecological connectivity • 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 beyond the established settlement envelope, potentially significant adverse effects would be likely to include: • 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 MA330 could potentially impact upon the protection of a European site and has been subject to Stage 2 AA. The AA recommended that the following text is integrated into the Plan at further modification stage: "Any proposal for development at these lands must demonstrate that it will not affect the nearby Ferbane Bog SAC, including as a result of changes to drainage patterns".		**BFF PHH S W MA A C CH L**		
MA422 MA423 MA424 MA425 MA426	This alteration would reduce the protection of architectural heritage by removing a structure that merits inclusion on the Record of Protected Structures from this list.		**CH**		**BFF PHH S W MA A C L**
MA440 MA444	This Alteration would not provide the most evidence-based framework for development and has the potential to: • Undermine and negate practical measures to reduce greenhouse gas emissions climate change in compliance with high-level climate action policy; and • Restrict the potential for wind energy development in the County, which is contrary to national energy policy that supports reductions in the reliance on fossil fuels and the development of renewable energy resources including wind energy infrastructure.		**C**		**BFF PHH S W MA A CH L**

Section 9 Mitigation Measures

9.1 Introduction

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

Various environmental sensitivities and issues have been communicated to the Council through the SEA, Appropriate Assessment (AA) and Strategic Flood Risk Assessment (SFRA) processes.

Mitigation was achieved through the:

- Strategic work undertaken by the Council to ensure contribution towards environmental protection and sustainable development;
- Considering reasonable alternatives for the Draft Plan to which the Proposed Material Alterations relate;
- Integration of environmental considerations into zoning provisions of the Draft Plan to which the Proposed Material Alterations relate; and
- Integration of individual SEA, AA and SFRA provisions into the text of the Draft Plan to which the Proposed Material Alterations relate.

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

Far in advance of both the submission of the pre-Draft Plan to the Elected Members for approval and 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 within the County.

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

- Strategic Environmental Assessment;
- Appropriate Assessment;
- Strategic Flood Risk Assessment;
- Record of Protected Structures;
- Core Strategy;
- Housing Strategy including a Housing Need Demand Assessment;
- Economic Development;
- Wind Energy Strategy;
- Climate Action; and
- Transport.

9.3 Consideration of Alternatives

Although strategic alternatives in relation to the content of the Plan were significantly limited for the Plan (see Section 6), as part of the Plan preparation/SEA process, the Council considered a number of alternatives for the Draft Plan to which the Proposed Material Alterations relate.

These alternatives were assessed by the SEA process (see Section 7) and the findings of this assessment informed the selection of preferred alternatives, facilitating an informed choice with respect to the type of Plan that was prepared and placed on public display.

9.4 Integration of environmental considerations into Zoning of the Plan

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

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

The detailed Plan preparation process undertaken by the Planning Department combined with specialist input from the SFRA process facilitated zoning that avoids inappropriate development being permitted in areas of high flood risk. Various provisions have been inserted into the Plan which provide for flood risk management at project level.

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

9.5 Integration of individual SEA, AA and SFRA provisions into the text of the Draft Plan

Various provisions have been integrated into the text of the Draft Plan through the Plan-preparation and SEA, SFRA and AA processes. These measures also apply to Proposed Material Alterations.

Both the Planning and the assessment teams contributed towards the mitigation which was developed over multiple iterations and was informed by, inter alia, various communications through the SEA, AA and SFRA processes.

Table 9.1 links key mitigation measure(s) to the likely significant effects of implementing the Plan, if unmitigated. The measures generally benefit multiple environmental components i.e. a measure providing for the protection of biodiversity, flora and fauna could beneficially impact upon the minimisation of flood risk and the protection of human health, for example.

Table 9.1 Integration of Environmental Considerations into the Plan

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendation integrated into the Plan	Plan Reference
All	Various	**Integration of Environmental Considerations into the Plan** The following environmental assessments have been undertaken in parallel with the preparation of the Draft Plan. An iterative process has been followed whereby each revisions of the Plan has been informed by the assessments. **Strategic Environmental Assessment (SEA)** SEA is the formal, systematic evaluation of the likely significant environmental effects of implementing a plan or programme before a decision is made to adopt it. SEA is required by the EU SEA Directive as transposed into Irish law through the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004) as amended. The findings of the SEA are included in the SEA Environmental Report that accompanies the Draft Plan. That report provides a clear understanding of the likely environmental consequences of decisions regarding the adoption and implementation of the Plan. All SEA recommendations have been integrated into the Draft Plan. **Appropriate Assessment (AA)** AA is a focused and detailed impact assessment of the implications of a plan or project on European Sites designated for habitats or species. AA is required by the EU Habitats Directive as transposed into Irish law through the Planning and Development Act 2000 (as amended). The findings of the AA are included in the AA Natura Impact Report that accompanies the Draft Plan. That report provides a clear understanding of the likely consequences of the Draft Plan on European Sites. All AA recommendations have been integrated into the Draft Plan. 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.[81] **Strategic Flood Risk Assessment (SFRA)** SFRA is an assessment of flood risk and includes mapped boundaries for Flood Risk Zones, taking into account factors including local knowledge, site walkovers and flood risk indicators. SFRA is required 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. All SFRA recommendations have been integrated into the Draft Plan. In addition to the above assessments, an Ecosystems Services Approach was taken in the preparation of the Plan (see Chapter 2 Core Strategy sub-section 2.1.4).	Integrated into Chapter 1 Introduction
All	Various	**Ecosystems Services Approach and Natural Capital** In preparing the Draft Plan and developing policy objectives, the Council have followed these Ecosystem Services[82] Approach principles: a) Consideration of natural systems - by using knowledge of interactions in nature and how ecosystems function (including at Plan Chapters 2 "Climate Action and Energy", 4 "Biodiversity and Landscape", 6 "Tourism and Recreational Development" and 11 "Water Services and Environment") b) Taking into account of the services that ecosystems provide - including those that underpin social and economic well-being, such as flood and climate regulation (including at Plan Chapters 11 "Climate Change and Energy"), resources for food, fibre or fuel (including at Chapters "5 Economic Development"), or for recreation, culture and quality of life (including at Plan Chapters 4 "Biodiversity and Landscape", 6 "Tourism and Recreational Development" and 10 "Built Heritage") c) Involving people - those who benefit from the ecosystem services and those managing them need to be involved in decisions that affect them. Public consultation has informed the preparation of the Draft Plan which will be further refined before adoption, taking into account	Integrated into Chapter 2 Core Strategy

[81] Except as provided for in Article 6(4) of the Habitats Directive, viz. There must be:
(a) no alternative solution available,
(b) imperative reasons of overriding public interest for the plan to proceed; and
(c) adequate compensatory measures in place.

[82] 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

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendation integrated into the Plan	Plan Reference
		submissions/observations made on the Draft Plan during public display. The Council shall promote an Ecosystem Services Approach, following the above principles, in its decision-making processes, including those relating to the preparation of statutory land use plans. In recognition of the need to manage natural capital[83], provisions have been integrated into the Plan that will contribute towards management of air quality, noise pollution, light pollution, water quality and integrated catchment management.	
All	Various	**United Nations Sustainability Goals** Contribute, as practicable, towards achievement of the 17 Sustainable Development Goals[84] of the 2030 Agenda for Sustainable Development, which were adopted by world leaders in 2015 at a United Nations Summit and came into force in 2016.	Integrated into Chapter 1 Introduction
All	Various	**Corridor and Route Selection Process** The following Corridor and Route Selection Process will be undertaken for relevant new infrastructure: Stage 1 – Route Corridor Identification, Evaluation and Selection • Environmental constraints (including those identified in Section 4 of the accompanying SEA Environmental Report) and opportunities (such as existing linear infrastructure) will assist in the identification of possible route corridor options; • Potentially feasible corridors within which infrastructure could be accommodated will be identified and these corridors assessed. The selection of the preferred route corridor will avoid constraints and meet opportunities to the optimum extent, as advised by the relevant specialists; and • In addition to the constraints identified above, site-specific field data may be required to identify the most appropriate corridors. Stage 2 – Route Identification, Evaluation and Selection • Potentially feasible routes within the preferred corridor will be identified and assessed. The selection of preferred routes will avoid constraints and meet opportunities to the optimum extent, as advised by the relevant specialists, taking into account project level information and potential mitigation measures that are readily achievable; • In addition to the constraints identified above, site specific field data may be required to identify the most appropriate routes; and • In addition to environmental considerations, the identification of route corridors and the refinement of route lines is likely to be informed by other considerations.	Integrated into Chapter 8.5.4 Corridor & Route Selection Process
All	Various	**Construction and Environmental Management Plan** Construction Environment Management Plans (CEMPs) shall be prepared in advance of the construction of relevant projects and implemented throughout. Such plans shall incorporate relevant mitigation measures which have been integrated into the Plan and any lower tier Environmental Impact Statement or Appropriate Assessment. CEMPs typically provide details of intended construction practice for the proposed development, including:	Integrated into Chapter 11.5.2 Waste Management

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

[84] Including:

- Goal 1: End poverty in all its forms everywhere
- Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture
- Goal 3: Ensure healthy lives and promote well-being for all at all ages
- Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
- Goal 5: Achieve gender equality and empower all women and girls
- Goal 6: Ensure availability and sustainable management of water and sanitation for all
- Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all
- Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
- Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
- Goal 10: Reduce inequality within and among countries
- Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable
- Goal 12: Ensure sustainable consumption and production patterns
- Goal 13: Take urgent action to combat climate change and its impacts
- Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development
- Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
- Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
- Goal 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendation integrated into the Plan	Plan Reference
		a. location of the sites and materials compound(s) including area(s) identified for the storage of construction refuse, b. location of areas for construction site offices and staff facilities, c. details of site security fencing and hoardings, d. details of on-site car parking facilities for site workers during the course of construction, e. details of the timing and routing of construction traffic to and from the construction site and associated directional signage, f. measures to obviate queuing of construction traffic on the adjoining road network, g. measures to prevent the spillage or deposit of clay, rubble or other debris, h. alternative arrangements to be put in place for pedestrians and vehicles in the case of the closure of any public right of way during the course of site development works, i. details of appropriate mitigation measures for noise, dust and vibration, and monitoring of such levels, j. containment of all construction-related fuel and oil within specially constructed bunds to ensure that fuel spillages are fully contained; such bunds shall be roofed to exclude rainwater, k. disposal of construction/demolition waste and details of how it is proposed to manage excavated soil, including compliance with 2006 Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects, Department of the Environment l. a water and sediment management plan, providing for means to ensure that surface water runoff is controlled such that no silt or other pollutants enter local water courses or drains, m. details of a water quality monitoring and sampling plan. n. if peat is encountered - a peat storage, handling and reinstatement management plan. o. measures adopted during construction to prevent the spread of invasive species (such as Japanese Knotweed). p. appointment of an ecological clerk of works at site investigation, preparation and construction phases. q. details of appropriate mitigation measures for lighting specifically designed to minimise impacts to biodiversity, including bats.	
All	Various	**Undergrounding Cables** All services, including ESB, telephone and television cables shall be placed underground. Service buildings or structures shall be sited as unobtrusively as possible and must be screened. Proposals should demonstrate that environmental impacts including the following are minimised: • Habitat loss as a result of removal of field boundaries and hedgerows (right of way preparation) followed by topsoil stripping (to ensure machinery does not destroy soil structure and drainage properties); • Short to medium term impacts on the landscape where, for example, hedgerows are encountered; • Impacts on underground archaeology; • Impacts on soil structure and drainage; and • Impacts on surface waters as a result of sedimentation.	DMO-96
All	Various	**Reasonable Alternatives and Existing Infrastructural Assets** It is Council policy to require that environmental assessments should address reasonable alternatives for the location of new energy developments, and where existing infrastructural assets such as sub-stations, power lines and roads already exist within the proposed development areas, then such assets should be considered for sustainable use by the proposed development where the assets have capacity to absorb the new development.	CAEP-20
All	Various	**Environmental considerations and Limitations in the types of uses** There are a wide range of land uses identified under each of the Land Use Zoning Objectives. Proposals for development will need to demonstrate compliance with the various written provisions of the Plan, as relevant, including those relating to environmental protection and management. Environmental considerations, such as those related to elevated levels of flood risk or European site ecological designations, may limit the types of uses that may be possible at certain sites. Prospective applicants are encouraged to engage with the Planning Authority at the earliest opportunity to seek guidance as to the appropriateness of emerging proposals.	Chapter 12.1

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendation integrated into the Plan	Plan Reference
Biodiversity and flora and fauna	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.	**Designated and Non-Designated Sites** It is Council policy to protect, conserve, and seek to enhance the county's biodiversity and ecological connectivity. It is Council policy to conserve and protect habitats and species listed in the Annexes of the EU Habitats Directive (92/43/EEC) (as amended) and the Birds Directive (2009/147/EC), the Wildlife Acts 1976 (as amended) and the Flora Protection Orders. It is Council policy to support and co-operate with statutory authorities and others in support of measures taken to manage proposed or designated sites in order to achieve their conservation objectives. It is Council policy to protect and maintain the conservation value of all existing and future Natural Heritage Areas, Nature Reserves, Ramsar Sites, Wildfowl Sanctuaries and Biogenetic Reserves in the county. It is Council policy to ensure that development does not have a significant adverse impact, incapable of satisfactory avoidance or mitigation, on plant, animal or bird species protected by law. It is Council policy to consult with the National Parks and Wildlife Service, and take account of any licensing requirements, when undertaking, approving or authorising development which is likely to affect plant, animal or bird species protected by law. It is Council policy to support the implementation of the National Biodiversity Action Plan 2017-2021 and the Offaly Heritage Plan Key Actions 2017-2021 and future editions in partnership with relevant stakeholders subject to available resources. It is an objective of the Council that no plans, programmes or projects giving rise to significant cumulative, direct, indirect or secondary impacts on European sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall be permitted on the basis of this Plan (either individually or in combination with other plans, programmes, etc. or projects). It is an objective of the Council that all projects and plans arising from this Plan will be screened for the need to undertake Appropriate Assessment under Article 6 of the Habitats Directive. A plan or project will only be authorised after the competent authority has ascertained, based on scientific evidence, Screening for Appropriate Assessment, and subsequent Appropriate Assessment where necessary, that: 1. The plan or project will not give rise to significant adverse direct, indirect or secondary effects on the integrity of any European site (either individually or in combination with other plans or projects); or 2. The plan or project will have significant adverse effects on the integrity of any European site (that does not host a priority natural habitat type/and or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or 3. The plan or project will have a significant adverse effect on the integrity of any European site (that hosts a natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons for overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000. It is an objective of the Council to ensure that the impact of development within or adjacent to national designated sites, Natural Heritage Areas, Ramsar Sites and Nature Reserves likely to result in significant adverse effects on the designated site is assessed by requiring the submission of an Ecological Impact Assessment prepared by a suitably qualified professional, which should accompany planning applications.	BLP-01 BLP-02 BLP-03 BLP-04 BLP-05 BLP-06 BLP-07 BLO-02 BLO-03 BLO-04
		Peatlands It is Council policy to protect the county's designated peatland areas and landscapes, including any historical walkways through bogs and to conserve their ecological, archaeological and cultural heritage and to develop educational heritage. It is Council policy to work with adjacent local authorities and relevant stakeholders in promoting a National Park designation for the peatlands in the midlands and a 'Regional Peatway' connecting natural and cultural attractions. It is Council policy to support the provision of outdoor pursuits, walking and cycling routes through the county's peatlands and network of industrial railways linking the River Shannon Blueway, Royal Canal, Grand Canal and Barrow Blueway across the midlands as outlined in the 'Major Cycling Destination in the Midlands of Ireland –Feasibility Study 2016', which is a priority of the 'Outdoor Recreation Plan State Lands and Waters' (2017). It is Council policy to support the National Parks and Wildlife Service in carrying out an EU LIFE fund supported raised bog restoration project in restoring the following Special Areas of Conservation sites in the county to favourable conservation status:	BLP-14 BLP-15 BLP-16 BLP-17 BLP-18 BLO-08 BLO-09

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendation integrated into the Plan	Plan Reference
		• Clara Bog; • Ferbane Bog; • Mongan Bog; • Moyclare Bog; • Raheenmore Bog; and • Sharavogue Bog. It is Council policy to support collaboration between Offaly County Council, Regional Transition Team and relevant stakeholders of a partnership approach to integrated peatland management for a just transition that incorporates the management, rehabilitation and restoration / re-wetting of significant tracts of peatlands in conjunction with appropriate developed after uses. It is an objective of the Council to require the preparation and submission of a Hydrological Report/Assessment for significant developments within and in close proximity to protected raised bogs and to take account of same in the assessment of impacts on the integrity of peatland ecosystems. It is an objective of the Council to work with relevant stakeholders on suitable peatland sites in order to demonstrate best practice in sustainable peatland conservation, management and restoration techniques to promote their heritage and educational value subject to ecological impact assessment and appropriate assessment screening.	
		Waterways, Lakes and Wetlands It is Council policy to protect the landscape associated with the River Shannon, including the Callows and views of special interest, and also to encourage the development of Shannonbridge, Banagher and Shannon Harbour as focal points. It will also be Council policy to investigate the possibility of providing a Linear Park based on the River Shannon from Banagher to Meelick, which takes account of the sensitive ecological nature of the Callows area. It is Council policy to protect riparian corridors by reserving land along their banks for ecological corridors and maintain them free from inappropriate development. Where appropriate clear span structures will be promoted where fisheries exist, and culverting and/or realignment of streams will be discouraged. The Council will consult with Inland Fisheries Ireland in relation to riparian and instream works as appropriate. It is Council policy to have regard to the Waterways Corridor Study 2002 and protect the recreational, educational and amenity potential of navigational and non-navigational waterways with the county, such as the Grand Canal Corridor, towpaths and adjacent wetlands. It is an objective of the Council to maintain a riparian zone for larger and smaller river channels based on the The Shannon Regional Fisheries Board Guidance Document, 'Planning for Watercourses in the Urban Environment, a Guide to the Protection of Watercourses through the use of Buffer Zones, Sustainable Drainage Systems, Instream Rehabilitation and Recreational Planning'. It is an objective of the Council to investigate the feasibility of and cooperate with relevant agencies in providing a Linear Park based on the River Shannon from Banagher to Meelick, which takes account of the sensitive ecological nature of the Callows area.	BLP-19 BLP-20 BLP-21 BLO-10 BLO-11
		Trees, Forestry and Hedgerows It is Council policy to support the protection and management of existing networks of woodlands, trees and hedgerows which are of amenity or biodiversity value and/or contribute to landscape character, and to strengthen local networks. It is Council policy to encourage the planting of native species in all new residential developments (individual and multiple units) and as part of landscaping for commercial and industrial developments. It is Council policy to require, where practical, the management of mature trees, such as tree surgery instead of felling particularly where the trees contribute to amenity. It is an objective of the Council to preserve individual trees and groups of trees that are included in Table 4.14 and 4.15. It is an objective of the Council to consider the making of Tree Preservation Orders to protect trees and woodlands of high value. It is an objective of the Council to encourage the preservation and enhancement of native and semi-natural woodlands, groups of trees and individual trees, not listed in Table 4.14 and 4.15; (a) in particular, on the grounds of Country Houses, Gardens and Demesnes and on approaches to settlements in the county; and (b) as part of the development management process, require the planting of native, deciduous, pollinator friendly trees in all new developments where possible. It is an objective of the Council to encourage pursuant to Article 10 of the Habitats Directive, the management of features of the landscape, such as traditional field boundaries, important for the ecological coherence of the Natura 2000 network and essential for the migration, dispersal and genetic exchange of wild species. It is an objective of the Council to encourage the retention, wherever possible, of hedgerows and other distinctive boundary treatment in the county. Where removal of a hedgerow, stone wall or other distinctive boundary treatment is unavoidable, provision of the same type of boundary will be required	BLP-22 BLP-23 BLP-24 BLO-12 BLO-13 BLO-14 BLO-15 BLO-16

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendation integrated into the Plan	Plan Reference
		of similar length and set back within the site in advance of the commencement of construction works on the site (unless otherwise agreed by the Planning Authority).	
		Green Infrastructure Strategy It is an objective of the Council to require all new developments to identify, protect and enhance ecological features by making provision for local biodiversity (for example, through provision of swift boxes or towers, bat roost sites, green roofs, etc.) and provide links to the wider Green Infrastructure network as an essential part of the design process.	BLO-17
		All Ireland Pollinator Plan BLP-30 It is Council policy to support the aims and objectives of the All Ireland Pollinator Plan 2015-2020 by encouraging the planting of pollinator friendly trees and plants and encouraging management options to improve pollinator populations within: • Natura 2000 and nationally designated sites; • State and publicly owned land; • Peatlands; • River, canal and railway corridors; • Grass verges along public roads and existing and future greenways; • Hedgerows; • Public parks; and • Public open spaces in towns and villages, including part of mixed use and residential developments.	BLP-30
		Invasive Species It is Council policy to continue to deliver and support measures for the prevention, control and/or eradication of invasive species within the county, and to seek details of how these species will be managed and controlled where their presence is identified. It is an objective of the Council to require, as part of the planning application process, the appropriate eradication/control of invasive species when identified on site or in the vicinity of a site, in accordance with Regulation 49 of the European Communities (Birds and Natural Habitats) Regulations 2011 to 2015. It is an objective of the Council to continue to maintain mapping identifying the location of invasive species in the county in conjunction with the National Biodiversity Data Centre.	BLP-31 BLO-18 BLO-19
		Light Pollution It is Council policy to require that the design of lighting schemes minimises the incidence of light pollution into the surrounding environment. New schemes shall ensure that there is no unacceptable adverse impact on residential or visual amenity and biodiversity in the surrounding area. It is an objective of the Council to seek to minimise the harmful effects of light pollution in the future provision of outdoor lighting, including investigating measures to improve the approach to street lighting and ensuring that new developments are lit appropriately and that environmentally sensitive areas are protected.	ENVP-21 ENVO-13
		Increases in visitor numbers It is Council policy to seek to manage any increases in visitor numbers in order to avoid significant effects including loss of habitat and disturbance and impacts on existing infrastructure. Visitor / habitat management plans will be required for proposed tourism projects as relevant and appropriate	TRP-09
		Built Heritage: Protected Species Protect habitats and species when considering proposed works to buildings which are likely to impact on protected ecological sites and protected species.	BHP-34
Population and human health	• Potential adverse effects arising from flood events. • Potential interactions if effects arising from environmental vectors.	Also see measures under other environmental components including Soil, Water and Air and Climatic Factors.	
		Human Health It is Council policy to assess, as relevant, proposals for development in terms of, inter alia, potential impact on existing adjacent developments, existing land uses and/or the surrounding landscape. Where proposed developments would be likely to have a significant adverse effect on the amenities of the area through pollution by noise, fumes, odours, dust, grit or vibration, or cause pollution of air, water and/or soil, mitigation measures shall be introduced in order to eliminate adverse environmental impacts or reduce them to an acceptable operating level. Application of this policy will take into account instances whereby activities are licensed by other bodies through other processes (such as Integrated Pollution Control Licensing or Industrial Emissions Licensing).	ENVP-22
		Major Accidents Directive – Seveso III It is Council policy, for the purposes of preventing / reducing the risk or limiting the consequences of a major accident involving dangerous substances, to have regard to the provisions of the Major Accidents Directive, and any regulations under any enactment giving effect to that Directive, and the	ENVP-15

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		recommendations of the Health and Safety Authority, in the control of: • The siting of new establishments; • The modification of existing establishments; and • Development within the consultation distance of such establishments.	
		Radon It is Council policy to ensure the implementation of the specific guidance on radon prevention measures for new homes as contained within the existing Building Regulations (including any updated/superseding regulations that may be published within the lifetime of this Plan).	ENVP-14
		Wind Farms It is Council policy that in assessing planning applications for wind farms, the Council shall: (a) have regard to the Department of the Environment, Heritage and Local Government's Guidelines for Planning Authorities on Wind Energy Development (or any update of this document) including applying appropriate setback distances as identified in the Guidelines; (b) have regard to 'Areas Open for Consideration for Wind Energy Developments' in the Wind Energy Strategy Designations Map from the County Wind Energy Strategy; (c) require a 2 km separation distance from turbines to town and village settlement boundaries in the county; (d) have regard to Development Management Standard 109 on wind farms contained in Chapter 13 of this Plan; and (e) have regard to existing and future international, European, national and regional policy, directives and legislation. It is an objective of the Council to implement the Council's Wind Energy Strategy as follows: 1. In 'Areas Deemed Open for Consideration for Wind Energy Development' as identified in Map No. 10 'Wind Energy Strategy Designations', the development of windfarms and smaller wind energy projects will be considered; 2. In all other areas, wind energy developments shall not normally be permitted – except as provided for under relevant exemption provisions in the Planning and Development Regulations 2001 (as amended); and 3. Applications for re-powering (by replacing existing wind turbines) and extension of existing and permitted wind farms will be assessed on a case by case basis and will be subject to criteria listed in Development Management Standard 109 contained in Chapter 13 of Volume 1 of this County Development Plan and the Section 28 Ministerial Wind Energy Development Guidelines.	CAEP-35 CAEO-03
Soil	• 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.	Also see measures under other environmental components including Water.	
		Soil Protection, Contamination and Remediation Offaly County Council require that all undeveloped, contaminated sites be remediated to internationally accepted standards prior to redevelopment (i.e. brownfield development). Treatment/management of any contaminated material shall comply as appropriate with the Waste Management Act 1996 (waste licence, waste facility permit), as amended, and under the EPA Act 1992 (Industrial Emissions licensing, in particular the First Schedule, Class 11 Waste), as amended. These measures will ensure that contaminated material will be managed in a manner that removes any risk to human health and ensures that the end use will be compatible with any risk.	Integrated into Chapter 11.5.2 Waste Management
		Geology, Eskers and Quarries It is Council policy to protect from inappropriate development and maintain the character, integrity and conservation value of features or areas of geological interest as contained in the scheduled list of geological heritage sites identified in Table 4.12 Offaly Geological Sites. It is Council policy to encourage, where practical and when not in conflict with ownership rights, access to geological features in the county. It is Council policy to protect and conserve the landscape, natural heritage and biodiversity value of esker systems in the county as identified in the Offaly Esker Study, 2006. It is Council policy to assess the impact of proposals for quarry development on nearby eskers, with reference to their status or relative importance, for example, amenity, landscape and scientific value in the context of the overall esker system. It is Council policy to recognise the natural heritage value of disused quarries as rich habitats and to encourage landowners to preserve quarries post extraction as habitats rather than levelling or infilling the quarry area where possible subject to health and safety considerations and the protection of the relevant conservation objectives, qualifying interests and integrity of Natura 2000 sites. It is an objective of the Council to protect county geological sites and mushroom stones identified in Table 4.12 Schedule of County Geological Sites identified by the Irish Geological Heritage Programme for Protection in County Offaly. It is an objective of the Council to increase pedestrian and cycling access to esker and geological sites in turn increasing appreciation of esker and geological heritage, where possible, subject to Article 6 of the Habitats Directive. It is an objective of the Council to consider, in consultation with the National Parks and Wildlife Service, Westmeath County Council, the Geological Survey	BLP-09 BLP-10 BLP-11 BLP-12 BLP-13 BLO-05 BLO-06 BLO-07

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		of Ireland and others, the potential designation of the north Offaly esker landscape as a UNESCO Geopark, to promote the unique geological heritage of the area.	
Water	• 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.	Also see measures under other environmental components including Soil and Material Assets.	
		Water Quality / Status It is Council policy to ensure that the Water Framework Directive, the River Basin Management Plan and any subsequent Water Management Plans are fully considered throughout the planning process. It is Council policy to manage, protect and enhance surface water and ground water quality to meet the requirements of the Water Framework Directive. It is Council policy to support the implementation of the Water Framework Directive, the River Basin Management Plan and the Local Authority Waters Programme in achieving and maintaining at least good environmental status for all water bodies in the county. It is Council policy that all proposed development which may have an impact on a high status water quality site will require site specific assessment to determine localised pressures and demonstrate suitable mitigation measures in order to protect these sites. It is Council policy to promote and comply with the environmental standards and objectives established for: (i) Bodies of surface water, by the European Communities (Surface Waters) Regulations 2009, made to give effect to the measures needed to achieve the environmental objectives established for bodies of surface water by the European Water Framework Directive; and (ii) Groundwater, by the European Communities (Groundwater) Regulations 2010, made to give effect to the measures needed to achieve the environmental objectives established for groundwater by the European Water Framework and Groundwater Directives, for which standards and objectives are included in the River Basin Management Plan. It is Council policy to protect groundwater sources through the implementation of the Groundwater Protection Scheme and Source Protection Zones. Development proposals within these zones which have the potential to pose a risk to groundwater will be required to demonstrate that no reasonable alternative site is available and that groundwater quality will be protected to the satisfaction of the Council. It is Council policy to encourage the use of catchment-sensitive farming practices, in order to meet Water Framework Directive targets and comply with the River Basin Management Plan. It is an objective of the Council to ensure, through the implementation of the River Basin Management Plan, and any other associated legislation, the protection and improvement of all drinking water, surface water and ground waters throughout the county. It is an objective of the Council to protect through its regulatory controls and in conjunction with the Local Authority Waters Programme, water bodies with 'high ecological status'; to restore water bodies that have fallen below 'high ecological status'; to maintain water bodies at 'Good Status'; and to mitigate threats to water bodies identified as 'At Risk' i.e. 'Moderate and Poor Status'. It is an objective of the Council to protect both ground and surface water resources; to work with Irish Water to develop and implement Drinking Water Safety Plans to protect sources of public water supply and their contributing catchment; and to work with the National Federation of Group Water Schemes in respect of Source Protection Plans for Group Water Schemes to protect these sources. It is an objective of the Council to comply with the Blue Dot Catchments Programme. It is Council policy to ensure that any proposed projects do not conflict with the requirements of the Water Framework Directive. It is Council policy to ensure that agricultural developments are designed and constructed in a manner that will ensure that groundwater watercourses and sources of potable water are protected from the threat of pollution in line with Water Quality Regulations and the requirements of the Water Framework Directive.	ENVP-01 ENVP-02 ENVP-03 ENVP-04 ENVP-05 ENVP-06 ENVP-07 ENVO-01 ENVO-02 ENVO-03 ENVO-04 CAEP-30 REDP–04
		Sustainable urban drainage systems and Surface Water It is Council policy to minimise and limit the extent of hard surfacing and paving and require the use of sustainable urban drainage systems (SuDs) where appropriate, for new developments or for extensions to existing developments, in order to reduce the potential impact of existing and predicted flooding risks.	CAEP-63
		Flood Risk Management It is Council policy to support, in co-operation with the OPW, the implementation of the EU Flood Risk Directive, the Flood Risk Regulations (S.I. No. 122 of 2010) and the 'The Planning System and Flood Risk Management Guidelines for Planning Authorities (2009) and Department Circular Pl2/2014 or any updated / superseding version. It is Council policy to protect Flood Zone A and Flood Zone B from inappropriate development and direct developments/land uses into the appropriate Flood Zone in accordance with The Planning System and Flood Risk Management Guidelines for Planning Authorities 2009 (or any superseding document) and the guidance contained in Development Management Standard DMS-106. Where a development/land use is proposed that is inappropriate within the Flood Zone, then the development proposal will need to be accompanied by a Development Management Justification Test and site-specific Flood Risk	CAEP-49 CAEP-50 CAEP-51 CAEP-52 CAEP-53 CAEP-54 CAEP-55 CAEP-56

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		Assessment in accordance with the criteria set out under with The Planning System and Flood Risk Management Guidelines for Planning Authorities 2009 and Circular PL2/2014 (as updated/superseded). In Flood Zone C, (See DMS-106 where the probability of flooding is low (less than 0.1%, Flood Zone C), the developer should satisfy themselves that the probability of flooding is appropriate to the development being proposed. It is Council policy to require a Site-specific Flood Risk Assessment (FRA) for all planning applications in areas at risk of flooding (fluvial, pluvial or groundwater), even for developments deemed appropriate in principle to the particular Flood Zone. The detail of these site-specific FRAs will depend on the level of risk and scale of development. A detailed site-specific FRA should quantify the risks, the effects of selected mitigation and the management of any residual risks. The assessments shall consider and provide information on the implications of climate change with regard to flood risk in relevant locations. The 2009 OPW Draft Guidance on Assessment of Potential Future Scenarios for Flood Risk Management (or any superseding document) and available information from the CFRAM Studies shall be consulted with to this effect. It is Council policy to ensure that applications to existing developments in flood vulnerable zones provide details of structural and non-structural risk management measures to include, but not be limited to specifications of the following - floor levels, internal layout, flood resilient construction, flood resistant construction, emergency response planning, access and egress during flood events. It is Council policy to work with other bodies and organisations, as appropriate, to help protect critical infrastructure, including water and wastewater, within the county, from risk of flooding. Any potential future variations to the Plan shall consider, as appropriate any new and/or emerging data, including, when available, any relevant information contained in the CFRAMS Flood Risk Management Plans and as recommended in the SFRA for the Plan. It is Council policy to have regard to the findings and recommendations of the current Strategic Flood Risk Assessment prepared as part of the County Development Plan. It is Council policy to consult with the Office of Public Works (OPW) in relation to proposed developments in the vicinity of drainage channels and rivers for which the OPW are responsible, and the Council will retain a strip of 10 metres on either side of such channel where required, to facilitate access thereto. It is Council policy to consult, where necessary, with Inland Fisheries Ireland, the National Parks and Wildlife Service and other relevant agencies in the construction of flood alleviation measures in Offaly. It is Council policy to work with the OPW and other relevant Departments and agencies to implement the recommendations of the CFRAM programme to ensure that flood risk management policies and infrastructure are progressively implemented, and to also work with catchment-based Flood Planning Groups, (including where catchments go beyond the Council's administrative boundary) in the development and implementation of catchment-based strategies for the management of flood risk – including those relating to storage and conveyance. It is Council policy that where resources are available and subject to compliance with the Habitats and Birds Directives, the Council will contribute towards the improvement and / or restoration of the natural flood risk management functions of flood plains. It is Council policy to take account of and incorporate into local planning policy and decision making, including possible future variations to this plan, the recommendations of the Flood Risk Management Plans (FRMPs), including planned investment measures for managing and reducing flood risk. It is an objective of the Council to ensure that flood risk management is incorporated into the preparation of Local Area Plans in accordance with 'The Planning System and Flood Risk Management - Guidelines for Planning Authorities (2009). It is an objective of the Council to co-operate with the Office of Public Works (OPW) in the delivery of the Birr, Portarlington and Rahan Flood Relief Schemes and other schemes that may be brought forward in the lifetime of this Plan. LUZO-14 Facilitate the appropriate management and sustainable use of flood risk areas designated as 'Constrained Land Use' on Settlement Plan zoning maps. *12.6.1 Constrained Land Uses* Flood risk areas in settlement plans are represented by a 'Constrained Land Use' designation. This designation generally limits new development, but will facilitate existing development uses within these areas that may require small scale development such as small extensions. Development proposals within these areas shall be accompanied by a detailed Flood Risk Assessment, carried out in accordance with The Planning System and Flood Risk Assessment Guidelines and Circular PL 2/2014 (or as updated), which shall assess the risks of flooding associated with the proposed development. Proposals shall only be considered favourably where it is demonstrated to the satisfaction of the Planning Authority that they would not have adverse impacts or impede access to a watercourse, floodplain or flood protection and management facilities, or increase the risk of flooding to other locations and be in accordance with the proper planning and sustainable development of the area. The nature and design of structural and non-structural flood risk management measures required for development in such areas will also be required to be demonstrated, to ensure that flood hazard and risk will not be increased. Measures proposed shall follow best practice in the management of health and safety for users and residents of the development. 13.8.3 Flood Risk Assessment The Council will have regard to the Planning System and Flood Risk Management Guidelines for Local Authorities (DEHLG and OPW 2009) when assessing	CAEP-57 CAEP-58 CAEP-59 CAEO-08 CAEO-09 LUZO-14 Section 12.6.1 Constrained Land Uses DM Section 13.8.3 Flood Risk Assessment DMO-106 Flood Risk Assessments

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		planning applications. The key requirements for the management of development in areas at risk of flooding include: • All development proposals within or incorporating areas at moderate to high risk of flooding will require site specific and appropriately detailed Flood Risk Assessments. • All development proposals within or incorporating areas at moderate or high risk of flooding will require the application of the Development Management Justification Test in accordance with the Planning System and Flood Risk Management-Guidelines for Planning Authorities (DEHLG and OPW, 2009). • Any proposal that is considered acceptable in principle shall demonstrate the use of the sequential approach to inform the site layout and design of development. Proposals shall also demonstrate that mitigation and management measures can be put in place and that the development will not increase flood risk elsewhere. DMO-106 Flood Risk Assessments	
Air and Climatic Factors	• 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	Also refer to the overall approach to land use zoning and sustainability provided by the Plan. Various other Plan provisions including those under headings such as Peatlands, Compact Growth, Sustainable Mobility and Integrated Transport and Landuse Planning, Reasonable Alternatives & Existing Infrastructural Assets, Renewable Energy and Low Carbon District Heating.	
		Air Quality It is Council policy to manage air quality in accordance with relevant legislation and policy. It is Council policy to promote the preservation of best ambient air quality compatible with sustainable development in accordance with the EU ambient Air Quality and Cleaner Air for Europe (CAFE) Directive (2008/50/EC) and ensure that all air emissions associated with new developments are within Environmental Quality Standards as set out in the Air Quality Standards Regulations 2011, or any updated/superseding documents. It is Council policy to require activities likely to give rise to air emissions to implement measures to control such emissions and to undertake air quality monitoring. Application of this policy will take into account instances whereby activities are licensed by other bodies through other processes (such as Integrated Pollution Control Licensing or Industrial Emissions Licensing). It is an objective of the Council to reduce harmful emissions and achieve and maintain good air quality for the county. It is an objective of the Council to actively promote measures to reduce air pollution and combat climate change including promotion of energy efficient buildings, cleaner home heating, green infrastructure, active and public transport modes, electric vehicles and innovative design solutions. It is an objective of the Council to promote sustainable design and construction to help reduce emissions from the demolition and construction of buildings. It is an objective of the Council to work with relevant agencies to support local data collection in the development of air quality monitoring.	ENVP-16 ENVP-17 ENVP-18 ENVO-09 ENVO-10 ENVO-11 ENVO-12
		Noise It is Council policy to promote the implementation of the Environmental Noise Directive and associated regulations through the Offaly County Council Noise Action Plan 2018-2023 and any subsequent Plan. It is Council policy to promote the pro-active management of noise where it is likely to have significant adverse impacts on health and quality of life. Planning permission will not normally be granted for new uses / development or extensions of existing uses that produce significant and unacceptable levels of noise and/or vibration at site boundaries or within adjacent noise sensitive areas, especially residential areas.	ENVP-19 ENVP-20
		Climate Change Adaptation and Mitigation It is Council policy to support and facilitate European and national objectives for climate adaptation and mitigation as detailed in the following documents, taking into account other provisions of the Plan (including those relating to land use planning, energy, sustainable mobility, flood risk management and drainage); • Climate Action Plan (2019 and any subsequent versions); • National Mitigation Plan (2017 and any subsequent versions); • National Climate Change Adaptation Framework (2018 and any subsequent versions); • Any Regional Decarbonisation Plan prepared on foot of commitments included in the emerging Regional Spatial and Economic Strategy for the Eastern and Midland Region; • Relevant provisions of any Sectoral Adaptation Plans prepared to comply with the requirements of the Climate Action and Low Carbon Development Act 2015, including those seeking to contribute towards the National Transition Objective, to pursue, and achieve, the transition to a low carbon, climate resilient and environmentally sustainable economy by the end of the year 2050; and • Offaly Climate Change Adaptation Strategy. It is Council policy to support the implementation and provision of the decarbonisation projects listed in Table 3.1 of the County Development Plan. It is Council policy to raise general awareness of issues associated with climate action and climate change mitigation and adaptation.	CAEP-04 CAEP-05 CAEP-06 CAEP-07 CAEP-08 CAEP-09 CAEP-10 CAEP-11 CAEP-12

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	management.	It is Council policy to support local, regional, national and international initiatives for climate adaptation and mitigation and to limit emissions of greenhouse gases through energy efficiency and the development of renewable energy sources which make use of all natural resources, including publicly owned lands, in an environmentally acceptable manner. It is Council policy to support the transition to a competitive, low carbon, climate-resilient and environmentally sustainable economy by 2050, by way of reducing greenhouse gases, increasing renewable energy, and improving energy efficiency. It is Council policy to support the National Dialogue on Climate Action in an effort to increase awareness of climate change, behavioural change and adaptation actions and in doing so provide an ongoing platform for planning climate resilience with a focus on personal responsibility at all levels. It is Council policy to support the creation of a Sustainable Development Trust, through Green Offaly, a Public Participation Network Initiative, which facilitates, creates and assists in the delivery of Green Projects and Programmes by working in partnership with all sectors of the local community. It is Council policy to cooperate with the Climate Action Regional Office (CARO) in respect of adaptation and mitigation of greenhouse gas emissions, and future climate change adaptation strategies. It is Council policy to support the enhancement of carbon sinks such as peatlands, forestry, and permanent grasslands, with consideration of afforestation on cut away peatlands.	
		Compact Growth, Sustainable Mobility and Integrated Transport and Landuse Planning It is Council policy to proactively encourage decarbonisation of local journeys by focusing on compact growth and reduced sprawl by targeting infill and brownfield lands in the existing built-up footprint of settlements. It is Council policy to improve walking and cycling connectivity within settlements and in particular with schools, town centres and employment areas, and to work with the National Trails Office, Coillte, the Department of Planning, Housing and Local Government, the Department of Transport, Tourism and Sport, and other relevant stakeholders, to improve on the existing level of infrastructure and facilities for walking and cycling in this regard.	CAEP-18 CAEP-19
		Green Infrastructure It is Council policy to maintain existing green infrastructure and encourage and facilitate, in consultation with relevant stakeholders, the development of green infrastructure that recognises the synergies that can be achieved with regard to the following: • Provision of open space amenities; • Sustainable management of water; • Protection and management of biodiversity; • Protection of cultural heritage; and • Protection of protected landscape sensitivities.	CAEP-60
		Peatlands It is Council policy that planning applications for development on or immediately adjacent to peatlands shall be accompanied by assessments considering the following issues where relevant; peatland stability, hydrology, and/ or carbon emissions balance.	CAEP-16
		Economic Development: Climate Action It is policy of Offaly County Council to support the agricultural sector to employ green technologies in the provision of its goods and services, while taking measures to accelerate the transition towards a sustainable, low carbon and circular economy. It is Council policy to encourage the development of environmentally sustainable practices with a low carbon footprint, particularly agriculture, to ensure that development does not impinge on the visual amenity of the countryside and that groundwater, watercourses, wildlife habitats and areas of ecological importance are protected from the threat of pollution. It is Council policy to support the development of renewable energy in rural areas, where it is considered appropriate i.e. where it is demonstrated that such development would not result in significant environmental effects. Such development will be assessed on a case-by-case basis. It is Council policy to encourage state and private afforestation, both native broadleaf and coniferous species, in appropriate locations, in co-operation with Coillte and the Forest Service and in line with national policy and Forest Service Guidelines. In addition, it is policy to encourage the Forest Service not to allow a proliferation of new forest road entrances, particularly in Areas of High Amenity.	REDP-12 REDP–13 REDP–14 REDP–15
		Traffic and Transport Assessment A Traffic and Transport Assessment (TTA) must examine the traffic and transport impacts of a proposed development, incorporating any subsequent measures necessary to ensure roads and junctions and other transport infrastructure in the vicinity of the development are adequate to accommodate the proposed development without causing additional delays to existing and future road based traffic. A TTA is important in demonstrating how to encourage a shift towards sustainable travel modes by those using the retail development in question. The TTA must also address urban design impacts of the proposed public and private transport proposals. A TTA will be required for retail developments over a threshold of 1,000sq.m. gross floorspace; and, at	Chapter 7: Retail and Town Centre Strategy and Regeneration

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		the discretion of the Planning Authority, a TTA may be required for retail developments below this threshold.	
Material Assets	• 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	Also see measures under CEMP requirement, other environmental components including Population and Human Health and various Land Use and Phasing provisions from the Plan.	
		Water Services and Surface Water It is Council policy to ensure the efficient and sustainable use and development of water resources and water services infrastructure in order to manage and conserve water resources in a manner that supports a healthy society, economic development requirements, a cleaner environment and climate change mitigation. It is Council policy to liaise and co-operate with Irish Water in the implementation and delivery of the 'Water Services Strategic Plan' (2015, under review in 2020), the 'Irish Water Business Plan 2015-2021', the 'Irish Water National Water Resources Plan' (expected in 2021) and the 'Irish Water Investment Plan 2020-2024' (or any amendment thereof) and other relevant investment works programmes of Irish Water, to provide infrastructure to service settlements in accordance with the Council's Core Strategy and Settlement Strategy. It is Council policy to work in conjunction with Irish Water to protect existing water supply and wastewater infrastructure, to maximise the potential of existing capacity and to facilitate the timely delivery of new water supply and wastewater infrastructure to facilitate future growth in accordance with the Council's Core Strategy and Settlement Strategy. It is Council policy to require developments to connect to public wastewater infrastructure and public water supplies, where available, including group water schemes, unless otherwise approved by the Planning Authority. It is Council policy as the Regulatory Authority to promote the protection of private water sources, the development of community connections (water and wastewater), and improvement works to septic tanks in accordance with national policy and regulations, and to administer the multi-annual Rural Water Programme (2019-2021). It is Council policy to ensure that development is permitted in tandem with available water supply and wastewater treatment and to manage development, so that new schemes are permitted only where adequate capacity or resources exists or will become available within the life of a planning permission. Prior to applying for planning permission, applicants shall consult with Irish Water regarding feasibility and capacity for water services connection. Applicants shall submit proof of documentation that connection to a group water scheme has been granted, where applicable. It is Council policy to ensure the delivery and phasing of services in the county is subject to the required appraisal, planning and environmental assessment processes and shall avoid adverse impacts on the integrity of the Natura 2000 network. It is Council policy to ensure any proposal for geothermal or other energy subsurface exploration is accompanied by an assessment that addresses the potential impacts on groundwater quality. It is Council policy to collaborate with and support, as relevant and appropriate, Irish Water in its role as the lead authority for water services to provide an adequate and appropriate drinking water supply that complies with the EU (Drinking Water) Regulations and the Drinking Water Regulations 2014 (as amended), and any future amendments. In this respect, Offaly County Council will have regard to the Environmental Protection Agency 2019 publication 'Drinking Water Report for Public Water Supplies 2018' (and any subsequent update) in the establishment and maintenance of water sources in the county, and in conjunction with Irish Water, undertake recommendations made by the EPA arising from any failure to meet drinking water standards and any enlistment on the EPA's remedial Action List. It is Council policy to engage with Irish Water to endeavour to facilitate developments which have requirements for water by allowing potential surface and ground water resources of County Offaly and the potential water resources of the River Shannon to be utilised, where practicable and possible, subject to appropriate safeguards. It is Council policy to promote the conservation and sustainable use of water in existing and new development within the county and to encourage demand management measures among all water users including rain water harvesting and grey water recycling. It is Council policy to monitor and regulate Group Water Schemes in accordance with national policy and regulations. It is Council policy to protect the Irish Water Eastern and Midlands Water Supply Project pipeline corridor from inappropriate development that would prejudice the delivery of the project and to refer any planning applications within the development corridor to Irish Water for comment. It is Council policy to co-operate and support Irish Water to eliminate untreated discharges from settlements in the short term, while planning strategically for long-term growth in tandem with Project Ireland 2040 and in increasing compliance with the requirements of the Urban Waste Water Treatment Directive to 90% by the end of 2021, to 99% by 2027 and to 100% by 2040. It is Council policy to support strategic wastewater treatment infrastructure investment by Irish Water and to support Irish Water in providing and maintaining adequate and appropriate wastewater treatment infrastructure to service zoned lands and developments over the lifetime of the Plan in	WSP-01 WSP-02 WSP-03 WSP-04 WSP-05 WSP-06 WSP-07 WSP-08 WSP-09 WSP-10 WSP-11 WSP-12 WSP-13 WSP-14 WSP-15 WSP-16 WSP-17 WSP-18 WSP-19 WSP-20 WSP-21 WSP-22 WSP-23 WSP-24 WSP-25 WSO-02 WSO-03 WSO-04 WSO-05 WSO-06 WSO-07 WSO-08 WSO-09

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	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.	accordance with the Council's Core Strategy and Settlement Strategy. It is Council policy to liaise with Irish Water to ensure the compliance of wastewater treatment systems with existing licences, EU Water Framework Directive, River Basin Management Plan, the Urban Waste Water Treatment Directive and the EU Habitats Directive. It is Council policy to encourage and support a changeover from septic tanks/private wastewater treatment plants to public collection networks wherever feasible, subject to connection agreements with Irish Water and to ensure that any future development connects to the public wastewater infrastructure where it is available. It is Council policy to ensure that the proposed wastewater treatment system for development in unserviced areas complies with the relevant EPA Codes of Practice. It is Council policy to require / implement appropriate buffer zones surrounding all effluent treatment plants suitable to the size and operation of each plant. It is Council policy to have regard to the policies and objectives contained in Irish Water's National Wastewater Sludge Management Plan. Private wastewater treatment plants for multi-house developments will not normally be permitted. It is Council policy to liaise with Irish Water to ensure the compliance of wastewater treatment systems with existing licences, EU Water Framework Directive, River Basin Management Plan, the Urban Waste Water Treatment Directive and the EU Habitats Directive. It is Council policy to encourage and support a changeover from septic tanks/private wastewater treatment plants to public collection networks wherever feasible, subject to connection agreements with Irish Water and to ensure that any future development connects to the public wastewater infrastructure where it is available. It is Council policy to ensure that the proposed wastewater treatment system for development in unserviced areas complies with the relevant EPA Codes of Practice. It is Council policy to require / implement appropriate buffer zones surrounding all effluent treatment plants suitable to the size and operation of each plant. It is Council policy to have regard to the policies and objectives contained in Irish Water's National Wastewater Sludge Management Plan. Private wastewater treatment plants for multi-house developments will not normally be permitted. Surface Water It is Council policy to ensure adequate surface water drainage systems are in place which meet the requirements of the Water Framework Directive and the River Basin Management Plan and to promote the use of Sustainable Drainage Systems. It is Council policy to limit and manage the permitted stormwater run-off from all new developments. The maximum permitted surface outflow from any new development shall be restricted to that of a greenfield site before any development takes place unless otherwise agreed with Offaly County Council. It is Council policy to require new development to provide a separate foul and surface water drainage system and to incorporate Sustainable urban Drainage Systems (SuDS). It is Council policy to promote the use of green infrastructure, for example green roofs, green walls, planting and green spaces for surface water run-off retention purposes, in the interests of flood mitigation and climate change adaptation. General WSO-01 It is an objective of the Council to work closely with Irish Water to service development with significant economic development potential and to align the supply of water services to the envisaged settlement size as per the Council's Core Strategy and Settlement Strategy. The availability of water services must not be a pre-cursor to large-scale growth in inappropriate locations. Water Supply It is an objective of the Council to support Irish Water's National Programme of Investment to reduce leakage minimising the demand for capital investment. It is an objective of the Council to co-operate with Irish Water in the delivery of the Eastern and Midlands Water Supply Project and to ensure the maximum benefit from this project to County Offaly, in particular with respect to economic development potential and security of supply to Tullamore. It is an objective of the Council to engage with Irish Water to examine significant raw water sources which may be made redundant by the Water Supply Project for the Eastern and Midlands Region with a view to reserving and protecting them for future back up or 'windfall' type economic development opportunities where high water use is required. It is an objective of the Council to provide guidance and advice regarding the protection of water supply to private wells with the overall responsibility for protection remaining with the householder. Waste Water	

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendation integrated into the Plan	Plan Reference
		It is an objective of the Council to support appropriate options for the extraction of energy and other resources from sewage sludge subject to appropriate environmental assessment and the planning process. It is an objective of the Council to support the servicing of small towns and villages through the serviced sites initiative to provide an alternative to one-off housing in the countryside, in accordance with National Policy Outcome 18b of the National Planning Framework and Regional Policy Objective 4.78 of the Eastern and Midland Regional Spatial and Economic Strategy. Surface Water It is an objective of the Council to improve surface water infrastructure and sustainable drainage and to reduce the risk of flooding, to facilitate the growth of settlements as per the county's settlement hierarchy. It is an objective of the Council to utilise, where appropriate, the provisions of Section 48 and 49 of the Planning and Development Act, 2000 (as amended) to generate financial contributions towards the capital costs of providing surface water infrastructure in the county	
		Waste Management It is Council policy to facilitate the provision of adequate waste recovery and disposal facilities for the county. It is Council policy to promote circular economy principles, prioritising prevention, reuse, recycling and recovery, and to sustainably manage residual waste. New developments will be expected to take account of the provisions of the Waste Management Plan for the Region and observe those elements of it that relate to waste prevention and minimisation, waste recycling facilities, and the capacity for source segregation. It is Council policy to ensure that all waste disposal shall be undertaken in compliance with the requirements of the Environmental Protection Agency and relevant Waste Management Legislation. It is Council policy to continue to fulfil its duties under the Waste Management (certification of historic unlicensed waste disposal and recovery activity) Regulations 2008, including those in relation to the identification and registration of closed landfills. It is Council policy to require the provision of recycling infrastructure where it is considered necessary and will assess requirements for recycling facilities on a case by case basis as part of the development management process. It is Council policy to require Construction and Environmental Management Plans (CEMPs) to be prepared for larger scale projects and this requirement shall be assessed on a case by case basis as part of the development management process. Where a CEMP is required, it shall be prepared in accordance with the criteria set out in Section 11.5.2 of this Plan. It is an objective of the Council to implement the Eastern-Midlands Regional Waste Management Plan 2015-2021; the Council's Litter Management Plan and Waste Bye-Laws. It is an objective of the Council to use statutory powers to prohibit the illegal deposit and disposal of waste materials, refuse and litter, and to authorise and regulate, waste disposal within the county in an environmentally sustainable manner. It is an objective of the Council to implement the legislative provisions in relation to historic landfill sites in the county and to undertake risk assessments where required and any subsequent remedial measures where necessary. It is an objective of the Council to promote the inclusion of adequate and easily accessible storage space that supports the separate collection of dry recyclables and food, as appropriate, within developments.	Integrated into Chapter 11.4.2 Waste Management ENVP-08 ENVP-09 ENVP-10 ENVP-11 ENVP-12 ENVP-13 ENVO-05 ENVO-06 ENVO-07 ENVO-08
		Resource based industry It is Council policy to continue to protect existing resource based industry from encroachment by residential development, for example mining, quarrying, gravel pits, and intensive agriculture.	REDP–02
		Tourism and Infrastructure Capacity Tourist and recreation facilities, in particular accommodation, shall be generally located within towns and villages unless; • A comprehensive justification of the need for the development by its nature and space requirements to be located outside towns and villages, for example, golf courses, swimming, angling, sailing/boating, pier/marina development, water sports, equestrian and pony trekking routes, adventure/interpretative centres and associated ancillary uses, tourist related leisure facilities including walking and cycling; • Evidence that the proposed development will not have an adverse impact upon the scenic value, heritage value and the environmental, ecological or conservation quality of primary tourism asset(s) and its their general environment; • Evidence that potential environmental effects of a likely increase in tourists/tourism-related traffic volumes in particular locations/along particular routes have been considered and mitigation measures proposed. Such a consideration should include potential impacts on existing infrastructure (including drinking water, wastewater, waste and transport) resulting from tourism proposals; • Compliance with development management standards set out in this chapter; and • Evidence that, where feasible, existing ruinous or disused buildings or existing heritage buildings have been re-used to maximum potential.	DMS-82 Tourist Facilities

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendation integrated into the Plan	Plan Reference
		This list is not exhaustive and the Council may consider other requirements contained in the chapter on a case by case basis with planning applications should the need arise.	
Cultural Heritage	Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities.	**Protected Structures** It is Council policy to ensure the protection, sympathetic and sensitive modification, alteration, extension or reuse of protected structures or parts of protected structures, and the immediate surrounds included and proposed for inclusion in the Record of Protected Structures that are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest, together with the integrity of their character and setting. It is Council policy to ensure the protection of the curtilage of protected structures or proposed protected structures and to prohibit inappropriate development within the curtilage or attendant grounds of a protected structure which would adversely impact on the special character of the protected structure including cause loss of or damage to the special character of the protected structure and loss of or damage to, any structures of architectural heritage value within the curtilage of the protected structure. It is Council policy to promote best practice and the use of skilled specialist practitioners in the conservation of, and any works to, protected structures. Method statements should make reference to the Department of Culture, Heritage and the Gaeltacht's Advice Series on how best to repair and maintain historic buildings. It is Council policy to favourably consider the change of use of any structure included on the Record of Protected Structures provided such a change of use does not adversely impact on its intrinsic character and is in accordance with the proper planning and sustainable development of the area. It is Council policy to actively encourage uses that are compatible with the character of protected structures. It is Council policy to retain where practicable a protected structure which has been damaged by fire, and to retain those elements of that structure that have survived (either in whole or in part) and that contribute to its special interest. It is Council policy to prohibit the demolition of any protected structure unless the Council is satisfied that exceptional circumstances exist. The demolition of a protected structure with the retention of its façade will likewise not generally be permitted. It is Council policy to require an Architectural Heritage Assessment Report, as described in Appendix B of the Architectural Heritage Protection, Guidelines for Planning Authorities, Department of Culture, Heritage and the Gaeltacht (2013), to accompany all applications involving a protected structure. It is Council policy to advise owners of protected structures in preparation of funding applications under Built Heritage Scheme of the Historic Structures Fund. It is Council policy to ensure that in the event of a planning application being granted for development within the curtilage of a protected structure, the proposed works to the protected structure should occur, where appropriate, in the first phase of the development to prevent endangerment, abandonment and dereliction of the structure. It is Council policy to ensure that measures to upgrade the energy efficiency of Protected Structures and historic buildings are sensitive to traditional construction methods and materials and do not have a detrimental physical, aesthetic or visual impact on the structure. They should follow the principles and direction given in the Department of Arts, Heritage and the Gaeltacht's publication Energy Efficiency in Traditional Buildings. It is an objective of the Council to review the Record of Protected Structures on an on-going basis and make additions, deletions and corrections as appropriate over the period of this Plan. It is an objective of the Council to prepare a Buildings at Risk Register to prevent the endangerment of Protected Structures. Architectural Conservation Areas It is an objective of the Council to investigate the designation of further Architectural Conservation Areas at appropriate locations throughout the county.	BHP-01 BHP-02 BHP-03 BHP-04 BHP-05 BHP-06 BHP-07 BHP-08 BHP-09 BHP-10 BHP-11 BHO-01 BHO-02 BHO-03
		Architectural Conservation Areas It is Council policy to encourage the retention of original windows, doors, renders, roof coverings, street furniture and other significant features of historic buildings and landscape features within Architectural Conservation Areas. It is Council policy to proactively promote conservation through the Planning and Development Act 2000 (as amended), the Built Heritage Investment Scheme and other schemes available to the Council. It is Council policy to preserve the character of Geashill Architectural Conservation Area (ACA) and any future ACA's in County Offaly by ensuring that any new development within or contiguous to the ACA is sympathetic to the character of the area and that the design is appropriate in terms of scale, height, plot density, layout, materials and finishes having regard to the advice given in the Statements of Character for each area.	BHP-12 BHP-13 BHP-14
		Vernacular Buildings It is Council policy to encourage the protection, retention, appreciation and appropriate revitalisation of the vernacular heritage of Offaly. It is Council policy to consider the guidance in "The Thatched Houses of Kildare" and "Reusing Farm Buildings, A Kildare Perspective" published by Kildare County Council in assessing planning applications in County Offaly relating to thatched cottages and traditional farm buildings.	BHP-15 BHP-16 BHP-17 BHP-18

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendation integrated into the Plan	Plan Reference
		It is Council policy to preserve the character and setting (for example, gates, gate piers and courtyards) of vernacular buildings where deemed appropriate by the planning authority. It is Council policy to seek the repair and retention of traditional timber and/or rendered shop fronts and pub fronts, including those that may not be protected structures. It is Council policy to communicate and work with owners of thatch buildings regarding the availability of conservation grants and funding. It is Council policy to encourage where appropriate the covering of thatch with metal, as a measure for the protection of buildings which are unoccupied and showing signs of considerable distress. It is Council policy to support proposals to refurbish vernacular structures that are in a run down or derelict condition, provided that; • Appropriate traditional building materials and methods are used to carry out repairs to the historic fabric; and • Proposals for extensions to vernacular structures are reflective and proportionate to the existing building and do not erode the setting and design qualities of the original structure which make it attractive.	BHP-19 BHP-20 BHP-21
		Industrial Heritage It is Council policy to protect the industrial heritage of Offaly, including mills, historic industrial buildings, canals and historic bridges. It is Council policy to utilise the information provided within Mills of County Offaly: An Industrial Heritage Survey (2009) when assessing development proposals for surviving industrial heritage sites. It is Council policy to protect and enhance the built and natural heritage of the Grand Canal and ensure that development within its vicinity is sensitively designed and does not have a detrimental effect on the character of the canal, its built elements and its natural heritage values and that it adheres to the Waterways Ireland's Heritage Plan 2016-2020. It is Council policy to encourage appropriate change of use and reuse of industrial buildings, provided such a change does not seriously impact on the intrinsic character of the structure and that all works are carried out in accordance with best conservation practice. It is Council policy to seek the retention and appropriate repair/maintenance of the historic bridges and harbours of the county whether they are protected structures or not. It is Council policy to restrict vehicular access onto public roads that were formerly towpaths and any development permitted with access off a towpath must be screened effectively with trees and hedging. In relation to planning applications for housing in the open countryside with access proposed off towpaths, applicants must demonstrate compliance with Policy SSP-21 as towpaths are located within Natural Heritage Areas and Areas of High Amenity.	BHP-22 BHP-23 BHP-24 BHP-25 BHP-26 BHP-27
		Country Houses, Gardens and Demesnes It is Council policy to encourage the protection, conservation, promotion and enhancement of Country Houses, Gardens and Demesnes in the county and support public awareness, enjoyment of and access to these sites where appropriate. It is Council policy to encourage the conservation, preservation, restoration and protection in their original setting of mausoleums and monuments: follies, grottoes; garden buildings and other structures of particular beauty or historic, environmental, architectural or industrial significance. It is Council policy to discourage development that would lead to a loss of, or cause damage to, the character, the principle components of, or the setting of Country	BHP-28 BHP-29 BHP-30
		Houses, Gardens and Demesnes. It is Council policy to consider the "Guidance Notes for the Appraisal of Historic Gardens, Demesnes, Estates and their Settings" published by Cork County Council 2006 in the appraisal and description of the impacts of proposed developments in County Offaly within or in close proximity to country houses and demesnes on historic designed landscapes, demesnes and gardens.	BHP-31
		Protected Species It is Council policy to protect habitats and species when considering proposed works to buildings and structures which are likely to impact on protected ecological sites and protected species.	BHP-32
		Funding It is Council policy to support the progression and delivery of projects that repair and conserve historic structures under the Historic Structures Fund, the Built Heritage Investment Scheme or other funding schemes as applicable.	BHP-43
		Vernacular Buildings It is an objective of the Council to identify and retain good examples of vernacular architecture and historic street furniture in situ, for example, cast-iron post boxes, water pumps, signage, street lighting, kerbing and traditional road and street surface coverings.	BHO-04
		Archaeological Heritage It is Council policy to support and promote the protection and appropriate management and sympathetic enhancement of the county's archaeological	BHP-33 BHP-34

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendation integrated into the Plan	Plan Reference
		heritage within the Plan area, in particular by implementing the Planning and Development Act 2000 (as amended) and the National Monuments Act 1930 (as amended). It is Council policy to seek to promote awareness of and access to archaeological sites in the county where appropriate. It is Council policy to consult with the National Monuments Service of the Department of Culture, Heritage and the Gaeltacht (DCHG) in relation to archaeological sites within and/or adjoining a proposed development. It is Council policy to facilitate the identification of important archaeological landscapes in the county. It is Council policy that any development that may, due to its size, location or nature, have implications for archaeological heritage (including both sites and areas of archaeological potential / significance) shall be subject to an archaeological assessment. When dealing with proposals for development that would impact upon archaeological sites and/or features, there will be presumption in favour of the 'preservation in situ' of archaeological remains and settings, in accordance with Government policy. Where permission for such proposals is granted, the Planning Authority will require the developer to have the site works supervised by a licenced archaeologist. It is Council policy to ensure that archaeological excavation is carried out according to best practice as outlined by the National Monuments Service, Department of Culture, Heritage and the Gaeltacht, the National Museum of Ireland and the Institute of Archaeologists of Ireland and to protect previously unknown archaeological sites and features, where they are discovered during development works. It is Council policy to support, as appropriate, the protection and preservation of underwater archaeological sites in riverine or lacustrine locations. It is an objective of the Council to protect archaeological sites and monuments, and archaeological objects, which are listed in the Record of Monuments and Places, and to seek their preservation in situ (or at a minimum, preservation by record) through the planning process.	BHP-35 BHP-36 BHP-37 BHP-38 BHP-39 BHO-05
		Monastic Sites It is Council policy to retain the nominated status of the area comprising the National Monument at Clonmacnoise, enclosing eskers, Mongans Bog, Clonmacnoise callows, Fin Lough and the limestone pavement at Clorhane as the "Clonmacnoise Heritage Zone" in accordance with the recommendations of the study of the area carried out by the Environmental Sciences Unit of Trinity College, Dublin as shown in Figure 10.7 of this Plan. It is Council policy to investigate the potential of Durrow Demesne as a public amenity and tourism asset. It is Council policy to support and promote the protection and appropriate management of all monastic sites in the county. The Council acknowledges the nomination by the Government of Ireland, of two Monastic sites, Clonmacnoise in its own right and Durrow, as a suite of potential sites, on the tentative list for inclusion to the UNESCO World Heritage sites list. It is an objective of the Council to explore the potential of further designating the Monastic Sites at Clonmacnoise and Durrow as prospective UNESCO World Heritage Sites.	BHP-40 BHP-41 BHP-42 BHO-06
Landscape	Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape.	**Setback Distances for Wind Farms** It is Council policy that in assessing planning applications for wind farms, the Council shall: (a) have regard to the Department of the Environment, Heritage and Local Government's Guidelines for Planning Authorities on Wind Energy Development (or any update of this document) including applying appropriate setback distances as identified in the Guidelines; (b) have regard to 'Areas Open for Consideration for Wind Energy Developments' in the Wind Energy Strategy Designations Map from the County Wind Energy Strategy; (c) require a 2 km separation distance from turbines to town and village settlement boundaries in the county; (d) have regard to Development Management Standard 109 on wind farms contained in Chapter 13 of this Plan; and (e) have regard to existing and future international, European, national and regional policy, directives and legislation.	CAEP-35
		Extractive Industry It is Council policy to ensure those extractions (quarries / sand and gravel pits) which would result in a reduction of the visual amenity of areas of high amenity, eskers, esker landscapes, protected views or damage to designated sites, habitat types or species shall not be permitted. It is Council policy that all such workings should be subjected to landscaping requirements and that worked out quarries should be rehabilitated to a use agreed with the Council which could include recreational, biodiversity, amenity or other end-of-life uses. Planning applications for extraction shall be assessed against section 28 Ministerial Guidelines. The use of these rehabilitated sites shall be limited to wastes such as soil, stone and subsoils and sites shall be authorised under the appropriate waste regulations. Where the Council considers and accepts that in cases where inert material (for example soil, stones and subsoil) cannot be recycled or otherwise sold, such materials may be considered for the phased restoration and landscaping of the site in line with planning conditions imposed.	REDP–16
		Landscape It is Council policy to protect and enhance the county's landscape, by ensuring that development retains, protects and where necessary, enhances the appearance and character of the county's existing landscape.	BLP-35 BLP-36 BLP-37

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendation integrated into the Plan	Plan Reference
		It is Council policy to seek to ensure that local landscape features, including historic features and buildings, hedgerow, shelter belts and stone walls, are retained, protected and enhanced where appropriate, so as to preserve the local landscape and character of an area, whilst providing for future development. It is Council policy to ensure that consideration of landscape sensitivity is an important factor in determining development uses. It is Council policy to require a Landscape/Visual Impact Assessment to accompany significant proposals, located within or adjacent to sensitive landscapes. This assessment will provide details of proposed mitigation measures to address likely negative impacts. It is Council policy to control advertising structures and hoardings in the open countryside. The Council will use its enforcement powers under the Planning and Development Act 2000 (as amended) to secure the removal of unauthorised advertising signs and hoardings including those that are affixed to trailers, wheeled vehicles etc. It is an objective of the Council to prepare a County Landscape Character Assessment in accordance with all relevant legislation and guidance documents and following the forthcoming National and Regional Landscape Character Assessment. It is an objective of the Council to have regard to the Landscape Sensitivity Areas in Tables 4.19 – 4.21 in the consideration of planning applications. It is an objective of the Council to protect skylines and ridgelines from development where such developments will create significant visual intrusion.	BLP-38 BLP-39 BLO-21 BLO-22 BLO-23
		Protection of Key Scenic Views, Key Prospects and Key Amenity Routes It is Council policy to require a Landscape/Visual Impact Assessment to accompany significant proposals that are likely to significantly affect Key Scenic Views and Prospects as listed in Table 4.22 and Key Amenity Routes as listed in Table 4.23. It is an objective of the Council to protect Key Scenic Views and Key Prospects contained in Table 4.22, and Key Amenity Routes as listed in Table 4.23 from inappropriate development. It is an objective of the Council to ensure that proposed developments take into consideration their effects on views from Key Scenic Views and Prospects and Key Amenity Routes and are designed and located to minimise their impact on this views and prospects.	BLP-40 BLO-24 BLO-25
		Areas of High Amenity It is Council policy to protect and preserve the county's Areas of High Amenity namely the Slieve Bloom Mountains, Clonmacnoise Heritage Zone, Durrow High Cross, Abbey and surrounding area, the River Shannon, Lough Boora Discovery Park, Grand Canal, Croghan Hill, Raheenmore Bog, Pallas Lake, Clara Bog, Clara eskers, Eiscir Riada and other eskers. Notwithstanding the location of certain settlements, or parts of, for which there are settlement plans (Towns, Villages, Sráids), within the Areas of High Amenity, it is not the intention of this policy to hinder appropriate sustainable levels of development (as set out in the plans and subject to proper planning). Further, it is policy to facilitate the sustainable extension and expansion of existing visitor, tourist related or other rural enterprises within the Areas of High Amenity, where such development is appropriate and where it can be demonstrated that it gives 'added value' to the extending activity and to the immediate area which is the subject of the 'Area of High Amenity' designation. It is Council policy, to ensure that issues of scale, siting, design and overall compatibility (including particular regard to environmental sensitivities) with a site's location within an Area of High Amenity are of paramount importance when assessing any application for planning permission. The merits of each proposal will be examined on a case-by case basis. It is Council policy to support the preparation of a masterplan that conserves and protects the Clonmacnoise monastic site and will co-operate with the Office of Public Works and other stakeholders in its preparation and implementation. It is an objective of the Council to ensure that new development, whether individually or cumulatively, does not impinge in any significant way on the character, integrity and distinctiveness of or the scenic value of the Areas of High Amenity listed in Table 4.18. New development in Areas of High Amenity shall not be permitted if it; • Causes unacceptable visual harm; • Introduces incongruous landscape elements; and • Causes the disturbance or loss of (i) landscape elements that contribute to local distinctiveness; (ii) historic elements that contribute significantly to landscape character and quality such as field or road patterns; (iii) vegetation which is a characteristic of that landscape type and (iv) the visual condition of landscape elements.	BLP-32 BLP-33 BLP-34 BLO-20

Section 10 Monitoring Measures

10.1 Introduction

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

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

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

10.2 Indicators and Targets

Monitoring is based around indicators which allow quantitative measures of trends and progress over time relating to the Strategic Environmental Objectives identified in Section 5 and used in the evaluation. Each indicator to be monitored is accompanied by the target(s) which were identified with regard to the relevant strategic actions. Given the position of the Development Plan in the land use planning hierarchy beneath the Eastern and Midland Regional Spatial and Economic Strategy (RSES), the measures identified in that RSES SEA have been used – as they are or having been slightly modified – in most instances. This consistency across the hierarchy of land use plans will improve the efficiency and effectiveness of future monitoring programmes.

Table 10.1 overleaf shows the indicators and targets which have been selected for monitoring the likely significant environmental effects of implementing the Plan, if unmitigated.

Monitoring is an ongoing process and the programme allows for flexibility and the further refinement of indicators and targets. The Monitoring Programme may be updated to deal with specific environmental issues – including unforeseen effects – as they arise.

10.3 Sources

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

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

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

Internal monitoring of the environmental effects of grants of permission in the Council would provide monitoring of certain indicators on a *grant of permission*[85] basis. Where significant adverse effects as a result of the development to be permitted are identified, such effects could be identified, recorded and used to inform monitoring evaluation.

[85] The likely significant effects of development proposals on environmental sensitivities are further determined during the development management process. Documenting any identified effects as a result of a development to be permitted can help to fulfill monitoring requirements.

10.4 Reporting

A stand-alone Monitoring Report on the significant environmental effects of implementing the Plan will be prepared in advance of the beginning of the review of the Plan. This report should address the indicators set out on Table 10.1. The Council is responsible for the ongoing review of indicators and targets, collating existing relevant monitored data, the preparation of monitoring evaluation report(s), the publication of these reports and, if necessary, the carrying out of remedial action.

Table 10.1 Indicators, Targets, Sources and Remedial Action

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
Biodiversity, Flora and Fauna	**BFF**	• 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 4 "Biodiversity and Landscape"	• 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 Chapter 4 "Biodiversity and Landscape"	• 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 (at monitoring evaluation - see Section 10.4)	• 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**	• Implementation of Plan measures relating to the promotion of economic growth as provided for by Chapter 5 "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	• For review of progress on implementing Plan objectives to demonstrate successful implementation of measures relating to the promotion of economic growth as provided for by Chapter 5 "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	• 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	• 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, DCCAE and NTA to develop a tailored response.
Soil (and Land)	**S**	• 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	• Maintain built surface cover nationally to below the EU average of 4%. • Achieve the 40% target for growth on infill as per NPF.	• Environmental Protection Agency (EPA), Geoportal • Internal monitoring of likely significant environmental effects of grants of permission (grant by grant)	• 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.

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
Water	**W**	• Status of water bodies as reported by the EPA Water Monitoring Programme for the WFD • Number of incompatible developments permitted within flood risk areas	• 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	• EPA Monitoring Programme for WFD compliance • Internal monitoring of likely significant environmental effects of grants of permission (grant by grant)	• 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**	• 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	• 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	• Internal monitoring of likely significant environmental effects of grants of permission (grant by grant) • CSO data • Consultations with Irish Water (at monitoring evaluation - see Section 10.4) • 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	• 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.

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
Air	**A**	• 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	• 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	• 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 (at monitoring evaluation - see Section 10.4)	• Where proportion of population shows increase in private car use above CSO 2016 figures, 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**	• 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 Action and Energy" • 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	• 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 Action and Energy" • 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 (CO_2) 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	• EPA Annual National Greenhouse Gas Emissions Inventory reporting • Climate Action Regional Office • Consultations with Department of Communication Climate Action and Environment (at monitoring evaluation - see Section 10.4) • CSO data	• 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

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
Cultural Heritage	**CH**	• 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	• 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	• Internal monitoring of likely significant environmental effects of grants of permission (grant by grant) • Consultation with Department of Culture, Heritage and the Gaeltacht (at monitoring evaluation - see Section 10.4).	• Where monitoring reveals visitor pressure is causing negative effects on key tourist features, the Council will work with Regional Assembly, Fáilte Ireland and other stakeholders to address the pressures through additional mitigation
Landscape	**L**	• 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	• 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	• Internal monitoring of likely significant environmental effects of grants of permission (grant by grant)	• 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

Appendix I Relationship with Legislation and Other Policies, Plans and Programmes

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

Legislation, Plan, etc.	Summary of high-level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
European Level			
SEA Directive (2001/42/EC)	• Contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development. • Provide for a high level of protection of the environment by carrying out an environmental assessment of plans and programmes which are likely to have significant effects on the environment.	• Carry out and environmental assessment for plans or programmes referred to in Articles 2 to 4 of the Directive. • Prepare an environmental report which identifies, describes and evaluates the likely significant effects on the environment of implementing the plan or programme and reasonable alternatives that consider the objectives and the geographical scope of the plan or programme. • Consult with relevant authorities, stakeholders and public allowing sufficient time to make a submission. • Consult other Member States where the implementation of a plan or programme is likely to have transboundary environmental effects. • Inform relevant authorities and stakeholders on the decision to implement the plan or programme. • Issue a statement to include requirements detailed in Article 9 of the Directive. • Monitor and mitigate significant environmental effects identified by the assessment.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EIA Directive (2011/92/EU as amended by 2014/52/EU)	• Requires the assessment of the environmental effects of public and private projects which are likely to have significant effects on the environment. • Aims to assess and implement avoidance or mitigation measures to eliminate environmental effects, before consent is given of projects likely to have significant effects on the environment by virtue, inter alia, of their nature, size or location are made subject to a requirement for development consent and an assessment with regard to their effects. Those projects are defined in Article 4.	• All projects listed in Annex I are considered as having significant effects on the environment and require an EIA. • For projects listed in Annex II, a "screening procedure" is required to determine the effects of projects on the basis of thresholds/criteria or a case by case examination. This should take into account Annex III. • The environmental impact assessment shall identify, describe and assess in an appropriate manner, in the light of each individual case and in accordance with Articles 4 to 12, the direct and indirect effects of a project on the following factors: human beings, fauna and flora, soil, water, air, climate and the landscape, material assets and the cultural heritage, the interaction between each factor. • Consult with relevant authorities, stakeholders and public allowing sufficient time to make a submission before a decision is made.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Habitats Directive (92/43/EEC)	• Promote the preservation, protection and improvement of the quality of the environment, including the conservation of natural habitats and of wild fauna and flora. • Contribute towards ensuring biodiversity through the conservation of natural habitats and of wild fauna and flora. • Maintain or restore to favourable conservation status, natural habitats and species of wild fauna and flora of community interest. • Promote the maintenance of biodiversity, taking account of economic, social, cultural and regional requirements.	• Propose and protect sites of importance to habitats, plant and animal species. • Establish a network of European sites hosting the natural habitat types listed in Annex I and habitats of the species listed in Annex II, to enable the natural habitat types and the species' habitats concerned to be maintained or, where appropriate, restored at a favourable conservation status in their natural range. • Carry out comprehensive assessment of habitat types and species present. • Establish a system of strict protection for the animal species and plant species listed in Annex IV.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Birds Directive (2009/147/EC)	• Conserve all species of naturally occurring birds in the wild state including their eggs, nests and habitats. • Protect, manage and control these species and comply with regulations relating to their exploitation.	• Preserve, maintain or re-establish a sufficient diversity and area of habitats for all the species of birds referred to in Annex 1. • Preserve, maintain and establish biotopes and habitats to include the creation of protected areas (Special Protection Areas).	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and

Legislation, Plan, etc.	Summary of high-level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
	• The species included in Annex I shall be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution.	• Ensure the upkeep and management in accordance with the ecological needs of habitats inside and outside the protected zones, re-establish destroyed biotopes and creation of biotopes. • Measures for regularly occurring migratory species not listed in Annex I is required as regards their breeding, moulting and wintering areas and staging posts along their migration routes. The protection of wetlands and particularly wetlands of international importance.	their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU Nitrates Directive (91/676/EC)	• Reducing water pollution caused or induced by nitrates from agricultural sources and - preventing further such pollution.	Ireland's Nitrates Action Programme is designed to prevent pollution of surface waters and ground water from agricultural sources and to protect and improve water quality. Ireland's third NAP came into operation in 2014. Each Member State's NAP must include: • a limit on the amount of livestock manure applied to the land each year • set periods when land spreading is prohibited due to risk • set capacity levels for the storage of livestock manure	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU Integrated Pollution Prevention Control Directive (2008/1/EC)	• The purpose of this Directive is to achieve integrated prevention and control of pollution arising from the activities listed in Annex I. It lays down measures designed to prevent or, where that is not practicable, to reduce emissions in the air, water and land from the abovementioned activities, including measures concerning waste, in order to achieve a high level of protection of the environment taken as a whole, without prejudice to Directive 85/337/EEC and other relevant Community provisions.	The IPPC Directive is based on several principles: • an integrated approach • best available techniques, • flexibility; and • public participation	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU Plant Protection (products) Directive 2009/127/EC	• The Directive aims at reducing the risks and impacts of pesticide use on human health and • the environment by introducing different targets, tools and measures such as Integrated Pest • Management (IPM) or National Action Plans (NAPs).	• The Framework Directive applies to pesticides which are plant protection products. • Regarding pesticide application equipment already in professional use, the Framework Directive introduces requirements for the inspection and maintenance to be carried out on such equipment.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU Renewables Directive (2009/28/EC)	• The Renewable Energy Directive establishes an overall policy for the production and promotion of energy from renewable sources in the EU. • It requires the EU to fulfil at least 20% of its total energy needs with renewables by 2020 – to be achieved through the attainment of individual national targets. • All EU countries must also ensure that at least 10% of their transport fuels come from renewable sources by 2020.	• The Directive promotes cooperation amongst EU countries (and with countries outside the EU) to help them meet their renewable energy targets. • The Directive specifies national renewable energy targets for each country, taking into account its starting point and overall potential for renewables. • EU countries set out how they plan to meet these targets and the general course of their renewable energy policy in national renewable energy action plans. • Progress towards national targets is measured every two years when EU countries publish national renewable energy progress reports.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Indirect Land Use Change Directive (2012/0288(COD))	• Article 3(4) of Directive 2009/28/EC of the European Parliament and of the Council (3) requires Member States to ensure that the share of energy from renewable energy sources in all forms of transport in 2020 is at least 10 % of their final energy consumption. • The blending of biofuels is one of the methods available for Member States to meet this target, and is expected to be the main contributor. • Other methods available to meet the target are the reduction of energy consumption, which is imperative because a mandatory percentage target for energy from renewable sources is likely to become increasingly difficult to achieve sustainably if overall demand for energy for transport continues to rise, and the use of electricity from renewable energy sources.	• Limit the contribution that conventional biofuels (with a risk of ILUC emissions) make towards attainment of the targets in the Renewable Energy Directive; • Improve the greenhouse gas performance of biofuel production processes (reducing associated emissions) by raising the greenhouse gas saving threshold for new installations subject to protecting installations already in operation on 1st July 2014; • Encourage a greater market penetration of advanced (low-ILUC) biofuels by allowing such fuels to contribute more to the targets in the Renewable Energy Directive than conventional biofuels; • Improve the reporting of greenhouse gas emissions by obliging Member States and fuel suppliers to report the estimated indirect land-use change emissions of biofuels.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

Legislation, Plan, etc.	Summary of high-level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
Alternative Fuels Infrastructure Directive (2014/94/EU)	• This Directive establishes a common framework of measures for the deployment of alternative fuels infrastructure in the Union in order to minimise dependence on oil and to mitigate the environmental impact of transport.	• This Directive sets out minimum requirements for the building-up of alternative fuels infrastructure, including recharging points for electric vehicles and refuelling points for natural gas (LNG and CNG) and hydrogen, to be implemented by means of Member States' national policy frameworks, as well as common technical specifications for such recharging and refuelling points, and user information requirements.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU Energy Efficiency Directive (2012/27/EU)	• Establishes a set of binding measures to help the EU reach its 20% energy efficiency target by 2020. • Under the Directive, all EU countries are required to use energy more efficiently at all stages of the energy chain, from production to final consumption.	• Energy distributors or retail energy sales companies have to achieve 1.5% energy savings per year through the implementation of energy efficiency measures • EU countries can opt to achieve the same level of savings through other means, such as improving the efficiency of heating systems, installing double glazed windows or insulating roofs • The public sector in EU countries should purchase energy efficient buildings, products and services • Every year, governments in EU countries must carry out energy efficient renovations on at least 3% (by floor area) of the buildings they own and occupy • Energy consumers should be empowered to better manage consumption. This includes easy and free access to data on consumption through individual metering • National incentives for SMEs to undergo energy audits • Large companies will make audits of their energy consumption to help them identify ways to reduce it • Monitoring efficiency levels in new energy generation capacities.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU Seveso Directive (2012/18/EU)	• This Directive lays down rules for the prevention of major accidents which involve dangerous substances, and the limitation of their consequences for human health and the environment, with a view to ensuring a high level of protection throughout the Union in a consistent and effective manner.	The Seveso Directive is well integrated with other EU policies, thus avoiding double regulation or other administrative burden. This includes the following related policy areas: • Classification, labelling and packaging of chemicals; • The Union's Civil Protection Mechanism; • The Security Union Agenda including CBRN-E and Protection of critical infrastructure; • Policy on environmental liability and on the protection of the environment through criminal law; • Safety of offshore oil and gas operations.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Union Biodiversity Strategy to 2020	• Aims to halt or reverse biodiversity loss and speed up the EU's transition towards a resource efficient and green economy. • Halting the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restoring them in so far as feasible.	• Outlines six targets and twenty actions to aid European Union in halting the loss to biodiversity and eco-system services. • The six targets cover: o Full implementation of EU nature legislation to protect biodiversity o Maintaining, enhancing and protecting for ecosystems, and green infrastructure o Ensuring sustainable agriculture, and forestry o Sustainable management of fish stocks o Reducing invasive alien species o Addressing the global need to contribute towards averting global biodiversity loss	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU Green Infrastructure Strategy	Aims to create a robust enabling framework in order to promote and facilitate Green Infrastructure (GI) projects.	• Promoting GI in the main EU policy areas. • Supporting EU-level GI projects. • Improving access to finance for GI projects. • Improving information and promoting innovation.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
UN Kyoto Protocol (2nd Kyoto Period), the Second European Climate Change Programme	The UN Kyoto Protocol set of policy measures to reduce greenhouse gas emissions.	• The Kyoto Protocol is implemented through the European Climate Change Programme (ECCP II). • EU member states implement measures to improve on or compliment the	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in

Legislation, Plan, etc.	Summary of high-level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
(ECCP II), Paris climate conference (COP21) 2015 (Paris Agreement)	The Second European Climate Change Programme (ECCP II) aims to identify and develop all the necessary elements of an EU strategy to implement the Kyoto Protocol. At the Paris climate conference (COP21) in December 2015, 195 countries adopted the first-ever universal, legally binding global climate deal. The agreement sets out a global action plan to put the world on track to avoid dangerous climate change by limiting global warming to well below 2°C.	specified measures and policies arising from the ECCP. • Under COP21, governments agreed to come together every 5 years to set more ambitious targets as required by science; report to each other and the public on how well they are doing to implement their targets; track progress towards the long-term goal through a robust transparency and accountability system.	combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU 2020 Climate and Energy Package	• Binding legislation which aims to ensure the European Union meets its climate and energy targets for 2020. • Aims to achieve a 20% reduction in EU greenhouse gas emissions from 1990 levels. • Aims to raise the share of EU energy consumption produced from renewable resources to 20%. • Achieve a 20% improvement in the EU's energy efficiency.	Four pieces of complimentary legislation: • Reform of the EU Emissions Trading System (EU ETS) to include a cap on emission allowances in addition to existing system of national caps. • Member States have agreed national targets for non-EU ETS emissions from countries outside the EU. • Meet the national renewable energy targets of 16% for Ireland by 2020. • Preparing a legal framework for technologies in carbon capture and storage.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU 2030 Framework for Climate and Energy	• A 2030 Framework for climate and energy, including EU-wide targets and policy objectives for the period between 2020 and 2030 that has been agreed by European countries. • Targets include a 40% cut in greenhouse gas emissions compared to 1990 levels, at least a 27% share of renewable energy consumption and at least 27% energy savings compared with the business-as-usual scenario.	To meet the targets, the European Commission has proposed the following policies for 2030: • A reformed EU emissions trading scheme (ETS). • New indicators for the competitiveness and security of the energy system, such as price differences with major trading partners, diversification of supply, and interconnection capacity between EU countries. • First ideas for a new governance system based on national plans for competitive, secure, and sustainable energy. These plans will follow a common EU approach. They will ensure stronger investor certainty, greater transparency, enhanced policy coherence and improved coordination across the EU.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
The Clean Air for Europe Directive (2008/50/EC) (EU Air Framework Directive) **Fourth Daughter Directive (2004/107/EC)**	• The CAFE Directive merges existing legislation into a single directive (except for the fourth daughter directive). • Sets new air quality objectives for $PM_{2.5}$ (fine particles) including the limit value and exposure related objectives. • Accounts for the possibility to discount natural sources of pollution when assessing compliance against limit values. • Allows the possibility for time extensions of three years (PM_{10}) or up to five years (NO_2, benzene) for complying with limit values, based on conditions and the assessment by the European Commission. • The Fourth Daughter Directive lists pollutants, target values and monitoring requirements for the following: arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air.	• Sets objectives for ambient air quality designed to avoid, prevent or reduce harmful effects on human health and the environment as a whole. • Aims to assess the ambient air quality in Member States on the basis of common methods and criteria. • Obtains information on ambient air quality in order to help combat air pollution and nuisance and to monitor long-term trends and improvements resulting from national and community measures. • Ensures that such information on ambient air quality is made available to the public. • Aims to maintain air quality where it is good and improving it in other cases. • Aims to promote increased cooperation between the Member States in reducing air pollution.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Noise Directive (2002/49/EC)	The Noise Directive - Directive 2002/49/EC relating to the assessment and management of environmental noise - is part of an EU strategy setting out to reduce the number of people affected by noise in the longer term and to provide a framework for developing existing Community policy on noise reduction from source.	The Directive requires competent authorities in Member States to: • Draw up strategic noise maps for major roads, railways, airports and agglomerations, using harmonised noise indicators and use these maps to assess the number of people which may be impacted upon as a result of excessive noise levels; • Draw up action plans to reduce noise where necessary and maintain environmental noise quality where it is good; and • Inform and consult the public about noise exposure, its effects, and the measures considered to address noise. The Directive does not set any limit value, nor does it prescribe the measures to be used in the action plans, which remain at the discretion of the competent authorities.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

Legislation, Plan, etc.	Summary of high-level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
Floods Directive (2007/60/EC)	• Establishes a framework for the assessment and management of flood risks • Reduce adverse consequences for human health, the environment, cultural heritage and economic activity associated with floods in the Community	• Assess all water courses and coast lines at risk from flooding through Flood Risk Assessment • Prepare flood hazard maps and flood risk maps outlining the extent or potential of flooding and assets and humans at risk in these areas at River Basin District level (Article 3(2) (b)) and areas covered by Article 5(1) and Article 13(1) (b) in accordance with paragraphs 2 and 3. • Implement flood risk management plans and take adequate and coordinated measures to reduce flood risk for the areas covered by the Articles listed above. • Inform the public and allow the public to participate in planning process.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Water Framework Directive (2000/60/EC)	• Establish a framework for the protection of water bodies to include inland surface waters, transitional waters, coastal waters and groundwater and their dependent wildlife and habitats. • Preserve and prevent the deterioration of water status and where necessary improve and maintain "good status" of water bodies. • Promote sustainable water usage. • The Water Framework Directive repealed the following Directives: o The Drinking Water Abstraction Directive o Sampling Drinking Water Directive o Exchange of Information on Quality of Surface Freshwater Directive o Shellfish Directive o Freshwater Fish Directive o Groundwater (Dangerous Substances) Directive o Dangerous Substances Directive	• Protect, enhance and restore all water bodies and meet the environmental objectives outlined in Article 4 of the Directive. • Achieve "good status" for all waters. • Manage water bodies based on identifying and establishing river basins districts. • Involve the public and streamline legislation. • Prepare and implement a River Basin Management Plan for each river basin districts identified and a Register of Protected Areas. • Establish a programme of monitoring for surface water status, groundwater status and protected areas. • Recover costs for water services.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Groundwater Directive (2006/118/EC)	• Protect, control and conserve groundwater. • Prevent the deterioration of the status of all bodies of groundwater. • Implements measures to prevent and control groundwater pollution, including criteria for assessing good groundwater chemical status and criteria for the identification of significant and sustained upward trends and for the definition of starting points for trend reversals.	• Meet minimum groundwater standards listed in Annex 1 of Directive. • Meet threshold values adopted by national legislation for the pollutants, groups of pollutants and indicators of pollution which have been identified as contributing to the characterisation of bodies or groups of bodies of groundwater as being at risk, also taking into account Part B of Annex II.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Drinking Water Directive (98/83/EC)	• Improve and maintain the quality of water intended for human consumption. • Protect human health from the adverse effects of any contamination of water intended for human consumption by ensuring that it is wholesome and clean.	• Set values applicable to water intended for human consumption for the parameters set out in Annex I. • Set values for additional parameters not included in Annex I, where the protection of human health within national territory or part of it so requires. The values set should, as a minimum, satisfy the requirements of Article 4(1) (a). • Implement all measures necessary to ensure that regular monitoring of the quality of water intended for human consumption is carried out, in order to check that the water available to consumers meets the requirements of this Directive and in particular the parametric values set in accordance with Article 5. • Ensure that any failure to meet the parametric values set in accordance with Article 5 is immediately investigated in order to identify the cause. • Ensure that the necessary remedial action is taken as soon as possible to restore its quality and shall give priority to their enforcement action. • Undertake remedial action to restore the quality of the water where necessary to protect human health. • Notify consumers when remedial action is being undertaken except where the competent authorities consider the non-compliance with the parametric value to be trivial.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Urban Waste Water Treatment Directive (91/271/EEC)	• This Directive concerns the collection, treatment and discharge of urban waste water and the treatment and	• Urban waste water entering collecting systems shall before discharge, be subject to secondary treatment.	Implementation of the Plan needs to comply with all environmental legislation and align

Legislation, Plan, etc.	Summary of high-level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
	discharge of waste water from certain industrial sectors. • The objective of the Directive is to protect the environment from the adverse effects of waste water discharges.	• Annex II requires the designation of areas sensitive to eutrophication which receive water discharges. • Establishes minimum requirements for urban waste water collection and treatment systems in specified agglomerations to include special requirements for sensitive areas and certain industrial sectors.	with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Environmental Liability Directive (2004/35/EC) as amended by Directive 2006/21/EC, Directive 2009/31/EC and Directive 2013/30/EU	• Establish a framework of environmental liability based on the 'polluter-pays' principle, to prevent and remedy environmental damage.	• Relates to environmental damage caused by any of the occupational activities listed in Annex III, and to any imminent threat of such damage occurring by reason of any of those activities; damage to protected species and natural habitats caused by any occupational activities other than those listed in Annex III, and to any imminent threat of such damage occurring by reason of any of those activities, whenever the operator has been at fault or negligent. • Where environmental damage has not yet occurred but there is an imminent threat of such damage occurring, the operator shall, without delay, take the necessary preventive measures. • Where environmental damage has occurred the operator shall, without delay, inform the competent authority of all relevant aspects of the situation and take all practicable steps to immediately control, contain, remove or otherwise manage the relevant contaminants and/or any other damage factors in order to limit or to prevent further environmental damage and adverse effects on human health or further impairment of services and the necessary remedial measures, in accordance with Article 7. • The operator shall bear the costs for the preventive and remedial actions taken pursuant to this Directive. • The competent authority shall be entitled to initiate cost recovery proceedings against the operator. • The operator may be required to provide financial security guarantees to ensure their responsibilities under the directive are met. • The Environmental Liability Directive has been amended through a number of Directives. Implementation of the Environmental Liability Directive is contributed towards by a Multi-Annual Work Programme (MAWP) 'Making the Environmental Liability Directive more fit for purpose' that is updated annually to changing developments, growing knowledge and new needs.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Convention on the Protection of the Archaeological Heritage (Valletta 1992)	• The aim of this (revised) Convention is to protect the archaeological heritage as a source of the European collective memory and as an instrument for historical and scientific study.	The Valletta Convention makes the conservation and enhancement of the archaeological heritage one of the goals of urban and regional planning policies. The Convention sets guidelines for the funding of excavation and research work and publication of research findings. It also deals with public access, in particular to archaeological sites, and educational actions to be undertaken to develop public awareness of the value of the archaeological heritage. It also constitutes an institutional framework for pan-European co-operation on the archaeological heritage, entailing a systematic exchange of experience and experts among the various States.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Convention of the Protection of the Architectural Heritage of Europe (Granada 1995)	• The main purpose of the Convention is to reinforce and promote policies for the conservation and enhancement of Europe's heritage. It also affirms the need for European solidarity with regard to heritage conservation and is designed to foster practical co-operation among the Parties. It establishes the principles of "European co-ordination of conservation policies" including consultations regarding the thrust of the policies to be implemented.	• The reinforcement and promotion of policies for protecting and enhancing the heritage within the territories of the parties. • The affirmation of European solidarity with regard to the protection of the heritage and the fostering of practical co-operation between states and regions.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Council of Europe Framework Convention on the Value of Cultural Heritage for Society (Faro 2005)	• Cultural heritage is a group of resources inherited from the past which people identify, independently of ownership, as a reflection and expression of their constantly evolving values, beliefs, knowledge and traditions. It includes all aspects of the environment resulting from the interaction between people and places through time.	• Recognise that rights relating to cultural heritage are inherent in the right to participate in cultural life, as defined in the Universal Declaration of Human Rights. • Recognise individual and collective responsibility towards cultural heritage. • Emphasise that the conservation of cultural heritage and its sustainable	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for

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	• A heritage community consists of people who value specific aspects of cultural heritage which they wish, within the framework of public action, to sustain and transmit to future generations.	use have human development and quality of life as their goal. • Take the necessary steps to apply the provisions of this Convention concerning the role of cultural heritage in the construction of a peaceful and democratic society. • Greater synergy of competencies among all the public, institutional and private actors concerned.	environmental protection and management.
European Landscape Convention 2000	• The developments in agriculture, forestry, industrial and mineral production techniques, together with the practices followed in town and country planning, transport, networks, tourism and recreation, and at a more general level, changes in the world economy, have in many cases accelerated the transformation of landscapes. The Convention expresses a concern to achieve sustainable development based on a balanced and harmonious relationship between social needs, economic activity and the environment. It aims to respond to the public's wish to enjoy high quality landscapes.	• Promote protection, management and planning of landscapes. • Organise European co-operation on landscape issues.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
The Seventh Environmental Action Programme (EAP) of the European Community (2013-2020)	It identifies three key objectives: • to protect, conserve and enhance the Union's natural capital • to turn the Union into a resource-efficient, green, and competitive low-carbon economy • to safeguard the Union's citizens from environment-related pressures and risks to health and wellbeing	Four so called "enablers" will help Europe deliver on these objectives (goals): • Better implementation of legislation. • Better information by improving the knowledge base. • More and wiser investment for environment and climate policy. • Full integration of environmental requirements and considerations into other policies. Two additional horizontal priority objectives complete the programme: • To make the Union's cities more sustainable. • To help the Union address international environmental and climate challenges more effectively.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Bern Convention (Convention on the Conservation of European Wildlife and Natural Habitats)	The convention has three main aims: • to conserve wild flora and fauna and their natural habitats • to promote cooperation between states • to give particular attention to endangered and vulnerable species including endangered and vulnerable migratory species	The Parties under the convention recognise the intrinsic value of nature, which needs to be preserved and passed to future generations, they also: • Seek to ensure the conservation of nature in their countries, paying particular attention to planning and development policies and pollution control. • Look at implementing the Bern Convention in central Eastern Europe and the Caucus. • Take account of the potential impact on natural heritage by other policies. • Promote education and information of the public, ensuring the need to conserve species is understood and acted upon. • Develop an extensive number of species action plans, codes of conducts, and guidelines, at their own initiative or in co-operation with other organisations. • Created the Emerald Network, an ecological network made up of Areas of Special Conservation Interest.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Bali Road Map (2007)	The overall goals of the project are twofold: • To increase national capacity to co-ordinate ministerial views, participate in the UNFCCC process, and negotiate positions within the timeframe of the Bali Action Plan; and • To assess investment and financial flows to address climate change for up to three key sectors and/or economic activities.	The Bali Action Plan is centred on four main building Blocks: • mitigation • adaptation • technology • financing	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Cancun Agreements (2010)	Set of decisions taken at the COP 16 Conference in Cancun in 2010 which addresses a series of key issues in the fight against climate change. Cancun Agreements' main objectives cover: • Mitigation • Transparency of actions • Technology • Finance • Adaptation	Among the most prominent agreements is the establishment of a Green Climate Fund to transfer money from the developed to developing world to tackle the impacts of climate change.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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	• Forests • Capacity building		
Doha Climate Gateway (2012)	Set of decisions taken at the COP 18 meeting in Doha in 2012 which pave the way for a new agreement in Paris in 2015.	• Set out a timetable to adopt a universal climate agreement by 2015 (to come into effect in 2020); • Complete the work under Bali Action Plan and to focus on new completing new targets; • Strengthen the aim to cut greenhouse gases and help vulnerable countries to adapt; • Amend Kyoto Protocol to include a new commitment period for cutting down the greenhouse gases emissions; and • Provide the financial and technology support and new institutions to allow clean energy investment and sustainable growth in developing countries.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU Common Agricultural Policy	• To improve agricultural productivity, so that consumers have a stable supply of affordable food; and • To ensure that EU farmers can make a reasonable living.	• ensuring viable food production that will contribute to feeding the world's population, which is expected to rise considerably in the future; • Climate change and sustainable management of natural resources; • Looking after the countryside across the EU and keeping the rural economy alive.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU REACH Regulation (EC 1907 / 2006)	• Aims to improve the protection of human health and the environment through the better and earlier identification of the intrinsic properties of chemical substances.	The aims are achieved by applying REACH, namely: • Registration, • Evaluation, • Authorisation; and • Restriction of chemicals. REACH also aims to enhance innovation and competitiveness of the EU chemicals industry.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Stockholm Convention	• The objective of the Stockholm Convention is to protect human health and the environment from persistent organic pollutants.	• Prohibit and/or eliminate the production and use, as well as the import and export, of the intentionally produced POPs that are listed in Annex A to the Convention • Restrict the production and use, as well as the import and export, of the intentionally produced POPs that are listed in Annex B to the Convention • Reduce or eliminate releases from unintentionally produced POPs that are listed in Annex C to the Convention • Ensure that stockpiles and wastes consisting of, containing or contaminated with POPs are managed safely and in an environmentally sound manner • To target additional POPs • Other provisions of the Convention relate to the development of implementation plans, information exchange, public information, awareness and education, research, development and monitoring, technical assistance, financial resources and mechanisms, reporting, effectiveness evaluation and non-compliance	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Ramsar Convention	The Convention's mission is "the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world".	Under the "three pillars" of the Convention, the Contracting Parties commit to: • Work towards the wise use of all their wetlands; • Designate suitable wetlands for the list of Wetlands of International Importance (the "Ramsar List") and ensure their effective management; • Cooperate internationally on transboundary wetlands, shared wetland systems and shared species.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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European 2020 Strategy for Growth	Europe 2020 sets out a vision of Europe's social market economy for the 21st century and puts forward three mutually reinforcing priorities: • Smart growth: developing an economy based on knowledge and innovation; • Sustainable growth: promoting a more resource efficient, greener and more competitive economy; • Inclusive growth: fostering a high-employment economy delivering social and territorial cohesion.	In order to reach these priorities, the Commission proposes five quantitative targets to fulfil by 2020: 1. 75 % of the population aged 20-64 should be employed; 2. 3% of the EU's GDP should be invested in R&D; 3. the "20/20/20" climate/energy targets should be met (including an increase to 30% of emissions reduction if the conditions are right); 4. the share of early school leavers should be under 10% and at least 40% of the younger generation should have a tertiary degree; 5. 20 million less people should be at risk of poverty.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Level			
Ireland 2040 - Our Plan, the National Planning Framework, (replacing the National Spatial Strategy 2002-2020) and the National Development Plan (2018-2027)	• The National Planning Framework is the Government's high-level strategic plan for shaping the future growth and development of to the year 2040. It is a framework to guide public and private investment, to create and promote opportunities for people, and to protect and enhance the environment - from villages to cities, and everything around and in between. • The National Development Plan sets out the investment priorities that will underpin the successful implementation of the new National Planning Framework. This will guide national, regional and local planning and investment decisions in Ireland over the next two decades, to cater for an expected population increase of over 1 million people.	National Strategic Outcomes as follows: 1. Compact Growth 2. Enhanced Regional Accessibility 3. Strengthened Rural Economies and Communities 4. Sustainable Mobility 5. A Strong Economy, supported by Enterprise, Innovation and Skills 6. High-Quality International Connectivity 7. Enhanced Amenity and Heritage 8. Transition to a Low-Carbon and Climate-Resilient Society 9. Sustainable Management of Water and other Environmental Resources 10. Access to Quality Childcare, Education and Health Services	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Planning, Land Use and Transport Outlook 2040 [in preparation]	The PLUTO will take account of forecasted future economic and demographic scenarios, affordability considerations and relevant Government policies and will: 1. Quantify in broad terms the appropriate scale of financial investment in land transport over the long term; 2. Consider how fiscal, environmental and technological developments might impact on this investment; and, 3. Identify strategic priorities for future investment to ensure land transport infrastructure provision facilitates the objectives of Project Ireland 2040.	In preparation	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Planning and Development Act 2000 (as amended)	• The core principal objectives of this Act are to amend the Planning Acts of 2000 – 2009 with specific regard given to supporting economic renewal and sustainable development.	• Development, with certain exceptions, is subject to development control under the Planning Acts and the local authorities grant or refuse planning permission for development, including ones within protected areas. • There are, however, a range of exemptions from the planning system. Use of land for agriculture, peat extraction and afforestation, subject to certain thresholds, is generally exempt from the requirement to obtain planning permission. • Additionally, Environmental Impact Assessment (EIA) is required for a range of classes and large-scale projects. • Under planning legislation, Development Plans must include mandatory objectives for the conservation of the natural heritage and for the conservation of European sites and any other sites which may be prescribed. There are also discretionary powers to set objectives for the conservation of a variety of other elements of the natural heritage.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Communities (Environmental Assessment of Certain Plans and Programmes Regulations 2004 (S.I. 435 of 2004), as amended by S.I. 200 of 2011	• The purpose of these Regulations is to transpose into Irish law Directive 2001/42/EC of 27 June 2001 (O.J. No. L 197, 21 July 2001) on the assessment of the effects of certain plans and programmes on the environment — commonly known as the Strategic Environmental Assessment (SEA) Directive.	• The Regulations cover plans and programmes in all of the sectors listed in article 3(2) of the Directive except land-use planning. • These Regulations also amend certain provisions of the Planning and Development Act 2000 to provide the statutory basis for the transposition of the Directive in respect of land-use planning. • Transposition in respect of the land-use planning sector is contained in the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. No. 436 of 2004).	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477of 2011, as amended)	• These Regulations provide a new for the implementation in Ireland of Council Directive 92/43/EEC on habitats and protection of wild fauna and flora (as amended) and for the implementation of Directive 2009/147/EC of the European Parliament and of the Council on the protection of wild birds.	• They provide, among other things, for: the appointment and functions of authorized officers; identification, classification and other procedures relative to the designation of Community sites. • The Regulations have been prepared to address several judgments of the CJEU against Ireland, notably cases C-418/04 and C-183/05, in respect of failure to transpose elements of the Birds Directive and the Habitats Directive into Irish law.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Waste Management Act 1996, as amended	• To make provision in relation to the prevention, management and control of waste; to give effect to provisions of certain acts adopted by institutions of the European communities in respect of those matters; to amend the Environmental Protection Agency Act, 1992, and to repeal certain enactments and to provide for related matters.	• The Waste Management Act contains a number of key legal obligations, including requirements for waste management planning, waste collection and movement, the authorisation of waste facilities, measures to reduce the production of waste and/or promote its recovery.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Communities Environmental Objectives (FPM) Regulations 2009 (S.I 296 of 2009)	• The purpose of these Regulations is to support the achievement of favourable conservation status for freshwater pearl mussels	• Set environmental quality objectives for the habitats of the freshwater pearl mussel populations named in the First Schedule to these Regulations that are within the boundaries of a site notified in a candidate list of European sites, or designated as a Special Area of Conservation, under the European Communities (Natural Habitats) Regulations, 1997 (S.I. No. 94/1997). • Require the production of sub-basin management plans with programmes of measures to achieve these objectives. • Set out the duties of public authorities in respect of the sub-basin management plans and programmes of measure.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Communities Environmental Objectives (Groundwater) Regulations 2010 (S.I 9 of 2010), as amended (S.I. No. 366 of 2016)	• To amend the European Communities Environmental Objectives (Groundwater) Regulations 2010 (S.I. No. 9 of 2010) to make further provision to implement Commission Directive 2014/80/EU of 20 June 2014 amending Annex II to Directive 2006/118/EC of the European Parliament and of the Council on the protection of groundwater against pollution and deterioration.	The substances and threshold values set out in Schedule 5 to S.I. No. 9 of 2010 have been reviewed and amended where necessary, based on existing monitoring information and international guidelines on appropriate threshold values. • Part A of Schedule 6 has been amended to include changes to the rules governing the determination of background levels for the purposes of establishing threshold values for groundwater pollutants and indicators of pollution. • Part B of Schedule 6 has been amended to include nitrites and phosphorus (total) / phosphates among the minimum list of pollutants and their indicators which the Environmental Protection Agency (EPA) must consider when establishing threshold values. • Part C of Schedule 6 amends the information to be provided to the Minister by the EPA with regard to the pollutants and their indicators for which threshold values have been established.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2014 (S.I. No. 31 of 2014)	• These Regulations, which give effect to Ireland's 3rd Nitrates Action Programme, provide statutory support for good agricultural practice to protect waters against pollution from agricultural sources	The Regulations include measures such as: • Periods when land application of fertilisers is prohibited • Limits on the land application of fertilisers • Storage requirements for livestock manure; and • Monitoring of the effectiveness of the measures in terms of agricultural practice and impact on water quality.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Climate Action and Low Carbon Development Act 2015	• An Act to provide for the approval of plans by the Government in relation to climate change for the purpose of pursuing the transition to a low carbon, climate resilient and environmentally sustainable economy.	When considering a plan or framework, for approval, the Government shall endeavour to achieve the national transition objective within the period to which the objective relates and shall, in endeavouring to achieve that objective, ensure that such objective is achieved by the implementation of measures that are cost effective and shall, for that purpose, have regard to: • The ultimate objective specified in Article 2 of the United Nations Framework Convention on Climate Change done at New York on 9 May 1992 and any mitigation commitment entered into by the European Union in response or otherwise in relation to that objective, • The policy of the Government on climate change, • Climate justice,	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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		• Any existing obligation of the State under the law of the European Union or any international agreement referred to in section 2; and • The most recent national greenhouse gas emissions inventory and projection of future greenhouse gas emissions, prepared by the Agency.	
The Sustainable Development Goals National Implementation Plan (2018 – 2020)	• National Implementation Plan 2018 - 2020 is in direct response to the 2030 Agenda for Sustainable Development and provides a whole-of-government approach to implement the 17 Sustainable Development Goals (SDGs). • The Plan provides a 'SDG Matrix' which identifies the responsible Government Departments for each of the 169 targets. It also includes a 'SDG Policy Map' indicating the relevant national policies for each of the targets.	The Plan identifies four strategic priorities to guide implementation: • Awareness: raise public awareness of the SDGs; • Participation: provide stakeholders opportunities to engage and contribute to follow-up and review processes, and further develop national implementation of the Goals; • Support: encourage and support efforts of communities and organisations to contribute towards meeting the SDGs, and foster public participation; and • Policy alignment: develop alignment of national policy with the SDGs and identify opportunities for policy coherence.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Infrastructure and Capital Investment Plan (2016-2021)	• €27 billion multi-annual Exchequer Capital Investment Plan, which is supported by a programme of capital investment in the wider State sector, and which over the period 2016 to 2021 will help to lay the foundations for continued growth in Ireland.	• This Capital Plan reflects the Government's commitment to supporting strong and sustainable economic growth and raising welfare and living standards for all. • It includes allocations for new projects across a number of key areas and funding to ensure that the present stock of national infrastructure is refreshed and maintained.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Union (Birds and Natural Habitats) (Sea-Fisheries) Regulations 2013 (S.I. 290 of 2013)	These regulations have been drafted to implement the responsibilities of the Minister for Agriculture Food and the Marine in relation to sea fisheries in Natura 2000 sites, in accordance with the Habitats and Birds Directives as transposed by the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011).	• Regulation 3 provides for the submission of a Fisheries Natura Plan in relation to planned fisheries; • Regulation 4 provides for a screening of a Fisheries Natura Plan to determine whether or not an appropriate assessment is required; • Regulation 5 provides for an appropriate assessment of a Fisheries Natura Plan and also provides for public and statutory consultation; • Regulation 6 provides for the Minister to make a determination to adopt a Fisheries Natura Plan. The Minister may amend, withdraw or revoke a plan; • Regulation 7 provides for publication of the adopted Fisheries Natura Plan; • Regulation 8 provides for a Risk Assessment of unplanned fisheries and also provides for public and statutory consultation on the assessment; • Regulation 9 provides for the issue of a Natura Declaration to prohibit, restrict including restricting by permit, control, etc. of sea fishing activities; • Regulation 10 provides for Natura Permits to be issued where required by Natura Declarations; and • Regulations 11 to 31 deal with functions of authorised officers and related matters, offences, etc.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Ireland's National Renewable Energy Action Plan 2010 (Irish Government submission to the European Commission)	• The National Renewable Energy Action Plan (NREAP) sets out the Government's strategic approach and concrete measures to deliver on Ireland's 16% target under Directive 2009/28/EC.	• The NREAP sets out the Member State's national targets for the share of energy from renewable sources to be consumed in transport, electricity and heating and cooling in 2020, and demonstrates how the Member State will meet its overall national target established under the Directive.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Strategy for Renewable Energy (2012-2020)	• The Government's overarching strategic objective is to make renewable energy an increasingly significant component of Ireland's energy supply by 2020, so that at a minimum it will achieve its legally binding 2020 target in the most cost-efficient manner for consumers. • Of critical importance is the role which the renewable energy sector plays in job creation and economic activity as part of the Government's action plan for jobs.	This document sets out five strategic goals, reflecting the key dimensions of the renewable energy challenge to 2020: • Increasing on and offshore wind, • Building a sustainable bioenergy sector, • Fostering R&D in renewables such as wave & tidal, • Growing sustainable transport; and • Building out robust and efficient networks.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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National Climate Mitigation Plan 2017	• The Plan represents an initial step to set Ireland on a pathway to achieve the deep decarbonisation required in Ireland by mid-century in line with the Government's policy objectives.	The National Mitigation Plan focuses on the following issues: • Climate Action Policy Framework • Decarbonising Electricity Generation • Decarbonising the Built Environment • Decarbonising Transport • An Approach to Carbon Neutrality for Agriculture, Forest and Land Use Sectors	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Policy Position on Climate Action and Low Carbon Development (2014)	• The National Policy Position provides a high-level policy direction for the adoption and implementation by Government of plans to enable the State to move to a low carbon economy by 2050. • Statutory authority for the plans is set out in the Climate Action and Low Carbon Development Act 2015.	National climate policy in Ireland: • Recognises the threat of climate change for humanity; • Anticipates and supports mobilisation of a comprehensive international response to climate change, and global transition to a low-carbon future; • Recognises the challenges and opportunities of the broad transition agenda for society; and • Aims, as a fundamental national objective, to achieve transition to a competitive, low carbon, climate-resilient and environmentally sustainable economy by 2050.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Clean Air Strategy [in preparation]	• The Clean Air Strategy will provide the strategic policy framework necessary to identify and promote integrated measures across government policy that are required to reduce air pollution and promote cleaner air while delivering on wider national objectives.	• Having a National Strategy will provide a policy framework by which Ireland can develop the necessary policies and measures to comply with new and emerging EU legislation. • The Strategy should also help tackle climate change. • The Strategy will consider a wider range of national policies that are relevant to clean air policy such as transport, energy, home heating and agriculture. • In any discussion relating to clean air policy, the issue of people's health is paramount and this will be a strong theme of the Strategy.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EirGrid's Grid25 Strategy and associated Grid25 Implementation Programme 2017-2022	• EirGrid's mission is to develop, maintain and operate a safe, secure, reliable, economical and efficient transmission system for Ireland; "*Our vision is of a grid developed to match future needs, so it can safely and reliably carry power all over the country to the major towns and cities and onwards to every home, farm and business where the electricity is consumed and so it can meet the needs of consumers and generators in a sustainable way.*"	• Grid25, EirGrid's roadmap to uprate the electricity transmission grid by 2025, continues to be implemented so as to increase the capacity of the grid, to satisfy future demand, and to help Ireland meet its target of 40 per cent of electricity from renewable energy by 2020.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Strategy for the Future Development of National and Regional Greenways (2018)	• The objective of this Strategy is to assist in the strategic development of nationally and regionally significant Greenways in appropriate locations constructed to an appropriate standard in order to deliver a quality experience for all Greenways users. • It also aims to increase the number and geographical spread of Greenways of scale and quality around the country over the next 10 years with a consequent significant increase in the number of people using Greenways as a visitor experience and as a recreational amenity.	• A Strategic Greenway network of national and regional routes, with a number of high capacity flagship routes that can be extended and/or link with local Greenways and other cycling and walking infrastructure; • Greenways of scale and appropriate standard that have significant potential to deliver an increase in activity tourism to Ireland and are regularly used by overseas visitors, domestic visitors and locals thereby contributing to a healthier society through increased physical activity; • Greenways that provide a substantially segregated off road experience linking places of interest, recreation and leisure in areas with beautiful scenery of different types with plenty to see and do; and • Greenways that provide opportunities for the development of local businesses and economies, and • Greenways that are developed with all relevant stakeholders in line with an agreed code of practice.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Water Resources Plan [in preparation]	• The NWRP is a plan on how to provide a safe, secure and reliable water supply to customers for the next 25 years, without causing adverse impact on the environment. • The objective of the NWRP is to set out how we intend to maintain the supply and demand for drinking water over the short, medium and long term whilst minimising the impact on the environment.	The key objectives of the plan are to: • Identify areas where there are current and future potential water supply shortfalls, taking into account normal and extreme weather conditions • Assess the current and future water demand from homes, businesses, farms, and industry • Consider the impacts of climate change on Ireland's water resources • Develop a drought plan advising measures to be taken before and during drought events • Develop a plan detailing how we deal with the material that is produced as a result of treating drinking water	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

Legislation, Plan, etc.	Summary of high-level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
		• Identify, develop and assess options to help meet potential shortfalls in water supplies • Assess the water resources available at a national level including lakes, rivers and groundwater	
National Strategic Plan for Aquaculture Development (2014-2020)	Vision: *"Aquaculture in RC is economically, socially and ecologically sustainable, with a developed infrastructure, strong human potentials and an organized market. The consumption of aquaculture products is equal or above EU average, while the technological development of the sector is among the best in the EU."*	General development and growth objectives of marine and freshwater aquaculture (2014 – 2020): • Strengthen the social, business and administrative environment for aquaculture development • Increase in the total production to 24,050 tonnes while adhering to the principles of economic, social and ecological sustainability • Improvement of the perception and increase in the national consumption of National products	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Construction 2020, A Strategy for a Renewed Construction Sector	• Construction 2020 sets out a package of measures agreed by the Government and is aimed at stimulating activity in the building industry. • The Strategy aims both to increase the capacity of the sector to create and maintain jobs, and to deliver a sustainable sector, operating at an appropriate level. It seeks to learn the lessons of the past and to ensure that the right structures and mechanisms are in place so that they are not repeated.	This Strategy therefore addresses issues including: • A strategic approach to the provision of housing, based on real and measured needs, with mechanisms in place to detect and act when things are going wrong; • Continuing improvement of the planning process, striking the right balance between current and future requirements; • The availability of financing for viable and worthwhile projects; • Access to mortgage finance on reasonable and sustainable terms; • Ensuring we have the tools we need to monitor and regulate the sector in a way that underpins public confidence and worker safety; • Ensuring a fit for purpose sector supported by a highly skilled workforce achieving high quality and standards; and • Ensuring opportunities are provided to unemployed former construction workers to contribute to the recovery of the sector.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Sustainable Development: A Strategy for Ireland (1997)	• The overall aim of this Strategy is to ensure that economy and society in Ireland can develop to their full potential within a well-protected environment, without compromising the quality of that environment, and with responsibility towards present and future generations and the wider international community.	• The Strategy addresses all areas of Government policy, and of economic and societal activity, which impact on the environment. It seeks to re-orientate policies as necessary to ensure that the strong growth Ireland enjoys and seeks to maintain will be environmentally sustainable.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Landscape Strategy for Ireland 2015-2025 and National Landscape Character Assessment (pending preparation)	• The National Landscape Strategy will be used to ensure compliance with the European Landscape Convention and to establish principles for protecting and enhancing the landscape while positively managing its change. It will provide a high-level policy framework to achieve balance between the protection, management and planning of the landscape by way of supporting actions. • Landscape Strategy Vision: *"Our landscape reflects and embodies our cultural values and our shared natural heritage and contributes to the well-being of our society, environment and economy. We have an obligation to ourselves and to future generations to promote its sustainable protection, management and planning."*	The objectives of the National Landscape Strategy are to: • Implement the European Landscape Convention by integrating landscape into the approach to sustainable development; • Establish and embed a public process of gathering, sharing and interpreting scientific, technical and cultural information in order to carry out evidence-based identification and description of the character, resources and processes of the landscape; • Provide a policy framework, which will put in place measures at national, sectoral - including agriculture, tourism, energy, transport and marine - and local level, together with civil society, to protect, manage and properly plan through high quality design for the sustainable stewardship of the landscape; • Ensure that we take advantage of opportunities to implement policies relating to landscape use that are complementary and mutually reinforcing and that conflicting policy objectives are avoided in as far as possible.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Hazardous Waste Management Plan (EPA) 2014-2020	This Plan sets out the priorities to be pursued over the next six years and beyond to improve the management of hazardous waste, taking into account the progress made since the previous plan and the waste policy and legislative changes that have occurred since the previous plan was published. Section 26 of the Waste Management Act 1996 as amended, sets out the overarching objectives for the National Hazardous Waste Management Plan. In this context, the following objectives are	The revised Plan makes 27 recommendations under the following topics: • Prevention • Collection • Self-sufficiency • Regulation • Legacy issues • North-south cooperation • Guidance and awareness	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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	included as priorities for the revised Plan period: • To prevent and reduce the generation of hazardous waste by industry and society generally; • To maximise the collection of hazardous waste with a view to reducing the environmental and health impacts of any unregulated waste; • To strive for increased self-sufficiency in the management of hazardous waste and to minimise hazardous waste export; • To minimise the environmental, health, social and economic impacts of hazardous waste generation and management.	• Implementation	
Ministerial Guidelines such as Sustainable Rural Housing Guidelines and Flood Risk Management Guidelines	• The Department produces a range of guidelines designed to help planning authorities, An Bord Pleanála, developers and the general public and cover a wide range of issues amongst others, architectural heritage, child care facilities, landscape, quarries and residential density.	• The Minister issues statutory guidelines under Section 28 of the Act which planning authorities and An Bord Pleanála are obliged to have regard to in the performance of their planning functions.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
HSE Healthy Ireland Framework for Improved Health and Wellbeing 2013-2025	• The vision is: *"A Healthy Ireland, where everyone can enjoy physical and mental health and wellbeing to their full potential, where wellbeing is valued and supported at every level of society and is everyone's responsibility."*	These four goals are interlinked, interdependent and mutually supportive: • Goal 1: Increase the proportion of people who are healthy at all stages of life • Goal 2: Reduce health inequalities • Goal 3: Protect the public from threats to health and wellbeing • Goal 4: Create an environment where every individual and sector of society can play their part in achieving a healthy Ireland	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Our Sustainable Future: A framework for Sustainable Development for Ireland 2012	A medium to long term framework for advancing sustainable development and the green economy in Ireland. It identifies spatial planning as a key challenge for sustainable development and sets a series of measures to address these challenges.	• Sets out the challenges facing us and how we might address them in making sure that quality of life and general wellbeing can be improved and sustained in the decades to come.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Smarter Travel – A Sustainable Transport Future – A New Transport Policy for Ireland 2009 – 2020 (2009)	• Outlines a policy for how a sustainable travel and transport system can be achieved. • Sets out five key goals: o To reduce overall travel demand. o To maximise the efficiency of the transport network. o To reduce reliance on fossil fuels. o To reduce transport emissions. o To improve accessibility to transport.	• Others lower level aims include: o reduce distance travelled by private car and encourage smarter travel, including focusing population growth in areas of employment and to encourage people to live in close proximity to places of employment o ensuring that alternatives to the car are more widely available, mainly through a radically improved public transport service and through investment in cycling and walking o improving the fuel efficiency of motorised transport through improved fleet structure, energy efficient driving and alternative technologies o strengthening institutional arrangements to deliver the targets	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Investing in our Future: A Strategic Framework for Investment in Land Transport (SFILT) – Department of Transport, Tourism and Sport	• SFILT sets out a set of priorities to guide the allocation of the State's investment to best develop and manage Ireland's land transport network over the coming decades.	The three priorities stated in SFILT are: • Priority 1: Achieve steady state maintenance (meaning that the maintenance and renewal of the existing transport system is at a sufficient level to maintain the system in an adequate condition); • Priority 2: Address urban congestion; and • Priority 3: Maximise the value of the road network. In delivering on the steady state maintenance objective set out in SFILT, the Plan includes for: • Planned replacement programme for the bus fleet operated under Public Service Obligation ("PSO") contracts; • Tram refurbishment and asset renewal in the case of light rail; and	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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		• To the extent within the Authority' remit, support for the operation of the existing rail network within the GDA.	
Delivering a Sustainable Energy Future for Ireland – The Energy Policy Framework 2007 – 2020 (2007)	• White paper setting out a framework for delivering a sustainable energy future in Ireland. • Outlines strategic Goals for: o Security of Supply o Sustainability of Energy o Competitiveness of Energy Supply	The underpinning Strategic Goals are: • Ensuring that electricity supply consistently meets demand • Ensuring the physical security and reliability of gas supplies to Ireland • Enhancing the diversity of fuels used for power generation • Delivering electricity and gas to homes and businesses over efficient, reliable and secure networks • Creating a stable attractive environment for hydrocarbon exploration and production • Being prepared for energy supply disruptions	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Adaptation Framework (NAF) 2018 and associated regional, local and sectoral adaptation plans	• NAF specifies the national strategy for the application of adaptation measures in different sectors and by local authorities in their administrative areas in order to reduce the vulnerability of the State to the negative effects of climate change and to avail of any positive effects that may occur	• Adaptation under this Framework should seek to minimise costs and maximise the opportunities arising from climate change. • Adaptation actions range from building adaptive capacity (e.g. increasing awareness, sharing information and targeted training) through to policy and finance-based actions. • Adaptation actions must be risk based, informed by existing vulnerabilities of our society and systems and an understanding of projected climate change. • Adaptation actions taken to increase climate resilience must also consider impacts on other sectors and levels of governance	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Governments White Paper 'Ireland's Transition to a Low Carbon Energy Future' (2015 – 2030)	The White Paper sets out a vision and a framework to guide Irish energy policy between now and 2030. A complete energy policy update informed by the vision to transform Ireland into a low carbon society and economy by 2050.	2030 will represent a significant milestone, meaning: • Reduced GHG emissions from the energy sector by between 80% and 95% • Ensuring that secure supplies of competitive and affordable energy remain available to citizens and businesses.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Renewable Energy Action Plan (2010)	• Sets out the Member State's national targets for the share of energy from renewable sources to be consumed in transport, electricity and heating and cooling in 2020, and demonstrates how the Member State will meet its overall national target established under the Directive.	Including Ireland's 16% target of gross final consumption to come from renewables by 2020.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Energy Efficiency Action Plan for Ireland (2009 – 2020)	• This is the second National Energy Efficiency Action Plan for Ireland.	• The Plan reviews the original 90 actions outlined in the first Plan and updates/renews/removes them as appropriate.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Wildlife Act of 1976 **Wildlife (Amendment) Act, 2000**	• The act provides protection and conservation of wild flora and fauna.	• Provides protection for certain species, their habitats and important ecosystems • Give statutory protection to NHAs • Enhances wildlife species and their habitats • Includes more species for protection	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Actions for Biodiversity (2017-2021) Ireland's National Biodiversity Plan	• Sets out strategic objectives, targets and actions to conserve and restore Ireland's biodiversity and to prevent and reduce the loss of biodiversity in Ireland and globally.	• To mainstream biodiversity in the decision-making process across all sectors. • To substantially strengthen the knowledge base for conservation, management and sustainable use of biodiversity. • To increase awareness and appreciation of biodiversity and ecosystems services. • To conserve and restore biodiversity and ecosystem services in the wider countryside.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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		• To conserve and restore biodiversity and ecosystem services in the marine environment. • To expand and improve on the management of protected areas and legally protected species. • To substantially strengthen the effectiveness of international governance for biodiversity and ecosystem services.	
National Broadband Plan (2012)	• Sets out the strategy to deliver high speed broadband throughout Ireland.	The Plan sets out: • A clear statement of Government policy on the delivery of High-Speed Broadband. • Specific targets for the delivery and rollout of high-speed broadband and the speeds to be delivered. • The strategy and interventions that will underpin the successful implementation of these targets. • A series of specific complementary measures to promote implementation of Government policy in this area.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Communities (Water Policy) Regulations of 2003 (SI 722 of 2003) **European Communities (Water Policy) Regulations of 2003 (SI 350 of 2014)** **European Communities Environmental Objectives (Surface waters) Regulations of 2009 (SI 272 of 2009)**	• Transpose the Water Framework Directive into legislation. • Outlines the general duty of public authorities in relation to water. • Identifies the competent authorities in charge of water policy (amended to Irish Water in 2013) and gives EPA and the CER the authority to regulate and supervise their actions.	• Implements River basin districts and characterisation of RBDs and River Basin Management Plans. • Requires the public to be informed and consulted on the Plan and for progress reports to be published on RBDs. • Implements a Register of protected areas, Classification systems and Monitoring programmes for water bodies. • Allows the competent authority to recover the cost of damage/destruction of status of water body. • Outlines environmental objectives and programme of measures and environmental quality standards for priority substances. • Outlines criteria for assessment of groundwater. • Outlines environmental objectives to be achieved for surface water bodies. • Outlines surface water quality standards. • Establishes threshold values for the classification and protection of surface waters against pollution and deterioration in quality.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Communities Environmental Objectives (Groundwater) Regulations of 2010 (SI 9 of 2010)	• Transpose the requirements of the Groundwater Directive 2006/118/EC into Irish Legislation.	• Outlines environmental objectives to be achieved for groundwater bodies of groundwater against pollution and deterioration in quality. • Sets groundwater quality standards. • Outlines threshold values for the classification and protection of groundwater.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Water Pollution Acts 1977 to 1990	• The Water Pollution Acts allow Local Authorities the authority regulate and supervise actions relating to water in their division.	The Water Pollution Acts enable local authorities to: • Prosecute for water pollution offences. • Attach appropriate pollution control conditions in the licensing of effluent discharges from industry, etc., made to waters. • Issue notices ("section 12 notices") to farmers, etc., specifying measures to be taken within a prescribed period to prevent water pollution. • issue notices requiring a person to cease the pollution of waters and requiring the mitigation or remedying of any effects of the pollution in the manner and within the period specified in such notices; • Seek court orders, including High Court injunctions, to prevent, terminate, mitigate or remedy pollution/its effects. • Prepare water quality management plans for any waters in or adjoining their functional areas.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Water Services Act 2007 **Water Services (Amendment) Act 2012** **Water Services Act (No. 2) 2013**	• Provides the water services infrastructure. • Outlines the responsibilities involved in delivering and managing water services. • Identifies the authority in charge of provision of water and waste water supply. • Irish Water was given the responsibility of the provision of	Key strategic objectives include: • Ensuring Irish Water delivers infrastructural projects that meet key public health, environmental and economic objectives in the water services sector. • Ensuring the provision of adequate water and sewerage services in the gateways and hubs listed in the National Spatial Strategy, and in other	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for

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	water and waste water services in the amendment act during 2013, therefore these services are no longer the responsibility of the 34 Local Authorities in Ireland.	locations where services need to be enhanced. • Ensuring good quality drinking water is available to all consumers of public and group water supplies, in compliance with national and EU drinking water standards • Ensuring the provision of the remaining infrastructure needed to provide secondary waste water treatment, for compliance with the requirements of the EU Urban Waste water Treatment Directive. • Promoting water conservation through Irish Water's Capital Investment Plan, the Rural Water Programme and other measures. • Monitoring the on-going implementation of septic tanks inspection regime and the National Inspection Plan for Domestic Waste Water Treatment Systems. • Ensuring a fair funding model to deliver water services. • Overseeing the establishment of an economic regulation function under the CER.	environmental protection and management.
Irish Water's Water Services Strategic Plan 2015 and associated Proposed Capital Investment Plan (2014-2016)	• This Water Services Strategic Plan sets out strategic objectives for the delivery of water services over the next 25 years up to 2040. It details current and future challenges which affect the provision of water services and identifies the priorities to be tackled in the short and medium term.	Six strategic objectives as follows: • Meet Customer Expectations. • Ensure a Safe and Reliable Water Supply. • Provide Effective Management of Waste water. • Protect and Enhance the Environment. • Support Social and Economic Growth. • Invest in the Future.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Raised Bog SAC Management Plan and Review of Raised Bog Natural Heritage Areas	• Aims to meet nature conservation obligations while having regard to national and local economic, social and cultural needs	• Ensure that the implications of management choices for water levels, quantity and quality are fully explored, understood and factored into policy making and land use planning. • Review the current raised bog NHA network in terms of its contribution to the national conservation objective for raised bog habitats and determine the most suitable sites to replace the losses of active raised bog habitat and high bog areas within the SAC network and to enhance the national network of NHAs.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Food Harvest 2020	• Food Harvest 2020 is a roadmap for the Irish food industry, as it seeks to innovate and expand in response to increased global demand for quality foods. It sets out a vision for the potential growth in agricultural output after the removal of milk quotas.	• Seeks for the improvement of all agricultural sectors at all levels in terms of sustainability, environmental consideration and marketing development.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Agri-vision 2015 Action Plan	Outlines the vision for agricultural industry to improve competitiveness and response to market demand while respecting and enhancing the environment	not applicable	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Rural Environmental Protection Scheme (REPS) **Agri-Environmental Options Scheme (AEOS)** **Green, Low-Carbon, Agri-environment Scheme (GLAS)**	• Agri-environmental funding schemes aimed at rural development for the environmental enhancement and protection. • GLAS is the new replacement for REPS and AEOS which are both expiring.	• Establish best practice farming methods and production methods in order to protect landscapes and maximise conservation. • Protect biodiversity, endangered species of flora and fauna and wildlife habitats. • Ensure food is produced with the highest regard to the environment. • Implement nutrient management plans and grassland management plans. • Protect and maintain water bodies, wetlands and cultural heritage.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Rural Development Programme	• The National Rural Development Programme, prepared by the Department of Agriculture, Fisheries and Food, sets out a national programme based on the EU framework for rural development and prioritises improving the competitiveness of agriculture, improving the environment and improving the	At a more detailed level, the programme also: • Supports structural change at farm level including training young farmers and encouraging early retirement, support for restructuring, development and innovation; • Aims to improve the environment, biodiversity and the amenity value of	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the

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	quality of life in rural areas	the countryside by support for land management through funds such as Natura 2000 payments etc.; and • Aims to improve quality of life in rural areas and encouraging diversification of economic activity through the implementation of local development strategies such as non-agricultural activities	objectives of the regulatory framework for environmental protection and management.
National Forestry Programme (2014-2020)	• Represents Ireland's proposals for 100% State aid funding for a new Forestry Programme for the period 2014 – 2020.	Measures include the following: • Afforestation and Creation of Woodland • NeighbourWood Scheme • Forest Roads • Reconstitution Scheme • Woodland Improvement Scheme • Native Woodland Conservation Scheme • Knowledge Transfer and Information Actions • Producer Groups • Innovative Forest Technology • Forest Genetic Reproductive Material • Forest Management Plans	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
River Basin Management Plan	• River Basin Management Plans set out the measures planned to maintain and improve the status of waters.	• Aim to protect and enhance all water bodies in the RBD and meet the environmental objectives outlined in Article 4 of the Water Framework Directive. • Identify and manages water bodies in the RBD. • Establish a programme of measures for monitoring and improving water quality in the RBD. • Involve the public through consultations.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Peatlands Strategy (2015-2025)	This Strategy aims to provide a long-term framework within which all of the peatlands within the State can be managed responsibly in order to optimise their social, environmental and economic contribution to the well-being of this and future generations.	Objectives of the Strategy: • To give direction to Ireland's approach to peatland management. • To apply to all peatlands, including peat soils. • To ensure that the relevant State authorities and state-owned companies that influence such decisions contribute to meeting cross-cutting objectives and obligations in their policies and actions. • To ensure that Ireland's peatlands are sustainably managed so that their benefits can be enjoyed responsible. • To inform appropriate regulatory systems to facilitate good decision making in support of responsible use. • To inform the provision of appropriate incentives, financial supports and disincentives where required. • To provide a framework for determining and ensuring the most appropriate future use of cutover and cutaway bogs. To ensure that specific actions necessary for the achievement of its objectives are clearly identified and delivered by those involved in or responsible for peatlands management or for decisions affecting their management.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Flood Risk Management Plans arising from National Catchment Flood Risk Assessment and Management Programme	• The national Catchment Flood Risk Assessment and Management (CFRAM) programme commenced in Ireland in 2011 and is being overseen by the Office of Public Works. The CFRAM Programme is intended to deliver on core components of the National Flood Policy, adopted in 2004, and on the requirements of the EU Floods Directive.	CFRAM Studies have been undertaken for all River Basin Districts. The studies are focusing on areas known to have experienced flooding in the past and areas that may be subject to flooding in the future either due to development pressures or climate change. Flood Risk and Hazard mapping, including Flood Extent Mapping, was finalised in 2017. The final outputs from the studies are the CFRAM Plans, finalised in 2018. The Plans define the current and future flood risk in the River Basin Districts and set out how this risk can be managed.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Draft National Bioenergy Plan 2014 - 2020	The Draft Bioenergy Plan sets out a vision as follows: • Bioenergy resources contributing to economic development and sustainable growth, generating jobs for citizens, supported by coherent policy, planning and regulation, and managed in an integrated manner.	Three high level goals, of equal importance, based on the concept of sustainable development are identified: • To harness the market opportunities presented by bioenergy in order to achieve economic development, growth and jobs. • To increase awareness of the value, opportunities and societal benefits of developing bioenergy. • To ensure that bioenergy developments do not adversely impact the environment and its living and non-living resources.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

Legislation, Plan, etc.	Summary of high-level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
Draft Renewable Electricity Policy and Development Framework (DCCAE) 2016	Goal: To optimise the opportunities in Ireland for renewable electricity development on land at significant scale, to serve both the All Island Single Electricity Market and any future regional market within the European Union, in accordance with European and Irish law, including Directive 2009/28/EC: On the promotion of the use of energy from renewable resources.	Objective: To develop a Policy and Development Framework for renewable electricity generation on land to serve both the All Island Single Electricity Market and any future regional market within the European Union, with particular focus on large scale projects for indigenous renewable electricity generation. This will, inter alia, provide guidance for planning authorities and An Bord Pleanála.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Alternative Fuels Infrastructure for the Transport Sector (DTTAS) 2017- 2030	This Framework sets targets to achieve an appropriate level of alternative fuels infrastructure for transport, which is relative to national policy and Irish market needs. Non-infrastructure-based incentives to support the use of the infrastructure and the uptake of alternative fuels are also included within the scope of the Framework.	Targets for alternative fuel infrastructure include the following: • AFV forecasts • Electricity targets • Natural gas (CNG, LNG) targets • Hydrogen targets • Biofuels targets • LPG targets • Synthetic and paraffinic fuels targets	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Food Wise 2025 (DAFM)	Food Wise 2025 sets out a ten-year plan for the agri-food sector. It underlines the sector's unique and special position within the Irish economy, and it illustrates the potential which exists for this sector to grow even further.	Food Wise 2025 identifies ambitious and challenging growth projections for the industry over the next ten years including: • 85% increase in exports to €19 billion. • 70% increase in value added to €13 billion. • 60% increase in primary production to €10 billion. • The creation of 23,000 additional jobs all along the supply chain from producer level to high-end value-added product development.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Cycle Network Scoping Study 2010	• Outlines objectives and actions aimed at developing a strong cycle network in Ireland • Sets out 19 specific objectives, and details the 109 actions, aimed at ensuring that a cycling culture is developed	• Sets a target where 10% of all journeys will be made by bike by 2020 • Proposes the planning, infrastructure, communication, education and stakeholder participations measures required to implement the initiative	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Policy Framework for Alternative Fuels Infrastructure for Transport in Ireland 2017 to 2030	• This National Policy Framework on Alternative Fuels Infrastructure for Transport represents the first step in communicating our longer-term national vision for decarbonising transport by 2050, the cornerstone of which is our ambition that by 2030 all new cars and vans sold in Ireland will be zero-emissions capable. • By 2030 it is envisaged that the movement in Ireland to electrically-fuelled cars and commuter rail will be well underway, with natural gas and biofuels developing as major alternatives in the freight and bus sectors.	This policy set out to achieve five key goals in transport: • Reduce overall travel demand • Maximise the efficiency of the transport network • Reduce reliance on fossil fuels • Reduce transport emissions • Improve accessibility to transport These goals remain the cornerstone of transport policy and are fully aligned to the objectives of this National Policy Framework.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Tourism Action Plan 2019-2021	The Tourism Action Plan 2019-2021 sets out actions that the Tourism Leadership Group has identified as priorities to be progressed until 2021 in order to maintain sustainable growth in overseas tourism revenue and employment. Each action involves specific tourism stakeholders, both in the public and private sectors, all of whom we expect to proactively work towards the completion of actions within the specified timeframe.	The Plan contains 27 actions focusing on the following areas: • Policy Context • Marketing Ireland as a Visitor Destination • Enhancing the Visitor Experience • Research in the Irish Tourism Sector • Supporting Local Communities in Tourism • Wider Government Policy • International Context • Co-ordination Structures	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Tourism Policy Statement: People, Place and Policy – Growing Tourism to 2025	The main goal of this policy statement is to have a vibrant, attractive tourism sector that makes a significant contribution to employment across the country; is economically, socially and environmentally sustainable; helps promote a positive image of Ireland overseas, and is a sector in which people want to work.	The Tourism Policy Statement sets three headline targets to be achieved by 2025: • Overseas tourism revenue of €5 billion per year • net of inflation excluding carrier receipts; • 250,000 people employed in tourism; and • 10 million overseas visitors to Ireland per year.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

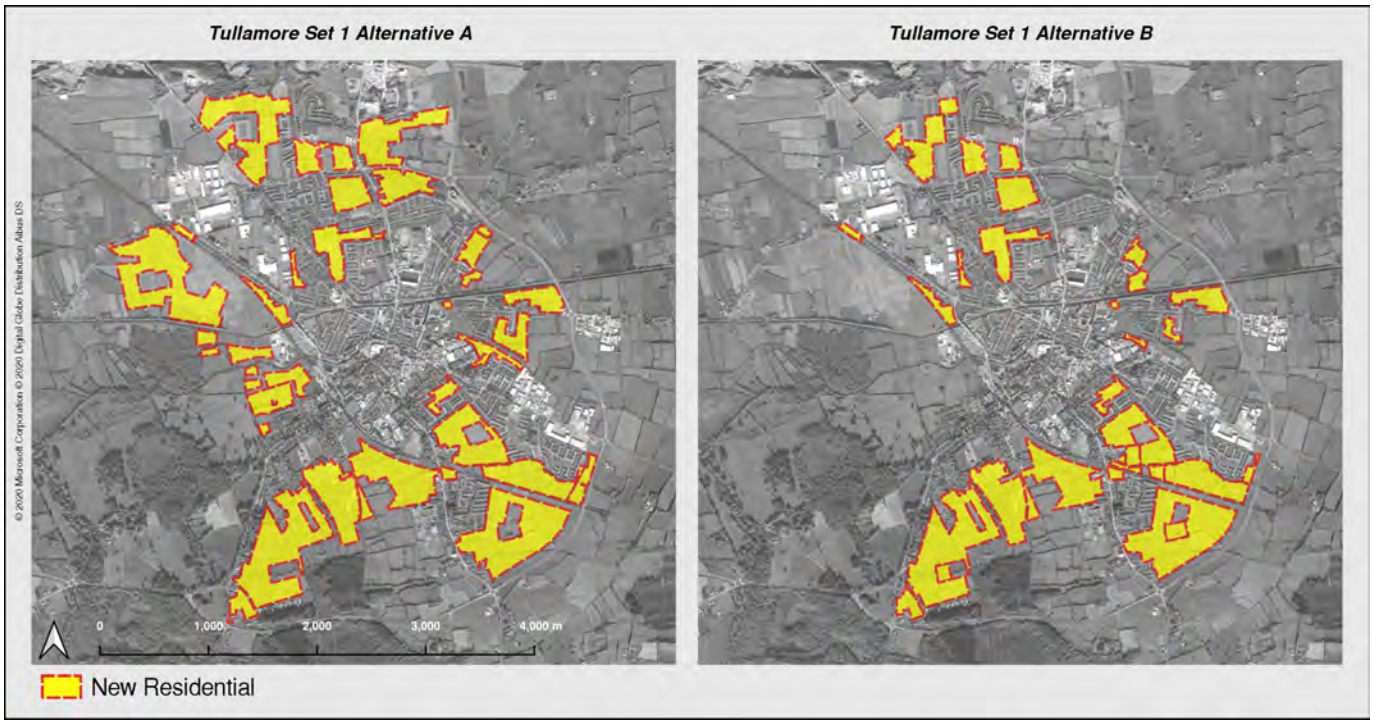
Legislation, Plan, etc.	Summary of high-level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
Draft Renewable Electricity Policy and Development Framework (DCCAE)	Goal: To optimise the opportunities in Ireland for renewable electricity development on land at significant scale, to serve both the All Island Single Electricity Market and any future regional market within the European Union, in accordance with European and Irish law, including Directive 2009/28/EC: On the promotion of the use of energy from renewable resources.	Objective: To develop a Policy and Development Framework for renewable electricity generation on land to serve both the All Island Single Electricity Market and any future regional market within the European Union, with particular focus on large scale projects for indigenous renewable electricity generation. This will, inter alia, provide guidance for planning authorities and An Bord Pleanála. Methodology: Development of the Policy and Development Framework is to be informed by the carrying out of an SEA, including widespread consultation with stakeholders and public, and with AA under the Habitats Directive.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Alternative Fuels Infrastructure for the Transport Sector (DTTAS) 2017- 2030	This Framework sets targets to achieve an appropriate level of alternative fuels infrastructure for transport, which is relative to national policy and Irish market needs. Non-infrastructure-based incentives to support the use of the infrastructure and the uptake of alternative fuels are also included within the scope of the Framework.	Targets for alternative fuel infrastructure include the following: • AFV forecasts • Electricity targets • Natural gas (CNG, LNG) targets • Hydrogen targets • Biofuels targets • LPG targets Synthetic and paraffinic fuels targets	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Regional / County / Local Level			
Eastern and Midlands Regional Economic and Spatial Strategy,	The Regional Spatial and Economic Strategy provides a long-term strategic planning and economic framework for the Eastern and Midlands Region in order to support the implementation of the National Planning Framework.	The Eastern and Midlands Regional Economic and Spatial Strategy includes provisions for its 12 constituent local authorities: Fingal County Council; Dublin City Council; South Dublin County Council; Dún Laoghaire-Rathdown County Council; Louth County Council; Kildare County Council; Meath County Council; Wicklow County Council; Longford County Council; Laois County Council; Offaly County Council; and Westmeath County Council.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Integrated Implementation Plan 2019-2024	The Transport Strategy for the Greater Dublin Area 2016-2035, which established an overall framework for transport investment over the next two decades and was subject to full SEA and Stage 2 AA, is a key policy shaping the six-year Integrated Infrastructure Plan. The priorities in the Integrated Infrastructure Plan align with the objectives and priorities set out in the Transport Strategy, focused on improving public and sustainable transport.	The Implementation Plan identifies investment proposals for a number of areas including: • Bus; • Light Rail; • Heavy Rai; • Integration Measures and Sustainable Transport Investment; • Integrated Service Plan; and • Integration and Accessibility.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
NPWS Conservation Plans and / or Conservation Objectives for SACs and SPAs	Management planning for nature conservation sites has a number of aims. These include: • To identify and evaluate the features of interest for a site • To set clear objectives for the conservation of the features of interest • To describe the site and its management • To identify issues (both positive and negative) that might influence the site • To set out appropriate strategies/management actions to achieve the objectives	• Conservation objectives for SACs and SPAs (i.e. sites within the Natura 2000 network) have to be set for the habitats and species for which the sites are selected. • These objectives are used when carrying out appropriate assessments for plans and projects that might impact on these sites.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Groundwater Protection Schemes	• A Groundwater Protection Scheme provides guidelines for the planning and licensing authorities in carrying out their functions, and a framework to assist in decision-making on the location, nature and control of developments and activities in order to protect groundwater.	• A Groundwater Protection Scheme aims to maintain the quantity and quality of groundwater, and in some cases improve it, by applying a risk assessment-based approach to groundwater protection and sustainable development.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Local Economic and Community Plans (LECPs), including the Offaly LECP 2016-2022	• The overarching vision for each LECP is: "to promote the well-being and quality of life of citizens and communities	• The purpose of the LECP, as provided for in the Local Government Reform Act 2014, is to set out, for a six-year period, the objectives and actions needed to promote and support the economic development and the local and community development of the relevant local authority area, both by itself directly and in partnership with other economic and	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the

Legislation, Plan, etc.	Summary of high-level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
		community development stakeholders.	objectives of the regulatory framework for environmental protection and management.
Land Use Plans including those in force in County Offaly (Tullamore Town and Environs Development Plan 2010-2016, extended until 2020, Birr Town and Environs Development Plan 2010, extended until 2020), and those in force in other adjoining planning authorities (including development plans for Counties Meath, Westmeath, Roscommon, Galway, Tipperary, Laois and Kildare and local plans for Portarlington, Monasterevin, Rathangan, Moate, Cloughjordan, Roscrea and Mountmellick)	• Outline planning objectives for land use development (including transport and tourism objectives). • Strategic framework for planning and sustainable development including those set out in National Planning Framework and Regional Economic and Spatial Strategies. • Set out the policies and proposals to guide development in the specific Local Authority area.	• Identify future infrastructure, development and zoning required. • Protect and enhances amenities and environment. • Guide planning authority in assessing proposals. • Aim to guide development in the area and the amount of nature of the planned development. • Aim to promote sustainable development. • Provide for economic development and protect natural environmental, heritage.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Offaly Tourism Statement of Strategy 2017-2022	• The Vision: to maximise sustainable tourism product development opportunities and to develop Offaly as a quality tourism destination steeped in treasures of culture and heritage and renowned for open spaces and welcoming people.	• This Vision will be delivered through, inter alia, measures relating to product development and marketing and promotion.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Offaly Heritage Plan 2017-2021	• Aim to highlight the importance of heritage at a strategic level. Aim to protect, conserve, enhance and restore biodiversity and ecosystem services across all spectrums	• Manage and promote heritage as well as increase awareness. Aim to conserve and protect heritage. Outline the status of biodiversity and identifies species of importance. Outline objectives and targets to be met to maintain and improve biodiversity. Aims to increase awareness.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Eastern & Midlands Regional Waste Management Plan 2015-2021	These plans give effect to national and EU waste policy, and address waste prevention and management (including generation, collection and treatment) over the period 2015-2021.	• To manage wastes in a safe and compliant manner, a clear strategy, policies and actions are required.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Offaly Noise Action Plan 2018-2023	Noise Action Plans are prepared in accordance with the requirements of the Environmental Noise Regulations 2006, Statutory Instrument 140 of 2006. These Regulations give effect to the EU Directive 2002/49/EC relating to the assessment and management of environmental noise. This Directive sets out a process for managing environmental noise in a consistent manner across the EU and the Noise Regulations set out the approach to meeting the requirements of the Directive in Ireland.	The main purpose of Noise Action Plans is to: • Inform and consult the public about noise exposure, its effects and the measures which may be considered to address noise problems Address strategic noise issues by requiring competent authorities to draw up action plans to manage noise issues and their effects Reduce noise, where possible, and maintain the environmental acoustic quality where it is good	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Offaly Climate Change Adaptation Strategy 2019-2024	Respond to the impact that climate change is having, and will continue to have. Attempt to climate change adaptation and mitigation.	These Plans include actions for: • Energy and Buildings, Transport, Flood Resilience, Nature-Based Solutions and Resource Management	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

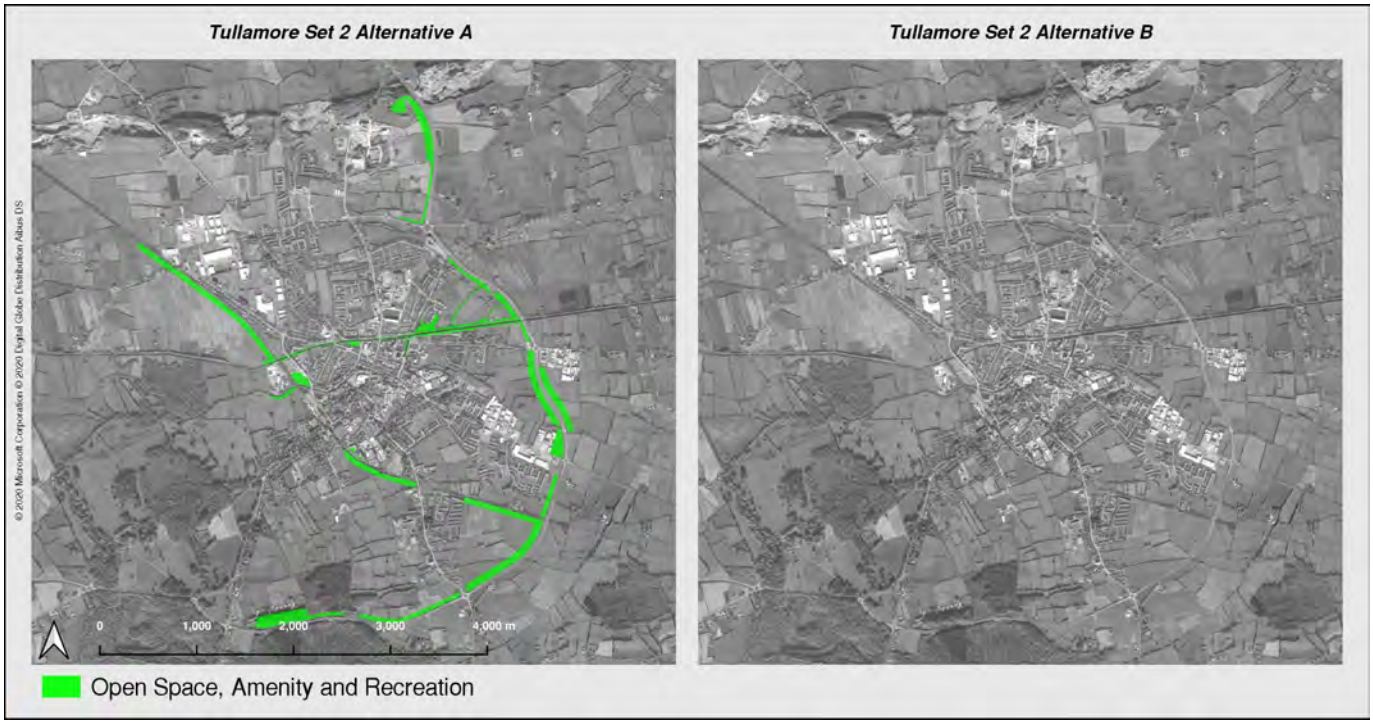
Legislation, Plan, etc.	Summary of high-level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
Fáilte Ireland Tourism plans, strategies, including those relating to the Ireland's Ancient East and Hidden Heartlands brands	Fáilte Ireland's work includes preparing various plans and strategies for Ireland's Hidden Heartlands, the Wild Atlantic Way, Ireland's Ancient East and other brands and initiatives. These plans are subject to their own environmental assessment processes and any project arising is required to be consistent with and conform with the provisions of all adopted/approved Statutory Policies, Strategies, Plans and Programmes, including provisions for the protection and management of the environment.	Some of Fáilte Ireland's plans and strategies include various projects relating to land use and infrastructural development, including those relating to development of land or on land and the carrying out of land use activities. Many of these projects exist already while some are not currently in existence. The Statutory Policies, Strategies, Plans and Programmes that provide for different projects undergo a variety of environmental assessments. These assessments ensure that environmental effects are considered, including: those arising from new and intensified uses and activities; and those arising from various sectors such as tourism.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection.
Various existing, planned and emerging projects provided for by the above plans and programmes	These projects have been provided for by higher-level plans and programmes.	These projects will contribute towards the development of the area to which the Plan relates and/or wider area and will contribute towards environmental protection and management.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

Appendix II Indicative Mapping of Land Use Zoning Alternatives

Tullamore Set 1 of 2

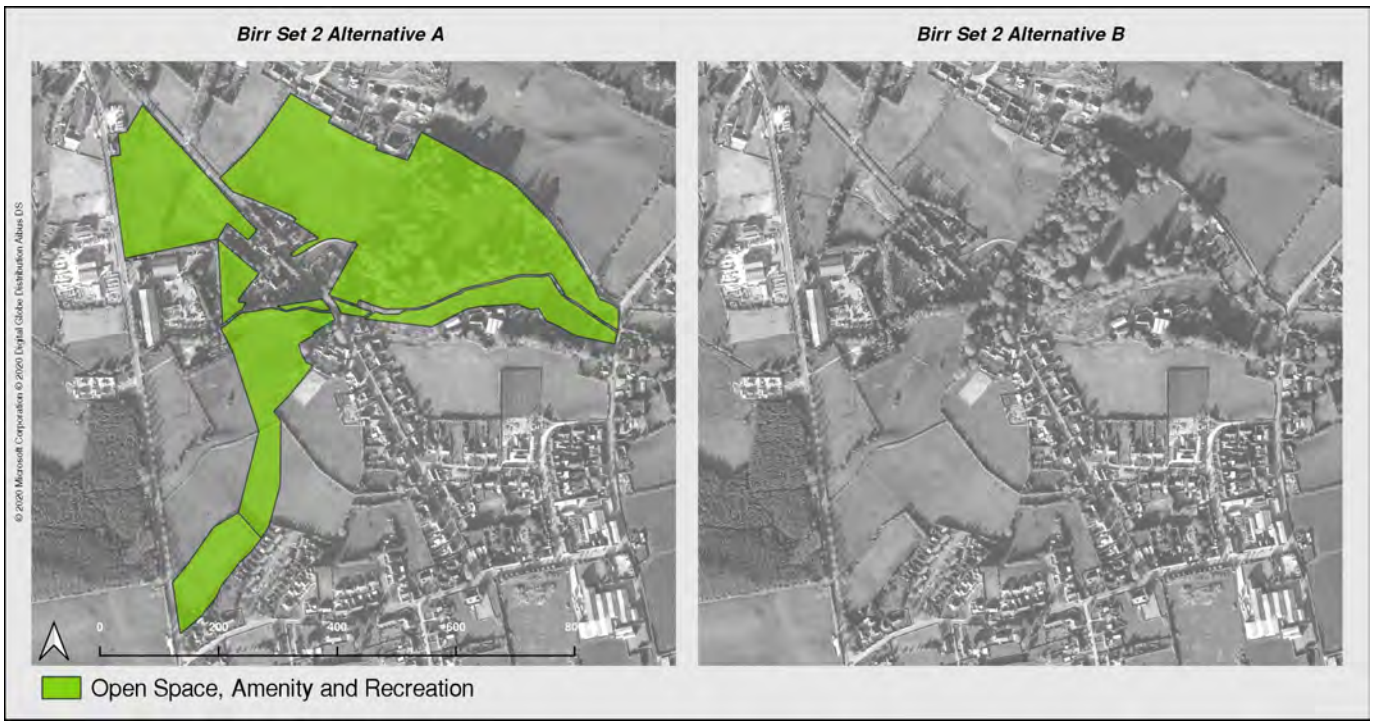


Tullamore Set 2 of 2

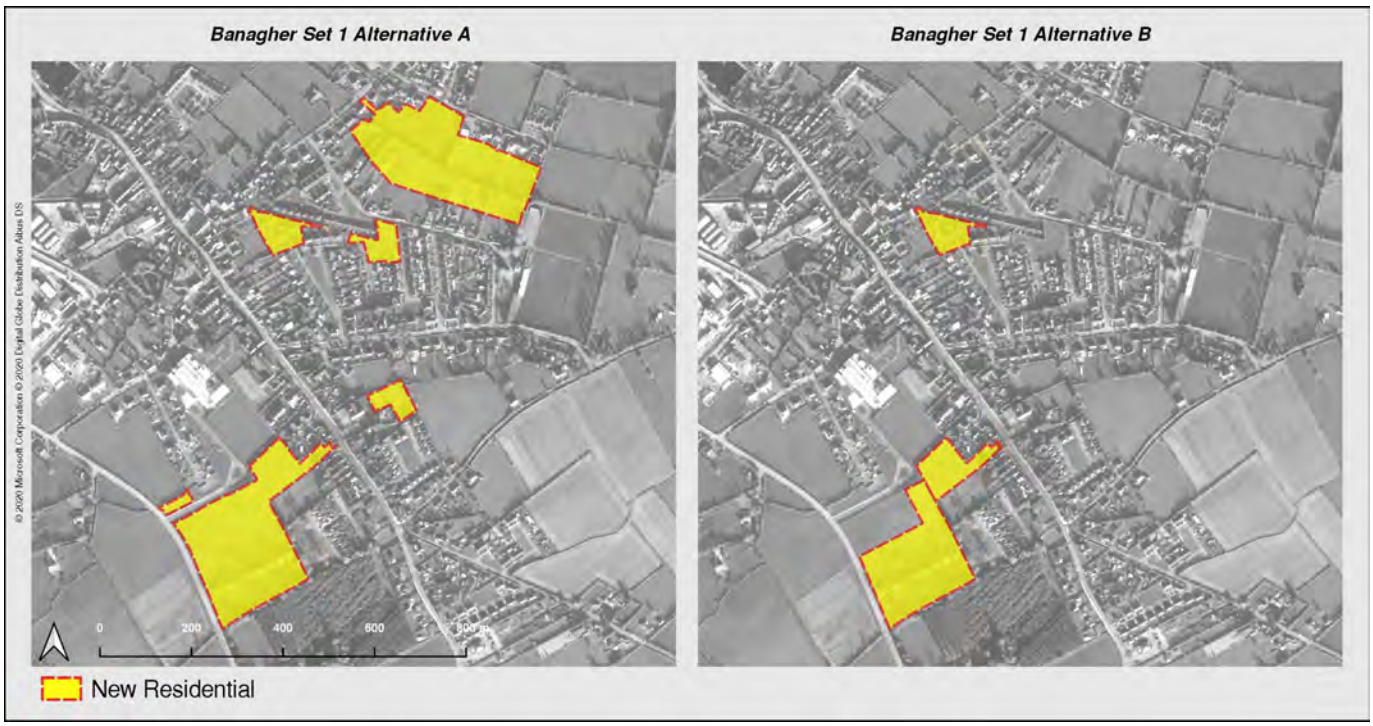


Birr, including Crinkill Set 1 of 2

Birr, including Crinkill Set 2 of 2



Banagher Set 1 of 1

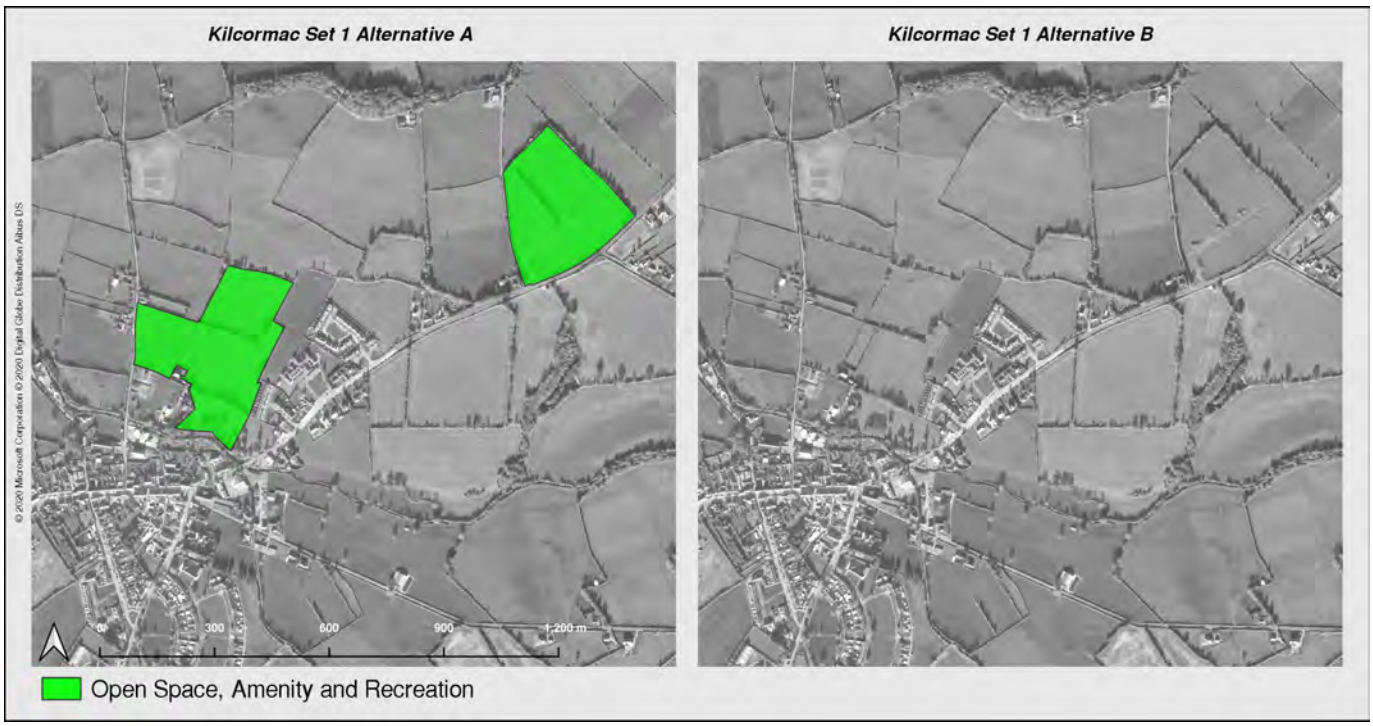


Clara Set 1 of 1

Daingean Set 1 of 1

Ferbane Set 1 of 1

Kilcormac Set 1 of 1



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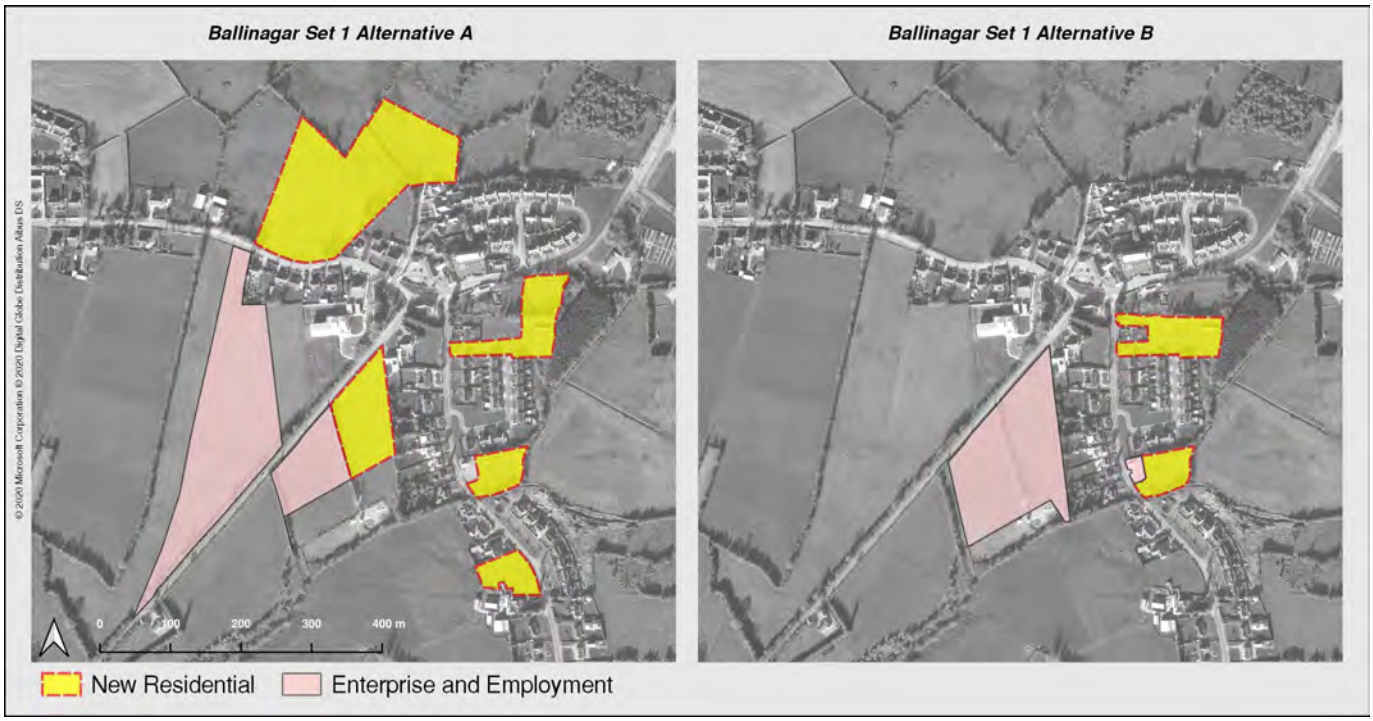

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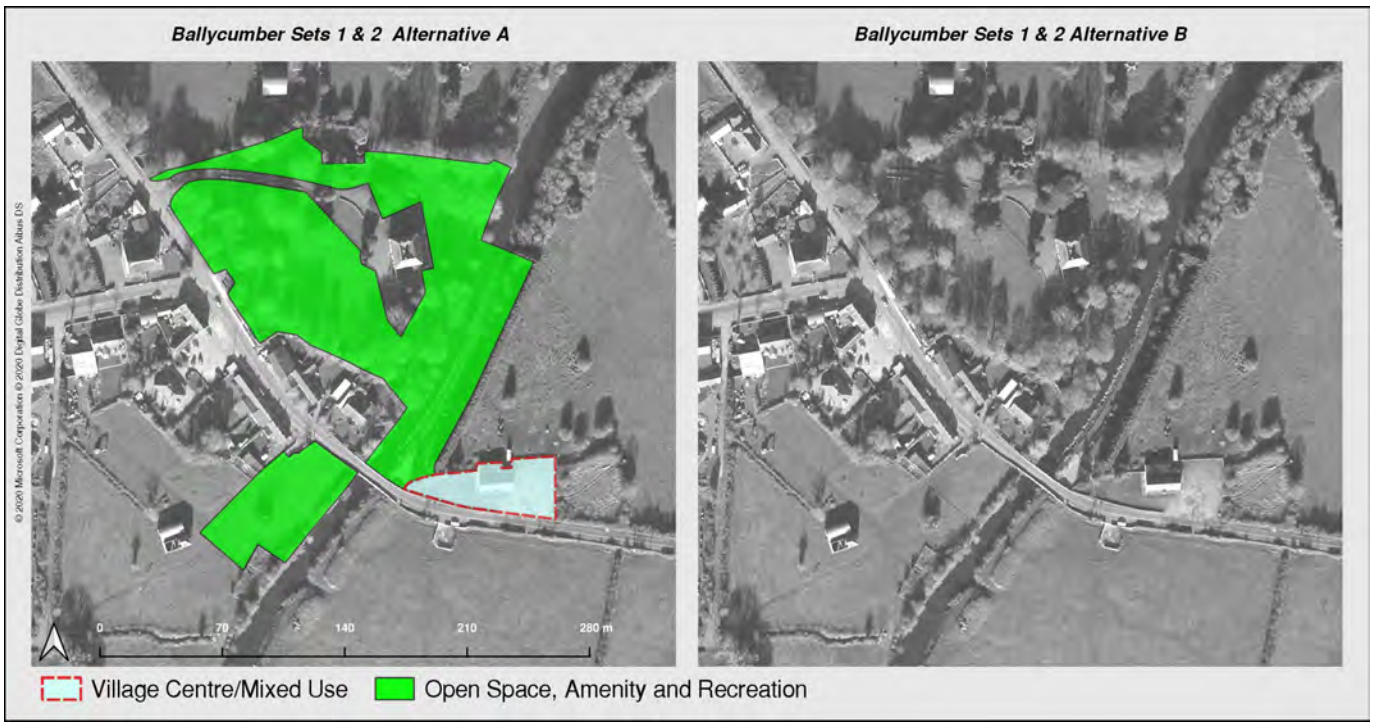


Belmont Set 1 of 1

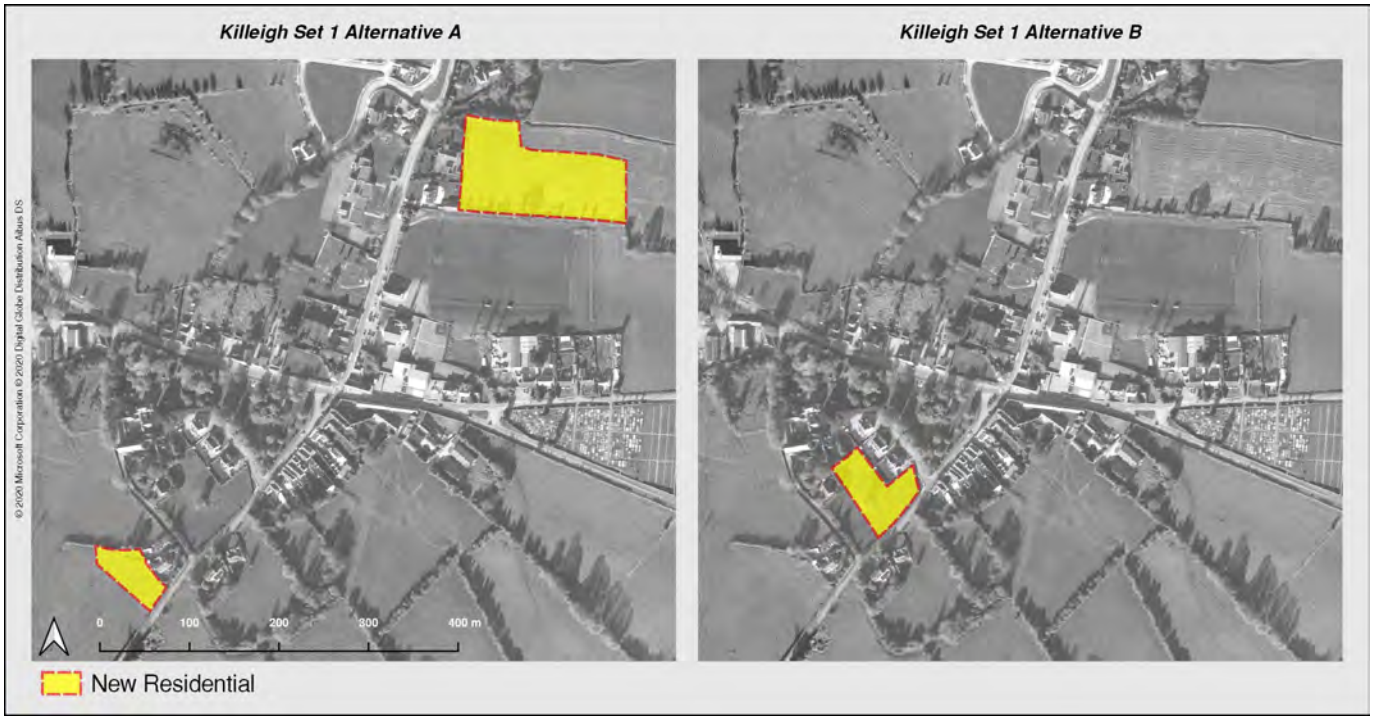
Cloghan Set 1 of 1

Clonbullogue Set 1 of 1

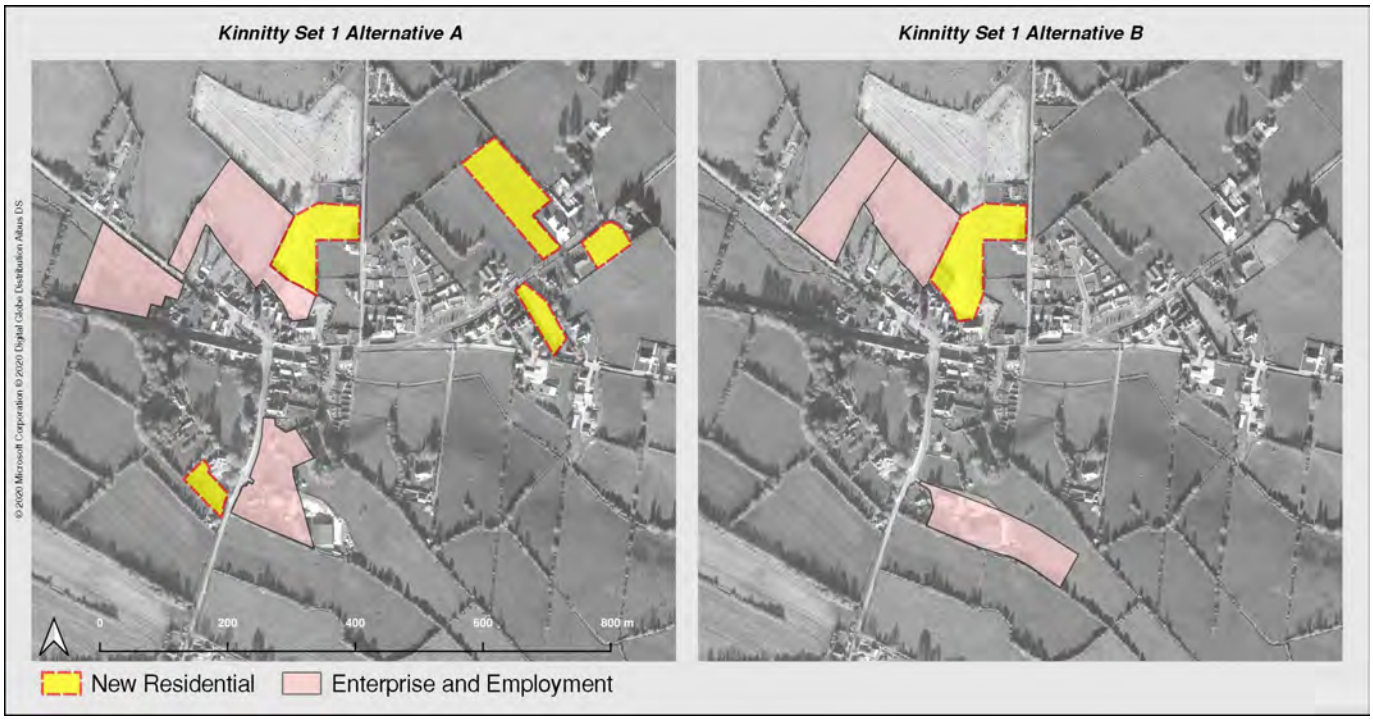
Coolderry Set 1 of 1

Geashill Set 1 of 1

Killeigh Set 1 of 1



Kinnitty Set 1 of 2



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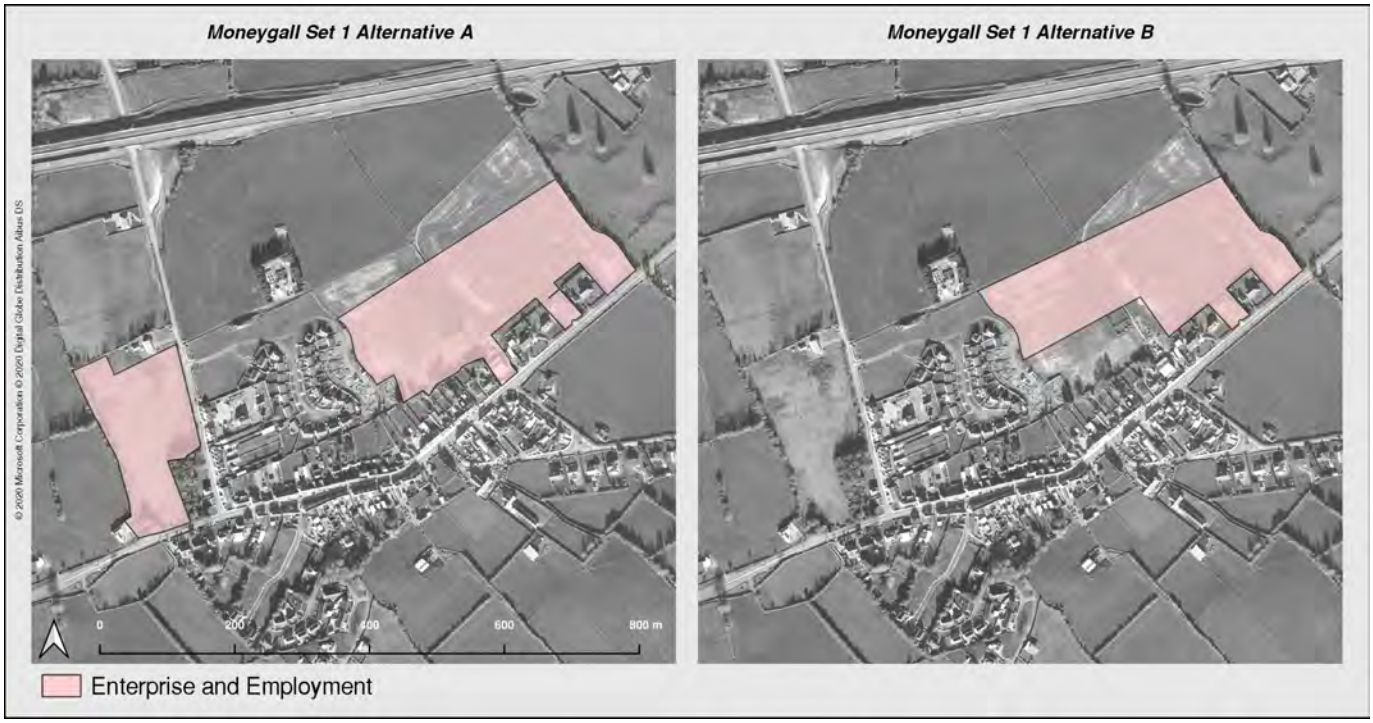
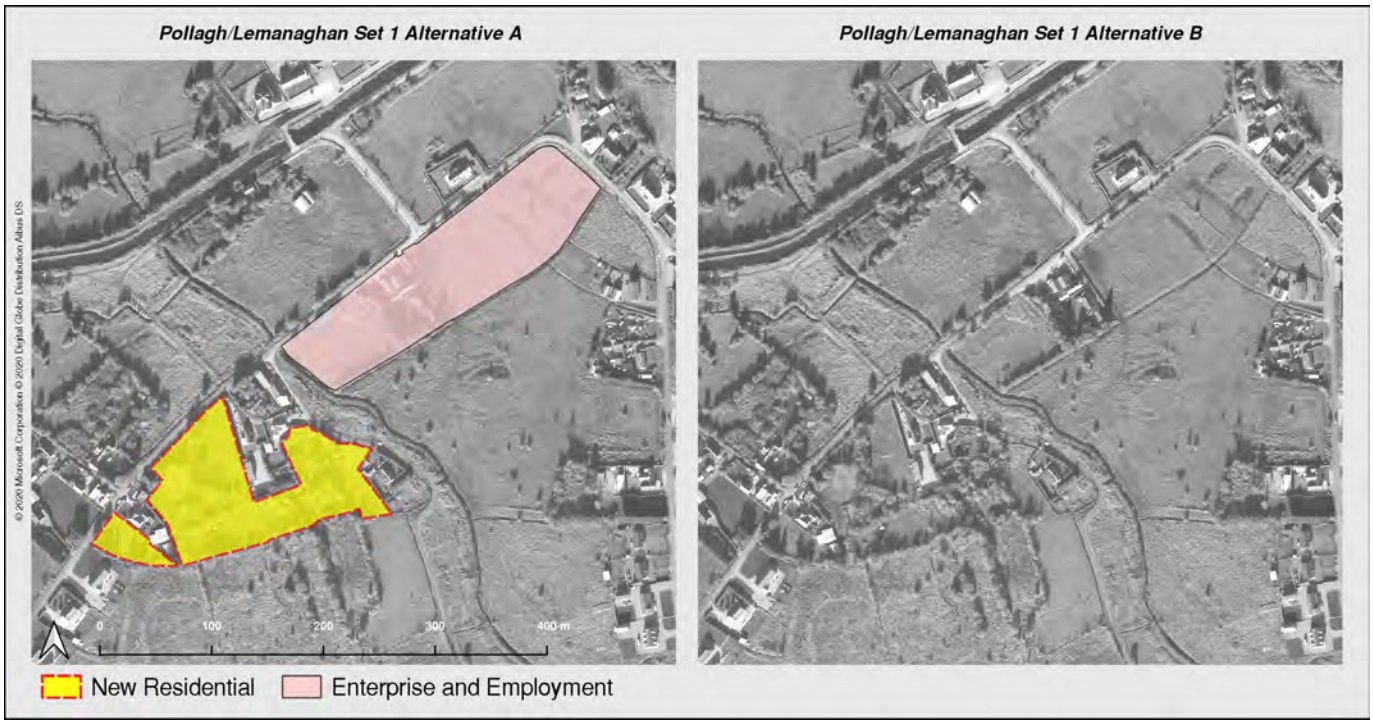
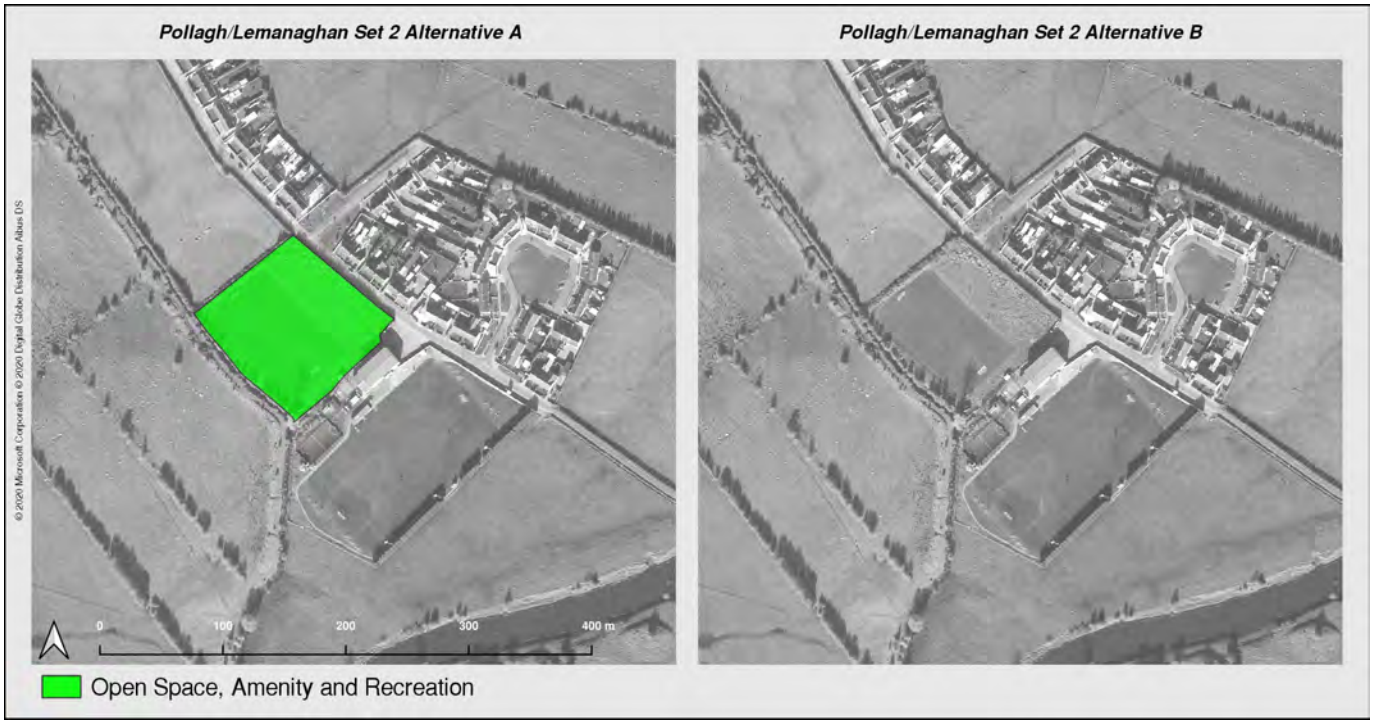


Mucklagh Set 1 of 1

Pollagh/Lemanaghan Set 1 of 1

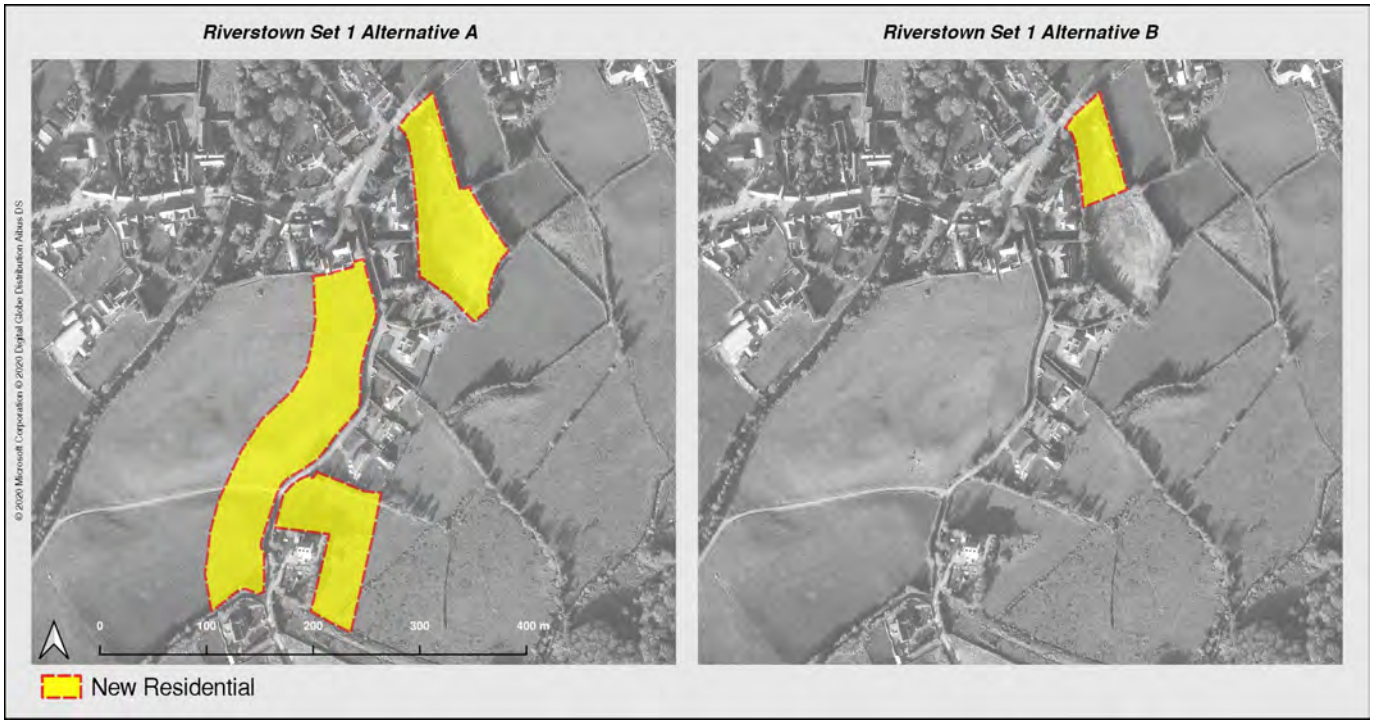


Pollagh / Lemanaghan Set 2 of 2

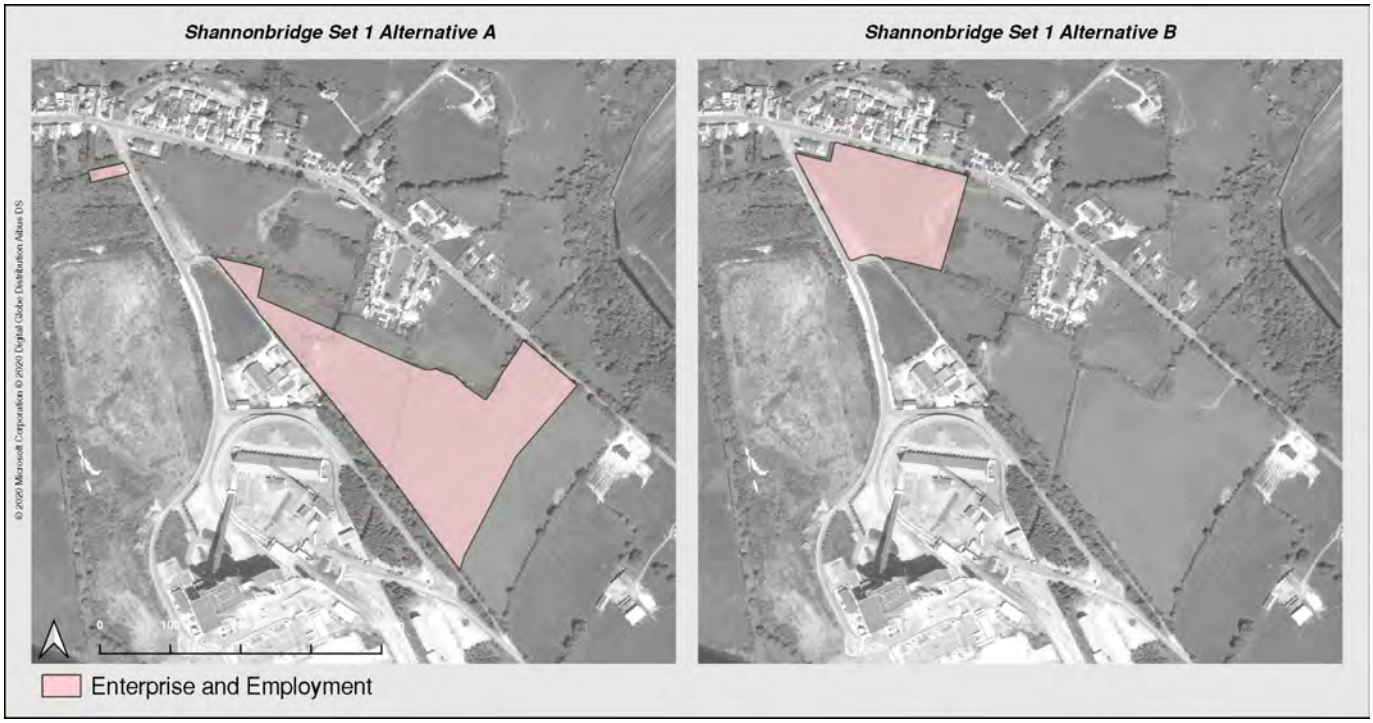


Rhode Set 1 of 1

Riverstown Set 1 of 1



Shannonbridge Set 1 of 1



Shinrone Set 1 of 1

Walsh Island Set 1 of 1

Appendix III SEA Screening Report

STRATEGIC ENVIRONMENTAL ASSESSMENT SCREENING REPORT

FOR

PROPOSED MATERIAL ALTERATIONS

TO THE

DRAFT OFFALY COUNTY DEVELOPMENT PLAN 2021-2027

for: **Offaly County Council**

Áras an Chontae
Charleville Road
Tullamore
County Offaly

by: **CAAS Ltd.**

1st Floor
24-26 Ormond Quay Upper
Dublin 7

JUNE 2021

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Section 1 Introduction and Background

1.1 Introduction

This is the Strategic Environmental Assessment (SEA) Screening Report for the Proposed Material Alterations to the Draft Offaly County Development Plan (CDP) 2021-2027.

SEA is the formal, systematic evaluation of the likely significant environmental effects of implementing a plan or programme, or alteration to a plan or programme, before a decision is made to adopt it. The SEA Directive[1] requires, inter alia, that SEA is undertaken for certain plans, programmes or alterations to these. Screening is the process for deciding whether a particular plan - or alteration to a plan -, other than those for which SEA is mandatory, would be likely to have significant environmental effects, and would thus warrant SEA.

The purpose of this report is to inform whether or not to undertake SEA on the Proposed Material Alterations to the Offaly CDP. Requirements in relation to the screening of Proposed Material Alterations to CDPs are provided under Section 12 (7) of the Planning and Development Act 2000 as amended.

This report should be read in conjunction with the CDP and all other associated documents including the:

- Proposed Material Alterations to the Draft Offaly County Development Plan 2021-2027;
- Appropriate Assessment (AA) Natura Impact Report (including information on AA Screening) for Proposed Material Alterations to the Draft Offaly CDP 2021-2027.
- SEA Environmental Report for the Draft Offaly CDP 2021-2027;
- AA Natura Impact Report for the Draft Offaly CDP 2021-2027; and
- AA Screening Report for Proposed Material Alterations to the Draft Offaly CDP 2021-2027.

1.2 Process so far

The CDP has been progressed to date in compliance with Section 12 of the Planning and Development Act 2000 as amended.

SEA[2] was undertaken on and informed the CDP in order to comply with the SEA Directive and transposing Regulations – the SEA Environmental Report that accompanied the CDP on public display contains the findings of the assessment.

AA[3] was also undertaken on the CDP (informing both the CDP and the SEA) in order to comply with the Habitats Directive and transposing Regulations. An AA Natura Impact Report was prepared that contains the findings of this assessment.

The CDP associated SEA and AA documents were placed on public display and submissions were invited. Submissions were responded to in a Chief Executive's Report and Elected Members decided upon Proposed Material Alterations to the CDP and these are the subject of this report.

[1] Directive 2001/42/EC of the European Parliament and of the Council of Ministers, of 27th June 2001, on the Assessment of the Effects of Certain Plans and Programmes on the Environment

[2] Strategic Environmental Assessment is the formal, systematic evaluation of the likely significant environmental effects of implementing a plan or programme, or alteration to a plan or programme, before a decision is made to adopt it.

[3] Appropriate Assessment is an impact assessment process concerning European Sites designated on foot of habitats and species.

1.3 SEA Environmental Report (July 2020)

The SEA Environmental Report for the CDP contains the information specified in Annex I of the SEA Directive and Schedule 2B of the Planning and Development (SEA) Regulations 2004 (S.I. 436 of 2004) as amended by the Planning and Development (SEA) (Amendment) Regulations 2011 (S.I. 201 of 2011). The relevant sections of the SEA Environmental Report that address these information requirements are detailed on Table 1.1 below.

The assessment undertaken on relevant Proposed Material Alterations (the findings of which are presented later in this document) has used the information contained in the SEA Environmental Report.

Table 1.1 Information contained within the SEA Environmental Report that accompanies the County Development Plan

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

Section 2 SEA Screening

2.1 Introduction

The section examines whether each Proposed Material Alteration to the CDP would be likely to have significant environmental effects (and thus would warrant the undertaking of SEA).

This examination takes account of relevant criteria set out in Schedule 2A *'Criteria for determining whether a plan is likely to have significant effects on the environment'* of the Planning and Development (SEA) Regulations, as amended, (see Section 2.5).

2.2 Strategic Flood Risk Assessment

SFRA is being undertaken to inform the preparation of the Draft Plan and the Proposed Material Alterations.

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).

As Rahan is proposed to be changed from a Sráid to a Village, land use zoning is included in the Proposed Material Alterations, necessitating groundtruthing of flood risk indicators and the delineation of Flood Zones at this settlement. This mapping is provided at Appendix I of this report. In addition to the map for Rahan, a revised Flood Zone map is also provided for Moneygall as time constraints in advance of public display of the Draft Plan meant that the groundtruthing of flood indicators was not previously possible at this settlement.

2.3 Appropriate Assessment

AA is an impact assessment process concerning *Natura 2000,* or *European,* sites - these sites have been designated or proposed for designation by virtue of their ecological importance. The Habitats Directive[4], its transposing Birds and Natural Habitats Regulations 2011 (as amended) and the Planning and Development Act 2000 (as amended) provide the requirement to screen for effects on European Sites. If the effects are deemed to be *significant, potentially significant or uncertain* then Stage 2 AA must be undertaken.

The County Development Plan is being subject to Stage 2 AA and a Draft Natura Impact Report was placed on public display alongside the Draft Plan. At adoption of the Plan, the Natura Impact Report will be finalised and an AA determination made by the Council.

An AA screening process has been undertaken on the Proposed Material Alterations. This process has determined that Stage 2 AA for certain Alterations is necessary. An AA Natura Impact Report contains the findings of this assessment for the Proposed Material Alterations, has informed this SEA Screening Report and accompanies the Proposed Material Alterations.

2.4 Screening Analysis of Individual Proposed Material Alterations

The analysis of individual Proposed Material Alteration is undertaken considering interactions Strategic Environmental Objectives (see Table 2.1). Table 2.2 examines whether each part of the Proposed Material Alterations would be likely to have significant environmental effects (and thus would warrant the undertaking of SEA).

[4] Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora

Table 2.2 is supplemented by Table 2.3 which provides details on:

- The likely significant effects of implementing the Draft Plan, if unmitigated;
- Key mitigation measure(s) that are already contained within the Draft Plan; and
- Residual non-significant adverse effects arising from the Draft Plan.

Effects encompass the full range of effects[5], including those arising cumulatively – such as those potentially arising as a result of interactions with other plans and programmes.

The examination of Proposed Material Alterations also takes into account relevant criteria set out in Schedule 2A *'Criteria for determining whether a plan is likely to have significant effects on the environment'* of the SEA Regulations, as amended, (see Section 2.5).

Table 2.1 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	• 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	• 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	• 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	• 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	• 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

[5] These include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
Air	**A**	Support clean air policies that reduce the impact of air pollution on the environment and public health	• 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	• 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
Cultural Heritage	**CH**	Safeguard cultural heritage features and their settings through responsible design and positioning of development	• Protect places, features, buildings and landscapes of cultural, archaeological or architectural heritage
Landscape	**L**	Protect and enhance the landscape character	• To implement the Plan's framework for identification, assessment, protection, management and planning of landscapes having regard to the European Landscape Convention

Table 2.2 Screening Analysis of Individual Proposed Material Alterations[6]

Ref **SEA Screening Consideration**

1 This alteration would further contribute towards provisions related to this sector/topic that are already contained within the Draft Plan. 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, it is determined that all potential effects arising from this Proposed Alteration: either are present already (beneficial) and will be further contributed towards; and/or will be mitigated so as not to be significant (adverse). **Consequently, SEA is not required.** Refer also to Table 2.3 and Section 2.5.

2 A future assessment/feasibility study would not result in different environmental outcomes or effects. **Consequently, SEA is not required.** Was such an assessment to be followed by recommendations, such as varying the Plan, such recommendations would have to be subject to SEA and AA screening and other requirements as appropriate.

3 The update to terminology/language/wording would not change the effects arising from the Plan. As such, this alteration would not be considered as being likely to result in significant environmental effects. **Consequently, SEA is not required.**

4 This Proposed Alteration relates to Plan text that sets the context for, summarises and/or provides clarification to Plan provisions. It does not interact with existing Plan provisions to an extent that it would have additional significant environmental effects. **Consequently, SEA is not required.**

5 This amendment adds more detail but would not have additional significant environmental effects. **Consequently, SEA is not required.**

6 This Proposed Alteration provides consistency with other parts of the Plan and/or with the wider planning and policy framework. It would not interact with Plan provisions to the extent that it would have environmental effects. **Consequently, SEA is not required.**

7 Removal of this provision would remove the potential for any environmental effects; however, removal of the provision would not be likely to result in any environmental effects. **Consequently, SEA is not required.**

8 There is no planning justification for these Proposed Alterations, they would not align with objectives relating to sustainable development, relate to greenfield lands in many cases and would present additional, unnecessary and potentially significant adverse effects on various environmental components. Potentially significant adverse effects, alone and/or in-combination with other similar changes alterations to zoning, would be likely to include:

- Effects on ecology and ecological connectivity
- 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 beyond the established settlement envelope, potentially significant adverse effects would be likely to include:

- 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

Taking into account the above, SEA is required.

9 As this alteration could potentially impact upon the protection of a European site, Stage 2 AA is required. Consequently, **SEA is advised as prudent.**

10 With regard to changing Daingean, Ferbane and Kilcormac from Towns to Small Towns, this part of the alteration would further contribute towards provisions related to these towns already contained within the Draft Plan. 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, it is determined that all potential effects arising from this Proposed Alteration: either are present already (beneficial) and will be further contributed towards; and/or will be mitigated so as not to be significant (adverse).

With regard to the amendment of Rahan's typology from a Sráid to a Village, as identified in the Chief Executive's Report:

> "For the purpose of the county development plan settlement hierarchy, the distinction made between Villages and Sráids is that Villages are serviced by mains wastewater treatment, whereas Sráids are not. Without mains wastewater treatment, a settlement is dependent on individual on-site effluent treatment systems and therefore cannot develop at a sustainable rate. Rahan has no mains wastewater treatment plant. College View housing estate is served by a shared septic tank system and the remainder of the properties in the Sráid have individual effluent treatment systems.
>
> The policy approach for Sráids is the promotion of balanced sustainable development, in an incremental and consolidated manner with the emphasis on small scale development over a medium to long term period, in keeping with the character of the settlement. The Rahan Sráid Plan includes a variety of objectives to support local facilities and amenities, including the development of facilities to improve tourism potential (see also response to Submissions Ref. CDP/D/28).
>
> It is recommended that Rahan is designated as a Sráid under the county settlement hierarchy, thus no change to the draft Plan."

Taking the above into account, there is potential for significant adverse environmental effects, including on water resources, ecology and human health, to occur as a result of lack of water services infrastructure. **Consequently SEA is required.**
Refer also to Table 2.3 and Section 2.5.

11 This is provided for elsewhere in the Plan. **Consequently, SEA is not required.**

12 This Alteration would not provide the most evidence-based framework for development and has the potential to:

- Undermine and negate practical measures to reduce greenhouse gas emissions climate change in compliance with high-level climate action policy; and
- Restrict the potential for wind energy development in the County, which is contrary to national energy policy that supports reductions in the reliance on fossil fuels and the development of renewable energy resources including wind energy infrastructure.

Consequently SEA is required.

13 This alteration would reduce the protection of architectural heritage by removing a structure that merits inclusion on the Record of Protected Structures from this list.
Consequently SEA is required.

14 This Proposed Alteration would further contribute towards provisions related to this sector already included within the Draft Plan. Taking into account the measures that have been already integrated into the Draft Plan, it is determined that all potential effects arising from this Proposed Alteration are present already (beneficial) and will be further contributed towards; or will be mitigated so as not to be significant (adverse). Refer also to Table 2.3 and Section 2.5.
As this alteration could be considered mitigation with the objective of protecting a European site(s), Stage 2 AA is required.
Taking all of the above into account and taking a precautionary approach, **SEA is advised as prudent.**

Alteration Ref.	Screening Consideration Ref.	Alteration Ref.	Screening Consideration Ref.	Alteration Ref.	Screening Consideration Ref.	Alteration Ref.	Screening Consideration Ref.	Alteration Ref.	Screening Consideration Ref.	Alteration Ref.	Screening Consideration Ref.	Alteration Ref.	Screening Consideration Ref.
MA1	4, 6	MA65	1,6	MA129	1	MA193	1	MA257	1	MA321	1	MA385	7
MA2	4, 6	MA66	1	MA130	3	MA194	1	MA258	1	MA322	1	MA386	1
MA3	4, 6	MA67	1	MA131	1	MA195	1	MA259	11	MA323	3	MA387	1

[6] For detail on Proposed Material Alterations please refer to Proposed Material Alterations document.

Alteration Ref.	Screening Consideration Ref.	Alteration Ref.	Screening Consideration Ref.	Alteration Ref.	Screening Consideration Ref.	Alteration Ref.	Screening Consideration Ref.	Alteration Ref.	Screening Consideration Ref.	Alteration Ref.	Screening Consideration Ref.	Alteration Ref.	Screening Consideration Ref.
MA4	3, 4	MA68	1	MA132	3	MA196	1	MA260	1, 6, 4	MA324	4	MA388	1
MA5	3	MA69	1	MA133	1	MA197	1	MA261	1	MA325	3	MA389	11
MA6	3	MA70	1	MA134	1	MA198	1	MA262	8	MA326	1	MA390	4
MA7	3	MA71	1	MA135	1	MA199	1	MA263	8	MA327	3	MA391	1
MA8	3	MA72	1	MA136	3	MA200	1	MA264	8	MA328	3	MA392	1
MA9	6	MA73	1	MA137	1	MA201	1	MA265	8	MA329	1	MA393	1
MA10	3, 5, 6	MA74	1	MA138	1	MA202	1	MA266	1	MA330	8, 9	MA394	4
MA11	3	MA75	1	MA139	3	MA203	1	MA267	1	MA331	1	MA395	8
MA12	4, 3	MA76	1	MA140	1	MA204	1	MA268	1	MA332	1	MA396	4
MA13	4	MA77	1,2	MA141	3	MA205	1	MA269	1	MA333	1	MA397	4
MA14	4	MA78	1	MA142	1	MA206	1	MA270	1	MA334	1	MA398	4
MA15	3, 4	MA79	1	MA143	11	MA207	3	MA271	1	MA335	3	MA399	4
MA16	3, 4	MA80	1	MA144	1	MA208	1,6	MA272	1	MA336	1	MA400	4
MA17	3, 4	MA81	1	MA145	1	MA209	1	MA273	1	MA337	3	MA401	8
MA18	10	MA82	1	MA146	1	MA210	1	MA274	8	MA338	3	MA402	4
MA19	1	MA83	4	MA147	3	MA211	4	MA275	1	MA339	1	MA403	10
MA20	4	MA84	4	MA148	3	MA212	3	MA276	8	MA340	3	MA404	10
MA21	4	MA85	4	MA149	3	MA213	1	MA277	8	MA341	1	MA405	10
MA22	4	MA86	1	MA150	1	MA214	4	MA278	1	MA342	1	MA406	10
MA23	1	MA87	4	MA151	1	MA215	4	MA279	11	MA343	4	MA407	1
MA24	1	MA88	4	MA152	3	MA216	1	MA280	3	MA344	1	MA408	8
MA25	1	MA89	4	MA153	1	MA217	1	MA281	3	MA345	4	MA409	8
MA26	1	MA90	4	MA154	3	MA218	1	MA282	4	MA346	4	MA410	3
MA27	10	MA91	1	MA155	1	blank	blank	MA283	1	MA347	4	MA411	1
MA28	4	MA92	1	MA156	1	MA220	1	MA284	3	MA348	1	MA412	1
MA29	4,5	MA93	3	MA157	1	MA221	6	MA285	1	MA349	8	MA413	1
MA30	10	MA94	4	MA158	1	MA222	1	MA286	3	MA350	4	MA414	1
MA31	1	MA95	1	MA159	1	MA223	1	MA287	1	MA351	4	MA415	1
MA32	3,6	MA96	3	MA160	14	MA224	1	MA288	1	MA352	8	MA416	1
MA33	10	MA97	3	MA161	1	MA225	1	MA289	3	MA353	4	MA417	1
MA34	1	MA98	1	MA162	3	MA226	1	MA290	1	MA354	1	MA418	1

Alteration Ref.	Screening Consideration Ref.	Alteration Ref.	Screening Consideration Ref.	Alteration Ref.	Screening Consideration Ref.	Alteration Ref.	Screening Consideration Ref.	Alteration Ref.	Screening Consideration Ref.	Alteration Ref.	Screening Consideration Ref.	Alteration Ref.	Screening Consideration Ref.
MA35	1	MA99	1	MA163	1	MA227	1	MA291	3	MA355	4	MA419	1
MA36	1	MA100	1	MA164	1	MA228	1	MA292	3	MA356	4	MA420	1
MA37	1	MA101	1	MA165	1	MA229	1	MA293	4	MA357	1	MA421	1
MA38	1	MA102	1	MA166	3	MA230	1,6	MA294	1	MA358	4	MA422	13
MA39	1	MA103	1	MA167	4	MA231	1,6	MA295	3	MA359	4	MA423	13
MA40	1	MA104	1	MA168	3	MA232	1,6	MA296	2	MA360	1	MA424	13
MA41	1	MA105	1	MA169	1	MA233	1,6	MA297	1	MA361	1	MA425	13
MA42	1	MA106	1	MA170	1	MA234	1,6	MA298	3	MA362	1	MA426	13
MA43	1	MA107	1	MA171	1	MA235	1,6	MA299	8	MA363	1	5 Addendums	1
MA44	1,5	MA108	14	MA172	1	MA236	1,6	MA300	1	MA364	4	MA427	4
MA45	1	MA109	14	MA173	10	MA237	1,6	MA301	1	MA365	4	MA428	4
MA46	1	MA110	1	MA174	1	MA238	1,6	MA302	3	MA366	7	MA429	4
MA47	1,6	MA111	14	MA175	4	MA239	1	MA303	1	MA367	1	MA430	1
MA48	3	MA112	1	MA176	3,6	MA240	1	MA304	3	MA368	8	MA431	1
MA49	1,4	MA113	2	MA177	3	MA241	1	MA305	3	MA369	4	blank	blank
MA50	1	MA114	3	MA178	1	MA242	1	MA306	4	MA370	4	MA433	1
MA51	3	MA115	4	MA179	1	MA243	1	MA307	1	MA371	1	MA434	3
MA52	5	MA116	1,3	MA180	3	MA244	1	MA308	3	MA372	1	MA435	14
MA53	1	MA117	1	MA181	1,6	MA245	1	MA309	1	MA373	1	MA436	6
MA54	1	MA118	3	MA182	4	MA246	1,6	MA310	1	MA374	1	MA437	14
MA55	1	MA119	1	MA183	1	MA247	1,6	MA311	3	MA375	1	MA438	4
MA56	1,5	MA120	4	MA184	4	MA248	1	MA312	1	MA376	1	MA439	3,4
MA57	1,5	MA121	3	MA185	1	MA249	1	MA313	3	MA377	1	MA440	12
MA58	1	MA122	4	MA186	1	MA250	1	MA314	1	MA378	1	MA441	1
MA59	1	MA123	4	MA187	1,6	MA251	1	MA315	1	MA379	4	MA442	1
MA60	1	MA124	1	MA188	1	MA252	1	MA316	1	MA380	1	MA443	1
MA61	1,6	MA125	1	MA189	1	MA253	1,6	MA317	1	MA381	1	MA444	refer to screening under MA440-MA443
MA62	1	MA126	1	MA190	1	MA254	1	MA318	4	MA382	1	blank	blank
MA63	1	MA127	1	MA191	1	MA255	1	MA319	3	MA383	1	blank	blank
MA64	1,5	MA128	1	MA192	1	MA256	1	MA320	1	MA384	1	blank	blank

Table 2.3 Detail of effects[7], if unmitigated, mitigation measures for potential effects and residual adverse effects

Environmental Component	Environmental Effects, in combination with the wider planning framework Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP 2018, the Eastern and Midland RSES, adjacent Development Plans and lower-tier land use plans.			Mitigation Measures, integrated into the Plan	SEO Codes
	Significant Positive Effect, likely to occur	**Potentially Significant Adverse Environmental Effects, if unmitigated**	**Likely Residual Adverse Non-Significant Effects**		
All	• All	All	• All	Chapter 8.5.4 Corridor & Route Selection Process Chapter 11.5.2 Waste Management DMO-96 CAEP-20 Chapter 12.1	
Biodiversity and Flora and Fauna	• Contribution towards protection of ecology (including designated sites, ecological connectivity, habitats) by facilitating development of lands (including those within and adjacent to the County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond. • 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 t fhat they contain.	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.	• 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).	BLP-01 BLP-02 BLP-03 BLP-04 BLP-05 BLP-06 BLP-07 BLO-02 BLO-03 BLO-04 BLP-14 BLP-15 BLP-16 BLP-17 BLP-18 BLO-08 BLO-09 BLP-19 BLP-20 BLP-21 BLO-10 BLO-11 BLP-22 BLP-23 BLP-24 BLO-12 BLO-13 BLO-14 BLO-15 BLO-16 BLO-17 BLP-30 BLP-31 BLO-18 BLO-19 ENVP-21 ENVO-13 TRP-09 BHP-34	**BFF**
Population and Human Health	• Promotion of economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management. • Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands (including those within and adjacent to the County's settlements) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the County and beyond • Contribution towards the protection of human health by facilitating development of lands (including those within and adjacent to the County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond. • Contributes towards protection of human health as a result of contributing towards the	• Potential adverse effects arising from flood events. • Potential interactions if effects arising from environmental vectors.	• Potential interactions with residual effects on environmental vectors – please refer to residual adverse effects under "Soil", "Water" and "Air and Climatic Factors" below.	ENVP-22 ENVP-15 ENVP-14 CAEP-35 CAEO-03	**PHH**

[7] Environmental effects of implementing the Plan, including in combination with the wider planning framework e.g. the National Planning Framework and associated National Development Plan 2018, the Eastern and Midlands Regional Spatial and Economic Strategy, adjacent Development Plans and lower-tier land use plans.

	protection of natural capital including environmental vectors, including air and water.				
Soil	• Contribution towards the protection of soils (including those used for agriculture) and designated sites of geological heritage by facilitating development of lands (including those within and adjacent to the County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond. • Contribution towards the protection of the environment from contamination the highest standards of remediation, and where appropriate to consultations with the EPA and other relevant bodies, will be required to resolve any instances of environmental pollution created by contaminated land.	• 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.	• Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces.	Integrated into Chapter 11.5.2 Waste Management BLP-09 BLP-10 BLP-11 BLP-12 BLP-13 BLO-05 BLO-06 BLO-07	**S**
Water	• Contribution towards the protection of water by facilitating development of lands (including those within and adjacent to the County's settlements) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond. • Contributions towards the protection of water resources including the status of surface and groundwaters and water-based designations. • Contribution towards flood risk management and appropriate drainage.	• 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.	• 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.	ENVP-01 ENVP-02 ENVP-03 ENVP-04 ENVP-05 ENVP-06 ENVP-07 ENVO-01 ENVO-02 ENVO-03 ENVO-04 CAEP-30 REDP–04 CAEP-63 CAEP-49 CAEP-50 CAEP-51 CAEP-52 CAEP-53 CAEP-54 CAEP-55 CAEP-56 CAEP-57 CAEP-58 CAEP-59 CAEO-08 CAEO-09 LUZO-14 Section 12.6.1 Constrained Land Uses DM Section 13.8.3 Flood Risk Assessment DMO-106 Flood Risk Assessments	**W**
Material Assets	• Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands (including those within and adjacent to the County's settlements) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the County and beyond. • Contribution towards compliance with national and regional water services and waste management policies. • Contribution towards increase in renewable energy use by facilitating renewable energy and electricity transmission infrastructure developments. • Contribution towards limits in increases in energy demand from the transport sector by facilitating sustainable compact growth. • Contribution towards reductions in average energy consumption per capita including promoting energy efficient buildings, retrofitting, smart buildings, cities and grids.	• 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	• 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.	WSP-01 WSP-02 WSP-03 WSP-04 WSP-05 WSP-06 WSP-07 WSP-08 WSP-09 WSP-10 WSP-11 WSP-12 WSP-13 WSP-14 WSP-15 WSP-16 WSP-17 WSP-18 WSP-19 WSP-20 WSP-21 WSP-22 WSP-23 WSP-24 WSP-25	**MA**

		secondary inorganic particulate matter.		WSO-02 WSO-03 WSO-04 WSO-05 WSO-06 WSO-07 WSO-08 WSO-09 Integrated into Chapter 11.4.2 Waste Management ENVP-08 ENVP-09 ENVP-10 ENVP-11 ENVP-12 ENVP-13 ENVO-05 ENVO-06 ENVO-07 ENVO-08 REDP–02 DMS-82 Tourist Facilities	
Air and Climatic Factors	• Contribution towards climate mitigation and adaptation by facilitating compact development of lands (including those within and adjacent to the County's settlements) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the County and beyond. • In combination with other plans, programmes etc., contribution towards the objectives of the wide policy framework relating to climate mitigation and adaptation, and associated contribution towards maintaining and improving air quality and managing noise levels, including through measures relating to: ○ Sustainable compact growth; ○ Sustainable mobility, including walking, cycling and public transport; ○ Drainage, flood risk management and resilience; ○ Sectors including agriculture, residential heating and infrastructure; ○ Sustainable infrastructure design solutions including energy efficient buildings; green infrastructure).	• 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.	• 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.	ENVP-16 ENVP-17 ENVP-18 ENVO-09 ENVO-10 ENVO-11 ENVO-12 ENVP-19 ENVP-20 CAEP-04 CAEP-05 CAEP-06 CAEP-07 CAEP-08 CAEP-09 CAEP-10 CAEP-11 CAEP-12 CAEP-18 CAEP-19 CAEP-60 CAEP-16 REDP-12 REDP–13 REDP–14 REDP–15 Chapter 7: Retail and Town Centre Strategy and Regeneration	**AC**
Cultural Heritage	• Contributes towards protection of cultural heritage elsewhere in the County by facilitating development within existing settlements. • Contributes towards protection of cultural heritage within existing settlements by facilitating brownfield development and regeneration.	• Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities.	• Potential effects on known architectural and archaeological heritage and unknown archaeology however, these will occur in compliance with legislation.	BHP-01 BHP-02 BHP-03 BHP-04 BHP-05 BHP-06 BHP-07 BHP-08 BHP-09 BHP-10 BHP-11 BHO-01 BHO-02 BHO-03 BHP-12 BHP-13 BHP-14 BHP-15 BHP-16 BHP-17	**CH**

				BHP-18 BHP-19 BHP-20 BHP-21 BHP-22 BHP-23 BHP-24 BHP-25 BHP-26 BHP-27 BHP-28 BHP-29 BHP-30 BHP-31 BHP-32 BHP-43 BHO-04 BHP-33 BHP-34 BHP-35 BHP-36 BHP-37 BHP-38 BHP-39 BHO-05 BHP-40 BHP-41 BHP-42 BHO-06	
Landscape	• Contributes towards protection of wider landscape and landscape designations by facilitating development within existing settlements.	• Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape.	• 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.	CAEP-35 REDP–16 BLP-35 BLP-36 BLP-37 BLP-38 BLP-39 BLO-21 BLO-22 BLO-23 BLP-40 BLO-24 BLO-25 BLP-32 BLP-33 BLP-34 BLO-20	**L**

2.5 Schedule 2A

PART 1

1. *The characteristics of the plan having regard, in particular, to:* the degree to which the plan sets a framework for projects and other activities, either with regard to the location, nature, size and operating conditions or by allocating resources

The Material Alterations propose a number of text and map-based changes to the Draft Offaly County Development Plan 2021-2027.

Proposed Material Alterations identified on Table 2.4 were determined to require full SEA and these will be considered in the SEA Environmental Report.

Table 2.4 Proposed Material Alterations Requiring SEA[8]

Alteration Ref.	Screening Consideration Ref.	Alteration Ref.	Screening Consideration Ref.
MA18	10	MA352	8
MA27	10	MA368	8
MA30	10	MA395	8
MA33	10	MA401	8
MA108	14	MA403	10
MA109	14	MA404	10
MA111	14	MA405	10
MA160	14	MA406	10
MA173	10	MA408	8
MA262	8	MA409	8
MA263	8	MA422	13
MA264	8	MA423	13
MA265	8	MA424	13
MA274	8	MA425	13
MA276	8	MA426	13
MA277	8	MA435	14
MA299	8	MA437	14
MA330	8, 9	MA440	12
MA349	8	MA444	refer to screening under MA440-MA443

Taking the examination of the various other Proposed Material Alterations provided under Section 2.4 into account, arising from the degree to which these Proposed Material Alterations and the Draft County Development Plan set a framework for projects and other activities, the other Proposed Material Alterations would not be likely to result in significant environmental effects.

2. *The characteristics of the plan having regard, in particular, to:* the degree to which the plan influences other plans, including those in a hierarchy

The Material Alterations are being proposed to the Draft Plan. The Draft Plan relates to the proper planning and sustainable development of County Offaly.

[8] For detail on Proposed Material Alterations please refer to Proposed Material Alterations document.

The Proposed Material Alterations identified on Table 2.4 were determined to require full SEA and these will be considered in the SEA Environmental Report.

Taking the above and the examination of the various other Proposed Material Alterations provided under Section 2.4 into account, arising from the degree to which these Proposed Material Alterations and the Draft County Development Plan influence other plans, the other Proposed Material Alterations would not be likely to result in significant environmental effects.

3. *The characteristics of the plan having regard, in particular, to:* the relevance of the plan for the integration of environmental considerations in particular with a view to promoting sustainable development

The Draft Plan - to which the Proposed Material Alterations relate - has undergone SEA. This process integrated environmental considerations into the Plan and found that the Plan contributes to environmental protection and management and sustainable development.

The Proposed Material Alterations identified on Table 2.4 were determined to require full SEA and these will be considered in the SEA Environmental Report.

Taking the above and the examination of the various other Proposed Material Alterations provided under Section 2.4 into account, arising from the degree to which these Proposed Material Alterations and the Draft County Development Plan are relevant for the integration of environmental considerations with a view to promoting sustainable development, the other Proposed Material Alterations would not be likely to result in significant environmental effects.

4. *The characteristics of the plan having regard, in particular, to:* environmental problems relevant to the plan

Environmental problems arise where there is a conflict between current environmental conditions and legislative targets.

Through its provisions relating to environmental protection and management, the Draft Plan contributes towards ensuring that environmental conditions do not get worse and, where possible, they contribute towards its amelioration.

The Proposed Material Alterations identified on Table 2.4 were determined to require full SEA and these will be considered in the SEA Environmental Report.

Taking the above and the examination of the various other Proposed Material Alterations provided under Section 2.4 into account, arising from environmental problems relevant to these Proposed Material Alterations and the Draft County Development Plan, the other Proposed Material Alterations would not be likely to result in significant environmental effects.

5. *The characteristics of the plan having regard, in particular, to:* the relevance of the plan for the implementation of European Union legislation on the environment (e.g. plans linked to waste-management or water protection)

The Draft County Development Plan relates to the land use and town planning sector and have fulfilled requirements in relation to SEA. These processes integrated considerations with regard to EU and national legislation on the environment, including those relating to the waste management and the Water Framework Directive.

The Proposed Material Alterations identified on Table 2.4 were determined to require full SEA and these will be considered in the SEA Environmental Report.

Taking the above and the examination of the various other Proposed Material Alterations provided under Section 2.4 into account, arising from the relevance of these Proposed Material

Alterations and the Draft County Development Plan for the implementation of European Union legislation on the environment, the other Proposed Material Alterations would not be likely to result in significant environmental effects.

PART 2

1. Characteristics of the effects and of the area likely to be affected, having regard, in particular, to: the probability, duration, frequency and reversibility of the effects

SEA is determined as being required for the Proposed Material Alterations identified on Table 2.4 while other Proposed Material Alterations would not necessitate SEA as they would not be likely to result in significant environmental effects (see responses under Schedule 2A Part 1 above and the examination of the various Proposed Material Alterations provided under Section 2.4).

2. Characteristics of the effects and of the area likely to be affected, having regard, in particular, to: the cumulative nature of the effects

SEA is determined as being required for the Proposed Material Alterations identified on Table 2.4 while other Proposed Material Alterations would not necessitate SEA as they would not be likely to result in significant environmental effects (see responses under Schedule 2A Part 1 above and the examination of the various Proposed Material Alterations provided under Section 2.4).

3. Characteristics of the effects and of the area likely to be affected, having regard, in particular, to: the transboundary nature of the effects

SEA is determined as being required for the Proposed Material Alterations identified on Table 2.4 while other Proposed Material Alterations would not necessitate SEA as they would not be likely to result in significant environmental effects (see responses under Schedule 2A Part 1 above and the examination of the various Proposed Material Alterations provided under Section 2.4).

4. Characteristics of the effects and of the area likely to be affected, having regard, in particular, to: the risks to human health or the environment (e.g. due to accidents)

SEA is determined as being required for the Proposed Material Alterations identified on Table 2.4 while other Proposed Material Alterations would not necessitate SEA as they would not be likely to result in significant environmental effects (see responses under Schedule 2A Part 1 above and the examination of the various Proposed Material Alterations provided under Section 2.4).

5. Characteristics of the effects and of the area likely to be affected, having regard, in particular, to: the magnitude and spatial extent of the effects (geographical area and size of the population likely to be affected)

SEA is determined as being required for the Proposed Material Alterations identified on Table 2.4 while other Proposed Material Alterations would not necessitate SEA as they would not be likely to result in significant environmental effects (see responses under Schedule 2A Part 1 above and the examination of the various Proposed Material Alterations provided under Section 2.4).

6. Characteristics of the effects and of the area likely to be affected, having regard, in particular, to: the value and vulnerability of the area likely to be affected due to:

a) special natural characteristics or cultural heritage;

SEA is determined as being required for the Proposed Material Alterations identified on Table 2.4 while other Proposed Material Alterations would not necessitate SEA as they would not be likely to result in significant environmental effects (see responses under Schedule 2A Part 1 above and the examination of the various Proposed Material Alterations provided under Section 2.4).

b) exceeded environmental quality standards or limit values, and;

SEA is determined as being required for the Proposed Material Alterations identified on Table 2.4 while other Proposed Material Alterations would not necessitate SEA as they would not be likely to result in significant environmental effects (see responses under Schedule 2A Part 1 above and the examination of the various Proposed Material Alterations provided under Section 2.4).

c) intensive land-use.

SEA is determined as being required for the Proposed Material Alterations identified on Table 2.4 while other Proposed Material Alterations would not necessitate SEA as they would not be likely to result in significant environmental effects (see responses under Schedule 2A Part 1 above and the examination of the various Proposed Material Alterations provided under Section 2.4).

7. Characteristics of the effects and of the area likely to be affected, having regard, in particular, to: the effects on areas or landscapes which have a recognised national, European Union or international protection status

SEA is determined as being required for the Proposed Material Alterations identified on Table 2.4 while other Proposed Material Alterations would not necessitate SEA as they would not be likely to result in significant environmental effects (see responses under Schedule 2A Part 1 above and the examination of the various Proposed Material Alterations provided under Section 2.4).

Section 3 Conclusion

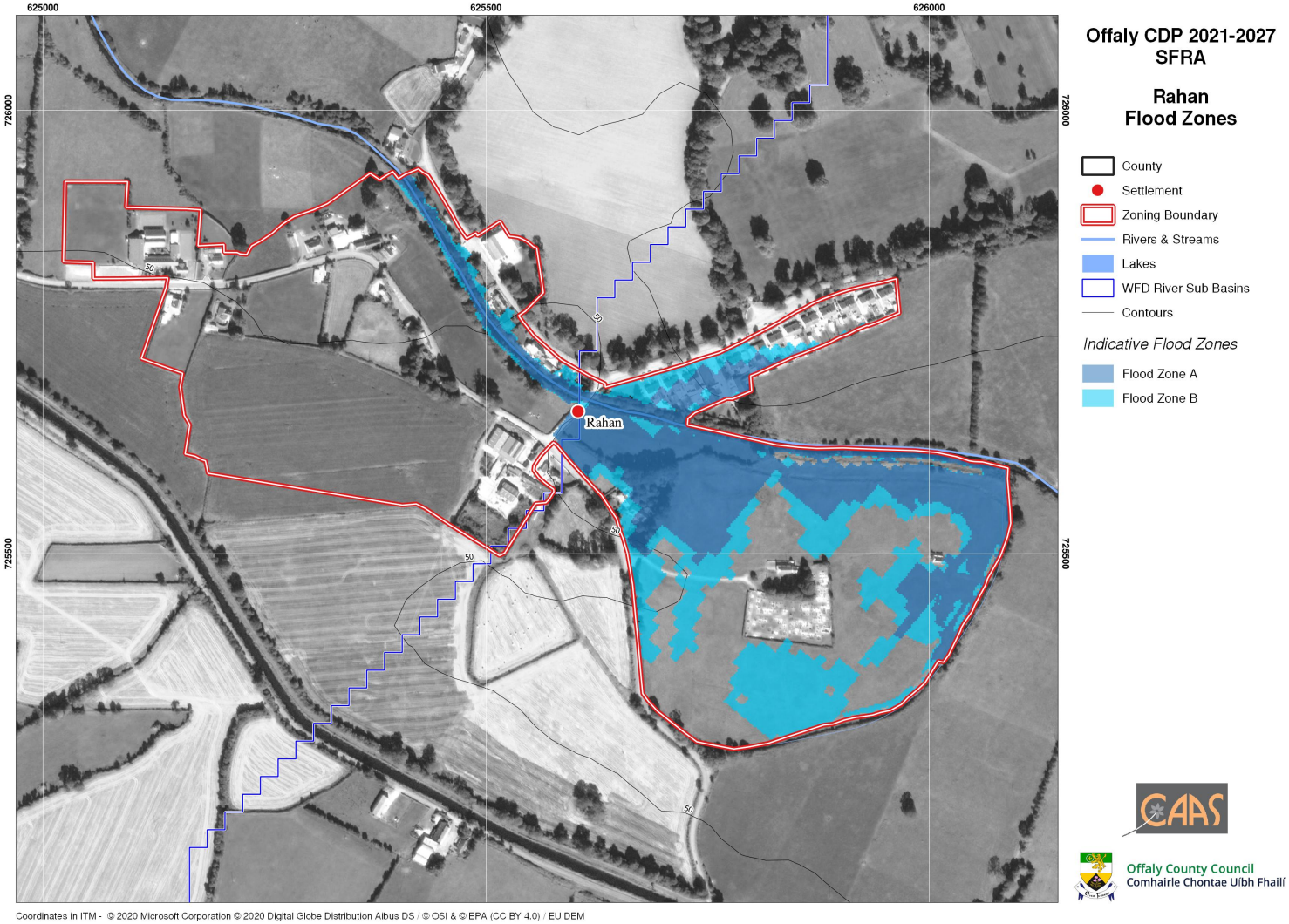
Most Proposed Material Alterations are determined not to result in likely significant effects. Taking into account the measures that have been already integrated into the Draft Plan that provide for and contribute towards environmental protection, environmental management and sustainable development, it is identified that all potential effects arising from most Proposed Alterations: either are present already (beneficial) and will be further contributed towards; or will be mitigated so as not to be significant (adverse). In addition, some alterations merely added clarifications or amended context setting text for Plan provisions and these will not result in significant environmental effects. Consequently, these Proposed Material Alterations do not require SEA.

The Proposed Material Alterations identified on Table 2.4 are advised as requiring SEA and consideration in an SEA Environmental Report.

The SEA Environmental Report prepared for the Draft Plan will be finalised in advance of adoption of the Plan an SEA Statement will be prepared following adoption, which will detail how environmental considerations were integrated into the Plan and how consultations on the SEA and associated Plan-preparation process were taken into account. The Strategic Flood Risk Assessment and the Appropriate Assessment reports will be finalised in a similar manner at adoption, taking into account how environmental considerations were integrated into the Plan and how consultations were taken into account.

Appendix I: Additional SFRA Mapping

New Flood Zone Map for Rahan



Updated, Groundtruthed Flood Zone Map for Moneygall