

SEA ENVIRONMENTAL REPORT

FOR THE

GALWAY COUNTY DEVELOPMENT PLAN 2022-2028

for: Galway County Council

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Galway



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JUNE 2022

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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
DCCA	Department of Communication, Climate Action and Environment
DCHG	Department of Culture, Heritage and the Gaeltacht
DECC	Department of Environment, Climate and Communications
DEHLG	Department of the Environment, Heritage and Local Government
DHLGH	Department of Housing, Local Government and Heritage
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
EQS	Environmental Quality Standard
EU	European Union
FPO	Flora Protection Order
GSI	Geological Survey of Ireland
GCTPS	Galway County Transport and Planning Strategy
MASP	Metropolitan Area Strategic Plan
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
POPs	Persistent Organic Pollutants
RAL	Remedial Action List
RBD	River Basin District
RMP	Record of Monuments and Places
RPA	Register of Protected Areas
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
THMs	Trihalomethanes
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WHO	World Health Organisation
WFD	Water Framework Directive
WRZ	Water Resource Zone
WWTP	Wastewater Treatment Plant

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 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 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. 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 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 Plan and the alternatives were 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 the Galway County Development Plan 2022-2028. It has been undertaken by CAAS Ltd. on behalf of Galway County Council. The purpose of this report is to provide a clear understanding of the likely environmental consequences of decisions regarding the adoption and implementation of the Plan.

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 European SEA Directive¹, which introduced the requirement that SEA be carried out on plans and programmes that are prepared for a number of sectors, including land use planning.

1.2 Implications for the Planning Authority

SEA identifies the likely significant environmental effects of implementing the Plan. The findings of the SEA are expressed in this Environmental Report, an earlier version of which accompanied the Draft Plan on public

display and has been updated following consultation, and identifies how environmental considerations were integrated into the Plan and how alternatives for the Plan were considered.

The planning authority has taken into account the findings of this report and other related SEA output during the Plan preparation process.

Following adoption of the Plan, an SEA Statement is prepared that summarises, inter alia, how environmental considerations have been integrated into the Plan.

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 Galway are shown on Figure 1.1. Further detail on the weighting applied to different sensitivities is provided under Section 4.14.

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

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, transposed into Irish Law through the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (SI No. 435 of 2004), as amended by the

European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011 (SI No. 200 of 2011), and the Planning and Development (SEA) Regulations 2004 (SI No. 436 of 2004), as amended by the Planning and Development (SEA) (Amendment) Regulations 2011 (SI No. 201 of 2011).

Lough Corrib and parts of the western half of the County (including Connemara and the coast) comprise the greatest extent of sensitive areas on account of multiple and overlapping ecological, hydrological and landscape designations, including those relating to bogs, upland and coastal areas.

Areas in close proximity to the County's border with Roscommon, Offaly and Tipperary are similarly sensitive. These areas include the water bodies of the River Shannon and Lough Derg as well as adjacent areas (sensitivities including hydrological, ecological, landscape and flood risk).

Other areas with heightened levels of sensitivities include the indented coastline to the south of Oranmore, smaller lakes in the east of the County (including Lough Cutra, Lough Rea, Coole Lough, Kiltullagh Lough and Glenamaddy Turlough) and areas to the west of Gort (sensitivities including flood risk related sensitivities).

The Plan directs incompatible development away from the most sensitive areas in the County and focuses on directing: compact, sustainable development within and adjacent to the existing built-up footprints 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 and improve services to existing and future communities.

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.

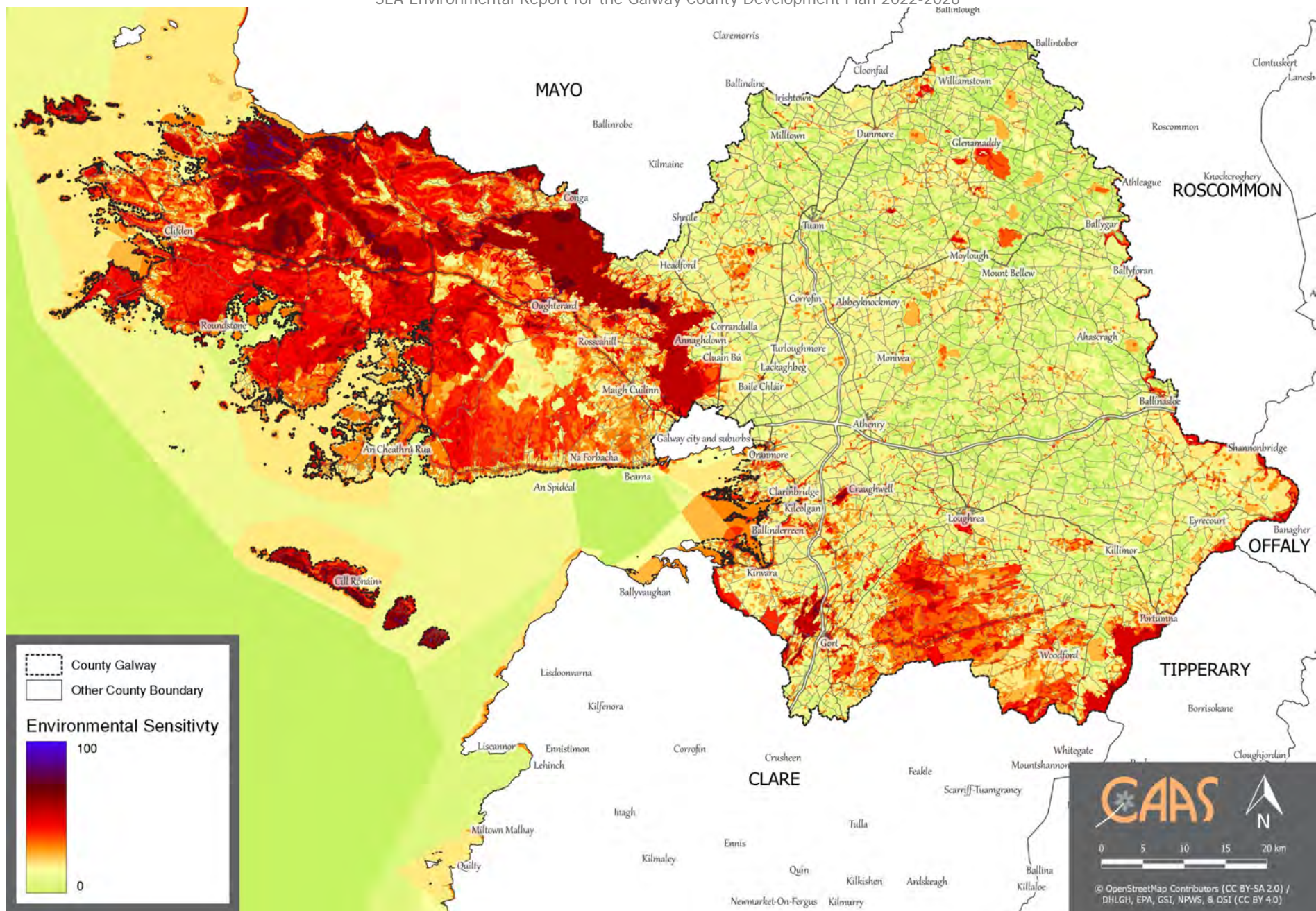


Figure 1.1 Overlay of Environmental Sensitivities in County Galway

CAAS for Galway County Council

Section 2 The Plan

2.1 Introduction

The Galway County Development Plan is a land use plan and overall strategy for the proper planning and sustainable development of the functional area of County Galway over the six-year period 2022-2028.

2.2 Content of the Plan

There are two Volumes to the County Development Plan, and a number of documents that are appended to the Draft Plan which include:

- Volume 1 Written Statement
- Volume 2 Settlement Strategy
- Appendix 1 Local Authority Renewable Energy Strategy
- Appendix 2 Housing Strategy and Housing Need Demand Assessment
- Appendix 3 Galway County Transportation Planning Strategy
- Appendix 4 Landscape Character Assessment
- Appendix 5 Rural Housing Design Guidelines
- Appendix 6 Record of Protected Structures
- Appendix 7 Architectural Conservation Areas
- Appendix 8 Environmental Reports

The Written Statement comprises 15 chapters listed below. Chapters 1 – 14 include a vision, strategic aims and policy objectives. Chapter 15 sets out the Development Management Standards.

1. Introduction
2. Core Strategy, Settlement Strategy and Housing Strategy
3. Placemaking, Regeneration and Urban Living
4. Rural Living and Development
5. Economic, Enterprise and Retail
6. Transport and Movement
7. Infrastructure, Utilities and Environmental Protection
8. Tourism and Landscape
9. Marine and Coastal Management
10. Natural Heritage, Biodiversity and Green Infrastructure
11. Community Development and Social Infrastructure
12. Architecture, Archaeology and Culture
13. Gaeltacht and Islands
14. Climate Change, Energy and Renewable Resource
15. Development Management Standards

2.3 Overarching Core Strategy Policy Objectives

The Overarching Core Strategy Policy Objectives of the Plan are as follows:

- CS 1 Implementation. To secure the implementation of the Core Strategy and the Settlement Strategy in so far as practicable, by directing sustainable growth towards the designated settlement.
- CS 2 Compact Growth. To achieve compact growth through the delivery new homes in urban areas within the existing built up footprint of settlements, by developing infill, brownfield and regeneration sites and redeveloping underutilised land in preference to greenfield sites.
- CS 3 Population Growth. To support and manage the self-sufficient sustainable development of all settlements in a planned manner, with population growth and the development of economic, physical and social infrastructure.
- CS 4 Initiatives. Promote measures to reduce vacancy and the underuse of existing building stock and support initiatives that promote the reuse, refurbishment and retrofitting of existing buildings within urban centres and targeted settlements in the County.
- CS 5 Population within Tiers. To support the attainment of the population projections of the settlements within the different tiers of the Core Strategy. After completion of the statutory requirements under section 15.2 of the Planning and Development Act 2000(as amended) of the midterm review of the Development Plan, where individual settlements are not on target to reach their population allocation maybe distributed with individual tiers as appropriate in exceptional instances and where a justifiable requirement is put forward.

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

Far in advance of both the submission of the pre-Draft Plan to the Elected Members for approval and the placing of the Draft Plan on public display, Galway 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:

- Settlement and Community;
- Housing and Rural Housing Design;
- Renewable Energy;
- Transportation and Infrastructure;
- Natural and Cultural Heritage; and
- Climate Action.

The undertaking of this SEA process and the associated AA and SFRA processes contributed towards the integration of environmental considerations into individual Plan provisions as detailed in Section 9 of this report.

2.5 Relationship with other relevant Plans and Programmes

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

The Plan sits within a hierarchy of statutory documents setting out public policy for, among other things, land use planning, infrastructure, sustainable development, tourism, environmental protection and environmental management. The Plan must comply with relevant higher-level strategic actions and will, in turn, guide lower-level strategic actions. These documents include plans and programmes such as those detailed in Appendix I² (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 up to 2040. The NPF is to be implemented through Regional Spatial and Economic Strategies (RSESs) and lower tier Development Plans and Local Area Plans. The RSES for the Northern and Western Region sets out objectives for land use planning, tourism, infrastructure, sustainable development, environmental protection and environmental management that have been subject to environmental assessment and must be implemented through the County Development Plan.

As required by the Planning and Development Act 2000, as amended, the County Development Plan is consistent with and conforms with national and regional policies, plans and programmes, including the NPF and the RSES for the Northern and Western Region. The County Development Plan will, in turn, guide lower-level strategic actions, such as Local Area Plans that will be subject to their own lower-tier environmental assessments.

In order to be realised, projects included in the 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 AA, EIA and other licencing requirements as appropriate) that form the statutory decision-making and consent-granting framework.

² 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.

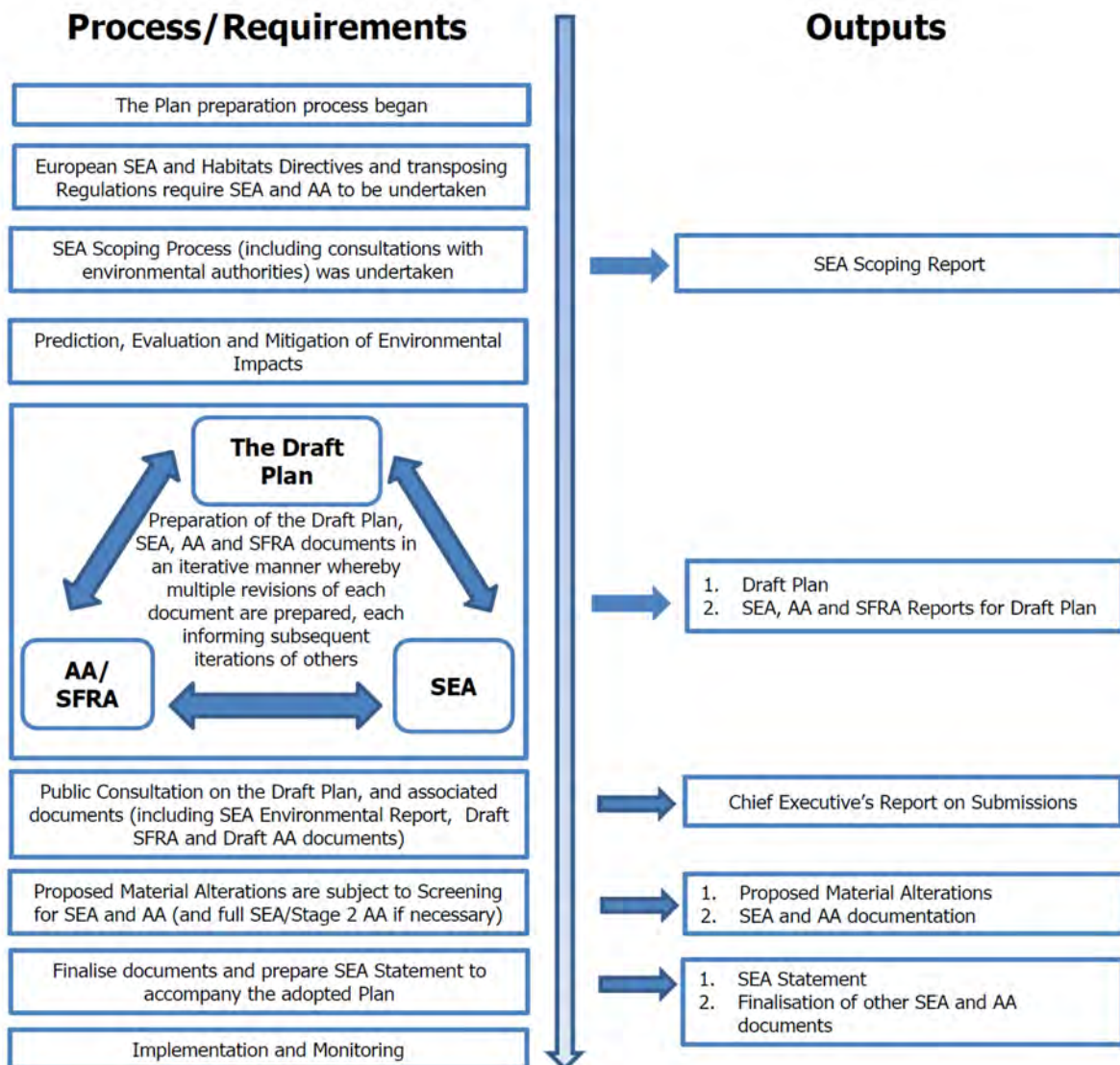


Figure 3.1 Overview of the SEA/AA/SFRA Plan-preparation Processes

3.2 Appropriate Assessment and Integrated Biodiversity Impact Assessment

3.2.1 Appropriate Assessment

Appropriate Assessment (AA) Screening and Stage 2 AA has been undertaken alongside the Plan. The requirement for AA is provided under the EU Habitats Directive (Directive 1992/43/EEC).

The 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.³

The preparation of the Plan, SEA and AA has taken place concurrently and the findings of the AA have informed the SEA.

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

A Strategic Flood Risk Assessment (SFRA) has been undertaken alongside the Plan. The requirement for SFRA is provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (Department of Environment and Office of Public Works, 2009) and associated Department of the Environment, Community and Local Government Circular PL2/2014. Recommendations from the SFRA have been integrated into the Plan.

3.4 Scoping

The scope of environmental issues to be dealt with by the SEA 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 Directive⁴.

³ 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.

⁴ 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.

All relevant environmental authorities identified under the SEA Regulations as amended, were sent SEA scoping notices by the Council 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 Council⁵.

Submissions made by the Environmental Protection Agency, the Department of Communications, Climate Action and Environment and the Department of Culture, Heritage and the Gaeltacht influenced the scope of the assessment undertaken, the findings of which are included in this report.

However, a number of alterations were adopted by the Elected Members as part of the Plan that are particularly internally inconsistent with the overall approach provided for by the Plan, including those which are identified on Table 3.1 and were advised against by the Plan-preparation/SEA process. Also included on Table 3.1 is advice that was provided by the SEA for consideration in advance of adoption of the Plan.

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.

3.6 Instances whereby Environmental Considerations were not integrated into the Plan

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

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

⁵ 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; Department of Housing, Planning and Local

Government; Environmental Protection Agency; Mayo County Council; Roscommon County Council; Offaly County Council; Tipperary County Council; Clare County Council; and Galway City Council.

Table 3.1 Alterations Advised Against but Adopted

Alteration Ref.	Commentary provided in advance of Plan Adoption	Recommendation provided in advance of Plan Adoption
Volume 1 - 7.8 Volume 1 - 7.9 Volume 1 - 7.10 Volume 1 - 7.23 Volume 2 - 19.1	<p>These alterations would not provide the most evidence-based framework for development and have the potential to undermine sustainable development and proper planning, including compact growth, by placing non-evidence-based restrictions on future growth. They do not align with higher level policy or guidance. These amendments have the potential to push development that would be appropriate in certain locations to more sensitive, less well-serviced, less well-connected locations.</p> <p>Any potentially conflict between flood risk and the uses possible under the Open Space zoning provided under Amendment No. Volume 1 7.23 and Amendment No. Volume 2 19.1 would be mitigated by other Proposed Material Alterations to the text of Volume 2 that qualify what types of uses would be permissible.</p>	Do not adopt as part of Draft Plan
Volume 2 - 2.1	This alteration would potentially conflict proper flood risk management and not comply with the Flood Risk Management Guidelines. There would be potential risk to environmental components including human health and material assets.	<p>Do not adopt as part of Draft Plan where non-compliance with the Flood Risk Management Guidelines has been advised.</p> <p>Where such proposals are being adopted it is recommended that the proposal is modified in order to integrate the following requirement, with explicit notification provided on zoning maps:</p> <p>“Inappropriate Development on Flood Zones: Where a development/land use is proposed within any area subject to this objective the development proposal will need to be accompanied by a detailed hydrological assessment and robust SUDS design which demonstrates the capacity to withstand potential flood events to maintain water quality and avoid potential effects to ecological features.</p> <ul style="list-style-type: none"> • Any development proposals should be considered with caution and will be required to comply with The Planning System and Flood Risk Management Guidelines for Planning Authorities/Circular PL2/2014 & the associated Development Management Justification Test. • Climate Change should be duly considered in any development proposal. • Protect the riparian zones of watercourse systems throughout the plan area through a general 10 metre protection buffer from rivers within the plan area as measured from the near river bank, (this distance may be increased and decreased on a site by site basis, as appropriate). • Any development proposals submitted for this site will require a detailed ecological report (s), carried out by suitably qualified personnel for the purposes of informing Appropriate Assessment Screening by Galway County Council, the competent authority. • The relevant lands will be outlined and flagged with a symbol on the land use zoning map and on the GIS system of Galway County Council so that staff and the public are aware of the special conditions/constraints attached. • A briefing will be provided to relevant staff within Galway County Council on the special conditions and constraints on relevant lands.”
Volume 1 - 4.1 Volume 1 - 4.2 Volume 1 - 4.3 Volume 1 - 4.4	These alterations would dilute the management of rural housing (including in the Rural Metropolitan Area, Rural Area Under Strong Urban Pressure-GCTPS-Outside Rural Metropolitan Area Zone 1 and Rural Housing Zone 4 - Landscape Classification 2, 3 and 4) and have the potential to result in more housing in these areas with associated additional, unnecessary and potentially significant adverse effects on various environmental components, including landscape, biodiversity, surface and ground water, human health and sustainable mobility and climate emission reduction targets. This would present potential conflicts with legislative requirements including the European Habitats and Water Framework Directives that would be challenging to mitigate.	Do not adopt as part of Draft Plan
Volume 2 - 2.2 Volume 2 - 3.1 Volume 2 - 3.5 Volume 2 - 6.4 Volume 2 - 6.5 Volume 2 - 7.2 Volume 2 - 7.3 Volume 2 - 7.4	These alterations would not be consistent with established population targets and/or the proper planning and sustainable development of the County. As a result they would present additional, unnecessary and potentially significant adverse effects on various environmental components, including soil, water, biodiversity, air and climatic factors and material assets.	<p>Do not adopt as part of Draft Plan</p> <p>Where such proposals are being adopted and where non-compliance with the Flood Risk Management Guidelines has been advised it is recommended that the proposal is modified in order to integrate the following requirement, with explicit notification provided on zoning maps:</p>

Alteration Ref.	Commentary provided in advance of Plan Adoption	Recommendation provided in advance of Plan Adoption
<p>Volume 2 - 7.8 Volume 2 - 7.10 Volume 2 - 9.1 Volume 2 - 9.4 Volume 2 - 9.5 Volume 2 - 9.6 Volume 2 - 9.8 Volume 2 - 9.9 Volume 2 - 10.2 Volume 2 - 11.1 Volume 2 - 12.2 Volume 2 - 15.1 Volume 2 - 20.1</p>	<p>For alterations relating to zoning, much of the zoning proposed is considered to be premature in the context of current population targets.</p> <p>Potentially significant adverse unnecessary effects, would be likely to include:</p> <ul style="list-style-type: none"> • Effects on non-designated habitats and species • Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces • Increased loadings on water bodies • Conflict with efforts to maximise sustainable compact growth and sustainable mobility • Occurrence of adverse visual impacts <p>Where such alterations are further from the centre of settlements, potentially significant unnecessary adverse effects would be likely to include:</p> <ul style="list-style-type: none"> • Difficulty in providing adequate and appropriate waste water treatment as a result of zoning outside of established built development envelopes of settlements • Adverse impacts upon the economic viability of providing for public assets and infrastructure • Adverse impacts upon carbon emission reduction targets in line with local, national and European environmental objectives • Conflicts between transport emissions, including those from cars, and air quality • Conflicts between increased frequency of noise emissions and protection of sensitive receptors • Potential effects on human health as a result of potential interactions with environmental vectors <p>Alteration Volume 2 - 3.5 would potentially conflict proper flood risk management and not comply with the Flood Risk Management Guidelines. There would be potential risk to environmental components including human health and material assets. Note that in instances whereby a land use zoning objective for Open Space or Tourism or Community Infrastructure is being provided by an alteration to areas previously unzoned by the Draft Plan, potential effects would be mitigated by other Proposed Material Alterations to the text of Volume 2 that qualify what types of uses would be permissible.</p> <p>Proposed Material Alteration No. Volume 2 - 3.1 related to land use zoning and is immediately adjacent to the Cregganna Marsh SPA and has the potential, if unmitigated, to impact upon the integrity of this site.</p> <p>Proposed Material Alteration No. Volume 2 - 3.5 relate to land use zoning and intersect the Galway Bay Complex SAC and have the potential, if unmitigated, to impact upon the integrity of the SAC.</p> <p>Proposed Material Alteration No. Volume 2 - 9.4 relates to land use zoning and an access road to these lands intersects the Lough Corrib SAC and has the potential, if unmitigated, to impact upon the integrity of the SAC.</p>	<p>“Inappropriate Development on Flood Zones: Where a development/land use is proposed within any area subject to this objective the development proposal will need to be accompanied by a detailed hydrological assessment and robust SUDS design which demonstrates the capacity to withstand potential flood events to maintain water quality and avoid potential effects to ecological features.</p> <ul style="list-style-type: none"> • Any development proposals should be considered with caution and will be required to comply with The Planning System and Flood Risk Management Guidelines for Planning Authorities/Circular PL2/2014 & the associated Development Management Justification Test. • Climate Change should be duly considered in any development proposal. • Protect the riparian zones of watercourse systems throughout the plan area through a general 10 metre protection buffer from rivers within the plan area as measured from the near river bank, (this distance may be increased and decreased on a site by site basis, as appropriate). • Any development proposals submitted for this site will require a detailed ecological report (s), carried out by suitably qualified personnel for the purposes of informing Appropriate Assessment Screening by Galway County Council, the competent authority. • The relevant lands will be outlined and flagged with a symbol on the land use zoning map and on the GIS system of Galway County Council so that staff and the public are aware of the special conditions/constraints attached. • A briefing will be provided to relevant staff within Galway County Council on the special conditions and constraints on relevant lands.”

3.7 Environmental Report

This SEA Environmental Report predicts and evaluates the likely significant effects of the Plan and the alternatives.

The Environmental Report provides Galway County Council, stakeholders and the public with a clear understanding of the likely environmental consequences of implementing the Plan.

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

An earlier version of this report was report was updated in order to take account of relevant recommendations contained in submissions and in order to take account of changes that were made to the original, Draft Plan that was placed on public display.

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.

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

3.8 SEA Statement

On finalisation of the Plan, an SEA Statement is prepared that includes 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 3.2 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 and Appendix II
(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 of 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 and 8
(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 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-making⁶.

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.

4.2 National Reporting on the Environment

The EPA's "*Ireland's Environment – An Assessment 2020*" 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:

Environmental Policy Position

A national policy position for Ireland's Environment.

Full implementation

Full implementation of existing environmental legislation and a review of the governance around the coordination on environmental protection across public bodies.

Health and Wellbeing

Protecting the Environment is an Investment in Our Health and Wellbeing.

Climate

Systemic change is required for Ireland to become the climate-neutral and climate resilient society and economy that it aspires to be.

Air Quality

Adoption of measures to meet the World Health Organization air quality guideline values should be the target to aim for in the Clean Air Strategy.

Nature

Safeguard nature and wild places as a national priority and to leave a legacy for future generations.

Water Quality

Improve the water environment and tackle water pollution locally at a water catchment level.

Marine

Reduce the human-induced pressures on the marine environment.

Clean Energy

Ireland needs to move rapidly away from the extensive use of fossil fuels to the use of clean energy systems.

Environmentally Sustainable Agriculture

An agriculture and food sector that demonstrates validated performance around producing food with a low environmental footprint.

Water Services

Drinking water and wastewater infrastructure must meet the needs of our society.

Circular Economy

Move to a less wasteful and circular economy where the priority is waste prevention, reuse, repair and recycling.

Land Use

Promote integrated land-mapping approaches to support decision-making on sustainable land use.

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.

⁶ 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.

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.
- 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

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

The 2015-2021 Plan has contributed towards environmental protection within County Galway. If the 2015-2021 Plan was to expire and not be replaced by a new 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-served 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-served 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-served 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 sustainable compact growth, sustainable mobility, sustainable design and energy efficiency.
 - 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, forestry, energy and buildings; and
 - Sustainable design, energy efficiency and 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 interactions if effects arising from environmental vectors.
 - Potential adverse effects on the hydrogeological and ecological function of the soil resource, including as a result of development on contaminated lands.
 - Potential for riverbank and coastal erosion.
 - Potential adverse effects upon the status of water bodies and entries to the WFD Register of Protected Areas (ecological and human value), arising from changes in quality, flow and/or morphology.
 - Increase in flood risk and associated effects associated with flood events.
 - Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity ensures the mitigation of potential conflicts).
 - Failure to adequately treat surface water run-off that is discharged to water bodies (water services infrastructure and capacity ensures the mitigation of potential conflicts).
 - Failure to comply with drinking water regulations and serve new development with adequate drinking water (water services infrastructure and capacity ensures the mitigation of potential conflicts).
 - Increases in waste levels.
 - Potential impacts upon public assets and infrastructure.
 - Interactions between agriculture and soil, water, biodiversity and human health – including phosphorous and nitrogen deposition as a result of agricultural activities and the production of secondary inorganic particulate matter.
 - Potential conflict between development under the Plan and aiming to reduce carbon emissions in line with local, national and European environmental objectives.

- Potential conflicts between transport emissions, including those from cars, and air quality.
- Potential conflicts between increased frequency of noise emissions and protection of sensitive receptors.
- Potential conflicts with climate adaptation measures including those relating to flood risk management.
- Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities.
- Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape.

4.5 Natural Capital and Ecosystem Services

County Galway'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.

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 values⁷.

In preparing the 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 Chapter 9 and 10);
- 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 14), resources for food, fibre or fuel (including at Plan Chapters 4, 9 and 10), or for recreation, culture and quality of life (including at Plan Chapters 12 and 13);
- 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 was 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 Plan:

- Air quality;
- Noise pollution;
- Light pollution;
- Water quality and river basin 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.

4.6 Biodiversity and Flora and Fauna

4.6.1 Introduction

Information on biodiversity and flora and fauna that is relevant to project planning and development and associated environmental assessment and administrative consent of projects includes that on designated ecological sites and protected species, ecological

⁷ <https://biodiversity.europa.eu/topics/ecosystem-services>

connectivity (including stepping stones and corridors) and non-designated habitats.

4.6.2 Overview of High Value Biodiversity and Designations

The most ecologically sensitive and heavily designated and protected areas within County Galway include coastal and upland areas. These areas contain many rare and threatened habitats and species of national and international importance, including those protected under the national and European legislation.

Ecological sensitivities within and surrounding the County include:

- **Coastal sand dunes and grasslands**, important habitats for many species of invertebrates including rare snails, dragonfly and butterfly species. **Machair** (flat sandy grassland) is a priority habitat found on the north-west coast, from Galway Bay to Malin Head in Donegal. Many machair sites have traditionally been used for low intensity mixed-farming, often as commonage land. High quality machair is found at a few sites in Connemara including Dog's Bay near Roundstone and Slyne Head. These areas support abundance of orchids and other wildflowers during the summer months.
- **Coastal lagoons**, including some saline lake lagoons situated on peat, support the foxtail stonewort plant (a protected species of algae that grows in highly saline lagoons), recorded at five locations in Ireland, three of which are in Connemara.
- **Salt marshes**, occur frequently in sheltered locations along the Galway coast. They contain a suite of species able to cope with the saline conditions and often are important habitats for otters and a wide range of birds.
- **Underwater reefs**, found off the Aran Islands and Kilkieran Bay and support a biodiversity of marine invertebrates including rare echinoderms, anemones, sponges, soft corals and sea fans. Ireland's only known sublittoral population of the purple sea urchin is found on a reef on the west coast of Inishmore.
- **Maerl beds**, found in western parts of the coast in County Galway are rare habitats composed of deep deposits of calcareous red algae which produce the distinctive 'coral' beaches found around An Cheathrú Rua.
- **The Atlantic Ocean** waters off the Galway coast are home to a great diversity of large marine mammals including bottlenose dolphins and the common and grey seal. The coast offers a variety of habitats for all manner of sea birds, including the chough, which breeds on rocky coastal sites, and the little tern, which nests on sandy shores.
- **Peatlands**, unique systems comprising of peat soil providing as significant carbon stores and supporting a range of unique species. Active blanket bogs and active raised bogs are

considered to be priority habitats, listed on Annex I of the EU Habitats Directive. A number of high quality active raised bogs are found in the north and east of County Galway. The most extensive habitat of nature importance within County Galway is a lowland blanket bog, found mainly in south Connemara. This habitat, which often occurs in close association with nutrient-poor lakes and rivers, provides a habitat for a large number of rare plants including slender cotton grass, bog orchid and pillwort. The mountains of Connemara and other upland areas in the County are generally dominated by upland blanket bog, wet, dry and montane heath. The coastal areas of Connemara tend to be dominated by extensive areas of dry heath and outcropping bedrock (mostly granite). The shallow, peaty soils found in these coastal heaths provide a habitat for a range of rare plants including pyramidal bugle, pale dog-violet, green-winged orchid and spotted rock-rose.

- **Fens**, often occur in association with raised bogs, eskers and/or lakes. The marsh fritillary is one of the most endangered species in Europe due to the loss of its habitat across much of its range. County Galway contains a large proportion of the Irish population and colonies can be found on a number of fens and raised bog sites in the east of the County.
- **Turloughs**, unique to limestone regions in the west of Ireland. These seasonal lakes are home to a characteristic suite of animals and plants that are adapted to the fluctuating water table and include some rarities such as fen violet, alder buckthorn and dropwort. Turloughs are abundant in the north, east and south of County Galway and there are a number of exceptional turlough sites in the region, including: Coolcam, Croaghill, Ballinastack, Coole-Garryland and Glenamaddy Turloughs. Rahasane Turlough near Craughwell is the largest in Ireland and is important for over-wintering birds.
- **Eskers**, long sinuous rounded hills which were formed at the end of the last ice age when silt, sand and gravel were deposited by rivers of glacial melt water under the ice. Eskers are important for the characteristic woodland and grassland habitats they support, including species-rich grasslands with abundant orchids.
- **Cutover bog**, a variable habitat, or complex of habitats, that can include mosaics of bare peat and re-vegetated areas with woodland, scrub, heath, fen and flush or grassland communities. It occurs where part or all of the original peat has been removed through turf cutting, by the traditional hand method or mechanically, for either domestic or commercial purposes. This habitat is widespread surrounding industrially and traditionally cutover raised bogs across the country, including County Galway.
- **Limestone pavement**, a unique habitat found in the Burren region in Clare, south County Galway and on the Aran Islands. Exposed limestone outcrops and the associated habitats of limestone heath, scrub and woodland form some special habitat mosaics with many uncommon plant species and unusual plant assemblages present. Extensive areas of limestone pavement still occur to the south of Kinvarra with a number of small, isolated patches occurring along a corridor from Kilcolgan to Tuam and near Maigh Cuilinn. These areas of limestone pavement often occur in close association with species-rich

calcareous grassland and sometimes support the protected species, wood bitter-vetch. Often associated with limestone pavement, orchid-rich calcareous grasslands are another priority habitat. These species-rich semi-natural grasslands are becoming increasingly scarce in Ireland due to changes in agricultural practice and housing development. Some good examples can be found in the Aran Islands and around Castletaylor and in the Cow Park in Clarinbridge. Underground limestone caves can be important hibernation areas for bats such as the lesser horseshoe, which is found in just six counties on the western seaboard including Galway.

- **Woodlands**, including important native woodland sites such as Derryclare and Ballinahinch in the west of the County and significant areas of oak-birch-holly woodland in Gortnacarnaun, Drummin, and Woodford in the east of the County. An extensive area of oak-ash woodland is also found in association with the turloughs of Coole and Garryland. These woodlands support many rare plant species including the narrow-leaved helleborine, bird cherry and yellow bird's nest. They are also home to the brown hairstreak, a much localised butterfly species that is found only in Galway, Clare and North Tipperary living in limestone woodlands and hedges. A number of eskers are found in the north and east of the County including Richmond Esker, a Nature Reserve near Kilkerrin, which has two of the few esker ridges left in the country which still carry native woodland.
- **Freshwater lakes, rivers and streams and their riparian zones.** These water bodies support a number of rare and important plant and animal species including important fisheries of salmon and brown trout. The callows, seasonally flooded grasslands of the floodplains of the Shannon and Suck Rivers, form important wildlife habitats and add to the rich habitat mosaic found along these rivers. During the summer the callows support exceptional flower rich wet meadows, and are home to the globally endangered corncrake. In the winter they provide food and shelter for large numbers of over-wintering wild fowl including whooper swan, wigeon and lapwing and a large flock of Greenland white-fronted geese, an Annex I species under the EU Birds Directive. The shores of Lough Corrib provide habitat for a number of rare plant species including Irish lady's tresses, shrubby cinquefoil and alder buckthorn.

Dispersed areas of marginal agricultural lands that may include ecological sensitivities occur throughout the County's lowlands and foothills. A network of green spaces, including gardens, parks, graveyards, amenity walks, railway lines and patches of woodland and scrub, provide habitats and ecological connectivity within the County and beyond.

Ecological designations in County Galway include:

- Special Protection Areas⁸;
- Special Areas of Conservation⁹;
- Natural Heritage Areas¹⁰
- Proposed Natural Heritage Areas¹¹;
- Nature Reserves¹²;
- Ramsar sites¹³
- National Park¹⁴;
- OSPAR sites¹⁵
- Certain entries to the Water Framework Directive Register of Protected Areas¹⁶;
- Freshwater Pearl Mussel catchments¹⁷
- Salmonid Rivers identified by Regulations (S.I. 293 only)¹⁸;
- Shellfish Waters¹⁹
- Wildfowl Sanctuaries²⁰;
- Flora Protection Order sites²¹;
- Tentative UNESCO World Heritage Site²²; and

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

4.6.3 European Sites

European sites in the County occur in the greatest concentrations along the coastline and in upland areas. European sites comprise:

- Special Areas of Conservation²³ (SACs); and

⁸ For more detail refer to Section 4.6.3.

⁹ For more detail refer to Section 4.6.3.

¹⁰ For more detail refer to Section 4.6.4.

¹¹ For more detail refer to Section 4.6.4.

¹² For more details refer to Section 4.6.9.

¹³ For more details refer to 4.6.9.

¹⁴ For more details refer to Section 4.6.9.

¹⁵ OSPAR is the mechanism by which 15 Governments and the EU cooperate to protect the marine environment of the North-East Atlantic. **There are 3 OSPAR sites within, partially within or adjacent to the County: Galway Bay Complex MPA (O-IE-0002969); Kilkieran Bay and Islands MPA (O-IE-0002979); and Kingstown Bay MPA (O-IE-0002985).**

¹⁶ For more detail refer to Sections 4.6.6 and 4.9.7.

¹⁷ For more details refer to 4.6.9.

¹⁸ For more detail refer to Section 4.6.7.

¹⁹ For more detail refer to 4.6.6.

²⁰ Areas that have been excluded from the 'Open Season Order' so that game birds can rest and feed undisturbed. **There are 5**

Wildfowl Sanctuaries within, partially within or adjacent to the County: Coole Lough (WFS-21), Lough Derg (parts) (WFS-22) and Muckanagh/Cloonlaughnan (WFS-23); Lough Rusheen (WFS-62); and Moyne (WFS-63).

²¹ The Flora (Protection) Order, 2015 (S.I. No. 356 of 2015) gives legal protection to 65 species of bryophytes in the Republic of Ireland (25 liverworts and 40 mosses). **There are 34 locations within the County with a number of species protected by the Order.** For more details refer to: <https://dahg.maps.arcgis.com/>.

²² For more detail refer to Section 4.12.1.

²³ SACs have been selected for protection under the European Council Directive on the conservation of natural habitats and of wild fauna and flora (92/43/EEC) due to their conservation value for habitats and species of importance in the European Union. The Habitats Directive seeks to establish Natura 2000, a network of protected areas throughout the EU. It is the responsibility of each member state to designate SACs to protect habitats and species, which, together with the SPAs designated under the 1979 Birds

- Special Protection Areas²⁴ (SPAs).

The SEA uses the same general zone of influence cited in the AA, a 15 km buffer around the County. There are 168 European sites (136 SACs and 32 SPAs) designated within this zone (mapped on Figure 4.1) out of which 96 European sites (77 SACs and 19 SPAs) are designated within or partially within the County.

Other European sites shown on Figure 4.2 include sites connected to the County via hydrological links but beyond the 15 km buffer.

All European sites and their sensitive features are listed in the Appendix II of this report. For more detail on European sites please refer to the AA Natura Impact Report that accompanies the Plan and this SEA Environmental Report.

4.6.4 Natural Heritage Sites and Proposed Natural Heritage Areas

Proposed NHAs (pNHAs) were published on a non-statutory basis in 1995, but have not since been statutorily proposed or designated. 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.

There are 36 NHAs and 114 pNHAs designated within, partially within or adjacent to the County. These sites are mapped²⁵ on Figure 4.3 and listed in Appendix II of this report.

4.6.5 Land Cover Mapping

CORINE²⁶ land cover mapping for the County is shown on Figure 4.4. The most dominant land

cover types are peat bogs (concentrated in the west of the County), pastures and agricultural lands (mainly in the east of the County).

Categories from CORINE mapping that may indicate areas with the potential for Annex I habitats (see Figure 4.6Figure 4.4), include:

- Non-irrigated arable land;
- Pastures;
- Complex cultivated patterns;
- Land principally occupied by agriculture with areas of natural vegetation;
- Broad-leaved forest;
- Coniferous forest;
- Mixed forests;
- Natural grassland;
- Moors and heathland;
- Transitional woodland-shrub;
- Beaches – dunes - sands;
- Sparsely vegetated areas;
- Inland marshes;
- Peat bogs;
- Salt marshes;
- Intertidal flats;
- Water courses;
- Water bodies;
- Coastal lagoons;
- Estuaries;
- Sea and ocean; and
- Green urban areas.

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). Water bodies designated on these lists (mapped on Figure 4.5 and Figure 4.6) include:

- Surface waters listed on the European Communities (Quality of Salmonid) Regulations 1988 (S.I. 293) and intersecting surface and groundwaters, including the River Corrib; and
- Shellfish waters²⁷ (including coastal and transitional waters and intersecting surface and groundwaters). In County Galway, these areas are found within the following river catchments:

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 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.

²⁴ 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.

²⁵ Sites in neighboring counties are also shown on Figure 4.3.

²⁶ 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. ²⁷ In order to protect existing shellfish waters and to ensure the future protection of these areas, the European Union introduced the

Kilkieran Bay; Clarinbridge/Kinvara Bay; Aughinish Bay; Outer Galway Bay Indreabhán; Mannin Bay; Clifden Bay/Ardbear Bay; Streamstown; Ballinakill; and Killary Harbour.

RPA's relating to Nutrient Sensitive Waters, Bathing Waters and water bodies used for Drinking Water are addressed under Section 4.9 "Water".

There are also a number of water dependent habitats in the County which have been listed on RPA's – these relate to designated SACs and SPAs (see Section 4.6.3).

4.6.7 Salmonid Waters

The Salmonid Regulations (S.I. 293/1988) designate the waters capable of supporting salmon (*Salmo salar*), trout (*Salmo trutta*), char (*Salvelinus*) and whitefish (*Coregonus*) as protected. 34 (no.) rivers, tributaries and lakes are listed and protected under these Regulations that prescribe quality standards for salmonid waters, the sampling programmes and the methods of analysis and inspection to be used by local authorities to determine compliance with the standards. Sections of the River Corrib are listed under the Regulations.

4.6.8 Margaritifera Sensitive Areas

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. There are two species of freshwater pearl mussel in Ireland (*Margaritifera* and *Margaritifera durrovensis*) and both are protected under Annex II and Annex V of the EU Habitats Directive. In County Galway, the Margaritifera Sensitive Areas are found within the following river catchments (mapped on Figure 4.7):

- Dawros (catchments of SAC populations listed in S.I. 296 of 2009);
- Ballynahinch - Inagh Lough (previous record *Margaritifera*, current status unknown);

- Ballynahinch - Ballynahinch Lake (previous record *Margaritifera*, current status unknown);
- Ballynahinch – Caher (catchments of other extant populations);
- Corrib – Owenriff (catchments of SAC populations listed in S.I. 296 of 2009);
- Corrib – Finny (catchments of other extant populations);
- Knock (catchments of other extant populations);
- Shannon – Woodford (previous record *Margaritifera*, current status unknown); and
- Shannon - Graney/Scariff (previous record *Margaritifera*, current status unknown).

Twenty-seven Management Plans for the Freshwater Pearl Mussel have been published, the objective of which is to restore the freshwater pearl mussel populations in 27 rivers, or stretches of rivers that are within the boundaries of Special Areas of Conservation.

4.6.9 Other Designations

Other designations within County Galway (mapped on Figure 4.8) include National Parks, Nature Reserves and Ramsar sites.

4.6.9.1 National Parks

National Parks have the following characteristics:

- Where one or several ecosystems are not materially altered by human exploitation and occupation; where plant and animal species, geomorphological sites and habitats are of special scientific, educational and recreational interest or which contain a natural landscape of great beauty;
- Where steps have been taken by the Government to prevent or eliminate as soon as possible exploitation or occupation in the whole area and to enforce effectively the respect of ecological, geomorphological or aesthetic features which have led to its establishment; and
- Where visitors are allowed to enter, under special conditions, for inspirational, educational, cultural and recreational purposes.

There are six National Parks in Ireland, including the **Connemara National Park** located within the north-west of the County. The Connemara National Park covers c. 2,957 hectares of scenic mountains, bogs, heaths, grasslands and woodlands. Some of the Park's mountains (Benbaun, Bencullagh, Benbrack and Muckanaght) are part of the Twelve Bens or Beanna Beola range.²⁸

Shellfish Waters Directive (2006/113/EC). The purpose of this Directive is to put in place concrete measures to protect waters, including shellfish waters, against pollution and to safeguard certain shellfish populations from various harmful consequences, resulting from the discharge of pollutant substances into the sea. The

Directive applies to the aquatic habitat of bivalve and gastropod molluscs only (includes oysters, mussels, cockles, scallops and clams). It does not include crustaceans such as lobsters, crabs and crayfish.

²⁸ Source: www.npws.ie

The Burren National Park is located to the south of County Galway, within north County Clare.

4.6.9.2 Nature Reserves

Nature Reserves are areas of importance to wildlife, 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 eight State owned Nature Reserves located within the County (mapped on Figure 4.8):

- **Ballynastaig Wood Nature Reserve** (in the south of the County);
- **Coole-Garryland Nature Reserve** (in the south of the County);
- **Clochra na gCon/Bealacoan Bog Nature Reserve** (in the east of the County) ;
- **Derrycrag Wood Nature Reserve** (in the south-east of the County);
- **Rosturra Wood Nature Reserves** (in the south-east of the County);
- **Leam West Bog Nature Reserve** (in the east of the County);
- **Pollnacknockaun Wood Nature Reserve** (in the south-east of the County); and
- **Richmond Esker Nature Reserve** (in the north-east of the County).

Nature Reserves closest to County Galway in neighbouring counties (also mapped on Figure 4.8) include: Keelhilla, SleveCarron, Ballyteigue, Dromore and Cahermurphy, within the northern parts of County Clare; and the Redwood Bog, within counties Tipperary and Offaly.

4.6.9.3 Ramsar Sites

Ramsar sites are wetlands designated to be of international importance under the Convention of Wetlands of International Importance (especially as Water Fowl Habitat), 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 three Ramsar sites designated within County Galway (mapped on Figure 4.8), including:

- **Lough Corrib** (in the north-east of the County);
- **Inner Galway Bay** (in the east of the County); and
- **Coole Lough and Garryland Wood** (in the south of the County).

Ramsar sites closest to County Galway in neighbouring counties (also mapped on Figure 4.8) include: Ballyallia Lough, within the northern parts of County Clare; and Monaghan Bog, within the north-east of County Offaly.

4.6.10 Other Sites of Ecological Importance

Within and surrounding the County, ecological networks are made up of components including lakes, wetlands, woodlands, trees and hedgerows. These components provide habitats for flora and fauna and facilitate linkages to the surrounding countryside for flora and fauna.

Hedgerows are valuable resource in the countryside, benefiting agriculture, wildlife, the environment, tourism, and the general community. The network of hedges across the country provides links between surviving fragments of other wildlife habitats, thereby allowing the movement and dispersal of species through otherwise hostile agricultural landscapes.

Important Bird Areas are a BirdLife International initiative aimed at identifying and protecting a network of critical sites for the conservation of the world's birds. There are six BirdWatch Ireland Important Bird Areas (IBAs)²⁹ within or partially within County Galway: Lough Corrib; Inner Galway Bay; Kilkiernan Bay and Islands; Lough Nageeron; Inishbofin; and Inishark.

4.6.11 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

²⁹ There are 105 Important Bird Areas in Ireland.

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.

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

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.

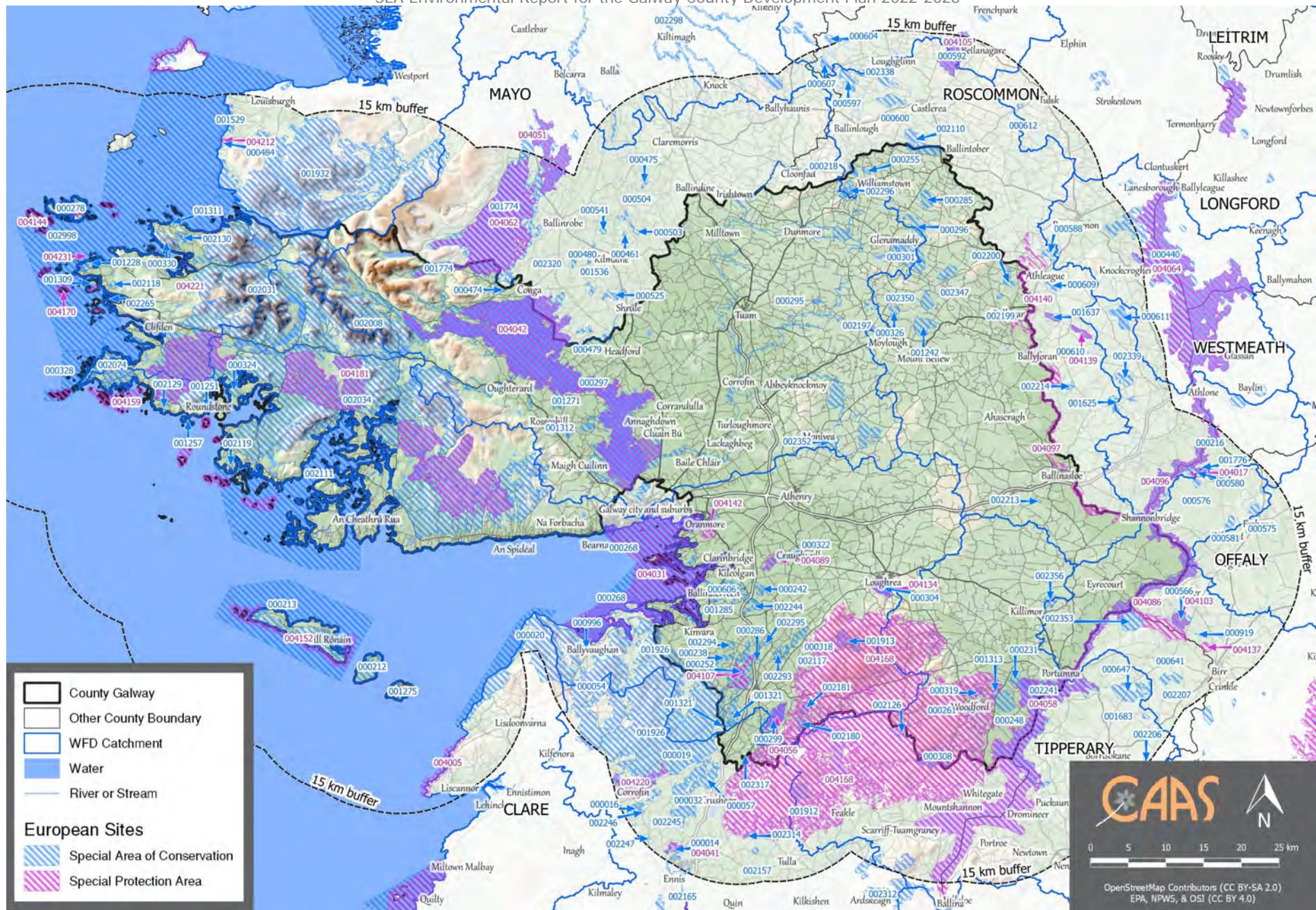


Figure 4.1 European sites within and within 15 km of the County

CAAS for Galway County Council

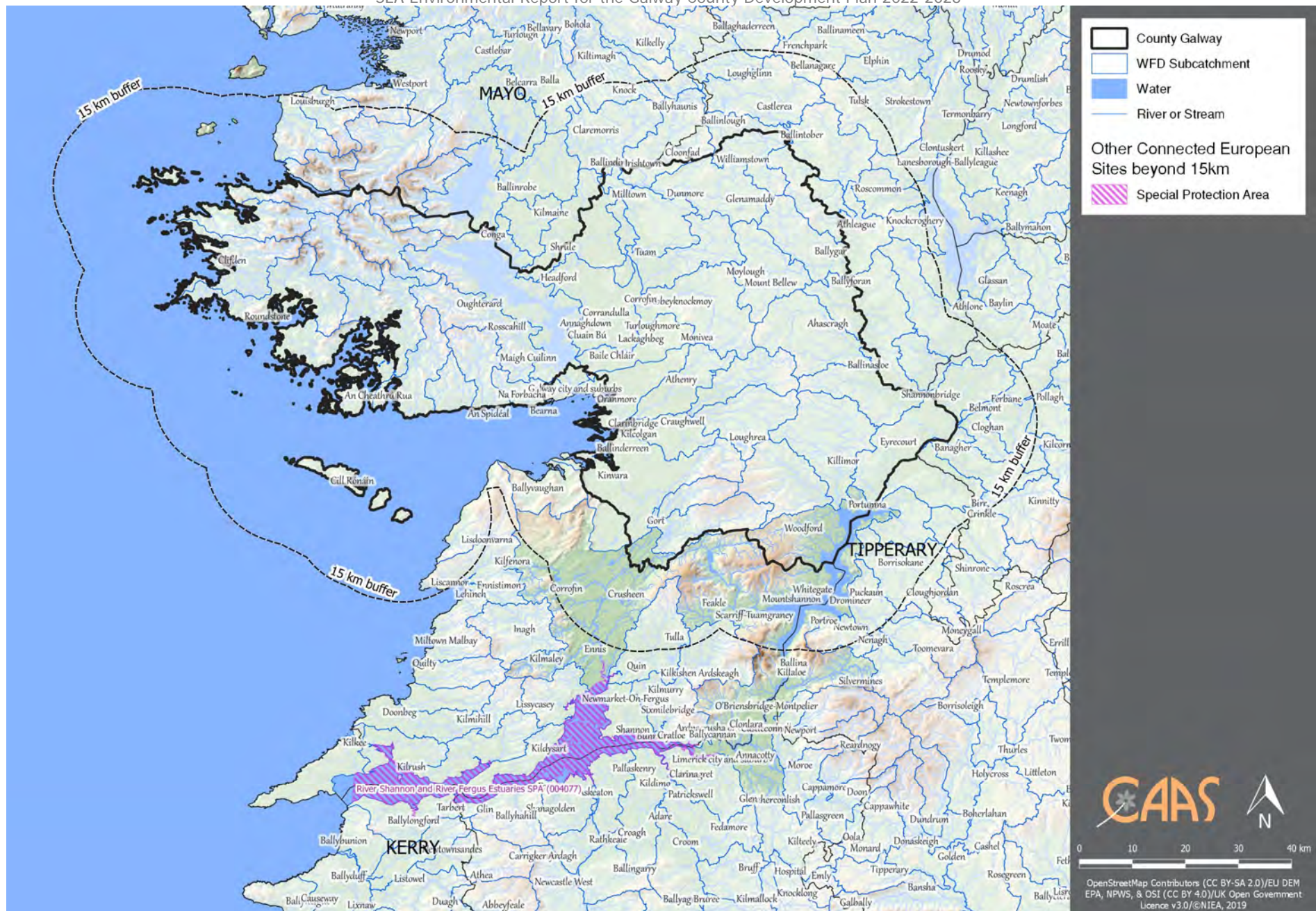


Figure 4.2 Other connected European sites beyond 15 km of the County

CAAS for Galway County Council

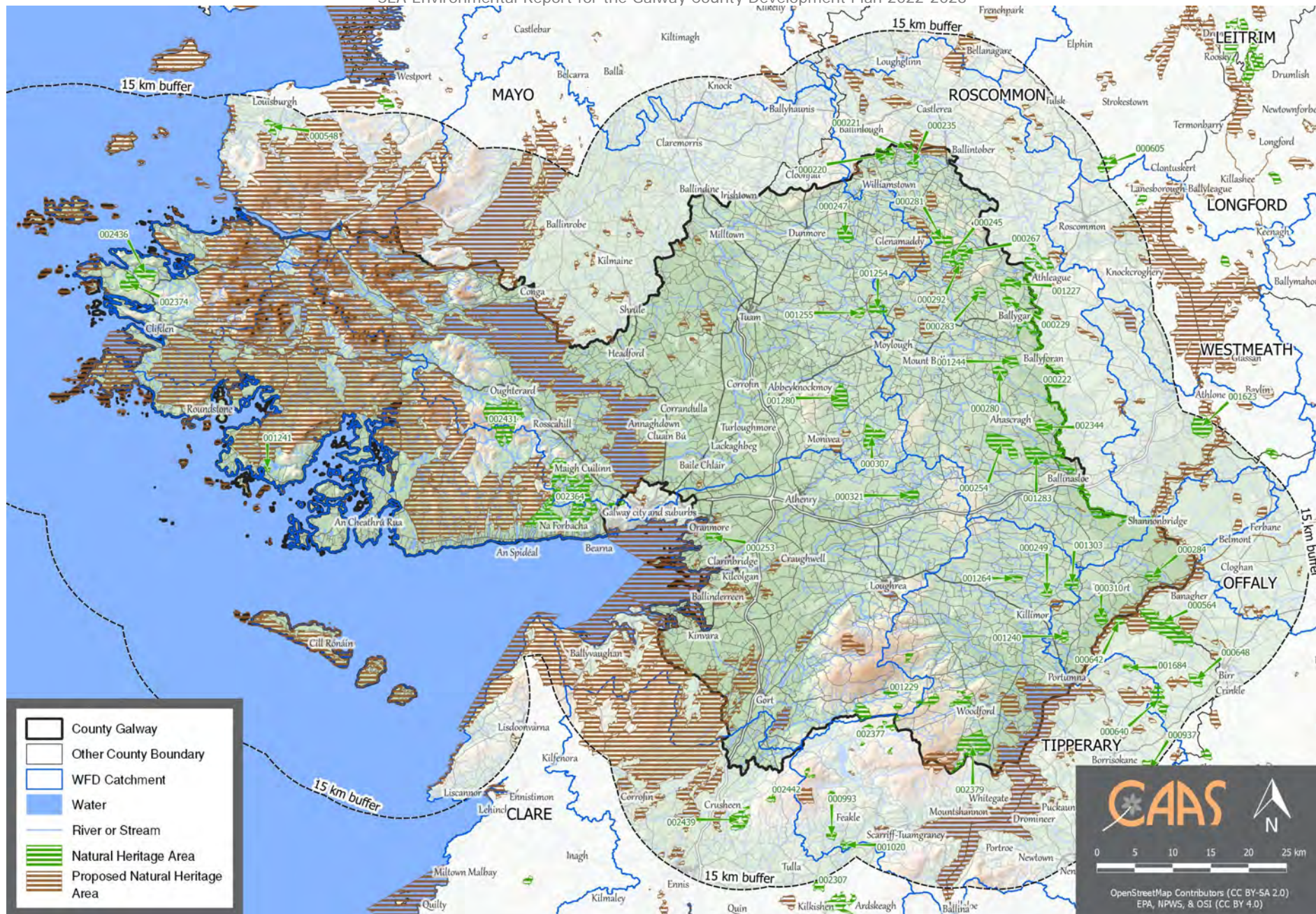


Figure 4.3 Natural Heritage Sites and Proposed Natural Heritage Areas within and within 15 km of the County

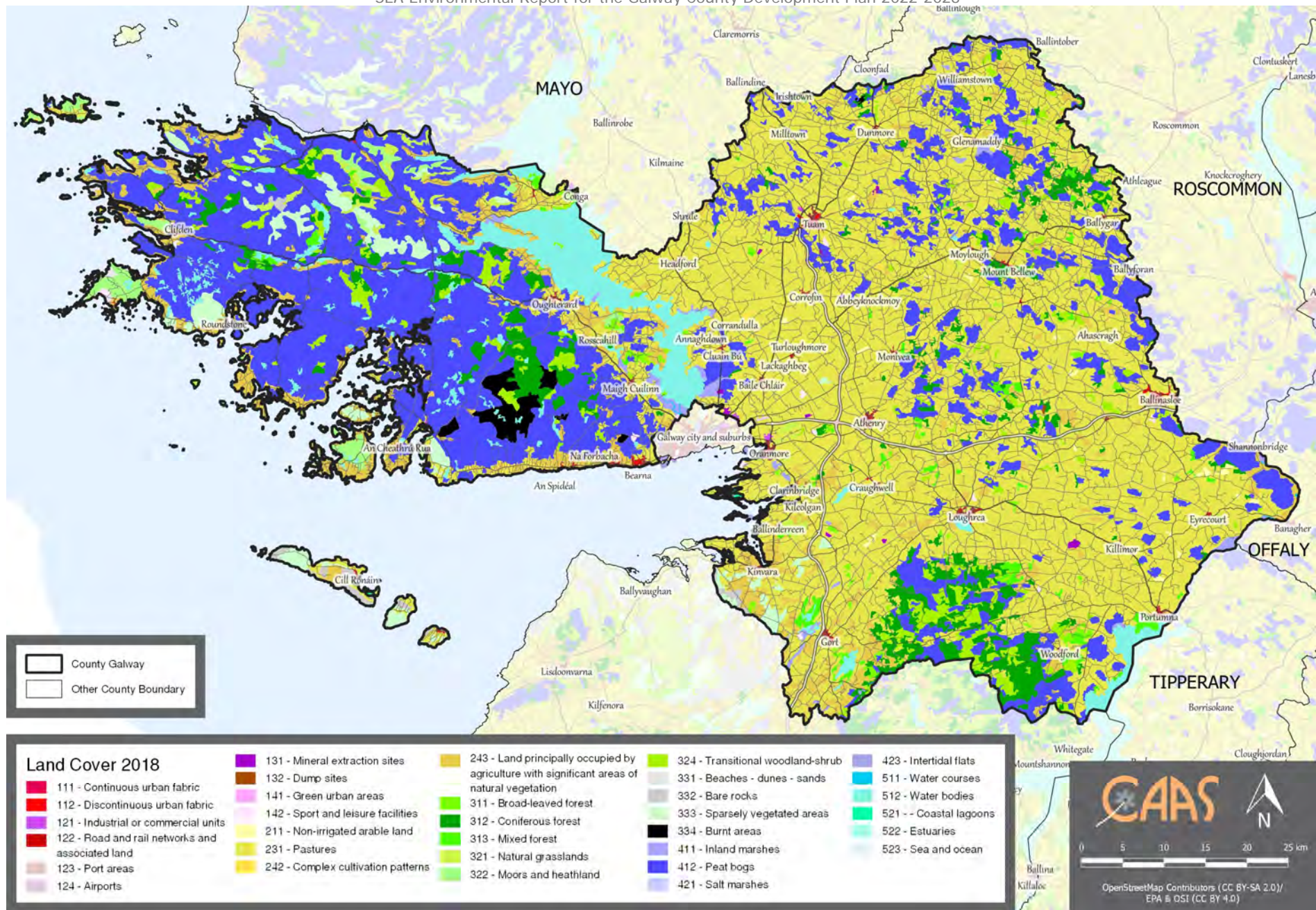


Figure 4.4 CORINE Land Cover 2018

CAAS for Galway County Council

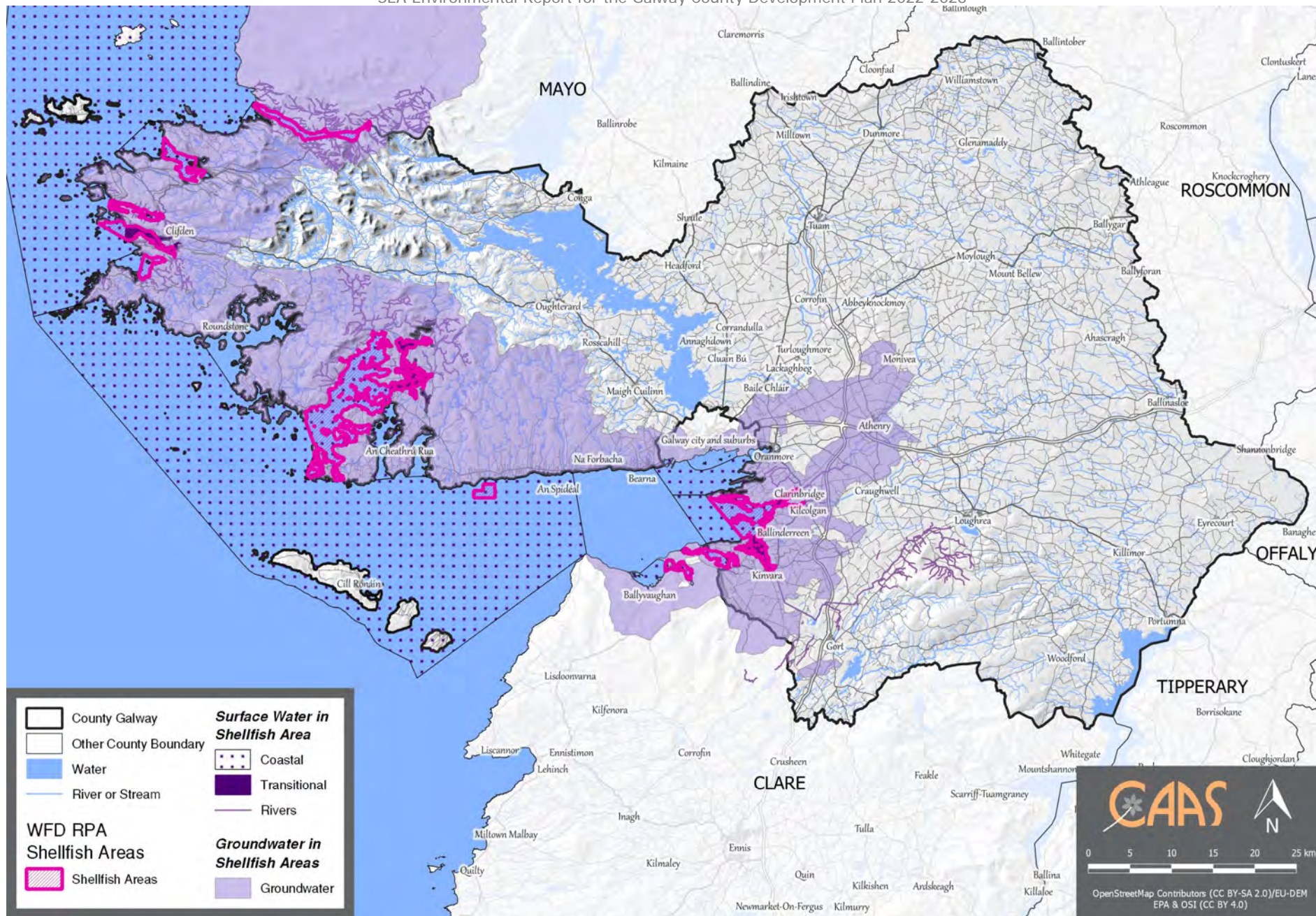


Figure 4.5 WFD Register of Protected Areas Shellfish Areas

CAAS for Galway County Council

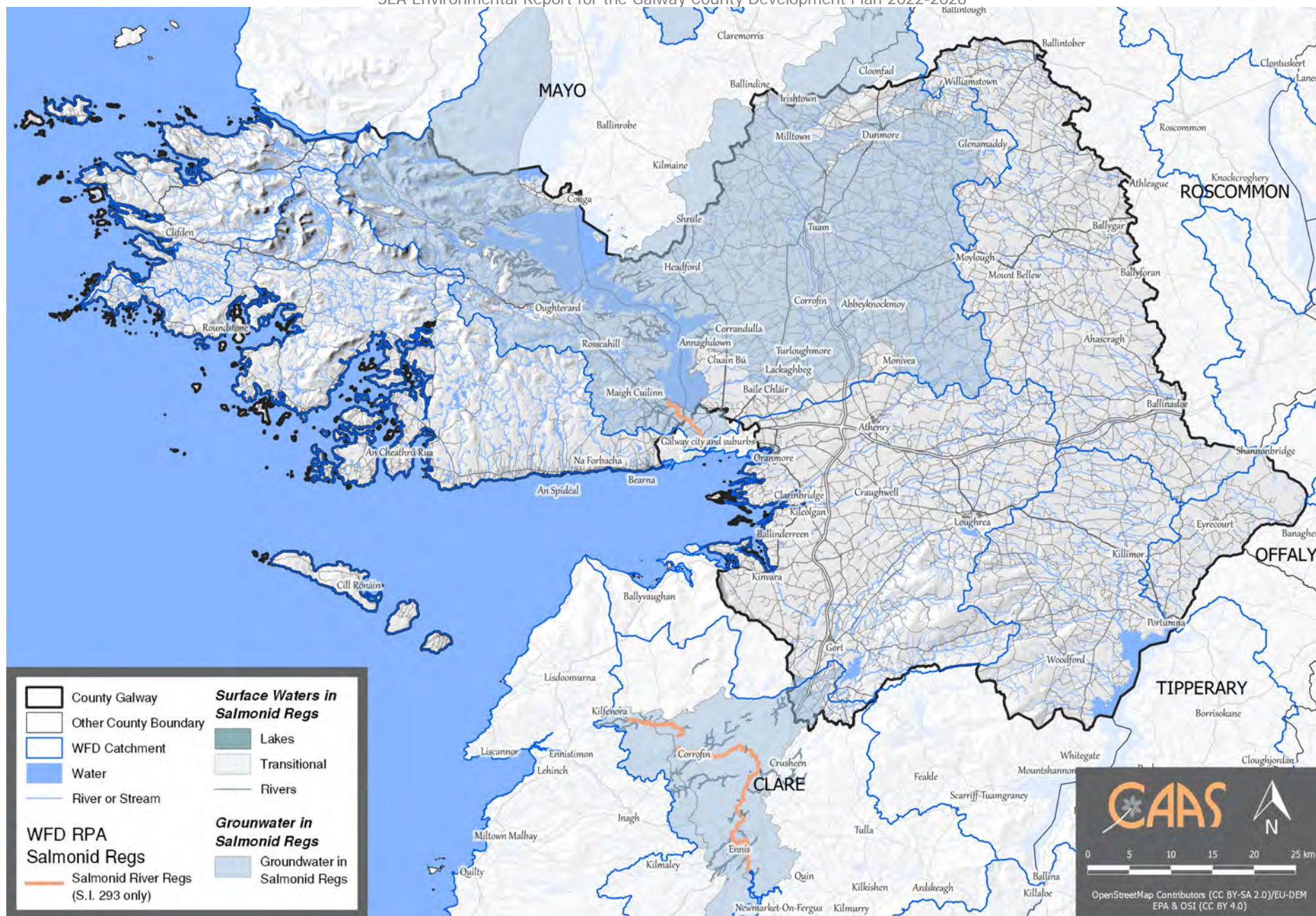


Figure 4.6 WFD Register of Protected Areas Salmonid Waters

CAAS for Galway County Council

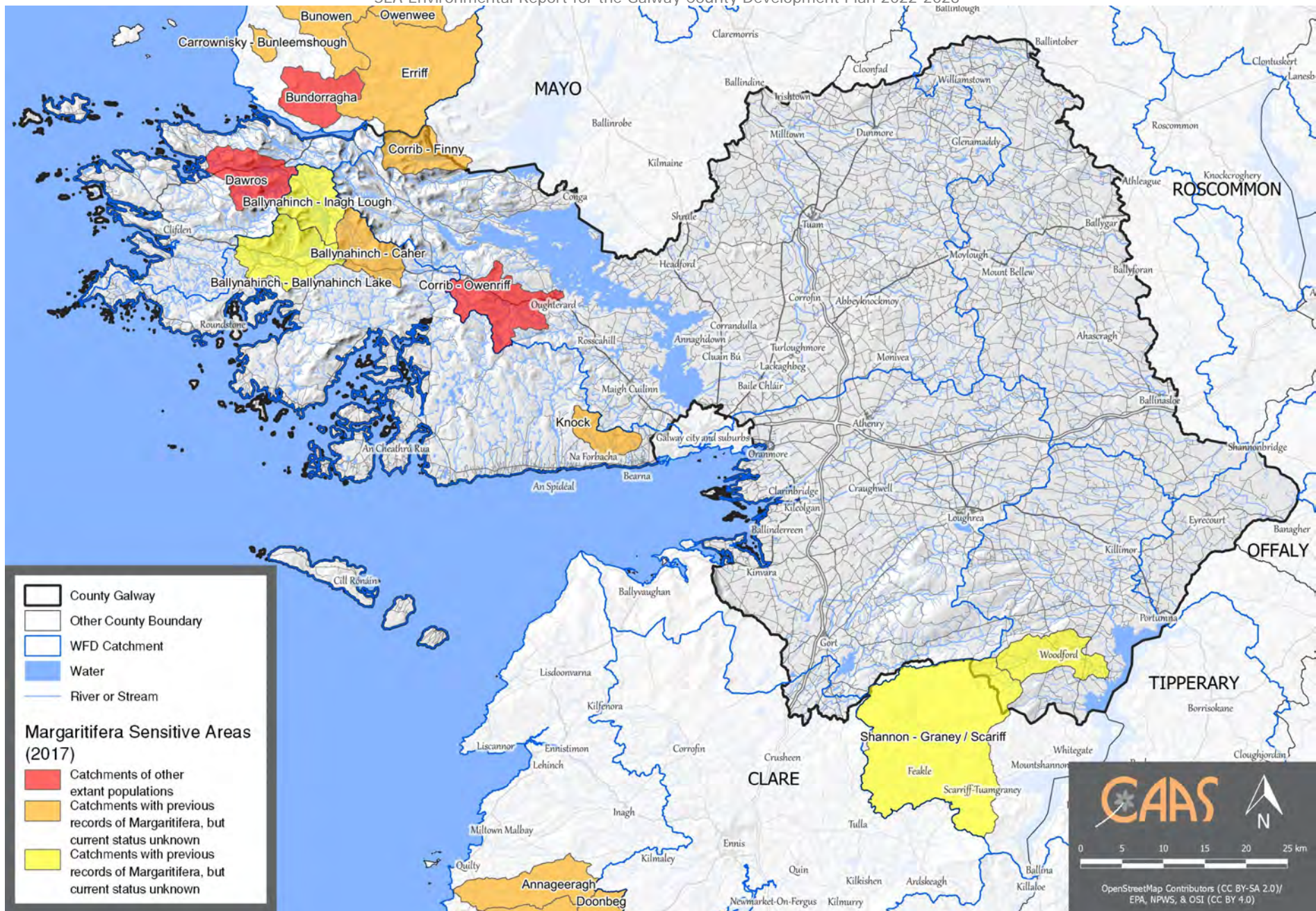


Figure 4.7 Margaritifera Sensitive Areas

CAAS for Galway County Council

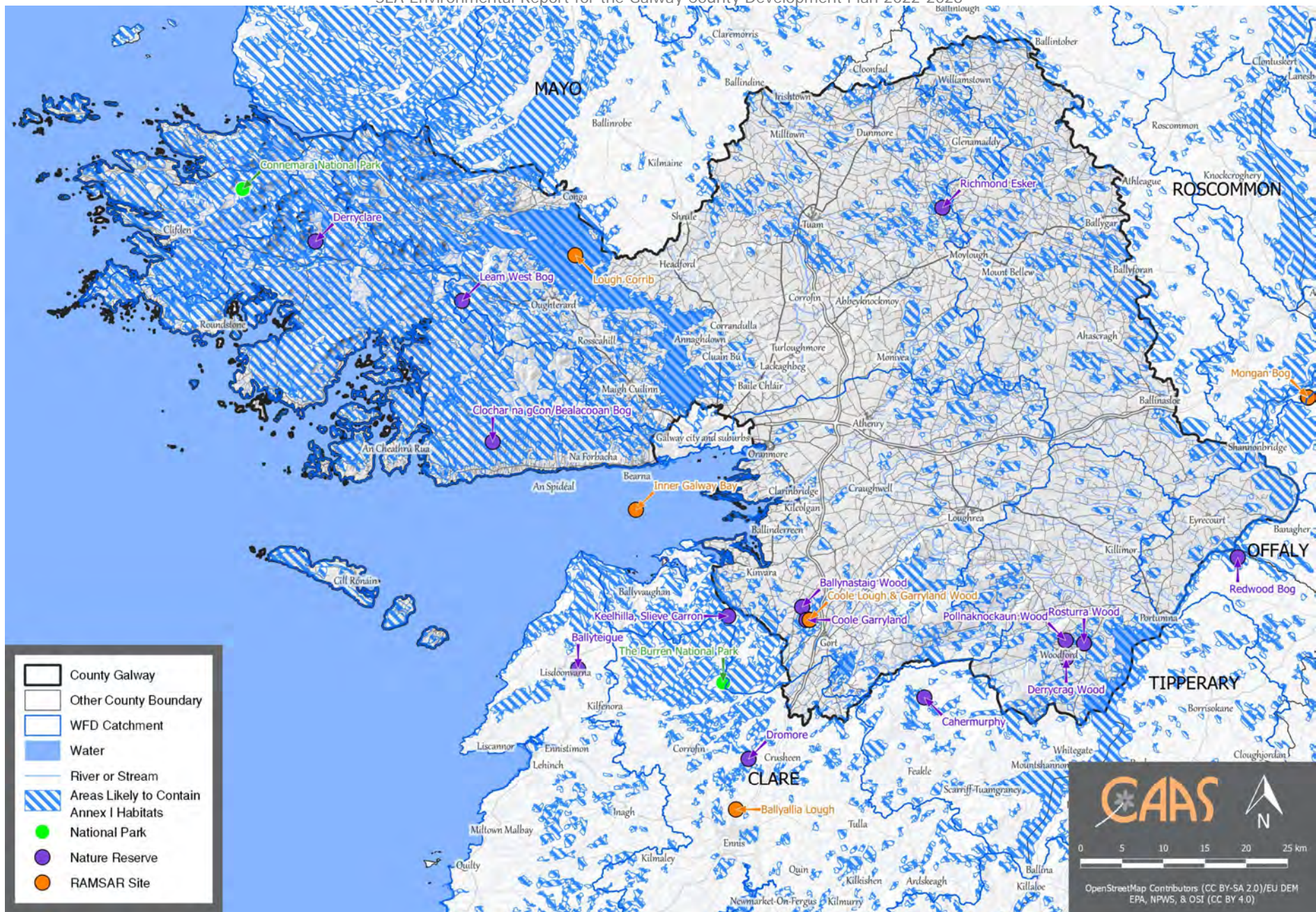


Figure 4.8 Other Ecological Designations

4.7 Population and Human Health

4.7.1 Population

In the 2016 Census the total population of County Galway was identified as being of 179,390 persons, an increase in total population in the County by c. 2.4% (c. 4,266 persons) since the previous census. The population growth projections for the County, as set out by the NPF and RSES, are 300,000-308,500 persons by 2026 and further growth by 14,000 persons by 2031.

Galway City, under the administration of Galway City Council, has a population of 79,934 persons (Census 2016) and is identified by the Northern and Western Regional Spatial and Economic Strategy (RSES) as a Regional Growth City. As per Variation no. 5 of the Galway City Development Plan 2017-2023, the target for the City is to reach a population of 102,900 persons by 2026 and 114,900 persons by 2031.

County Galway's Key Towns include: Tuam, with population of 8,767 persons (Census 2016); and Ballinasloe, with population of 6,662 persons (Census 2016). Key Towns provide important connections with adjoining regions and have the capacity and future growth potential to accommodate above average growth in tandem with the requisite investment in employment creation, services, amenities and sustainable transport.

The Plan designates a hierarchy of the County's settlements as follows:

- Metropolitan Area Strategic Plan (Baile Chlair, Bearnna, Oranmore, Garraun Framework and Briarhill Framework);
- Key towns (Tuam and Ballinasloe);
- Strategic Potential (Athenry);
- Self-Sustaining Towns (Gort and Loughrea);
- Small Growth Towns (Clifden, Maigh Cuilinn, Oughterard, Portumna and Headford);
- Small Growth Villages (An Chearthrú Rua, An Spidéal, Ballygar, Dunmore, Glenamaddy, Kinvara and Moylough); and
- Rural Villages and Rural Countryside.

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

- Increase in demand for wastewater 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 4.9.9).

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 country³⁰.

³⁰ Mapping available at <http://www.epa.ie/radiation/radonmap>

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 4.11.10.

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 a 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 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 and 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.

Brown earths³¹ (occupying most of the eastern and central areas of the County) and blanket peat and peaty soils (mainly in the north-western upland areas of the County) are the two most dominant soil types in County Galway (shown on Figure 4.9). Raised bogs and cutaway raised bogs are found mainly in the eastern areas of the County with blanket bog common to the west of the Corrib.

Active blanket bogs and active raised bogs are considered to be priority habitats, listed on Annex I of the EU Habitats Directive. Ombrotrophic (rain-fed) and minerotrophic (groundwater fed) peat soils are often indicative of areas that are the most sensitive to development due to ecological sensitivities

and impeded drainage issues. Many of these peat areas are also subject to ecological designations (Figure 4.1).

Other soil types (shown on Figure 4.9) identified within the County include:

- Lithosol soils³² (mainly along the west and north-western upland areas of the County)
- Alluvial soils³³ (in the flood plains of rivers and streams and coastal areas);
- Groundwater gleys³⁴ (mainly in the south-east of the County and);
- Surface water gleys (mainly in the south-east of the County);
- Podzols³⁵ (in the north-western, uplands areas of the County);
- Brown podzols³⁶ (throughout the County); and
- Luvisols³⁷ (mainly along the east and north-east of the County).

Outcropping rock is identified within a number of upland and coastal locations. Extensive areas of limestone pavement occur to the south of Kinvarra and on Oileán Árann. More isolated patches occurring along a corridor from Kilcolgan to Tuam and near Maigh Cuillinn. These areas of limestone pavement often occur in close association with species-rich calcareous grassland and sometimes support protected species. The Burren, which is included on the Tentative UNESCO World Heritage Site list, extends from County Clare into Kinvarra in the south of County Galway.

The GSI (Geological Survey of Ireland) have a suite of data sources available that would be useful in planning and assessing individual projects with regard to the environmental topic(s) of soil and/or material assets. These include:

- Aggregate Potential Mapping;
- Bedrock mapping;
- Quaternary and Physiographic mapping; and
- National Aquifer and Recharge mapping.

4.8.1 Geological Sites

Geological Survey of Ireland coordinates the Irish Geological Heritage Programme, which seeks to identify and select sites of geological interest within each county across the country. The audit of County Geological Sites in County Galway was completed in 2020 and identified

³¹ Brown earths are well drained mineral soils, associated with high levels of natural fertility.

³² Shallow soils, consisting of partially weathered rock fragments.

³³ These are associated with alluvial (clay, silt or sand) river deposits.

³⁴ Surface water gleys and groundwater gleys are wetland soils with slowly permeable horizons resulting in seasonal waterlogging.

³⁵ Podzol soils are Infertile acidic soils with an ash-like subsurface layer associated with acid leaching typically formed under coniferous forest.

³⁶ Brown podzol soils are characterised by dark brown humus-mineral soil covered with a thin mat of partly decayed leaves.

³⁷ Luvisol soils are generally fertile, widely used for agriculture and associated with significant accumulation of clay.

134 County Geological Sites³⁸. Concentrations of these designations can be found in the upland areas and along the coast. Galway County Geological Sites³⁹ are mapped on Figure 4.10 listed in Appendix II.

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 areas across the country, there is potential for contamination at sites within County Galway, especially where land uses occurred in the past in the absence of environmental protection legislation. Such contamination has the potential to affect water quality, biodiversity and flora and fauna and human health. Under the Plan (Chapter 12), where brownfield redevelopment is proposed, adequate and appropriate investigations are required to be carried out into the nature and extent of any soil and groundwater contamination and the risks associated with site development work.

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.

Public Supply Source Protection Areas comprise are managed by Irish Water to supply Public Water Supply Schemes across Ireland. Source Protection Areas provide protection by placing tighter controls on activities within all or part of the zone of contribution of the source.

Groundwater bodies are important water supply sources for private wells, group schemes and local authority supplies and for use in a range of commercial activities. This is particularly the case in rural areas that are not served by public or group water schemes, with private bored wells being the only source of supply.

There are a number of Source Protection Areas in County Galway, including:

- Public Supply Source Protection Areas
 - Dunmore Glenamaddy PWS
 - Kilkerrin PWS
 - Mid-Galway PWS
 - Mountbellew PWS
- Group Scheme Preliminary Source Protection Areas include those at:
 - Kilcoona Caherlistrane
 - Kiltvna
 - Ardrahan
 - Roo
 - Oldthort
 - Rusheens
 - Cloonigney
 - Lowville
 - Carheenlea
 - Rhynn Killeeneen
 - Bullaun Loughrea
 - Cloonkeen Toomard
 - Newcastle
 - Ballyaneen_Rankerin
 - Lydacan
 - Killeen/Poulatoon
 - Tubber
 - Cappataggle District
 - Kilconieron
 - Boyounagh Ballyedmond
 - Brockagh Lisduff
 - Oldthort
 - Kiltiernan
 - Claretuam Belclare
 - Peterswell Castledaly
 - Moyglass
 - Gurteen Cloonmore
 - Brockagh Lavally
 - New Inn
 - Anbally
 - Abbey Kylemore
 - Coole
 - Rhynn Killeeneen
 - Balrobuckbeg
 - Caherlea
 - Keeloges Kilcolum
 - Carheenlea
 - Cluide - Cahermorris
 - Gallagh
 - Ballyglass Fiddane
 - Tynagh
 - Oldthort
 - Carheenlea
 - Feigh East and West
 - Toberowen Lissybroder
 - Esker
 - Cahermorris Glenreevagh
 - Tierneevin

Public Supply Source Protection Areas (including Inner and Outer Protection Areas⁴⁰)

³⁸ Geological Survey of Ireland (2020) *The Geological Heritage of County Galway. An audit of County Geological Sites in County Galway 2019*.

³⁹ County Geological Sites in the neighbouring counties, which straddle County Galway boundaries have been also considered by the assessment.

⁴⁰ The Zone of Contribution is the land area that contributes water to the well or spring. The Inner Protection Area (SI) is designed to protect against the effects of human activities that might have an immediate effect on the source and, in particular, against microbial pollution. The Outer Protection Area (SO) is encompassing the remainder of the zone of contribution to the groundwater abstraction point (e.g. borehole or spring).

and Group Scheme Preliminary Source Protection Areas⁴¹ are shown on Figure 4.11.

4.8.4 Landslides

The term "landslide" describes a wide variety of processes that result in the downward and outward movement of materials such as rock, debris, earth, mud and peat under the force of gravity. Issues such as existing ground conditions, slope stability and storage of excavated material have the potential to influence susceptibility to landslides/bog bursts. The potential impacts of landslides include loss of human life/injury, flooding, pollution of watercourses and impacts upon aquatic biodiversity.

The County has numerous locations with a history of landslide events⁴² (shown on Figure 4.12). Many of these events are associated with the upland peatland areas in the north-west of the County.

The GSI have identified that most of the County has relatively low levels of landslide susceptibility, with moderate to high susceptibility found in upland and some coastal areas and high to high infrared in the north-west of the County (as mapped on Figure 4.12).

4.8.5 Existing Problems

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

⁴¹ The Group Scheme Preliminary Source Protection Areas comprises Zones of Contribution to groundwater abstraction points that supply Group Water Schemes across Ireland that are affiliated to the National Federation of Group Water Schemes and that supply more than 15 people.

⁴² Over 2,500 landslide events are recorded in the National Landslides Database available from GSI (www.gsi.ie). This dataset also includes Landslide Susceptibility Mapping to assist in the identification of areas that are likely to experience landsliding.

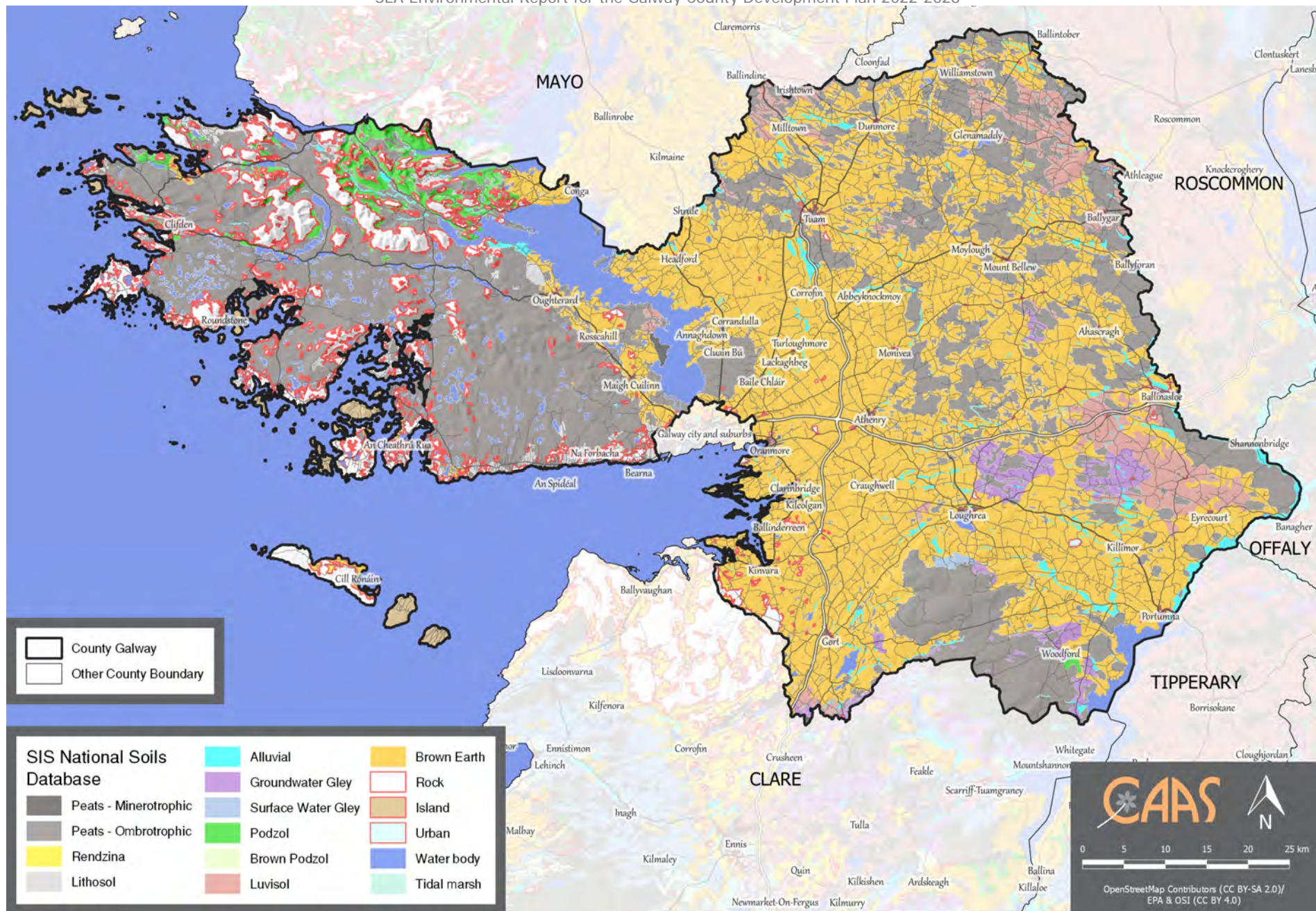


Figure 4.9 Soil Type
CAAS for Galway County Council

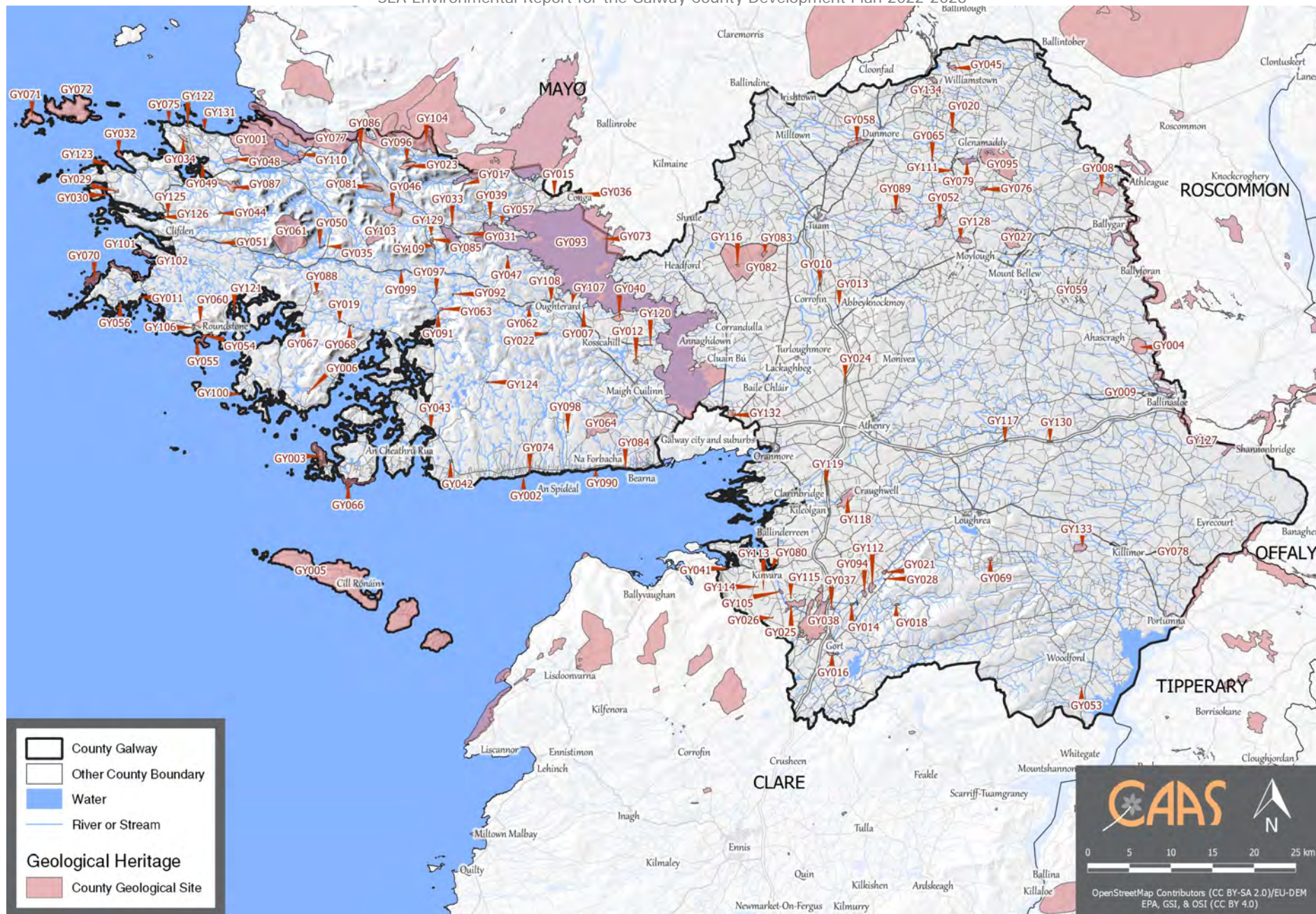


Figure 4.10 County Geological Sites

CAAS for Galway County Council

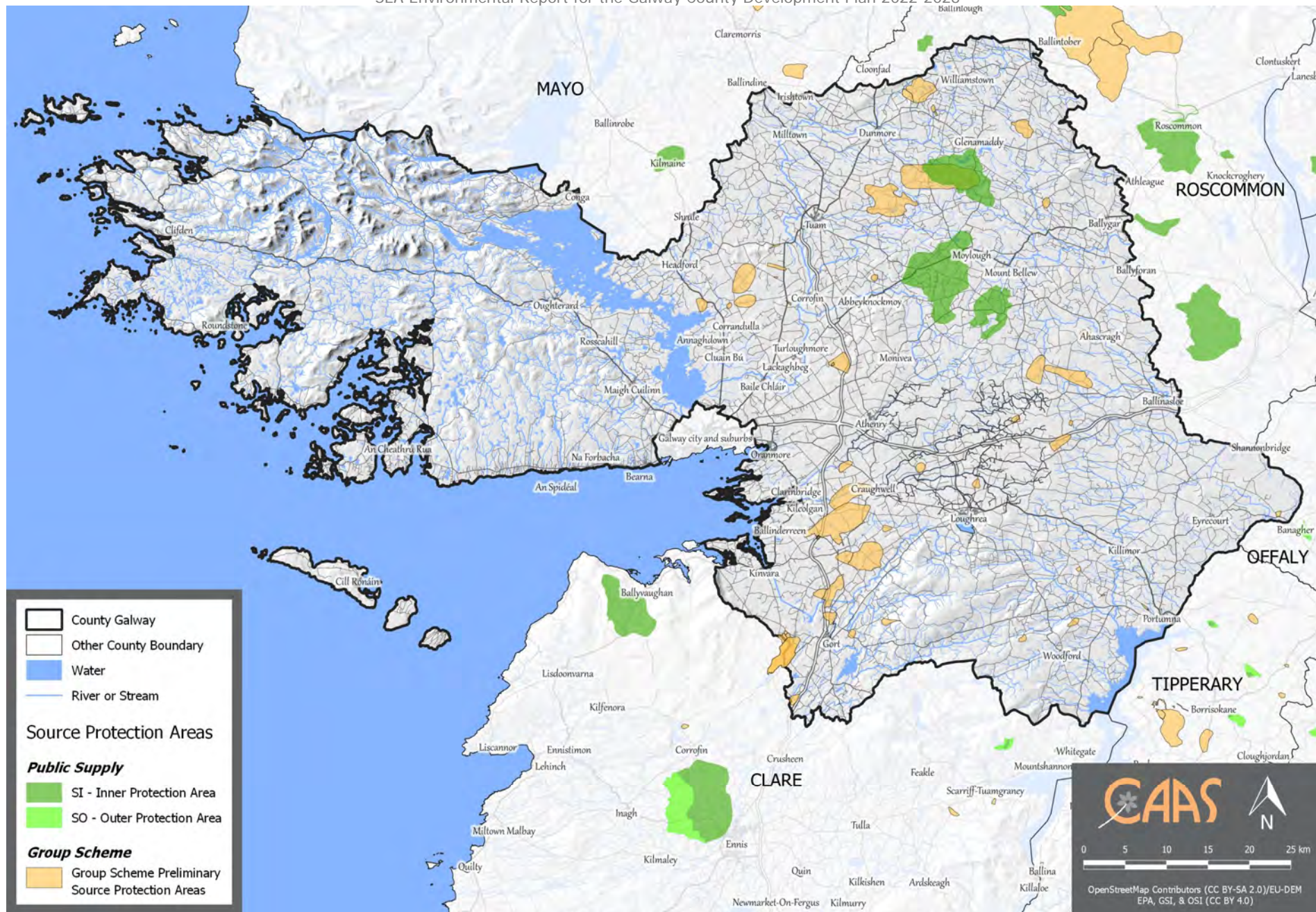


Figure 4.11 Source Protection Areas

CAAS for Galway County Council

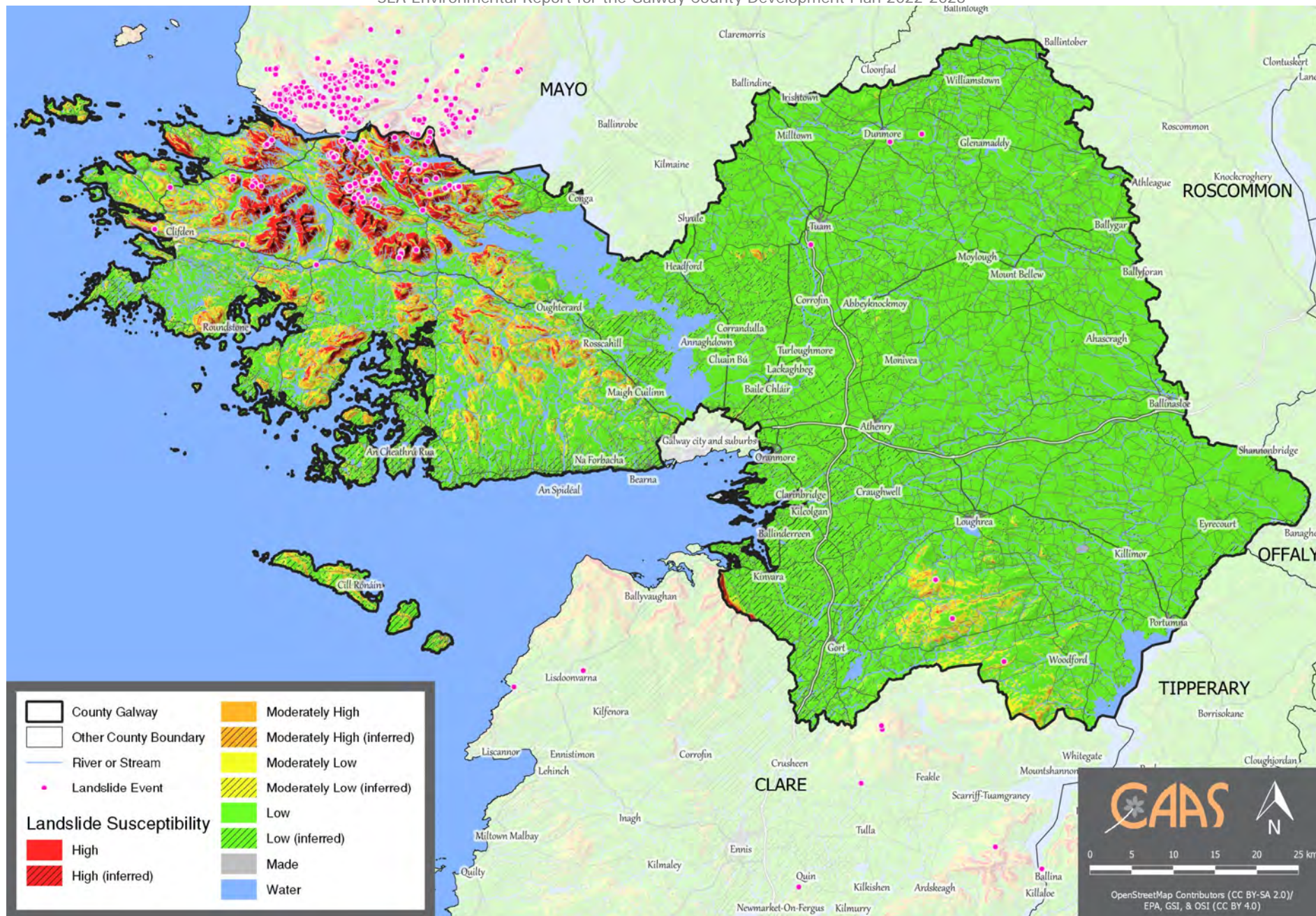


Figure 4.12 Landslide Susceptibility and Previous Landslide Events

CAAS for Galway County Council

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.

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 the County.

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.

The County lies within two regional River Basin Districts, the Shannon International RBD and the Western RBD. Catchments draining the County include: Corrib and Galway Bay South East; Erriff-Clew Bay and Galway Bay North; Upper Shannon; Lower Shannon; and Shannon Estuary North.

The main rivers within the County include:

- River Corrib (flowing from Lough Corrib through Galway to Galway Bay);
- River Suck (flowing along the natural border between counties Galway and Roscommon); River Shannon (flowing near Portumna in County Galway);
- Clare River (flowing through Milltown, Tuam and Claregalway and reaching Lough Corrib at Annaghdown);
- Dunkellin River (flowing across East Galway and entering the Galway Bay near Kilcolgan); Owendallaigh River (flowing west into Lough Cutra near Gort); and
- Owenriff River (starting in the Connemara mountains, flowing through Oughterard and emptying at the edge of town into Lough Corrib).

The main lakes in the County include:

- Lough Corrib;
- Lough Mask;
- Lough Coolin;
- Lough Cutra;
- Lough Inagh and Derryclare;
- Loughrea Lake;
- Mountbellew Lake;
- Ballynakill Lough;
- Lough Derg;
- Ballyquirke Lake; and
- Ross Lake.

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), for rivers, lakes, coastal and transitional waters within and surrounding the County is shown on Figure 4.13 and on Table 4.1.

The WFD status of most of the rivers and lakes within the County is classified as *moderate*, *good* and *high*, however sections⁴³ of rivers and lakes are identified as *bad*⁴⁴ and *poor*⁴⁵ due to unsatisfactory ecological/biological and/or physio-chemical status.

The WFD surface water status (2013-2018) of coastal and transitional waterbodies within and surrounding the County is identified as *moderate*, *good* and *high*, however coastal waters of Rincarna Pools North are identified as *bad* due to unsatisfactory ecological/biological and/or physio-chemical status.

Significant pressures, those pressures which need to be addressed in order to improve water quality, have been identified⁴⁶ for waterbodies that are 'At Risk' of not meeting their water quality objectives under the WFD. Significant pressures for surface water bodies within or adjacent to County Galway are identified on Table 4.1. There are various types of pressures identified, such as:

- **Agricultural pressures** - can include issues related to farming including loss of excess nutrients and sediment loss to surface waters from diffuse sources such as spreading of fertilisers and manures. Excess phosphorous and sediment are typically issues for rivers and lakes, and too much nitrogen is the main issue for estuaries and coastal waters.
- **Urban run-off pressures** - can include leaking sewers and run-off from paved and unpaved areas and misconnections where private foul

connections are connected to storm sewers instead of the foul sewer network.

- **Urban wastewater pressures** - can include direct discharge of nutrients from urban wastewater treatment plants and discharge from combined storm overflows or storm water overflows. Discharges of elevated concentrations of phosphorus, ammonium and nitrogen impact on the ecology of surface waters.
- **Hydromorphological and anthropogenic pressures** are identified together in many instances. Hydromorphological pressures can include: modifications to the physical habitat conditions or the natural functioning of a waterbody which can impact on ecology, caused by dredging and straightening of rivers (channelisation), land drainage or hard infrastructure such as dams, weirs, culverts or other obstructions. Anthropogenic pressures can include: water abstractions; invasive species; agriculture; use of fertilizers, manures and pesticides; animal husbandry activities; inefficient irrigation practices; deforestation of woods; aquaculture; pollution due to industrial effluents and domestic sewage; and recreational activities.
- **Industrial pressures** - can include discharges and emissions from industrial and commercial facilities.
- **Extractive industry related pressures** – can include different activities that lead to the extraction of raw materials from the earth, such as oil, metals, mineral and aggregates. Impacts from extractive sites include sediment/siltation pollution and alteration to the physical environment.
- **Forestry pressures** - can include poorly managed and inappropriately sited forest operations, negatively impact on water quality and aquatic habitats and species. The most common water quality problems arising from forestry relate to the release of sediment and nutrients and the impacts from acidification. Forestry may also give rise to changes in stream flow regimes caused by associated land drainage.
- **Domestic wastewater pressures** – can include septic-tank systems associated with one-off housing and small unlicensed private urban waste-water treatment plants. If not correctly installed and well maintained, these systems can result in leakage of untreated effluent to waters.
- **Other pressures** can include impacts from activities such as **historically polluted sites** and **aquaculture**. These activities each impact a relatively small number of water bodies so they have been grouped together.

⁴³ As per EPA classification system (gis.epa.ie/EPAMaps)

⁴⁴ Including rivers Owenriff – Corrib and Kilcolgan; and lakes Alewnaghta and Ballyquirke.

⁴⁵ Including rivers: Recess; Raford; Lisduff-Kilcrow; Laurencetown Stream; Kilcrow; Kilcolgan; Invermore; Eyrecourt Stream;

Derryhippo; Dawros; Culfín; Coos; Clarinbridge; Castlodge; Castlegar; Carra Stream; Cannahowna; Ballindine; Ballinaboy; and Ahascragh; and lakes: Aghrusbeg and Ross.

⁴⁶ EPA (2019): Report on Water Quality in Ireland 2013-2018

Table 4.1 WFD River , Lake, Transitional and Coastal Waterbodies Status⁴⁷

Name and Code ⁴⁸	Type	WFD Surface Waterbody Status (2013 -2018) ⁴⁹
Owenriff (Corrib)_020	River	Bad - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from hydromorphological/anthropogenic sources.
Kilcolgan_030	River	Bad - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from hydromorphological/anthropogenic and urban wastewater sources.
Alewnaghta	Lake	Bad - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural and invasive species sources.
Ballyquirke	Lake	Bad - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from invasive species and urban wastewater sources.
Rincarna Pools North	Coastal	Bad - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from hydromorphological/anthropogenic sources.
Recess_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural sources.
Raford_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from hydromorphological/anthropogenic sources.
Lisduff (Kilcrow)_020	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural, hydromorphological/anthropogenic and extractive industry related sources.
Laurencetown Stream_020	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure agricultural and industrial from sources.
Kilcrow_060	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from hydromorphological/anthropogenic and agricultural sources.
Kilcrow_050	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural and hydromorphological/anthropogenic sources.
Kilcolgan_040	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural, domestic wastewater and industrial sources.
Kilcolgan_020	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from urban wastewater sources.
Invermore_020	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from domestic wastewater, extractive industry related and forestry sources.
Eyrecourt Stream_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from hydromorphological/anthropogenic and urban wastewater sources.
Derryhippoo_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from hydromorphological/anthropogenic, agricultural, extractive industry related and forestry sources.
Dawros_020	River	Poor - due to poor ecological/biological status. No pressures identified.
Culfin_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from hydromorphological/anthropogenic sources.
Coos_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural sources.
Clarinbridge_050	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from urban run-off, agricultural and domestic wastewater sources.
Clarinbridge_040	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from urban wastewater sources.
Clarinbridge_030	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from urban wastewater sources.
Castlodge_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural and forestry sources.
Castlegar_020	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from urban wastewater sources.
Carra Stream_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from hydromorphological/anthropogenic sources.
Cannahowna_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from urban wastewater sources.

⁴⁷ Source: <https://gis.epa.ie/EPAMaps/> and <https://gis.epa.ie/EPAMaps/Water>.

⁴⁸ The number at the end of each river water body name indicates where the waterbody is located along the main river channel. For example, the waterbody at the source is coded '_010', the next waterbody downstream is coded '_020' and the final waterbody before the river becomes transitional is '_180'.

⁴⁹ There is a data gap relating to WFD surface water status data. There are a number of waterbodies within the Plan area with overall status currently not assigned to them and the term "unassigned status" applies in respect of these waterbodies. These are not included on Table 4.1

Name and Code ⁴⁸	Type	WFD Surface Waterbody Status (2013 -2018) ⁴⁹
Ballindine_010	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural, forestry, hydromorphological/anthropogenic and urban wastewater sources.
Ballinaboy_020	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from aquacultural sources.
Ahascragh_030	River	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from agricultural, domestic wastewater and urban wastewater sources.
Aughrusbeg	Lake	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from hydromorphological/anthropogenic sources.
Ross GY	Lake	Poor - due to poor ecological/biological status. This waterbody is also identified as being under significant pressure from invasive species sources.
Woodford (Galway)_020	River	Moderate. This waterbody is identified as being under significant pressure from urban wastewater sources.
Woodford (Galway)_010	River	Moderate. This waterbody is identified as being under significant pressure from forestry sources.
Tooreenacoona_010	River	Moderate. No pressures identified.
Toberdoney_020	River	Moderate. This waterbody is identified as being under significant pressure from agricultural and domestic wastewater sources.
Toberdoney_010	River	Moderate. This waterbody is identified as being under significant pressure from agricultural sources.
Suck_150	River	Moderate. This waterbody is identified as being under pressure from extractive industry related and hydromorphological/anthropogenic sources.
Suck_140	River	Moderate. This waterbody is identified as being under pressure from hydromorphological/anthropogenic sources.
Suck_120	River	Moderate. This waterbody is identified as being under pressure from hydromorphological/anthropogenic sources.
Sinking_030	River	Moderate. No pressures identified.
Sinking_010	River	Moderate. No pressures identified.
Shiven (South)_020	River	Moderate. No pressures identified.
Shiven (South)_010	River	Moderate. This waterbody is identified as being under pressure from agricultural and domestic wastewater sources.
Shannon (Lower)_020	River	Moderate. No pressures identified.
Screeb_010	River	Moderate. This waterbody is identified as being under pressure from industrial sources.
Raford_020	River	Moderate. This waterbody is identified as being under pressure from domestic wastewater sources.
Polleen_010	River	Moderate. No pressures identified.
Owenriff (South Galway)_010	River	Moderate. This waterbody is identified as being under pressure from hydromorphological/anthropogenic, domestic wastewater and industrial sources.
Owendalulleagh_050	River	Moderate. This waterbody is identified as being under pressure from hydromorphological/anthropogenic and forestry sources.
Nanny (Tuam)_030	River	Moderate. This waterbody is identified as being under pressure from hydromorphological/anthropogenic sources.
Moyree_030	River	Moderate. This waterbody is identified as being under pressure from hydromorphological/anthropogenic sources.
Knockadoagh_010	River	Moderate. No pressures identified.
Kilcrow_070	River	Moderate. This waterbody is identified as being under pressure from hydromorphological/anthropogenic sources.
Kilcrow_040	River	Moderate. No pressures identified.
Kilcrow_030	River	Moderate. No pressures identified.
Invermore_010	River	Moderate. This waterbody is identified as being under pressure from forestry sources.
Headford Stream_020	River	Moderate. No pressures identified.
Grange (Galway)_020	River	Moderate. No pressures identified.
Gowlabeg_010	River	Moderate. No pressures identified.
Gortgarrow Stream_010	River	Moderate. This waterbody is identified as being under significant pressure from hydromorphological/anthropogenic sources.
Derrymullan Stream_020	River	Moderate. This waterbody is identified as being under significant pressure from hydromorphological/anthropogenic sources.
Derrymullan Stream_010	River	Moderate. No pressures identified.
Dawros_040	River	Moderate. No pressures identified.
Dawros_030	River	Moderate. No pressures identified.
Cuilleen Stream_010	River	Moderate. No pressures identified.
Cregg_010	River	Moderate. This waterbody is identified as being under significant pressure from hydromorphological/anthropogenic sources.
Clare (Galway)_090	River	Moderate. This waterbody is identified as being under significant pressure from hydromorphological/anthropogenic sources.

Name and Code ⁴⁸	Type	WFD Surface Waterbody Status (2013 -2018) ⁴⁹
Clare (Galway)_080	River	Moderate. This waterbody is identified as being under significant pressure from hydromorphological/anthropogenic sources.
Clare (Galway)_060	River	Moderate. This waterbody is identified as being under significant pressure from hydromorphological/anthropogenic sources.
Clare (Galway)_010	River	Moderate. This waterbody is identified as being under significant pressure from hydromorphological/anthropogenic, agricultural and extractive industrial related sources.
Castlegar_010	River	Moderate. This waterbody is identified as being under significant pressure from agricultural and hydromorphological/anthropogenic sources.
Cappagh (Galway)_020	River	Moderate. This waterbody is identified as being under significant pressure from domestic wastewater, agricultural and hydromorphological/anthropogenic sources.
Brosna_140	River	Moderate. This waterbody is identified as being under significant pressure from hydromorphological/anthropogenic sources.
Beagh_010	River	Moderate. This waterbody is identified as being under significant pressure from hydromorphological/anthropogenic sources.
Ballycuike_010	River	Moderate. This waterbody is identified as being under significant pressure from domestic wastewater, urban wastewater and hydromorphological/anthropogenic sources.
Ballinure_020	River	Moderate. This waterbody is identified as being under significant pressure from agricultural and domestic wastewater sources.
Abbert_040	River	Moderate. This waterbody is identified as being under significant pressure from domestic wastewater, agricultural and hydromorphological/anthropogenic sources.
Abbert_010	River	Moderate. No pressures identified.
Beaghcauneen	Lake	Moderate. No pressures identified.
Derg TN	Lake	Moderate. This waterbody is identified as being under significant pressure from urban wastewater, invasive species, agricultural and hydromorphological/anthropogenic sources.
Seecon	Lake	Moderate. This waterbody is identified as being under significant pressure from forestry sources.
Tully	Lake	Moderate. No pressures identified.
Kinvarra Bay	Transitional	Moderate. This waterbody is identified as being under significant pressure from aquacultural, domestic wastewater and urban wastewater sources.
Killary Harbour	Coastal	This waterbody is identified as being under significant pressure from hydromorphological/anthropogenic sources.
Yellow (Sinking)_010	River	Good. No pressures identified.
Woodford (Galway)_030	River	Good. No pressures identified.
Traheen_010	River	Good. This waterbody is identified as being under pressure from agricultural, domestic wastewater and hydromorphological/anthropogenic sources.
Suck_130	River	Good. No pressures identified.
Suck_110	River	Good. No pressures identified.
Suck_100	River	Good. No pressures identified.
Suck_060	River	Good. No pressures identified.
Suck_050	River	Good. No pressures identified.
Springfield_020	River	Good. No pressures identified.
Springfield_010	River	Good. No pressures identified.
Sinking_020	River	Good. No pressures identified.
Shiven (South)_050	River	Good. This waterbody is identified as being under pressure from hydromorphological/anthropogenic sources.
Shiven (South)_040	River	Good. No pressures identified.
Shiven (South)_030	River	Good. No pressures identified.
Scardaun_010	River	Good. No pressures identified.
Recess_040	River	Good. No pressures identified.
Raford_030	River	Good. No pressures identified.
Owenwee (Corrib)_010	River	Good. No pressures identified.
Owentooley_010	River	Good. No pressures identified.
Owenriff (Corrib)_010	River	Good. This waterbody is identified as being under pressure from hydromorphological/anthropogenic sources.
Owengowla_010	River	Good. No pressures identified.
Owenglin_030	River	Good. No pressures identified.
Owendalulleagh_030	River	Good. This waterbody is identified as being under pressure from forestry sources.
Owenboliska_010	River	Good. No pressures identified.
Nanny (Tuam)_020	River	Good. No pressures identified.
Moyree_020	River	Good. No pressures identified.
Moyree_010	River	Good. No pressures identified.
Loughkip_010	River	Good. No pressures identified.
Loughinch_010	River	Good. This waterbody is identified as being under pressure from domestic wastewater sources.

Name and Code ⁴⁸	Type	WFD Surface Waterbody Status (2013 -2018) ⁴⁹
Lisduff (Kilcrow)_010	River	Good. No pressures identified.
Levally Stream_010	River	Good. This waterbody is identified as being under pressure from agricultural and hydromorphological/anthropogenic sources.
Lecarrow Stream_010	River	Good. No pressures identified.
Knockaunranny Stream_010	River	Good. No pressures identified.
Knock (Furbo)_010	River	Good. This waterbody is identified as being under pressure from domestic wastewater sources.
Killian_020	River	Good. This waterbody is identified as being under pressure from domestic wastewater, forestry and agricultural sources.
Killian_010	River	Good. No pressures identified.
Kilcrow_020	River	Good. No pressures identified.
Kilcrow_010	River	Good. No pressures identified.
Joyce's_010	River	Good. No pressures identified.
Island_030	River	Good. This waterbody is identified as being under pressure from urban wastewater sources.
Island_020	River	Good. No pressures identified.
Grange (Galway)_040	River	Good. No pressures identified.
Grange (Galway)_030	River	Good. No pressures identified.
Grange (Galway)_010	River	Good. No pressures identified.
Glennamucka Stream_010	River	Good. No pressures identified.
Glengawbeg_010	River	Good. No pressures identified.
Fooley_010	River	Good. No pressures identified.
Fenny_010	River	Good. This waterbody is identified as being under pressure from hydromorphological/anthropogenic sources.
Duniry_020	River	Good. No pressures identified.
Duniry_010	River	Good. No pressures identified.
Drumkeary Stream_020	River	Good. This waterbody is identified as being under pressure from forestry sources.
Drumkeary Stream_010	River	Good. This waterbody is identified as being under pressure from forestry sources.
Drimneen_010	River	Good. No pressures identified.
Dooghta_010	River	Good. No pressures identified.
Derryhorraun_010	River	Good. This waterbody is identified as being under pressure from domestic wastewater and extractive industry related sources.
Derrainy_010	River	Good. No pressures identified.
Dalgan_050	River	Good. No pressures identified.
Dalgan_040	River	Good. No pressures identified.
Culfin_020	River	Good. No pressures identified.
Crumlin (Galway Bay)_010	River	Good. No pressures identified.
Corrib_020	River	Good. No pressures identified.
Corra_010	River	Good. No pressures identified.
Cong Canal_010	River	Good. No pressures identified.
Clarinbridge_010	River	Good. No pressures identified.
Clare (Galway)_070	River	Good. No pressures identified.
Clare (Galway)_050	River	Good. No pressures identified.
Clare (Galway)_040	River	Good. No pressures identified.
Clare (Galway)_030	River	Good. No pressures identified.
Cashla_010	River	Good. This waterbody is identified as being under pressure from forestry, hydromorphological/anthropogenic and extractive industry related sources.
Carra Stream_020	River	Good. No pressures identified.
Cappagh (Galway)_010	River	Good. No pressures identified.
Cammanagh_010	River	Good. No pressures identified.
Bleach_010	River	Good. No pressures identified.
Black (Shrule)_030	River	Good. No pressures identified.
Black (Shrule)_020	River	Good. This waterbody is identified as being under pressure from domestic wastewater, hydromorphological/anthropogenic and agricultural sources.
Black (Shrule)_010	River	Good. No pressures identified.
Bealanabrack_020	River	Good. No pressures identified.
Bealanabrack_010	River	Good. No pressures identified.
Ballymabilla_010	River	Good. No pressures identified.
Ballinure_010	River	Good. No pressures identified.
Ballinlough Stream_020	River	Good. This waterbody is identified as being under pressure from hydromorphological/anthropogenic sources.
Ballinlough Stream_010	River	Good. This waterbody is identified as being under pressure from extractive industry related and forestry sources.
Ahascragh_040	River	Good. No pressures identified.

Name and Code ⁴⁸	Type	WFD Surface Waterbody Status (2013 -2018) ⁴⁹
Ahascragh_020	River	Good. No pressures identified.
Ahascragh_010	River	Good. No pressures identified.
Abbert_030	River	Good. No pressures identified.
Abbert_020	River	Good. No pressures identified.
Ardderry	Lake	Good. No pressures identified.
Ballynakill	Lake	Good. No pressures identified.
Corrib Lower	Lake	Good. No pressures identified.
Corrib Upper	Lake	Good. No pressures identified.
Cutra	Lake	Good. No pressures identified.
Kylemore	Lake	Good. No pressures identified.
Lettercraffroe	Lake	Good. No pressures identified.
Loughanillaun Maam Cross	Lake	Good. This waterbody is identified as being under pressure from hydromorphological/anthropogenic sources.
Loughaunore	Lake	Good. No pressures identified.
Loughaunwillan	Lake	Good. No pressures identified.
Mask	Lake	Good. This waterbody is identified as being under pressure from agricultural, domestic wastewater and invasive species sources.
Maumwee	Lake	Good. This waterbody is identified as being under pressure from hydromorphological/anthropogenic sources.
Nambrackmore Cushatrower	Lake	Good. No pressures identified.
Pollacappul	Lake	Good. No pressures identified.
Rea	Lake	Good. No pressures identified.
Bridge Lough, Knockakilleen	Transitional	Good. This waterbody is identified as being under pressure from hydromorphological/anthropogenic sources.
Camus Bay	Transitional	Good. No pressures identified.
Erriff Estuary	Transitional	Good. No pressures identified.
Loch an tSaile, North of Camus Bay	Transitional	Good. No pressures identified.
Inner Galway Bay North	Coastal	Good. No pressures identified.
Kilkieran Bay	Coastal	Good. No pressures identified.
Streamstown (Clifden)_010	River	High. No pressures identified.
Owenglin_020	River	High. No pressures identified.
Owenglin_010	River	High. No pressures identified.
Owendalulleegh_040	River	High. No pressures identified.
Owendalulleegh_020	River	High. No pressures identified.
Killian_030	River	High. No pressures identified.
Glencoaghan_010	River	High. No pressures identified.
Failmore_010	River	High. No pressures identified.
Dooghta_020	River	High. No pressures identified.
Dawros_010	River	High. This waterbody is identified as being under pressure from hydromorphological/anthropogenic and forestry sources.
Boleyneendorrish_030	River	High. No pressures identified.
Boleyneendorrish_020	River	High. No pressures identified.
Boleyneendorrish_010	River	High. No pressures identified.
Anaserd	Lake	High. No pressures identified.
Ballynahinch	Lake	High. No pressures identified.
Bofin GY	Lake	High. No pressures identified.
Derryclare	Lake	High. No pressures identified.
Enask	Lake	High. No pressures identified.
Fadda	Lake	High. No pressures identified.
Illauntrasna	Lake	High. No pressures identified.
Mask Upper	Lake	High. No pressures identified.
Nahasleam	Lake	High. No pressures identified.
Shindilla	Lake	High. No pressures identified.
Loch an Aibhinn, Camus Bay	Transitional	High. No pressures identified.
Loch Tanai	Transitional	High. No pressures identified.
Outer Galway Bay	Coastal	High. No pressures identified.

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 groundwater underlying the County is mostly identified as being of *good* status, with some areas of *poor*⁵⁰ status to the north-east of Galway Bay and in the southern parts of the County (as shown on Figure 4.14).

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 vulnerability of aquifers underlying the County are mapped on Figure 4.15 and generally classified as being of:

- *High and moderate*, throughout the County;
- *Low vulnerability*, mainly in the east of the County; and
- *Extreme vulnerability and extreme (rock at or near surface or karst)* mainly in the west and north-west of the County and along the coastal and upland areas.

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 mapped on Figure 4.16. Productivity within the County is generally classified as being:

- *Poor aquifer bedrock which is generally unproductive except for local zones;*
- *Regionally important aquifer karstified (conduit);*
- *Locally important aquifer bedrock which is moderately productive only in local zones;*
- *Locally important aquifer bedrock which is generally moderately productive; and*
- *Locally important aquifer karstified.*

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:

- Surface Water and Groundwater⁵¹ in Nutrient Sensitive Areas⁵² - groundwater bodies partially underlying southern fringes of the County intersect Nutrient Sensitive Areas associated with the Lough Derg, as shown on Figure 4.17;
- Drinking Water Surface Water Bodies⁵³ (shown on Figure 4.18). Groundwater beneath the entire County is also included; and

⁵⁰ Underlying: Caherglassaun Turlough in the south of the County; Tullynafrankagh Turlough in the south-west of the County; Historic Mine (Tynagh); Industrial Facility (P0056-01) north of Oranmore; and Waste Facility (W0013-01) to the north-west of Galway Airport.
⁵¹ Groundwater bodies that intersect with areas designated as sensitive.

⁵² Areas designated as sensitive under the Urban Wastewater Treatment Directive (91/271/EEC) and and transposing Regulations.
⁵³ Various water bodies are used for drinking water abstraction in accordance with European Communities (Drinking Water) (No. 2) Regulations 2007 (SI No. 278/2007).

- Bathing Water Areas⁵⁴ including surface waters and groundwater in bathing areas (shown on Figure 4.19).

RPA's relating to Salmonid Regulations and Shellfish Areas are addressed under Section 4.6 "Biodiversity and Flora and Fauna".

There are also a number of water dependent habitats in the County which have been listed on RPA's – these relate to designated SACs and SPAs (see Section 4.6.3).

4.9.8 Bathing Waters

Bathing locations identified as 'Bathing Waters' under the Bathing Water Regulations 2008, as amended, are mapped on Figure 4.19.

For bathing waters, Mandatory and Guide Values are set out for bathing waters in the 2006 EU Bathing Water Directive and transposing Regulations. Mandatory Values are values that must be observed if the bathing area is to be deemed compliant with the Directive. Compliance with Guide Values exceeds guidance with Mandatory Values and can be regarded as quality objectives which bathing sites should endeavour to achieve.

Bathing waters are now classified into four quality categories; '*excellent*', '*good*', '*sufficient*', or '*poor*' with a minimum target of '*sufficient*' required to be achieved for all bathing waters.

The most recent available data from the EPA for 2019⁵⁵ shows that locations of designated bathing waters along the County's coastline and lakes are either classified as *excellent*⁵⁶ (at: Goirtín, Cloch na Rón; Trá Chaladh Finis, Carna; Trá an Dóilín, An Ceathrú Rua; Cill Mhuirbhigh, Inis Mór; Trá Inis Oirr - Main Beach; An Trá Mór, Coill Rua, Indreabhán; Silverstrand Beach; Salthill Beach; Traught, Kinvara; Portumna; and Loughrea Lake) or *good*⁵⁷ (at: Céibh an Spidéil; Trá na mBan, An Spidéal;). Bathing waters at Clifden Beach are classified as *poor*, and bathing waters at Trá na bhForbacha, Na

Forbacha, Grattan Road Beach and Ballyloughane Beach are classified as *sufficient*.

The Blue Flag award is given to beaches and marinas that have excellent water quality and maintain other standards including effective and appropriate management to ensure the protection of the natural environment and safety standards. Bathing locations at Portumna, Loughrea, Kinavara, Salthill (Galway City) and Silver Strand (Galway City) were awarded with the Blue Flag in 2020.

4.9.9 Flooding

Certain areas across the County are at risk from flooding from sources including groundwater, pluvial⁵⁸, fluvial⁵⁹ and coastal⁶⁰. There is historic evidence of flooding in various locations across the County, including: including along the River Corrib, the River Shannon and its tributaries; and at various locations along the coastline. Predictive OPW Preliminary Flood Risk Assessment mapping for the County is shown on Figure 4.20⁶¹, indicating areas likely to be at most risk of flooding.

Locations within and adjacent to the County that were identified by the Office of Public Works (OPW) in 2012 as requiring detailed assessment of flood risk (Areas for Further Assessment) include: Ahascragh; Athenry; Ballinasloe; Baile Chláir, Clifden; Corrofin; Galway City; Gort; Kinvarra; Loughrea; Oranmore; Oughterard; Portumna; Cloch na Rón and Tuam. Detailed predictive flood risk mapping is now available for these areas.

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

⁵⁴ Bathing Waters are designated under the Bathing Water Quality Regulations 2008 S.I. No. 79 of 2008, as amended.

⁵⁵ EPA Report (2020) on *Bathing Water Quality in Ireland for the year 2019*

⁵⁶ The highest, cleanest class

⁵⁷ The second highest, second cleanest class

⁵⁸ Resulting from high intensity rainfall events where run-off volume exceeds capacity of surface water network.

⁵⁹ Watercourse capacity is exceeded or the channel is blocked and excess water spills from the channel onto adjacent floodplains.

⁶⁰ Resulting from higher sea levels than normal causing the sea to overflow onto land. Such flooding is influenced by high tide level, storm surges and wave action.

⁶¹ This mapping shows the likelihood of flooding from a number of sources, defined as the percentage probability of a flood occurring in any given year. For example, a 1% Annual Exceedance Probability (AEP) indicates the severity of a flood that is expected to be exceeded on average once in 100 years, i.e. it has a 1 in 100 (1%) chance of occurring in any one year.

4.9.10 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 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 and coastal sources at various locations across the County.

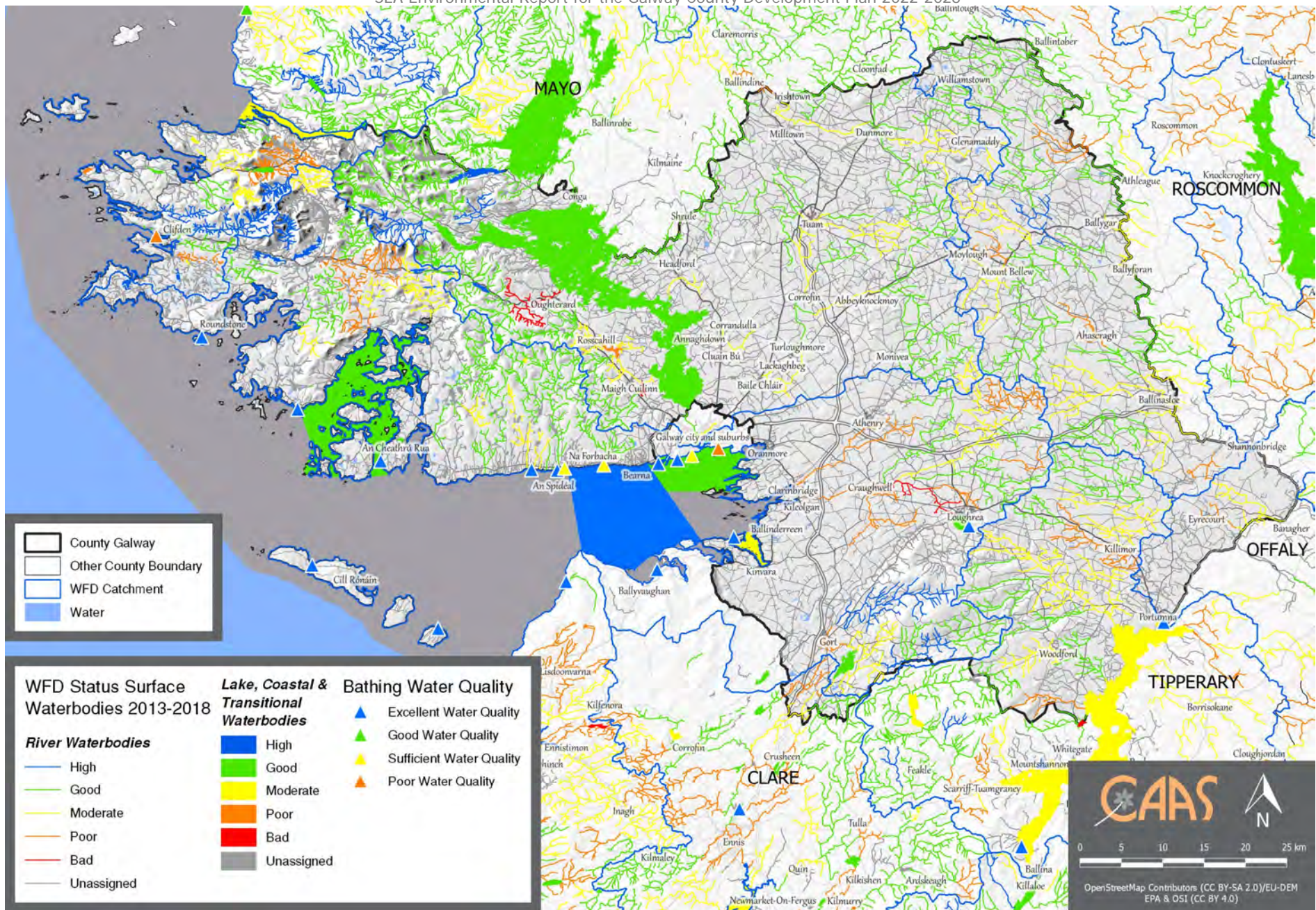


Figure 4.13 WFD Surface Water Status (2013-2018)

CAAS for Galway County Council

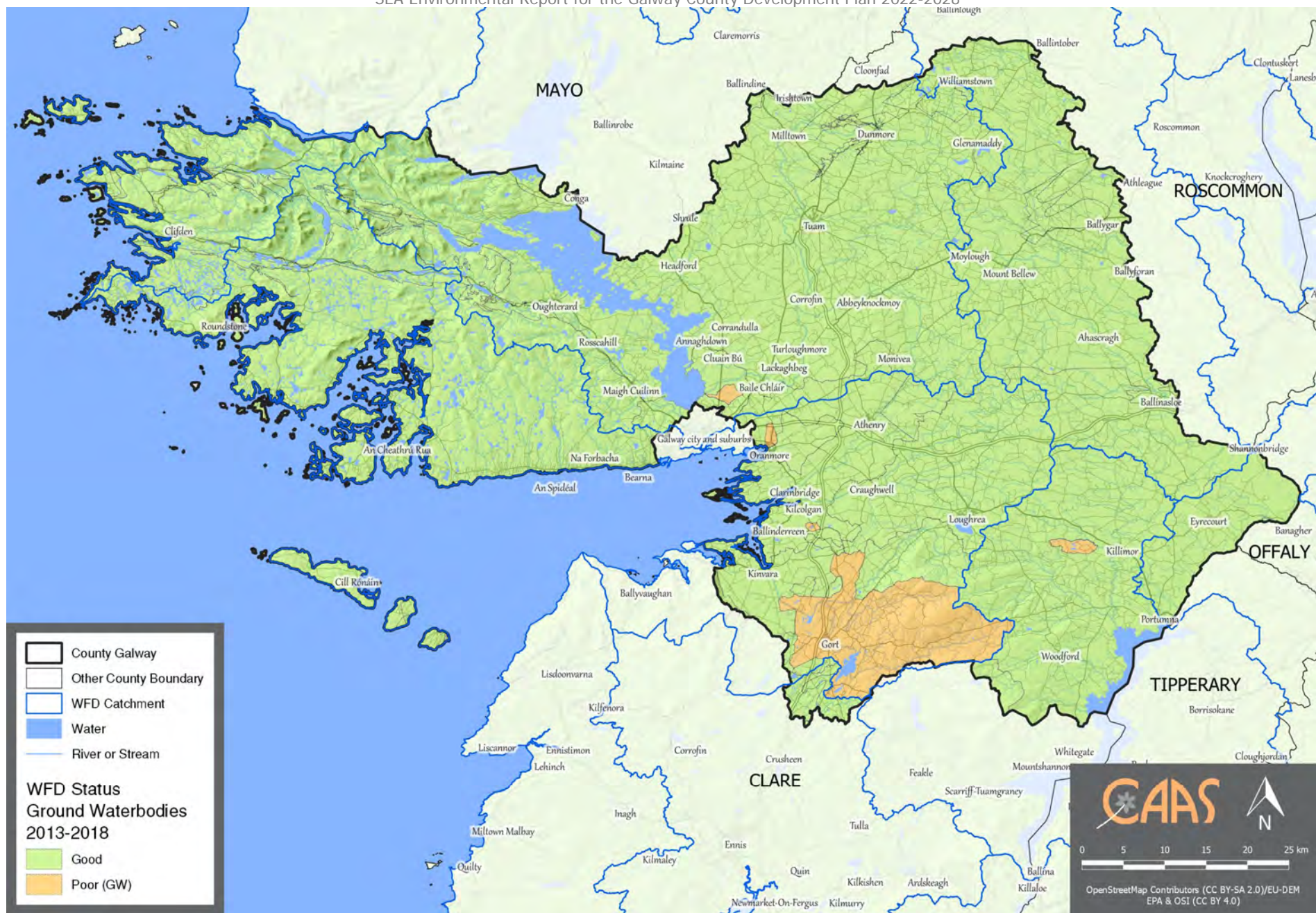


Figure 4.14 WFD Groundwater Status (2013-2018)

CAAS for Galway County Council

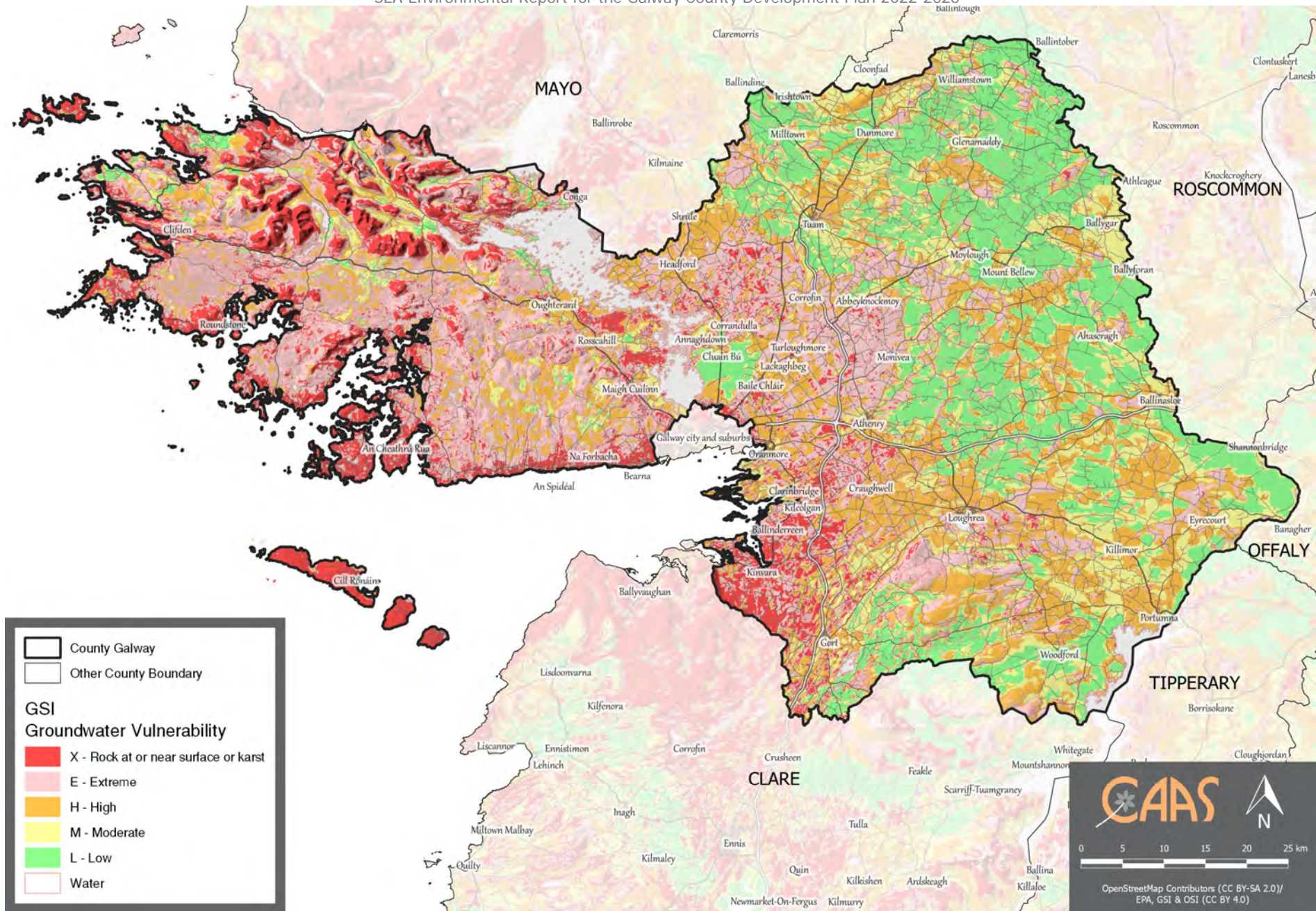


Figure 4.15 Groundwater Vulnerability
CAAS for Galway County Council

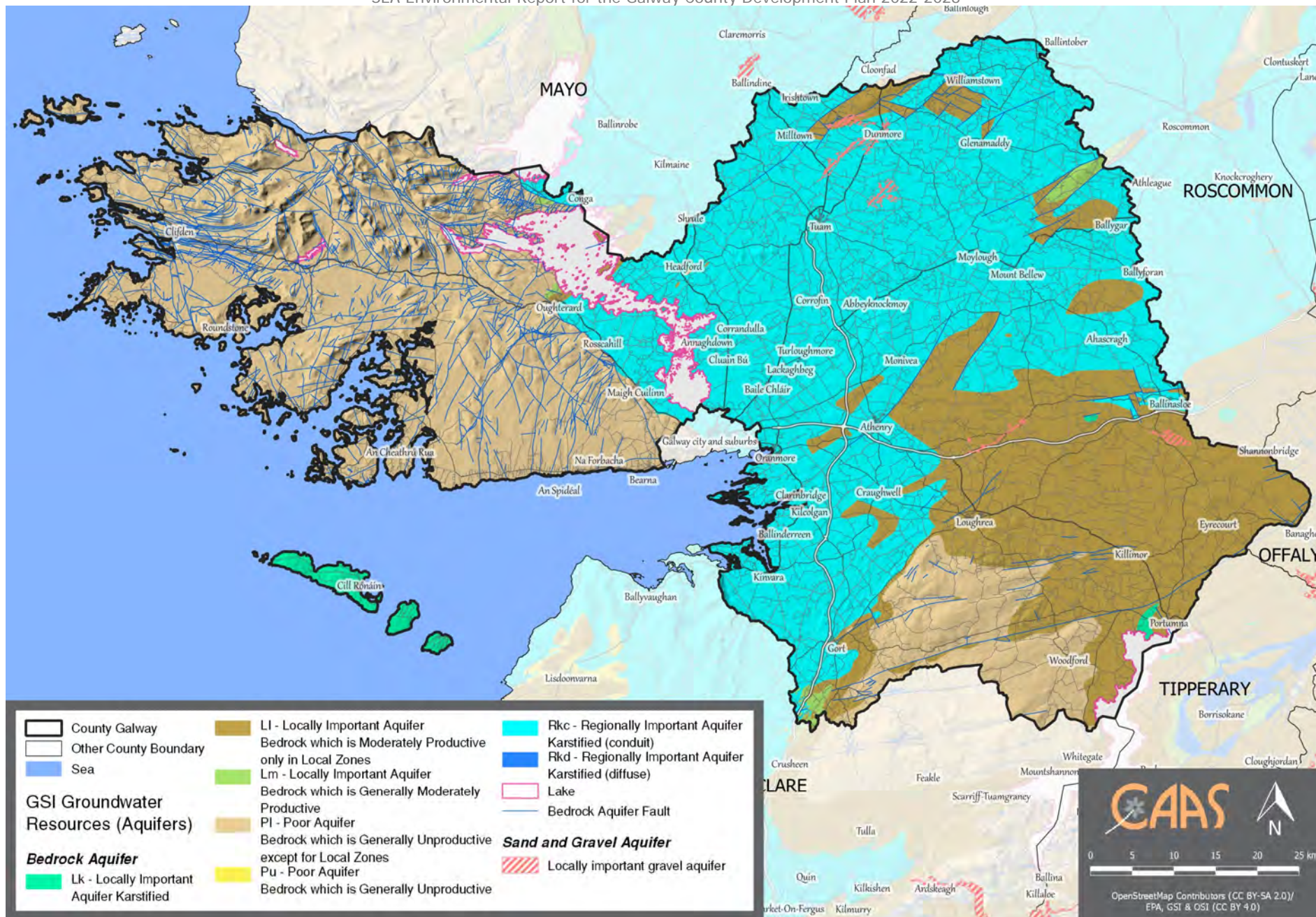


Figure 4.16 Groundwater Productivity

CAAS for Galway County Council

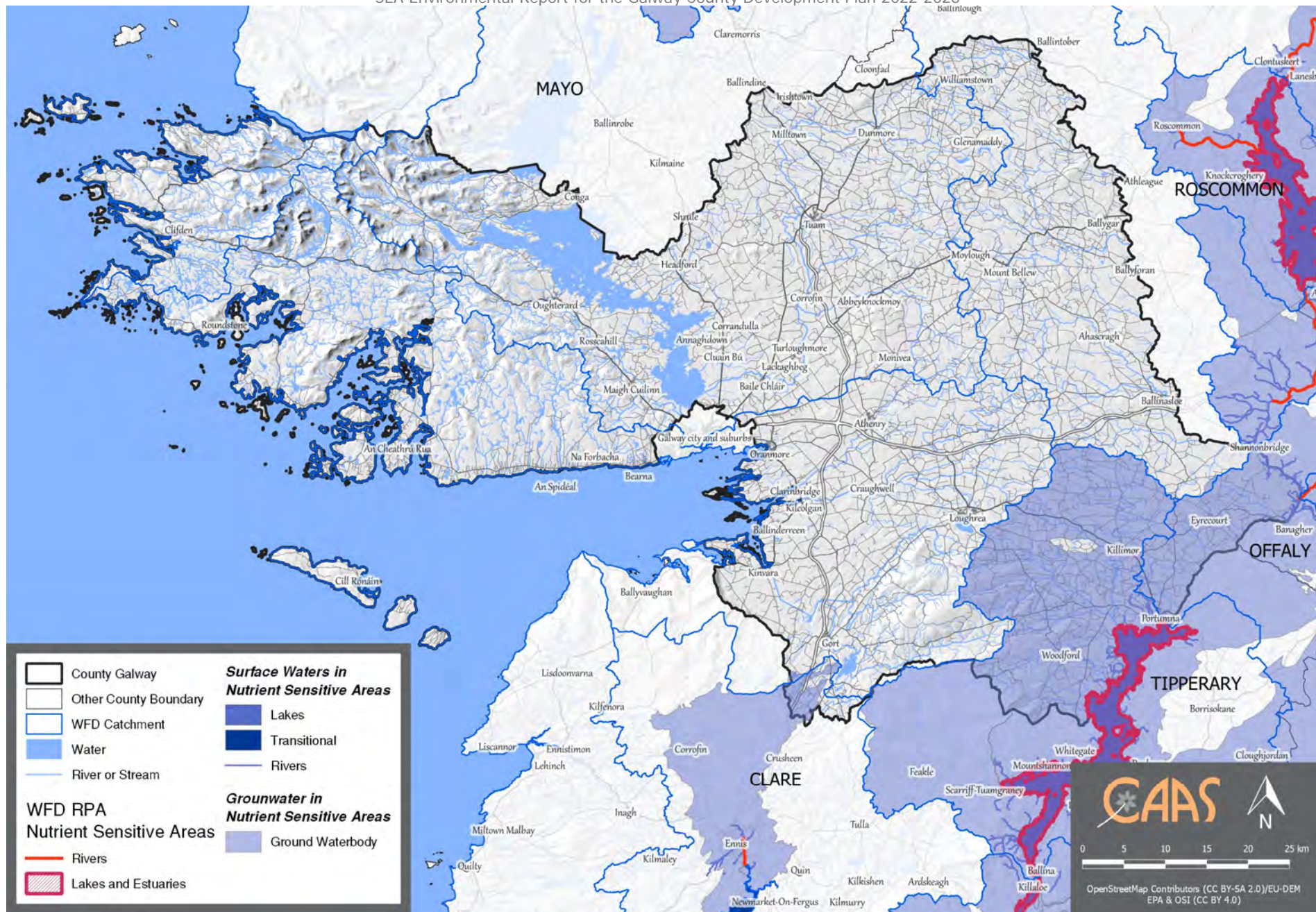


Figure 4.17 WFD Register of Protected Areas: Nutrient Sensitive Areas

CAAS for Galway County Council

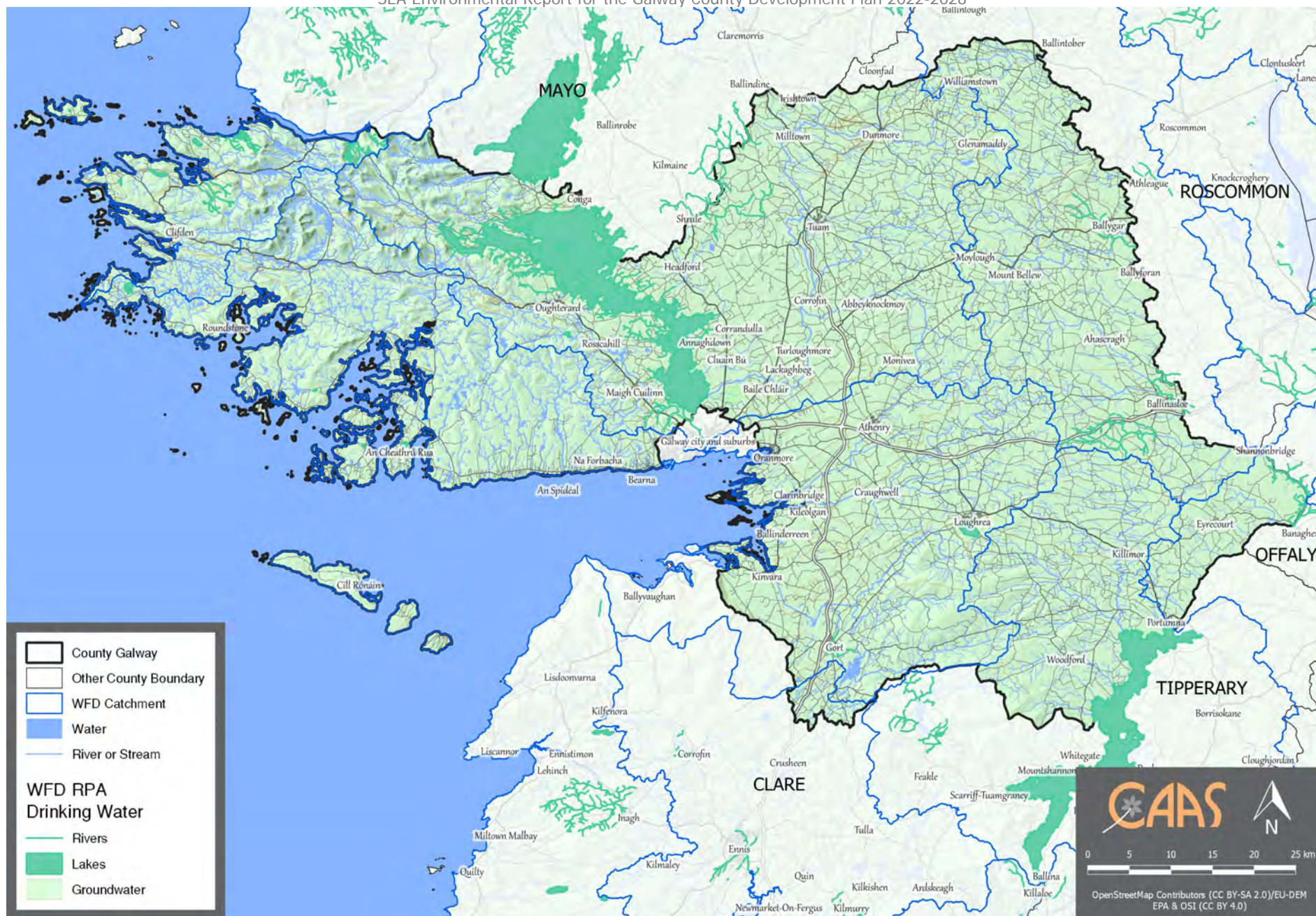


Figure 4.18 WFD Register of Protected Areas: Drinking Water

CAAS for Galway County Council

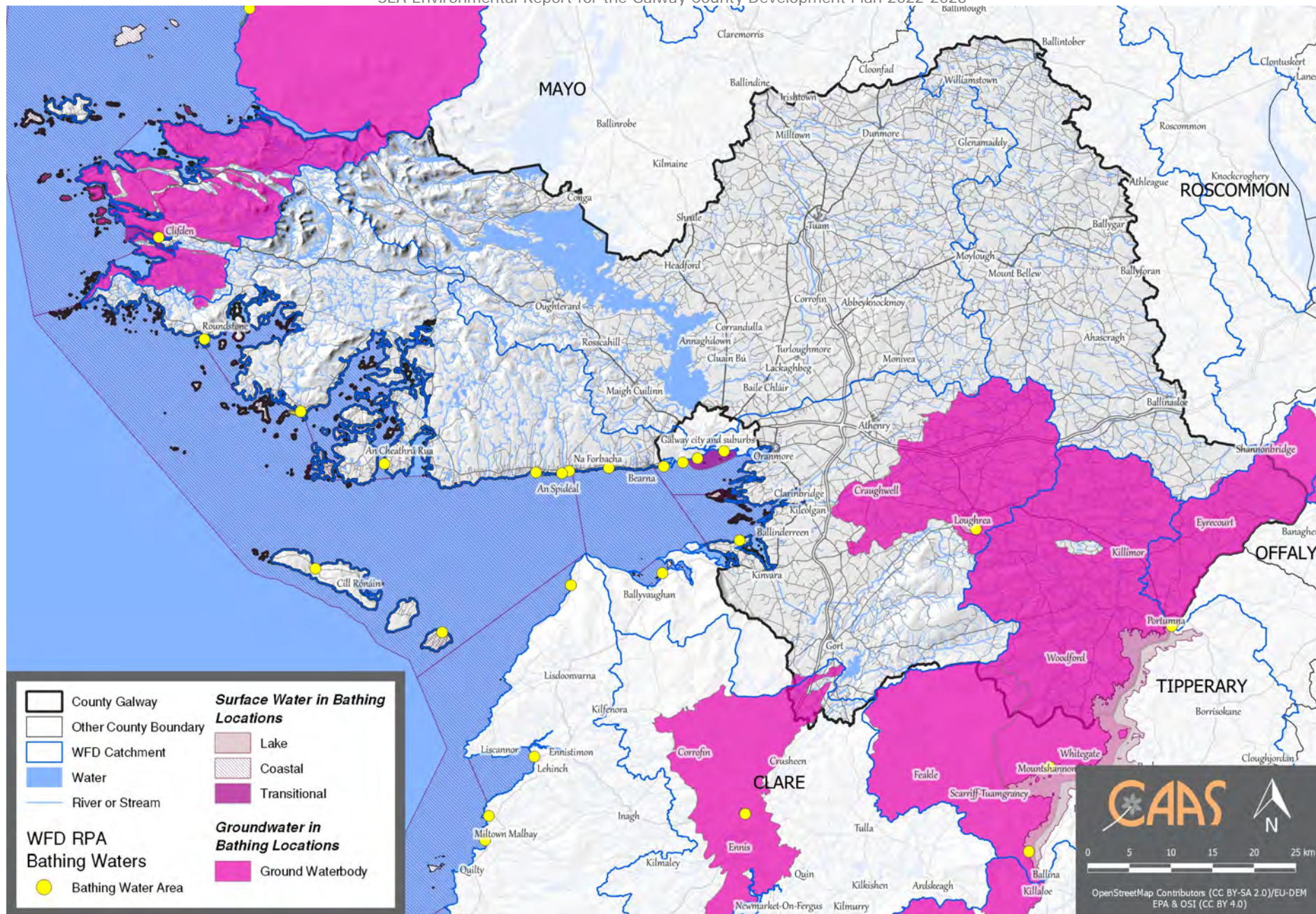


Figure 4.19 WFD Register of Protected Areas: Bathing Waters

CAAS for Galway County Council

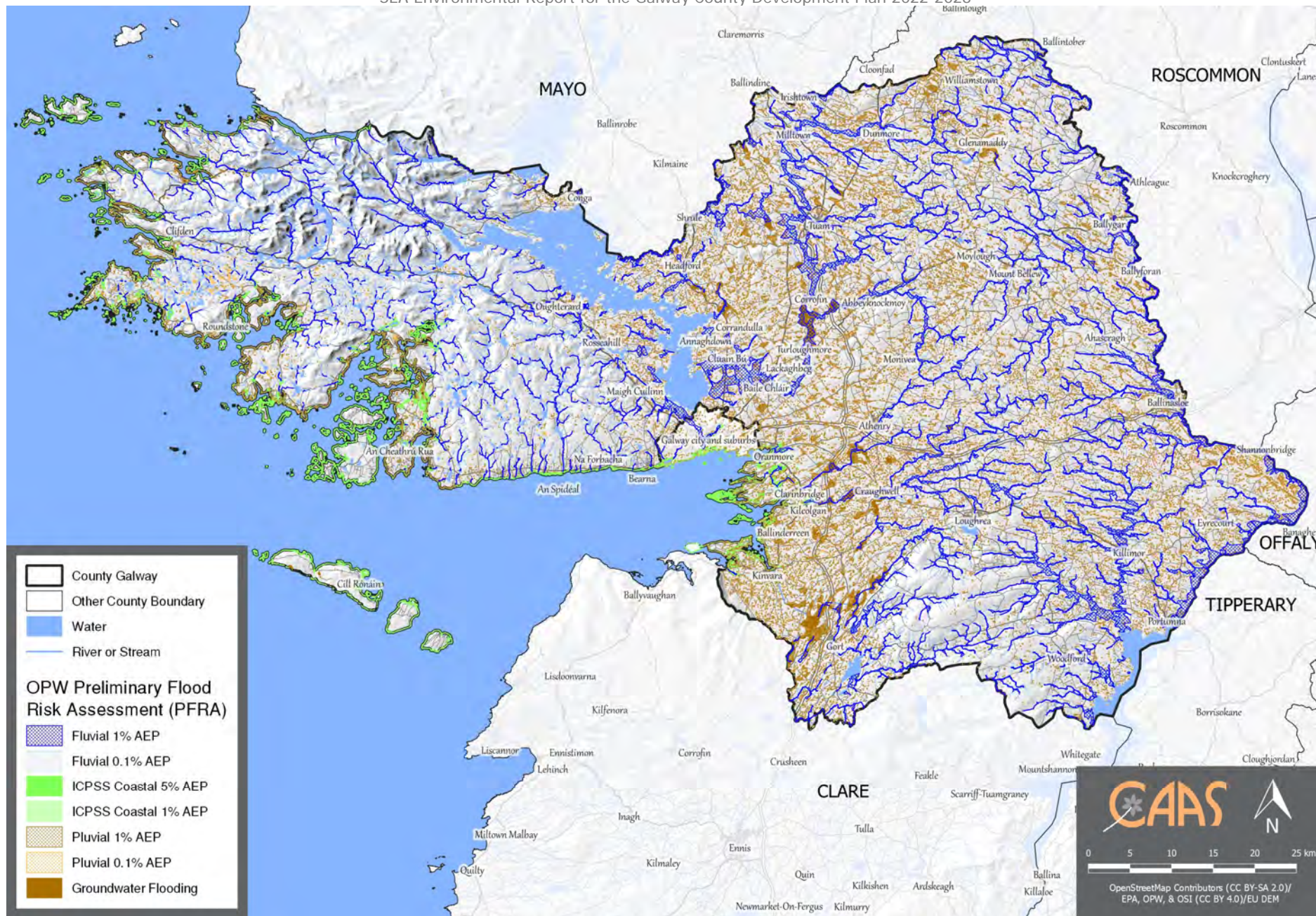


Figure 4.20 OPW Preliminary Flood Risk Assessment (PFRA) Mapping

CAAS for Galway County Council

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 CO₂eq). This is 0.9% lower (0.53 Mt CO₂eq) than emissions in 2016.

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 CO₂eq), 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 ETS⁶² 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 Combustion⁶³ 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 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 inclusion of new climate mitigation policies and measures that formed part of the 2018-2027 National Development Plan (updated in 2021). This is evident in the With Additional Measures scenario which assumes full implementation of the programmes, policies and measures included in the 2018 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.

⁶² 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 CO₂ becomes a product and,

thus, CO₂ is valued at a price, which is determined by the supply and demand at the (trading) market.

⁶³ Manufacturing Combustion; includes combustion of fuels in Industry and Construction, both in ETS and non-ETS

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 2018 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 Action

The National Climate Action Plan 2021 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 Action Plan sets out an ambitious course of action over the coming years to address the diverse and wide-ranging impacts climate disruption is having on Ireland's environment, society, economic and natural resources. The Climate Action Plan sets out clear 2030 targets for each sector with the ultimate objective of achieving a transition to a competitive, low-carbon, climate-resilient, and environmentally sustainable society and economy by 2050. The Action Plan deals with both mitigation and adaptation.

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

The 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 are included in the Action 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 2020 identifies that the most recent projections demonstrate that, under different assumptions, Ireland will not meet its emissions reduction targets, even with the additional policies and measures included in the National Development Plan. The projections also show

that progress on reducing emissions is sensitive to the future path of fuel prices. A significant and sustained rate of emissions reduction of approximately -2.5% per year is required to meet our objectives for 2050. However, it must be noted that additional measures within the recent Climate Action Plan are not included in the analysis to date.

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

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

The Galway County Council Climate Change Adaptation Strategy 2019-2024 seeks to:

- Improve education, awareness-raising and capacity on climate change, adaptation (and mitigation), impact reduction and early warning across the Local Authority departments, businesses, communities and individuals;
- Integrate climate change measures into policies, strategies and planning, as well as the identification of areas at risk to inform planning and decision making; and
- Strengthen resilience and adaptive capacity and develop and implement co-ordinated responses to climate risk where needed.

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 (S.I. No. 271 of 2002).

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

- Air quality in Ireland is generally good however there are localised issues;
- Nitrogen dioxide (NO₂) from transport emissions is polluting urban areas; and
- Ireland was above World Health Organization air quality guideline value levels at 33 monitoring sites – mostly due to the burning of solid fuel within settlements across the country.

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 current⁶⁴ air quality within the County is identified by the EPA as being *good*.

4.10.4 Noise

Galway County Council has prepared a Noise Action Plan 2019-2023 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 Galway were not identified as being conflicted with.

4.11 Material Assets

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, wastewater infrastructure etc.); forestry; and natural resources that are covered under other topics such as water and soil.

4.11.2 Green Infrastructure

Parks and open space promote health and well-being, provide recreational facilities and range of habitats for various species. Green infrastructure is also a crucial component in building resilient communities capable of adapting to the consequences of climate change with trees, woodlands and wetlands providing carbon capture and slowing water flows while improving air quality.

4.11.3 Land

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

⁶⁴ 25/03/2021 (<http://www.epa.ie/air/quality/>)

4.11.4 Forestry

Various extents and types of forestry exist across the County, as indicated on Figure 4.4, much of which is owned by Coillte⁶⁵. Coillte forests within the County include Clonbur Wood, Newvillage, Lackavrea, Derroura and Portumna Forest Park. Woodlands provide recreational opportunities in addition to their heritage and economic benefits. They are a valuable resource in terms of biodiversity, recreation and tourism, and also important as links in the County's green infrastructure network.

4.11.5 Peatlands

Peatlands provide a valuable natural and archaeological resource. Peatlands are also important controllers of water levels in river catchments, providing a source of water in dry conditions and soaking up excess water during wetter periods; they actively capture and hold carbon and are an important natural resource in combatting climate change. Cutaway bogs have the potential to facilitate land uses such as employment, renewable energy generation, waste management, industrial, and tourism and recreation. Peat soils are often indicative of areas that are the most sensitive to development due to ecological sensitivities and impeded drainage issues; various peatland areas are subject to ecological designations (see Section 4.6).

4.11.6 Coastline

Management of the County's coastline and coastal erosion are topics with relevance to various environmental components. The coastline of County Galway is amongst the most sensitive and valuable resources in the country, in terms of natural and cultural heritage, scenic beauty and recreation. The coast is also an important economic resource - particularly for the fishing, aquaculture, leisure and tourism industries. Many of the County's settlements have developed along or near the coast.

Ros an Mhíl is the largest and busiest port within County Galway and one of the country's top ten ports for fish landings. It is also the headquarters for the Galway and Árann Deep-Sea fishing fleet and is identified as one of the

country's six Major Fishery Harbour Centres. The Galway Port is identified as a 'Port of Regional Significance' in the Northern and Western Regional Economic and Spatial Strategy.

4.11.7 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).

The Local Authority Renewable Energy Strategy (LARES) has been prepared for County Galway as part of the County Development Plan. The LARES outlines the renewable energy resource potential in the County and aims to ensure that such developments are suitably located, economical and sustainable in the long term.

4.11.8 Minerals and Aggregates

Minerals such as iron and copper and aggregates such as sand and gravel can occur throughout the country. Minerals and aggregates are essential to manufacturing and construction.

Minerals localities within County Galway are shown on Figure 4.21. The GSI have a suite of data sources available that would be useful in planning and assessing individual projects with regard to the environmental topic(s) of soil and/or material assets. These include:

- Aggregate Potential Mapping;
- Bedrock mapping;
- Quaternary and Physiographic mapping; and
- National Aquifer and Recharge mapping.

4.11.9 Transport

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

⁶⁵ Coillte Teoranta, the State Forestry Board, was established to manage the public forest built up since the commencement of State planting and is the largest provider of forest recreation in Ireland.

The County is well served by public transport and road links. The M6/M17/M18 motorways and a network of national routes traverse the County. Irish Rail operate along the Western Rail Corridor via the Galway/Limerick and Galway/Dublin rail lines.

There are a number of public and private bus operators linking settlements within the County. This includes NTA's Local Link Rural Transport programme, providing sustainable transport links for those living in rural communities within the County with over 80 services a week. In addition, Bus Éireann and private operators service the number of long-distance routes to and from the County several times daily.

There are a number of airports located within and adjacent to the County, including: Ireland West Airport Knock to the north; Shannon Airport to the south; and Connemara Airport located at Indreabhán, which provides an important connection between the mainland and Oileáin Árann.

The Galway County Transport and Planning Strategy (GCTPS) provides an overview and examination of existing transport networks and services within the County and identifies key opportunities and challenges which will arise with regards to transport provision within the period of the County Development Plan and beyond. The GCTPS has been informed by the Galway Transport Strategy, in particular in regards to the metropolitan areas, which border the Galway City administrative area. The GCTPS seeks to actively promote and support improvements to the transport networks which will encourage greater use of sustainable transport, reduce car dependency and support new development in locations where sustainable travel choices can be encouraged and facilitated through existing and upgraded infrastructure and other measures.

4.11.10 Water Services

4.11.10.1 Wastewater

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 wastewater. Irish Water is also responsible for the treatment and disposal of the sludge that is generated from both its water and wastewater 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 wastewater treatment systems and is responsible for surface water drainage in the County.

The provision of well-maintained quality wastewater 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 wastewater where public wastewater facilities exist in towns and villages. In unserved areas and outside the main towns and villages, the main method of sewage disposal is by means of individual septic tanks and proprietary wastewater treatment systems.

The EPA's 2020 report *'Urban Wastewater Treatment in 2019'* identified that:

- Wastewater treatment at 19 towns and cities did not meet European standards for the treatment of urban wastewater in 2018;
- Raw sewage is released into the environment from 35 urban areas (including: **Ahascragh, Carraroe, Roundstone and Spiddal**);
- Wastewater from 48 areas (including **Athenry, Ballymoe, Loughrea, Mountbellew and Woodford**) is the main significant pressure on waters at risk of pollution;
- Wastewater contributed to poor quality bathing waters at three beaches in 2019 (including **Clifden and Galway City**);
- Discharges from 13 areas must improve to protect freshwater pearl mussels;
- Irish Water must complete assessments of the impacts of wastewater discharges on 26 shellfish waters to inform the need for any improvements; and
- Seven wastewater collection systems have been found non-compliant with European Union requirements.
- There are 11 urban areas in County Galway that are listed as Priority Areas (**Ahascragh, Athenry, Ballymoe, Carraroe, Clifden, Galway City, Loughrea, Mountbellew, Roundstone, Spiddal and Woodford**), where improvements are required to resolve urgent environmental issues with respect to wastewater treatment.

The County is served by various Wastewater Treatment Plants (WWTPs). In unserved areas and outside the main settlements, the main method of sewage disposal is by individual septic tanks (64%) and other types of wastewater treatment (7%).

Irish Water has provided information on wastewater treatment capacity, constraints and projects planned within the County to improve the existing network, to assist the Council in the preparation of the new County Development Plan (shown on Table 4.2 and Table 4.3). This information indicates where there may be

wastewater treatment capacity available to accommodate growth (“headroom”) in terms of population equivalent⁶⁶ (PE) in areas serviced by a public wastewater treatment plant. Spare treatment capacity is identified as being available in all of these settlements except for An Cheathrú Rua, Mount Bellew, Ballygar and Roundstone. The highest levels of headroom (PE) are available at Tuam WWTP (13,925 PE), Ballinasloe WWTP (4,969 PE) and Athenry WWTP (3,690 PE).

Table 4.4 provides information on wastewater treatment plant performance sourced from the EPA’s 2019 Annual Environmental Reports (AERs). These Wastewater Agglomerations are subject to Wastewater Discharge Licences issued by The Environmental Protection Agency. WWTPs non-compliant with the Emission Limit Values (ELVs) set in the Discharge Licences include:

- Tuam WWTP (D0031-01);
- Ballinasloe WWTP (D0032-01);
- Moycullen WWTP (D0191-01);
- Oughterard WWTP (D0192-01);
- Athenry WWTP (D0193-01);
- Portumna WWTP (D0196-01);
- Mountbellew WWTP (D0219-01);
- Ballygar (D0371-01);
- Glenamaddy WWTP (D0379-01);
- Carraroe WWTP (D0388-01);
- Spiddal WWTP (D0396-01); and
- Moylough WWTP (D0403-01).

Galway County Council will work alongside and facilitate the delivery of Irish Water’s Water Investment Plan to support and facilitate the delivery of new or improved wastewater treatment plants in the County. Sewerage projects that have been completed to date in the County under Irish Water’s Investment Plan up to 2020 include: Clifden Sewerage Scheme; Baile Chláir and Milltown Sewerage Scheme; Kinvara Sewerage Scheme; Oughterard Sewerage Scheme; Glenamaddy Sewerage Scheme; Athenry Sewerage Scheme; Tuam Sewerage Scheme; Ballinasloe Sewerage Scheme; Gort Sewerage Scheme; and Ballinasloe Contract 2. Wastewater projects proposed to be completed in County Galway under the Proposed Capital Investment Plan 2020 – 2024 include: new WWTPs at An Spidéal Sewerage; Ahascragh Sewerage; An Cheathrú Rua; Roundstone Sewerage Scheme and network upgrades at Athenry Sewerage

Scheme; Galway City Agglomeration wastewater network; and Greater Galway Area Drainage Strategy.

Irish Water is responsible for the treatment and disposal of the sludge that is generated from both its water and wastewater treatment plants. Irish Water has prepared a National Wastewater Sludge Management Plan 2016-2021 that outlines Irish Water’s strategy to ensure a nationwide standardised approach for managing wastewater sludge over a 25-year period. A separate plan will be prepared in relation to sludge produced at drinking water plants.

4.11.10.2 Water Supply

Irish Water is responsible for providing and maintaining adequate public water supply infrastructure throughout the County. Public drinking water in County Galway is supplied through 38 public water supply schemes and approximately 80% of the treated water supplied through this infrastructure network is abstracted from surface water sources.⁶⁷ The remaining households are served by either Group Water Schemes or private wells, which do not fall within the remit of Irish Water. Information on Water Resource Zones (WRZs) for the County are shown on Table 4.5. There is surplus supply available in all zones except Rosmuc Public Supply. The highest amount of surplus is available in Lough Corrib (Galway City, Tuam, Loughrea) WRZ.

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)

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. There are no County Galway water supplies identified on the most recent available RAL (Q4 of 2020 published in January 2021).

Currently, Irish Water is developing the National Water Resource Plan outlining how to move to a sustainable, secure and reliable

⁶⁶ WWTPs are described in terms of their designed treatment capacity, which is generally expressed as population equivalent (PE). This is a measurement of total organic biodegradable load, including industrial, institutional, commercial and domestic organic load, on a wastewater treatment plant, converted to the equivalent

number of PEs. One person is considered to generate 60g of five-day Biochemical Oxygen Demand (BOD) per day. 1 PE is defined as being equivalent to 60g of BOD per day.

⁶⁷ Draft Galway County Development Plan 2022-2028

public drinking water supply over a 25-year period while safeguarding the environment. It will outline how Irish Water intends to maintain a balance between supply from water sources around the country and demand for drinking water over the short, medium and long term. This will facilitate future planning and ensure provision of sufficient, safe, clean drinking water to facilitate the social and economic growth of the County.

It is the policy of the Council to work in conjunction with Irish Water to protect existing water infrastructure, to maximise the potential of existing capacity and to facilitate the timely delivery of new wastewater services infrastructure to facilitate future growth. Water supply works Completed in County Galway Under the Irish Water's Investment Plans up to 2020 include: Lough Mask Extension to Williamstown; Dunmore/Glenamaddy Water Supply; Gort Water Supply Scheme; Ballinasloe Water Supply and Main Drainage; Spiddal Water Supply; An Cheathrú Rua Water Supply; Leenane Water Supply; Mid-Galway Water Supply; Portumna Water Supply; and Ballinasloe Contract 2. Water supply projects proposed to be completed in County Galway under the Proposed Capital Investment Plan 2020 – 2024 include: Tuam RWSS extension to Loughrea; and Gort Water Supply New Reservoir.

4.11.10.3 Surface Water Drainage

Sustainable Urban Drainage systems (SUDS) can minimise the quantity and increase the quality of surface water runoff as well as mitigating 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.

4.11.11 Waste Management

The Connacht-Ulster Waste Region comprises nine local authority areas of: Mayo; Galway; Galway City; Roscommon; Sligo; Leitrim; Donegal; Cavan; and Monaghan.

The Connacht-Ulster 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. It is underpinned by National and European waste legislation and the work carried out will ensure

the continued management of waste in a safe and sustainable manner. The Plan includes three strategic targets:

- 1% reduction per annum in the quality of household waste generated per capita over the period of the Plan;
- Achieve a recycling rate of 50% of managed Municipal waste by 2020; and
- Reduce to 0% the direct disposal of unprocessed residual municipal waste to landfill (from 2016 onwards) in favour of higher value pre-treatment processes and indigenous recovery practices.

The Connacht-Ulster Waste Management Plan states that the future role of local authorities in waste management will be focused on education, prevention, and resource efficiency activities as well as regulating householders, businesses and waste operators and enforcing waste legislation. Waste infrastructure provided by local authorities will mainly include bring banks and civic amenities include bring banks and civic amenities.

4.11.12 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 Water Services Section of Galway County Council will co-operate with Irish Water in providing and maintaining adequate public water supply and wastewater collection and treatment infrastructure throughout the County for the period of the plan and beyond. In conjunction with Irish Water, the Water Services Section of Galway County Council will endeavour to ensure the continued investment in and delivery of improvements to water infrastructure over the Plan period through the implementation of the Capital Investment Plan.

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

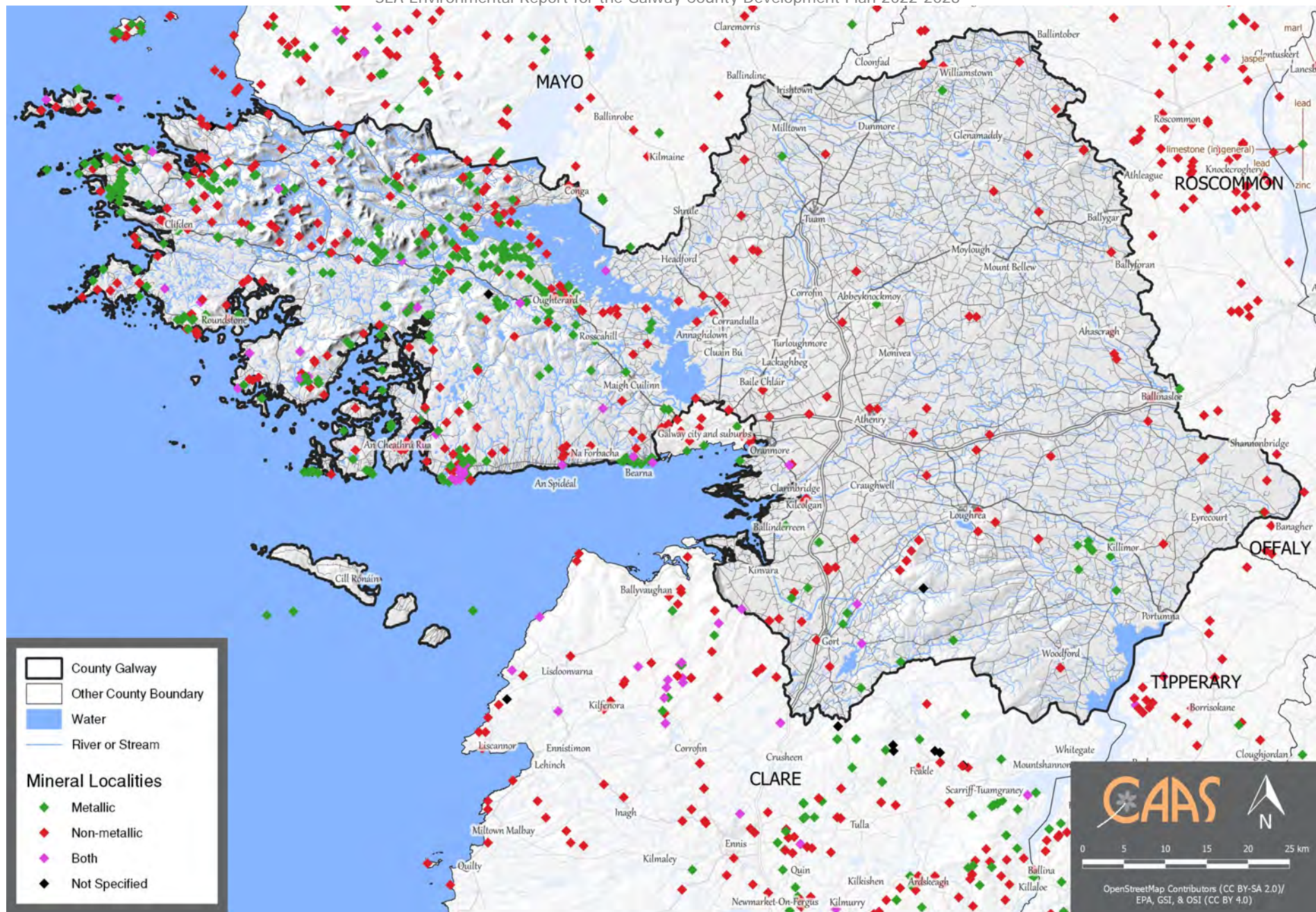


Figure 4.21 Minerals Localities

CAAS for Galway County Council

Table 4.2 Wastewater Constraints in County Galway (Irish Water, April 2020)

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)	
NW	Galway	Tuam	8,767	Tuam WWTP	00031	No	24,834	24,834	10,909	13,925		2021
NW	Galway	Ballinasloe	6,662	Ballinasloe WWTP	00032	No	13,500	=	8,531	4,969		
NW	Galway	Loughrea	5,556	Loughrea WWTP	00194	No	9,500	=	7,160	0	2,340	
NW	Galway	Oranmore	4,490	Mutton Island WWTP	00050	Yes	170,000	=	102,278	incl.		
NW	Galway	Athenry	4,445	Athenry WWTP	00193	No	9,500	=	5,810	3,690		
NW	Galway	Gort	2,994	Gort WWTP	00195	No	4,310	=	3,450	860		
NW	Galway	Bearna	1,998	Mutton Island WWTP	00050	Yes	170,000	=	102,278	incl.		
NW	Galway	Maigh Cuillinn	1,704	Moycullen WWTP	00191	No	4,000	=	1,999	2,001		
NW	Galway	Clifden	1,597	Clifden WWTP	00198	No	6,000	=	2,684	3,316		
NW	Galway	Portumna	1,450	Portumna WWTP	00196	No	3,100	=	2,187	913		
NW	Galway	Oughterard	1,318	Oughterard WWTP	00192	No	2,400	=	1,506	894		
NW	Galway	Baile Chiar	1,248	Claregalway WWTP	00543	No	6,000	=	2,422	3,578		
NW	Galway	Headford	973	Headford WWTP	00197	No	3,000	=	1,387	1,613		
NW	Galway	An Cheathrú Rua	781	-	00388	No	-	1,000	765			2023
NW	Galway	Mount Bellew	774	Mountbellew WWTP	00219	No	700	1,600	1,034			Post 2024
NW	Galway	Kinvara	734	Kinvara WWTP	00276	No	2,050	=	680	1,370		
NW	Galway	Ballygar	687	Ballygar WWTP	00371	No	360	1,000	677			Post 2024
NW	Galway	Dunmore	600	Dunmore WWTP	00370	No	3,000	=	781	2,219		
NW	Galway	Moylough	518	Moylough WWTP	00403	No	1,000	=	540	460		
NW	Galway	Glenamaddy	480	Glenamaddy WWTP	00379	No	300	700	522	178		2020
NW	Galway	An Spidéal	237	-	00396	No	-	1,000	306	0	694	2022
CoA Headroom (PE)												
NW	Galway	Ahascragh	195	Ahascragh	A0548	No	-	500	201	299		2022
NW	Galway	Ballymoe	Unavailable	Ballymoe WWTP	A0105	No	290	=	100	190		
NW	Galway	Clonbur	Unavailable	Clonbur WWTP	A0560	No	1,100	=	168	932		
NW	Galway	Eyrecourt	252	Eyrecourt WWTP	A0554	No	325	500	259	66		Post 2024
NW	Galway	Kilkerrin	Unavailable	Kilkerrin WWTP	A0532	No	500	=	104	396		
NW	Galway	Killimor	336	Killimor WWTP	A0517	No	1,000	=	376	624		
NW	Galway	Kilronan Cottages	Unavailable	Kilronan Cottages WWTP	A0522	No	36	=	18	18		
NW	Galway	Leenane	Unavailable	Leenane WWTP	A0531	No	550	=	217	333		
NW	Galway	Letterfrack	192	Letterfrack WWTP	A0561	No	800	=	164	636		
NW	Galway	Milltown	207	Milltown WWTP	A0562	No	1,400	=	481	919		
NW	Galway	Newbridge	Unavailable	Newbridge WWTP	A0100	No	50	=	17	33		
NW	Galway	Williamstown	148	Williamstown WWTP	A0109	No	400	=	193	207		
NW	Galway	Woodford	239	Woodford WWTP	A0111	No	370	=	274	96		
NW	Galway	Roundstone	214	-	A0115	No	-	1,000	394			2024

Notes: 68,69,70,71,72,73,74

⁶⁸ Wastewater Discharge Licences (WWDL) and Certificates of Authorisation (CoA)

⁶⁹ 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).

⁷⁰ 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 Wastewater Discharge Licence (WWDL) emission limit values (ELVs) in the former case, or at least the Urban Wastewater (UWW) Treatment Directive parametric values in the latter case.

⁷¹ Load (PE) 2019 = Wastewater load arising from the settlement(s) being served entering the WWTP in 2019.

⁷² 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 Wastewater 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 Wastewater Discharge (Authorisation) Regulations 2007. Red = no spare capacity available

⁷³ 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.

⁷⁴ 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

Table 4.3 Additional Details on Wastewater Capacity (Irish Water, February 2021)

Settlement	Additional Details on Wastewater Capacity
Baile Chláir	It is envisaged that there is adequate capacity (to WWDL ELV capability) to meet the 2028 Draft CDP population targets.
Bearna	It is envisaged that there is adequate WWTP capacity (to WWDL ELV capability) to meet the 2028 Draft CDP population targets. Stormwater ingress into network being investigated.
Oranmore	It is envisaged that there is adequate WWTP capacity (to WWDL ELV capability) to meet the 2028 Draft CDP population targets. A local network reinforcement project in Galway city will provide a new wastewater storage tank at Merlin Park Pumping Station No.1 which will improve existing capacity constraints at Oranmore main pumping station. DAP will identify medium-long term solutions.
Garraun Framework	It is envisaged that there is adequate WWTP capacity (to WWDL ELV capability) to meet the 2028 Draft CDP population targets. Garraun will be assessed in DAP, localised upgrade likely to be required. Refer also to Oranmore comment.
Briarhill Framework	It is envisaged that there is adequate WWTP capacity (to WWDL ELV capability) to meet the 2028 Draft CDP population targets. Localised network upgrades may be required.
Ballinasloe	It is envisaged that there is adequate capacity (to WWDL ELV capability) to meet the 2028 Draft CDP population targets. Pumping station upgrades in Ballinasloe (Dunloe P.S.) to resolve capacity constraints are under consideration.
Tuam	It is envisaged that there is adequate capacity (to WWDL ELV capability) to meet the 2028 Draft CDP population targets.
Athenry	It is envisaged that there is adequate capacity (to WWDL ELV capability) to meet the 2028 Draft CDP population targets. A project to resolve capacity constraints in the Athenry wastewater network is at detailed design stage.
Gort	Capacity available (to WWDL ELV capability) to accommodate almost 90% of projected growth.
Loughrea	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. A hydraulic study will be undertaken in the 2020-2024 investment period to investigate issues associated with a stormwater overflow at Station Road in Loughrea.
Clifden	It is envisaged that there is adequate capacity (to WWDL ELV capability) to meet the 2028 Draft CDP population targets.
Maigh Cuilinn	It is envisaged that there is adequate capacity (to WWDL ELV capability) to meet the 2028 Draft CDP population targets.
Oughterard	It is envisaged that there is adequate capacity (to WWDL ELV capability) to meet the 2028 Draft CDP population targets.
Portumna	It is envisaged that there is adequate capacity (to WWDL ELV capability) to meet the 2028 Draft CDP population targets. Pumping station upgrade in Portumna (Green Isle P.S.) to resolve capacity constraints are under consideration.
Headford	It is envisaged that there is adequate capacity (to WWDL ELV capability) to meet the 2028 Draft CDP population targets.
An Cheathrú Rua	Project to provide WWTP underway, includes some wastewater network also. It is envisaged that the proposed works will ensure there is adequate capacity (to WWDL ELV capability) to meet the 2028 draft CDP targets within the Plan period.
An Spidéal	Project to provide WWTP underway. It is envisaged that the proposed works will ensure there is adequate capacity (to WWDL ELV capability) to meet the 2028 draft CDP targets within the Plan period.
Ballygar	At present there is no capacity at the WWTP. Candidate site under the STVGP, decision due in 2021.
Dunmore	It is envisaged that there is adequate capacity (to WWDL ELV capability) to meet the 2028 Draft CDP population targets.
Glenamaddy	It is envisaged that there is adequate capacity (to WWDL ELV capability) to meet the 2028 Draft CDP population targets. WWTP upgrade recently completed.
Kinvara	It is envisaged that there is adequate capacity (to WWDL ELV capability) to meet the 2028 Draft CDP population targets.
Moylough	It is envisaged that there is adequate capacity (to WWDL ELV capability) to meet the 2028 Draft CDP population targets.

Table 4.4 Wastewater Treatment Plant Performance

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
Galway City D0050-01	Secondary	Pass	N/A	The WWTP is compliant with the Emission Limit Values set in the Wastewater Discharge Licence.	170000	102278	67722
Tuam D0031-01	Tertiary	Fail	Ammonia-Total (as N) mg/l ortho-Phosphate (as P) - unspecified mg/l	<p>Cause: ammonia exceedances are due to inadequate surface aeration, Ortho-phosphate exceedances due to Ferric dosing failure.</p> <ul style="list-style-type: none"> The ambient monitoring results meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009. Based on ambient monitoring results a deterioration in Ammonia-N, Ortho-Phosphate - P, concentrations downstream of the effluent discharge is noted. A deterioration in water quality has been identified, however it is not known if it or is not caused by the WWTP. Other causes of deterioration in water quality in the area are unknown. The discharge from the wastewater treatment plant does not have an observable negative impact on the Water Framework Directive status. 	24834	10909	13925
Ballinasloe D0032-01	Tertiary	Fail	ortho-Phosphate (as P) - unspecified mg/l	<p>Cause: There is no effluent data included in the AER to confirm an exceedance of ELV's.</p> <ul style="list-style-type: none"> The ambient monitoring results do not meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009. Based on ambient monitoring results; a deterioration in Ammonia and Ortho-Phosphate concentrations downstream of the effluent discharge is noted. A deterioration in water quality has been identified; however, it is not known if it is caused by the WWTP. Other causes of deterioration in water quality in the area are unknown. The discharge from the wastewater treatment plant does not have an observable negative impact on the Water Framework Directive status. 	100	30	70
Moycullen D0191-01	Tertiary	Fail	Ortho-Phosphate (as P) - unspecified mg/l	<ul style="list-style-type: none"> The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence. The ambient monitoring results do not meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009. Based on ambient monitoring results deterioration in Ammonia and Ortho-Phosphorus concentrations downstream of the effluent discharge are noted. A deterioration in water quality has been identified, however it is not known if it or is not caused by the WWTP. Other causes of deterioration in water quality in the area are Unknown. The discharge from the wastewater treatment plant does not have an observable negative impact on the Water Framework Directive status. 	4000	1999	2001
Oughterard D0192-01	Tertiary	Fail	Ammonia-Total (as N) mg/l Ortho-Phosphate (as P) - unspecified mg/l	<ul style="list-style-type: none"> The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence. The ambient monitoring results do not meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009. Based on ambient monitoring results a deterioration in BOD and Ammonia concentrations downstream of the effluent discharge is noted. 	2400	1506	894

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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
				<ul style="list-style-type: none"> Deterioration in water quality has been identified; however, it is not known if it is caused by the WWTP. Other causes of deterioration in water quality in the area are unknown. The discharge from the wastewater treatment plant does not have an observable negative impact on the Water Framework Directive status. 			
Athenry D0193-01	Tertiary	Fail	ortho-Phosphate (as P) - unspecified mg/l	Cause: Upgrade of WWTP and inadequate operational procedures and training. <ul style="list-style-type: none"> The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence. The ambient monitoring results do not meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009. Based on ambient monitoring results deterioration in Ammonia, BOD and ortho- Phosphate concentrations downstream of the effluent discharge are noted. 	9500	5810	3690
Loughrea D0194-01	Tertiary	Pass	N/A	The WWTP is compliant with the Emission Limit Values set in the Wastewater Discharge Licence.	9500	7160	2340
Gort D0195-01	Secondary	Pass	N/A	The WWTP is compliant with the Emission Limit Values set in the Wastewater Discharge Licence.	4310	3450	860
Portumna D0196-01	Secondary	Fail	Ammonia-Total (as N) mg/l Total Phosphorus (as P) mg/l	Cause: Plant or equipment breakdown and Inadequate operational procedures or training. <ul style="list-style-type: none"> The ambient monitoring results does not meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009. Based on ambient monitoring results a deterioration in Ammonia concentrations downstream of the effluent discharge is noted. A deterioration in water quality has been identified, however it is not known if it is or is not caused by the WWTP. Other causes of deterioration in water quality in the area are unknown. The discharge from the wastewater treatment plant does have an observable negative impact on the Water Framework Directive status. 	3100	2187	913
Headford D0197-01	Tertiary	Pass	N/A	The WWTP is compliant with the Emission Limit Values set in the Wastewater Discharge Licence.	3000	1387	1613
Kinvara D0276-01	Secondary	Pass	N/A	The WWTP is compliant with the Emission Limit Values set in the Wastewater Discharge Licence.	2050	680	1370
Mountbellew D0219-01	Secondary	Fail	BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l COD-Cr mg/l Suspended Solids mg/l	Cause: Storm water infiltration and the plant is undersized for current PE. <ul style="list-style-type: none"> The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence. The ambient monitoring results do not meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009. Based on ambient monitoring results, a deterioration in Ortho-phosphate, Ammonia and BOD concentrations downstream of the effluent discharge is noted. The discharge from the wastewater treatment plant does have an observable negative impact on the Water Framework Directive status. 	700	1034	0
Dunmore D0370-01	Tertiary	Pass	N/A	The WWTP is compliant with the Emission Limit Values set in the Wastewater Discharge Licence.	3000	781	2219
Ballygar D0371-01	Secondary	Fail	BOD, 5 days with Inhibition	Cause: Plant is under capacity and not fit for purpose.	360	677	0

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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
			(Carbonaceous BOD) mg/l COD-Cr mg/l Suspended Solids mg/l	<ul style="list-style-type: none"> The WWTP discharge is not compliant with the ELV's set in the wastewater discharge licence. The ambient monitoring results do not meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009. Based on ambient monitoring results; a deterioration in Ammonia and ortho-Phosphate concentrations downstream of the effluent discharge is noted. The discharge from the wastewater treatment plant does have an observable negative impact on the Water Framework Directive status. 			
Glenamaddy D0379-01	Primary	Fail	cBOD and Suspended Solids	<ul style="list-style-type: none"> The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence. Ambient monitoring was not undertaken during the reporting period. 	300	522	0
Carraroe D0388-01	Currently there is no treatment provided at Carraroe.	Fail	Unknown	<ul style="list-style-type: none"> The WWTP discharge is non-compliant with the ELV's set in the wastewater discharge licence. There is no ambient data included in the AER. It is unknown if the ambient monitoring points meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009. It is unknown if discharge from the wastewater treatment plant has an observable impact on the water quality. It is unknown if discharge from the wastewater treatment plant has an observable negative impact on the Water Framework Directive status. 	N/A	N/A	N/A
Spiddal D0396-01	Currently there is no treatment provided at Spiddal.	Fail	Unknown	<ul style="list-style-type: none"> The WWTP discharge is non-compliant with the ELV's set in the wastewater discharge licence. There is no ambient data included in the AER. It is unknown if the ambient monitoring points meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009. It is unknown if discharge from the wastewater treatment plant has an observable impact on the water quality. It is unknown if discharge from the wastewater treatment plant has an observable negative impact on the Water Framework Directive status. 	N/A	N/A	N/A
Moylough D0403-01	Secondary	Fail	BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	<p>Cause: Heavy rainfall storm water surges.</p> <ul style="list-style-type: none"> The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence. The ambient monitoring results meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009. Based on ambient monitoring results a deterioration in Ammonia - N, concentrations downstream of the effluent discharge is noted. A deterioration in water quality has been identified, however it is not known if it or is not caused by the WWTP. Other causes of deterioration in water quality in the area are: Unknown. The discharge from the wastewater treatment plant does not have an observable negative impact on the Water Framework Directive status. 	1000	540	460
Claregalway D0543-01	Tertiary	Pass	N/A	The WWTP is compliant with the Emission Limit Values set in the Wastewater Discharge Licence.	6000	6000	0
Clifden D0198-01	Tertiary	Pass	N/A	The WWTP is compliant with the Emission Limit Values set in the Wastewater Discharge Licence.	6000	2684	3316

Table 4.5 Water Resource Zones (Irish Water, February 2021)

LA (WRZ)	Water Resource Zone (WRZ) Name	Water Resource Code	22Hr WTP capacity (m ³ /hr)	Average Demand 2019 (m ³ /hr)	Surplus/Deficit
Galway City	Lough Corrib (Galway City, Tuam, Loughrea)	1100SC0001	87,358	69,817	17,542
Galway	Carna_KilKieran RWSS	1100SC0001_B	2,475	1,743	732
Galway	Dunmore_Glenamaddy P.S.	1100SC0001_D	2,811	1,722	1,089
Galway	Kilkerrin_Moylough	1100SC0001_F	1,224	1,160	64
Galway	Mid-Galway	1100SC0001_H	4,109	3,642	467
Galway	Mountbellew P.S.	1100SC0001_I	2,878	1,712	1,166
Galway	Oughterard	1100SC0001_J	2,750	2,213	537
Galway	Rosmuc P.S.	1100SC0001_K	321	395	- 74
Galway	Teeranea_Lettermore P.S.	1100SC0001_M	550	482	68
Galway	Ballymoe P.S.	1200SC0001	733	458	276
Galway	IN_Inishmean	1200SC0004	83	68	16
Galway	Ahascragh P.S.	1200SC0005	1,467	891	576
Galway	Ballinasloe Public Supply	1200SC0006	4,354	3,931	423
Galway	Ballyconneely P.S.	1200SC0007	871	501	370
Galway	Cleggan_Claddaghduff	1200SC0010	321	210	111
Galway	Clifden	1200SC0011	752	720	31
Galway	Clonbur PS	1200SC0012	1,128	890	238
Galway	Gort	1200SC0016	1,320	1,018	302
Galway	Inisboffin P.S.	1200SC0017	242	165	77
Galway	Inishere	1200SC0018	229	104	125
Galway	Inishmore	1200SC0019	1,247	714	532
Galway	Kilconnell PWS (GWS Import)	1200SC0020	See GWS	73	see GWS
Galway	Kinvara P.S.	1200SC0023	1,650	1,130	520
Galway	Leenane P.S.	1200SC0024	106	80	26
Galway	Portumna PS	1200SC0030	1,375	1,139	236
Galway	Tully-Tullycross	1200SC0035	422	276	146
Galway	Woodford PS	1200SC0036	141	97	44
Galway	Carraroe	1200SC0037	2,200	1,309	891
Galway	Spiddal	1200SC0038	3,667	3,374	293

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.

There are many sites of significant archaeological interest in County Galway, including two sites within or partially within the County included on the Tentative UNESCO World Heritage Sites List (mapped on Figure 4.22): the Burren; and the Western Stone Forts. A Tentative List is an inventory of properties which a country intends to consider for nomination to the World Heritage List.

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.

A Sites and Monuments Record (SMR)⁷⁵ is a manual containing a numbered list of all certain and possible monuments accompanied. An Urban Archaeology Survey was completed in 1995 and contained reports on historic towns dating to before 1700 A.D. with a view to delineating zones of archaeological potential (SMR Zones of Notification). The SMR formed the basis for issuing the RMP.

Figure 4.22 shows the spatial distribution of recorded monuments in the County. There are hundreds of Recorded Monuments within the County, including graveyards, castles, forts, crosses and churches.

Clusters of archaeological heritage are identified: along the coastline; along river and lake banks; surrounding settlements (such as Galway City, Headford, Tuam, Oranmore, Athenry, Loughrea and Gort); in lowland rural areas; and on the County's Islands, including Oileán Árann and Inishbofin. There are lower concentrations in the central upland areas.

⁷⁵ The RMP was issued for each county between 1995 and 1998 in a similar format to the existing SMR. However, the RMP differs from the earlier lists in that, as defined in the Act, only monuments with known locations or places where there are believed to be monuments are included. The large archive and supporting

database are managed by the National Monuments Service and the records are continually updated and supplemented as additional monuments are discovered. (<https://data.gov.ie/dataset/national-monuments-service-archaeological-survey-of-ireland>).

There are 88 Monuments in State Care (81 in State Ownership and seven in State Guardianship)⁷⁶ within the County (mapped on Figure 4.22), including Dunmore Abbey, Athenry Castle, Dun Aengus, St. MacDara's Island and Pearse's Cottage.

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, estuaries and marine and coastal areas within and adjacent to 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.

There are over 1,500 of entries to the Record of Protected Structures within the County. Similar to the general spatial spread of archaeological heritage, clusters of architectural heritage are indicated within the County's settlements as shown on Figure 4.23.

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

- The interior of the structure;
- The land lying within the curtilage⁷⁷ 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).

County Galway has an important vernacular heritage with many important historic buildings and structures (including examples of cottages, houses, shops, farm complexes, outbuildings, mills, factories and forges). Notable buildings include the Kelp House, Dún Guaire Castle, Menlough, Streamstown Mill and Ballynahinch Castle.

Architecture within the County also includes industrial heritage associated with ship building, agriculture, weaving, transportation, stone cutting processes and mining.

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

⁷⁶ 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.

⁷⁷ 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.

townscape that is of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest or value, or contributes to the appreciation of protected structures, whose character it is an objective to preserve in a development plan. The ACA designation requires that planning permission must be obtained before significant works can be carried out to the exterior of a structure in the ACA that might alter the character of the structure or the ACA. There are 20 ACAs designated in the County (mapped on Figure 4.23) and listed below:

- An Spidéal ACA
- Athenry ACA
- Ballinasloe ACA
- Ballinasloe St Brigid's Hospital ACA
- Ballygar ACA
- Bearna ACA
- Clarinbridge ACA
- Clifden ACA
- Craughwell ACA
- Dunmore ACA
- Glenamaddy ACA
- Gort ACA
- Headford ACA
- Kinvara ACA
- Loughrea ACA
- Moylough ACA
- Oranmore ACA
- Oughterard ACA
- Portumna ACA
- Tuam ACA

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 4.23 shows entries to NIAH within the County and beyond.

4.12.3 Existing Problems

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

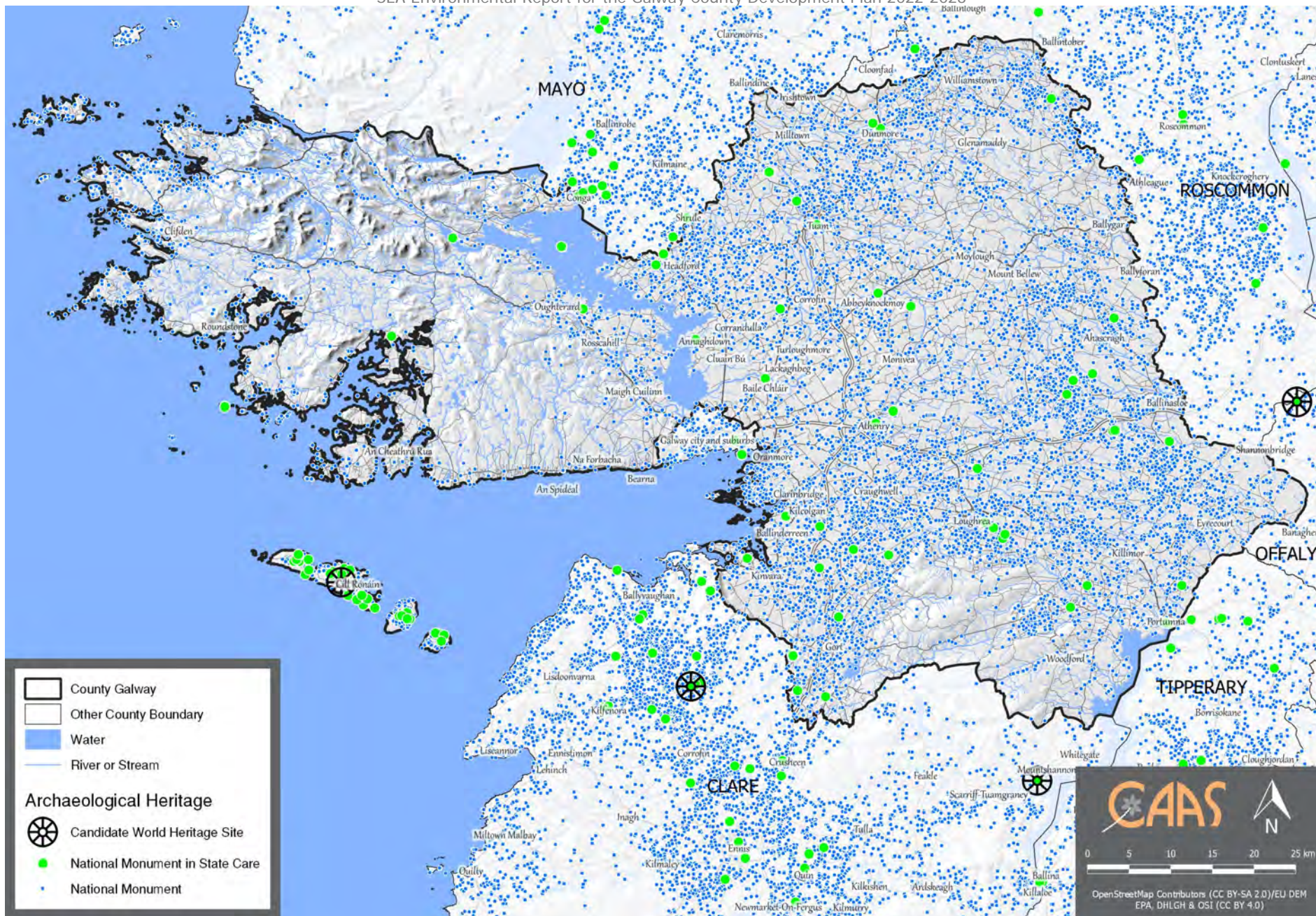


Figure 4.22 Archaeological Heritage

CAAS for Galway County Council

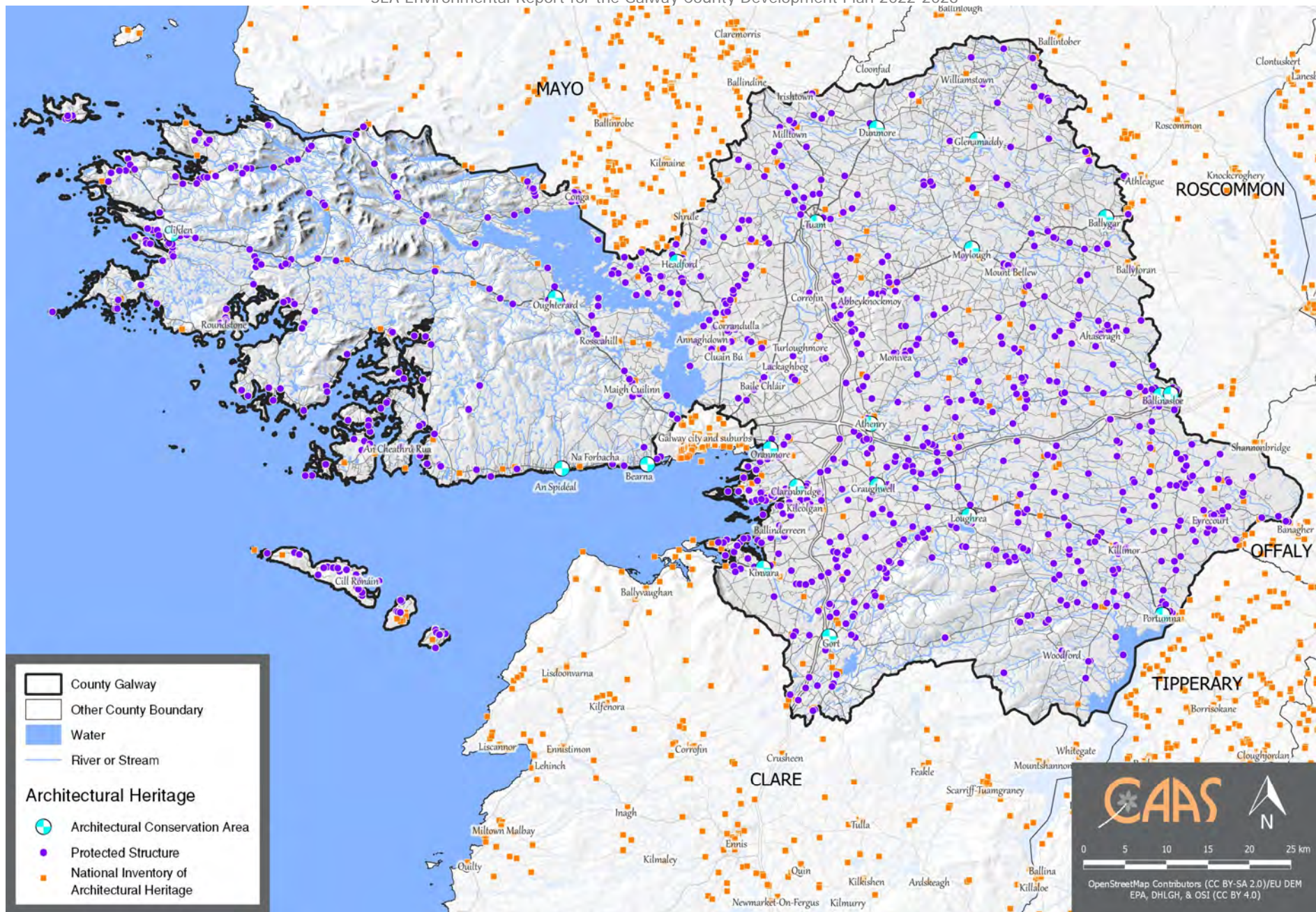


Figure 4.23 Architectural Heritage

CAAS for Galway County Council

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.

The unique visual character of County Galway is due to its variety of landscapes, seascapes and rich and diverse built, natural and cultural heritage.

The landscape of the west of the County is rugged and varied with its mountains, bogs, rivers, waterways and lakes, and characteristic limestone pavement of Oileáin Árann. The east of the County is characterised by a low-lying rolling topography of a fertile limestone plain, rich pastures, bogs and the Suck-Shannon system with its callows and Lough Derg, while the lowlands of the Burren are characterised by its unique karstic landscape and hydrology. Lough Corrib lies between the east and west of the County. The seascape includes many islands, peninsulas and deep coastal indentations.

4.13.2 Landscape Character Assessment

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.

Galway County Council Landscape Character Assessment have identified three **Landscape Regions**, which include ten distinctive

Landscape Character Types (shown on Figure 4.24) subdivided into smaller **Landscape Character Units**, as listed below:

THE WEST GALWAY REGION:

1. Coastal Landscape

- 1a. Conamara Coastal Islands
- 1b. Cois Fharráige
- 1c. Inner Galway Bay
- 1d. Hard Shore Coastal
- 1e. Soft Shore Coastal
- 1f. Conamara Sea Lough

2. Island Landscape

- 2a. Oileáin Árann
- 2b. Inishbofin

3. Uplands and Bog

- 3a. Joyce Country
- 3b. Maumturk Mountains
- 3c. South Conamara
- 3d. West Conamara

4. Lake Environs

- 4a. Upper Corrib Environs
- 4b. Lower Corrib Environs

THE EASTERN PLAINS REGION:

5. North Galway Complex

- 5a. Northern River Clare Basin
- 5b. Slieve Dart
- 5c. Springfield Basin
- 5d. Castlegar Basin
- 5e. North Loughrea
- 5f. Suck Valley

6. Central Galway Complex

- 6a. Black River Basin
- 6b. Southern River Clare Basin
- 6c. Kilchreest Basin
- 6d. Kilcrow Basin
- 6e. South Loughrea

7. Urban Environs

Maigh Cuilinn, Oughterard, Clifden, Tuam, Headford, Gort, Loughrea, Athenry, Ballinasloe, Portumna, An Spidéal, Oranmore, Kinvara, An Cheathrú Rua, Dunmore, Glennamaddy, Ballygar, An Bearna, Baile Chláir and Mountbellew.

THE SOUTH GALWAY REGION:

4. Lake Environs

- 4c. Lough Derg Environs

8. Shannon Environs

- 8a. Shannon Environs

9. Karst

- 9a. Karst Landscape

10. Slieve Aughty

- 10a. Slieve Aughty

Landscape Character Units in County Galway are arranged in a hierarchy according to the level of their sensitivity (shown on Figure 4.25):

- **'Iconic'** - unique landscape with high sensitivity to change;
- **'Special'** - high sensitivity to change;
- **'High'** - elevated sensitivity to change; and
- **'Low'** - unlikely to be adversely affected by change.

The 'iconic' and 'special' sensitivity 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. have the capacity to absorb development without significantly changing its character. Landscape Character Types in County Galway which are most sensitive to development include: Karst; Lake Environs; Uplands and Bog; Island; and Coastal.

4.13.3 Seascapes

A seascape can be defined as the coastal landscape and adjoining areas of open water, including views from land to sea, from sea to land and along the coastline.

Galway Landscape Character Assessment identifies the following Seascape Types within the County:

- Fully Enclosed Coast;
- Semi-Enclosed Coast;
- Open Coast;
- Offshore; and
- Open Sea.

Each of the above Seascape Types has distinct sensitivities, but share the vulnerability to high levels of inter-visibility due to the absence of topography or vegetation that could screen visual impacts.

4.13.4 Protected Views and Scenic Routes

The Plan area encompasses many sites and vantage points from which views over areas of great natural beauty, local landmarks, historic landscapes, adjoining counties may be obtained.

The Galway Landscape Character Assessment identifies 52 Viewing Points and seven Scenic Routes within the County. These are mapped on Figure 4.26.

4.13.5 Landscape Designations in Adjacent Counties

County Mayo borders County Galway to the north. There are 16 Landscape Units identified within County Mayo. Lakeland Drumlins, South East Mayo Plains and South West Mountain Moorlands Landscape Units are adjacent to

County Galway. Other landscape designations within County Mayo include Scenic Routes, Protected Views and Highly Scenic Vistas.

County Roscommon borders Galway to the east and north-east. Roscommon County Council have identified seven Landscape Character Types and 36 Landscape Character Areas within the County. Landscape Character Areas adjacent to County Galway, include: Castle Ray and Upper Suck Valley; Athleague and Lower Suck Valley; Suck Callows; Suck River Source and Lough O'Flynn Boglands and Esker Ridges; Cloonfad Bog and Uplands; Cloonfad Hills and Eskers Ridges; and Ballinbugh Bogland and Esker Ridges. Other landscape designations within County Roscommon include Scenic Views and Scenic Routes.

County Offaly borders Galway to the east. Landscape Character Areas within County Offaly include: 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. These areas are also the most sensitive to development within the County. Landscape designations within County Offaly also include Areas of High Amenity, Protected View Points and Amenity Value Roads.

County Tipperary borders County Galway to the south-east. There are 23 Landscape Character Areas identified within County Tipperary, out of which Upper Lough Derg and Shannon Callows Landscape Character Units are adjacent to County Galway. Other Landscape designations include Protected Routes and Views.

County Clare borders County Galway to the south. There are 21 Landscape Character Areas identified in County Clare. Burren Uplands, Low Burren, Fergus Loughlands, Slieve Aughty Uplands and Lough Derg Basin are adjacent to County Galway. Landscape designations include scenic routes, affording views and prospects.

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.

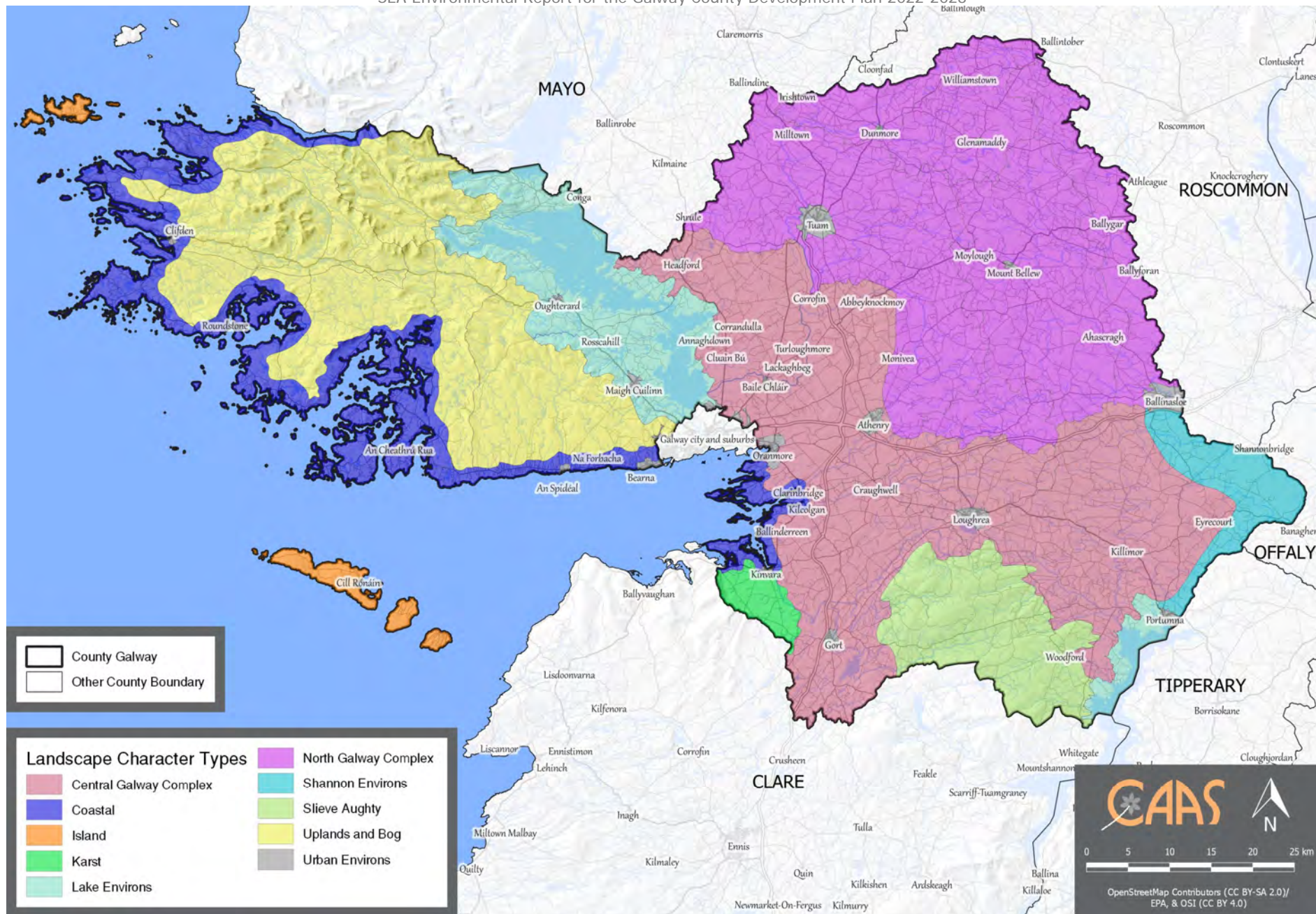


Figure 4.24 Landscape Character Types

CAAS for Galway County Council

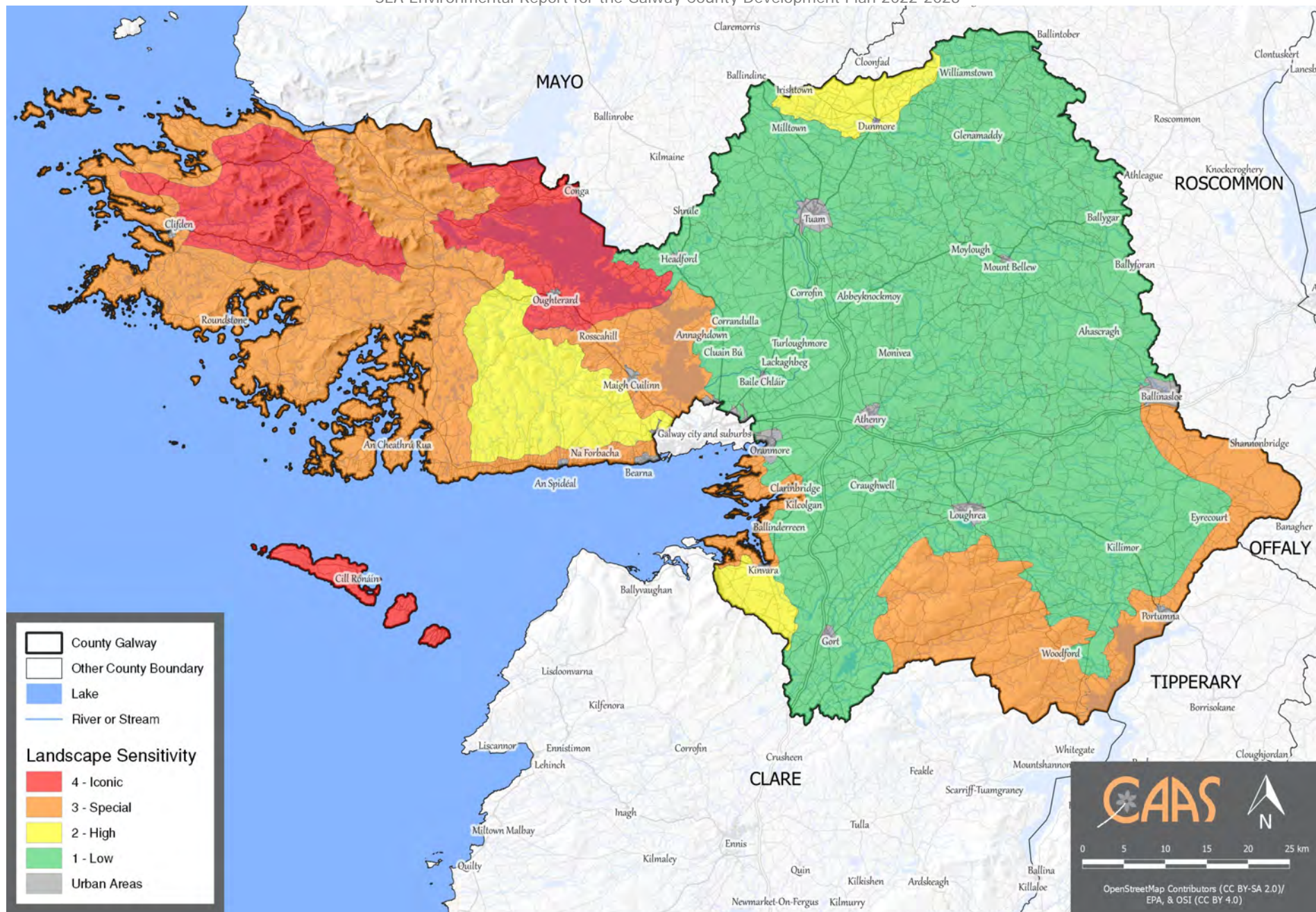


Figure 4.25 Landscape Sensitivity

CAAS for Galway County Council

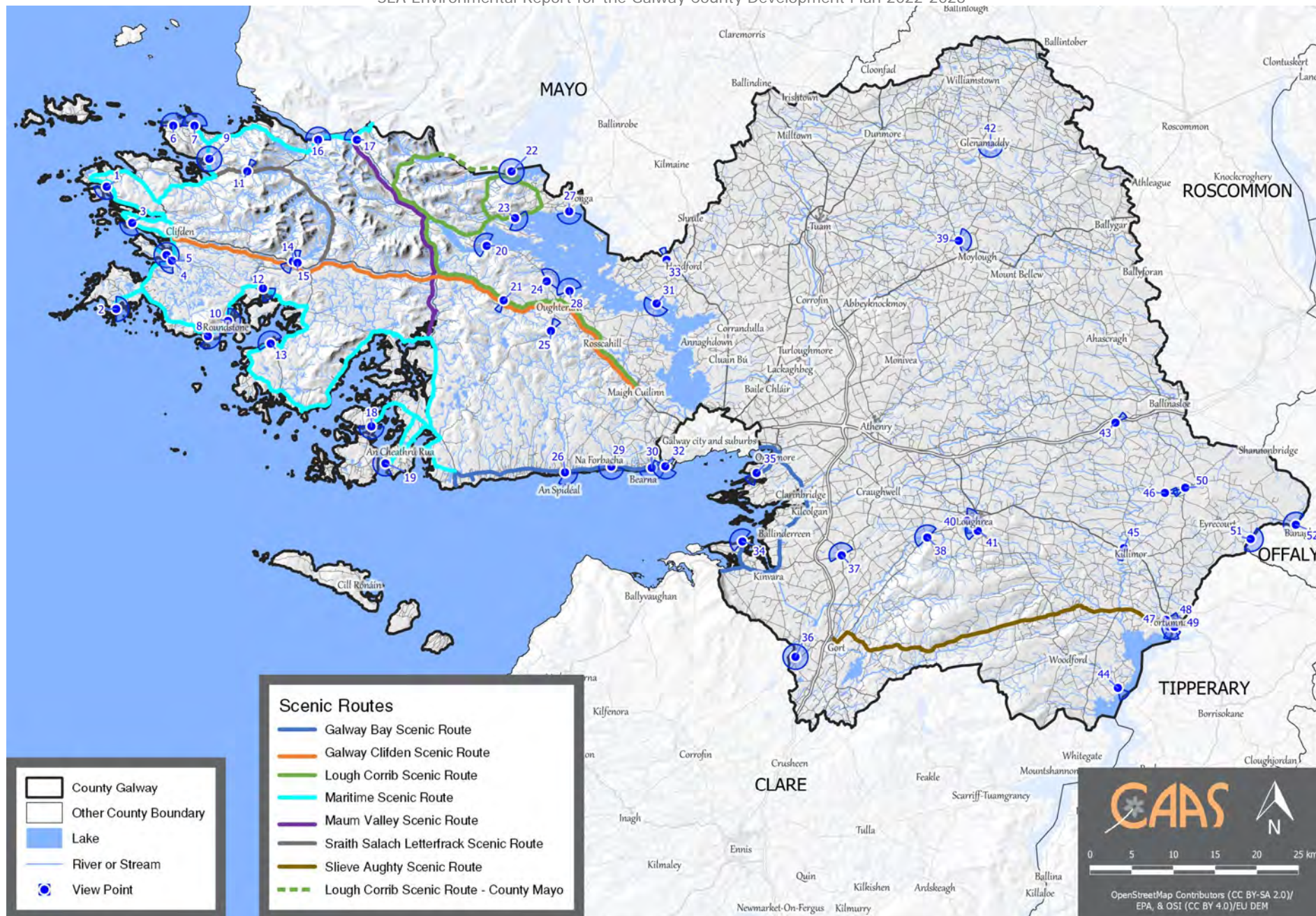


Figure 4.26 Scenic Views and Routes

CAAS for Galway County Council

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 4.27 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 National Parks (5 points);
- Sensitive Landcover Categories (10 points);
- Margaritifera Sensitive Areas (5 points);
- WFD Status of Surface moderate and 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);
- Groundwater vulnerability (aquifers which are extremely vulnerable - 10 points; and highly vulnerable - 5 points);
- Source Protection Areas (Inner Protection Area and Group Scheme Preliminary Source Protection Area - 10 points; Outer Protection Area - 5 points);
- WFD RPA Nutrient Sensitive Rivers and Lakes and Estuaries (10 points) and Rivers in Nutrient Sensitive Areas (5 points);
- WFD RPA Rivers and Lakes for Drinking Water (10 points);
- WFD RPA Salmonid River Regs (S.I. 293 only) – 10 points; and Rivers in Salmonid Regs and Surface Waters in Salmonid Regs (5 points);
- WFD RPA Bathing Water Areas (10 points);
- WFD RPA Shellfish Areas (10 points); and Rivers and Groundwater in Shellfish Areas (5 points);
- County Geological Sites (10 points);
- GSI Landslide Susceptibility (High or High Inferred – 10 points; Moderately High or Moderately High Inferred – 5 points);
- Preliminary Flood Risk Assessment Flood Zone A (10 points) and Flood Zone B (5 points);
- Cultural Heritage including: Architectural Conservation Areas, entries to the Record of Protected Structures, entries to the Record of

Monuments and Places, SMR and RMP Zones of Notification, National Monuments in State Care and entire to the National Inventory of Architectural Heritage (10 points);

- Views and Scenic Routes (10 points);
- Landscape Values: Iconic (15 points); Special (10 points); and High (5 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.

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

Lough Corrib and parts of the western half of the County (including Connemara and the coast) comprise the greatest extent of sensitive areas on account of multiple and overlapping ecological, hydrological and landscape designations, including those relating to bogs, upland and coastal areas.

Areas in close proximity to the County's border with Roscommon, Offaly and Tipperary are similarly sensitive. These areas include the water bodies of the River Shannon and Lough Derg as well as adjacent areas (sensitivities including hydrological, ecological, landscape and flood risk).

Other areas with heightened levels of sensitivities include the indented coastline to the south of Oranmore, smaller lakes in the east of the County (including Lough Cutra, Lough Rea, Coole Lough, Kiltullagh Lough and Glenamaddy Turlough) and areas to the west of Gort (sensitivities including flood risk related sensitivities).

The EPA-funded Environmental Sensitivity Mapping Web Tool could assist in lower tier consideration of plans and projects.

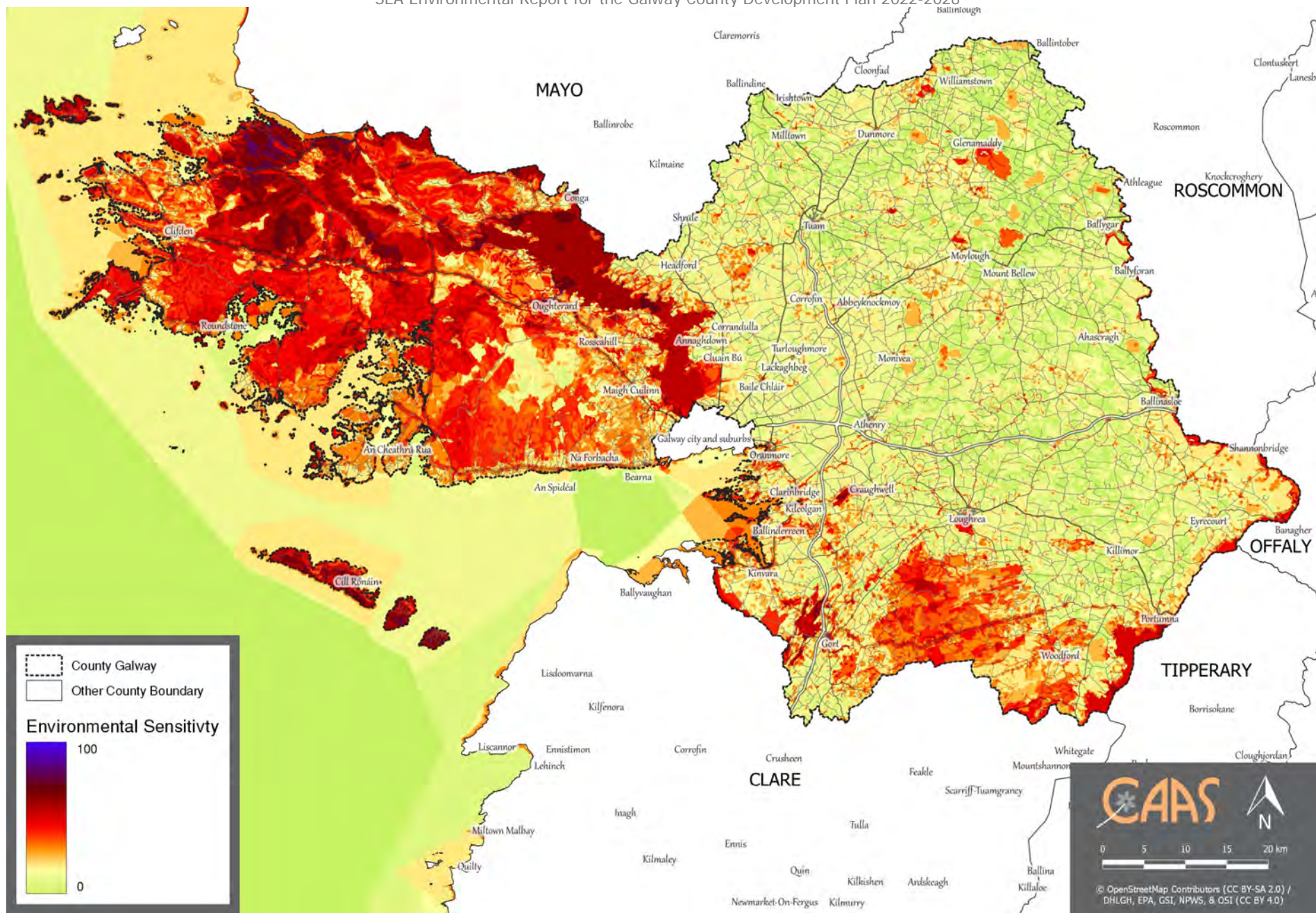


Figure 4.27 Overlay of Environmental Sensitivities in County Galway
 CAAS for Galway County Council

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 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 RSES, the measures identified in the RSES SEAs, including the Northern and Western 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	<ul style="list-style-type: none"> To preserve, protect, maintain and, where appropriate, enhance the terrestrial, aquatic and soil biodiversity, particularly EU designated sites and protected species Ensure no adverse effects on the integrity of any European site, with regard to its qualifying interests, associated conservation status, structure and function Safeguard national, regional and local designated sites and supporting features which function as stepping stones for migration, dispersal and genetic exchange of wild species Enhance biodiversity in line with the National Biodiversity Strategy and its targets To protect, maintain and conserve the County's natural capital 	<ul style="list-style-type: none"> Condition of European sites 	<ul style="list-style-type: none"> Require all local level land use plans to include ecosystem services and green/blue infrastructure provisions in their land use plans and as a minimum, to have regard to the required targets in relation to the conservation of European sites, other nature conservation sites, ecological networks, and protected species Implement and review, as relevant, the Galway County Heritage and Biodiversity Plan 2017-2022
				<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Require all local level land use plans to include ecosystem services and green/blue infrastructure provisions in their land use plans and as a minimum, to have regard to the required targets in relation to the conservation of European sites, other nature conservation sites, ecological networks, and protected species Implement and review, as relevant, County Galway Heritage and Biodiversity Plan 2017-2022
				<ul style="list-style-type: none"> SEAs and AAs as relevant for new Council policies, plans, programmes etc. 	<ul style="list-style-type: none"> Screen for and undertake SEA and AA as relevant for new Council policies, plans, programmes etc.
				<ul style="list-style-type: none"> Status of water quality in the County's water bodies 	<ul style="list-style-type: none"> Included under Water below
				<ul style="list-style-type: none"> Compliance of planning permissions with Plan measures providing for the protection of Biodiversity and flora and fauna – see Chapter 10 “Natural Heritage, Biodiversity and Green Infrastructure” 	<ul style="list-style-type: none"> 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 10 “Natural Heritage, Biodiversity and Green Infrastructure”
Population and Human Health	PHH	Improve quality of life for all ages and abilities based on high-quality, serviced, well connected and sustainable residential, working, educational and recreational environments	<ul style="list-style-type: none"> Promote economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management Ensure that existing population and planned growth is matched with the required public infrastructure and the required services Safeguard the County's citizens from environment-related pressures and risks to health and well-being 	<ul style="list-style-type: none"> Implementation of Plan measures relating to the promotion of economic growth as provided for by Chapter 5 “Economic, Enterprise and Retail” 	<ul style="list-style-type: none"> For review of progress on implementing Plan objectives to demonstrate successful implementation of measures relating to the promotion of economic growth as provided for by Chapter 5 “Economic, Enterprise and Retail” By 2020 all citizens will have access to speeds of 30Mbps, and that 50% of citizens will be subscribing to speeds of 100Mbps (Also relevant to Material Assets)
				<ul style="list-style-type: none"> Number of spatial concentrations of health problems arising from environmental factors resulting from development permitted under the Plan 	<ul style="list-style-type: none"> No spatial concentrations of health problems arising from environmental factors as a result of implementing the Plan
				<ul style="list-style-type: none"> Proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures 	<ul style="list-style-type: none"> Increase in the proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures
				<ul style="list-style-type: none"> Number of spatial plans that include specific green infrastructure mapping 	<ul style="list-style-type: none"> Require all local level land use plans to include specific green infrastructure mapping

SEA Environmental Report for the Galway County Development Plan 2022-2028

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives	Indicators	Targets
Soil (and Land)	S	Ensure the long-term sustainable management of land	<ul style="list-style-type: none"> • Protect soils against pollution, and prevent degradation of the soil resource • Promote the sustainable use of infill and brownfield sites over the use of greenfield within the County • Safeguard areas of prime agricultural land and designated geological sites 	<ul style="list-style-type: none"> • Proportion of population growth occurring on infill and brownfield lands compared to greenfield (also relevant to Material Assets) 	<ul style="list-style-type: none"> • Maintain built surface cover nationally to below the EU average of 4% as per the NPF • In accordance with National Policy Objectives 3c of the National Planning Framework, a minimum of 30% of the housing growth targeted in any settlement is to be delivered within the existing built-up footprint of the settlement • To map brownfield and infill land parcels across the County
				<ul style="list-style-type: none"> • Instances where contaminated material generated from brownfield and infill must be disposed of 	<ul style="list-style-type: none"> • Dispose of contaminated material in compliance with EPA guidance and waste management requirements
				<ul style="list-style-type: none"> • Environmental assessments and AAs as relevant for applications for brownfield and infill development prior to planning permission 	<ul style="list-style-type: none"> • Screen for and undertake environmental assessments and AA as relevant for applications for brownfield and infill development prior to planning permission
Water	W	Protection, improvement and sustainable management of the water resource	<ul style="list-style-type: none"> • Ensure that the status of water bodies is protected, maintained and improved in line with the requirements of the Water Framework Directive • Ensure water resources are sustainably managed to deliver proposed regional and County growth targets in the context of existing and projected water supply and wastewater capacity constraints ensuring the protection of receiving environments • Avoid inappropriate zoning and development in areas at risk of flooding and areas that are vulnerable to current and future erosion, particularly coastal areas • Integrate sustainable water management solutions (such as SuDS, porous surfacing and green roofs) into development proposals 	<ul style="list-style-type: none"> • Status of water bodies as reported by the EPA Water Monitoring Programme for the WFD 	<ul style="list-style-type: none"> • Not to cause deterioration in the status of any surface water or affect the ability of any surface water to achieve 'good status' • Implementation of the objectives of the River Basin Management Plan
				<ul style="list-style-type: none"> • Number of incompatible developments permitted within flood risk areas 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Optimise existing infrastructure and provide new infrastructure to match population distribution proposals in the County - this includes transport infrastructure • Ensure access to affordable, reliable, sustainable and modern energy for all which encourages a broad energy generation mix to ensure security of supply – wind, solar, hydro, biomass, energy from waste and traditional fossil fuels • Promote the circular economy, reduce waste, and increase energy efficiencies • Ensure there is adequate sewerage and drainage infrastructure in place to support new development 	<ul style="list-style-type: none"> • Programmed delivery of Irish Water infrastructure for all key growth towns in line with Irish Water Investment Plan and prioritisation programme to ensure sustainable growth can be accommodated • Number of new developments granted permission which can be adequately and appropriately served with waste water treatment over the lifetime of the Plan 	<ul style="list-style-type: none"> • 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 • Facilitate, as appropriate, Irish Water in developing water and wastewater infrastructure • See also targets relating to greenfield and brownfield development of land under Soil and broadband under Population and Human Health

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives	Indicators	Targets
			<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures 	<ul style="list-style-type: none"> Increase in the proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures
Air	A	Support clean air policies that reduce the impact of air pollution on the environment and public health	<ul style="list-style-type: none"> To avoid, prevent or reduce harmful effects on human health and the environment as a whole resulting from emissions to air from all sectors with particular reference to emissions from transport, residential heating, industry and agriculture Maintain and promote continuing improvement in air quality through the reduction of emissions and promotion of renewable energy and energy efficiency Promote continuing improvement in air quality Reduction of emissions of sulphur dioxide, nitrogen oxides, volatile organic compounds, ammonia and fine particulate matter which are responsible for acidification, eutrophication and ground-level ozone pollution Meet Air Quality Directive standards for the protection of human health — Air Quality Directive Significantly decrease noise pollution by 2020 and move closer to WHO recommended levels 	<ul style="list-style-type: none"> Proportion of journeys made by private fossil fuel-based car compared to 2016 National Travel Survey levels of 74% NO_x, SO_x, PM10 and PM2.5 as part of Ambient Air Quality Monitoring 	<ul style="list-style-type: none"> Decrease in proportion of journeys made by private fossil fuel-based car compared to 2016 National Travel Survey levels Improvement in Air Quality trends, particularly in relation to transport related emissions of NO_x and particulate matter
Climatic Factors ⁷⁸	C	Achieving transition to a competitive, low carbon, climate-resilient economy that is cognisant of environmental impacts	<ul style="list-style-type: none"> To minimise emissions of greenhouse gases 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 	<ul style="list-style-type: none"> Implementation of Plan measures relating to climate reduction targets 	<ul style="list-style-type: none"> For review of progress on implementing Plan objectives to demonstrate successful implementation of measures relating to climate reduction targets
				<ul style="list-style-type: none"> A competitive, low-carbon, climate-resilient and environmentally sustainable economy 	<ul style="list-style-type: none"> Contribute towards transition to a competitive, low-carbon, climate-resilient and environmentally sustainable economy by 2050
				<ul style="list-style-type: none"> Share of renewable energy in transport 	<ul style="list-style-type: none"> Contribute towards the target of the Renewable Energy Directive (2009/28/EC), for all Member States to reach a 10% share of renewable energy in transport by facilitating the development of electricity charging and transmission infrastructure, in compliance with the provisions of the Plan
				<ul style="list-style-type: none"> Carbon dioxide (CO₂) emissions across the electricity generation, built environment and transport sectors 	<ul style="list-style-type: none"> Contribute towards the target of aggregate reduction in carbon dioxide (CO₂) emissions of at least 80% (compared

⁷⁸ Please also refer to relevant legislation and requirements under Section 4.10, Section 8.6, Section 8.8.13 and Appendix I. Targets under the national Climate Action Plan are reviewed and updated periodically and include those under the headings of Electricity, Built Environment, Transport, Agriculture, Forestry & Land Use and Enterprise.

SEA Environmental Report for the Galway County Development Plan 2022-2028

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives	Indicators	Targets
					to 1990 levels) by 2050 across the electricity generation, built environment and transport sectors
				<ul style="list-style-type: none"> • Energy consumption, the uptake of renewable options and solid fuels for residential heating 	<ul style="list-style-type: none"> • To promote reduced energy consumption and support the uptake of renewable options and a move away from solid fuels for residential heating
				<ul style="list-style-type: none"> • Proportion of journeys made by private fossil fuel-based car compared to 2016 levels 	<ul style="list-style-type: none"> • Decrease in the proportion of journeys made by residents of the County using private fossil fuel-based car compared to 2016 levels
				<ul style="list-style-type: none"> • Proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures 	<ul style="list-style-type: none"> • Increase in the proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures
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	<ul style="list-style-type: none"> • Percentage of entries to the Record of Monuments and Places, and the context these entries within the surrounding landscape where relevant, protected from adverse effects resulting from development which is granted permission under the Plan 	<ul style="list-style-type: none"> • Protect entries to the Record of Monuments and Places, and the context of these entries within the surrounding landscape where relevant, from adverse effects resulting from development which is granted permission under the Plan
				<ul style="list-style-type: none"> • Percentage of entries to the Record of Protected Structures and Architectural Conservation Areas and their context protected from significant adverse effects arising from new development granted permission under the Plan 	<ul style="list-style-type: none"> • Protect entries to the Record of 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	<ul style="list-style-type: none"> • Number of developments permitted that result in avoidable adverse visual impacts on the landscape, especially with regard to landscape and amenity designations included in Land Use Plans, resulting from development which is granted permission under the Plan 	<ul style="list-style-type: none"> • No developments permitted which result in avoidable adverse visual impacts on the landscape, especially with regard to landscape and amenity designations included in Land Use Plans, resulting from development which is granted permission under the Plan

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. Available reasonable alternatives for the County Development Plan are provided under Type 1 to 4 detailed below. These alternatives are assessed in Section 7.

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 Northern and Western Region. These documents set out various requirements for the content of the Plan including on topics such as settlement typology, land use zoning and the sustainable development of rural areas.

6.3 Type 1: Alternatives for Positioning under the Settlement Hierarchy

The categories from the Settlement Hierarchy for the Plan are identified on Table 6.1.

Table 6.1 Settlement Hierarchy Levels in Galway

Settlement Level	Settlement Category	Description
1	Metropolitan Area Strategic Plan	Galway Metropolitan Area includes Galway city and suburbs and the settlements of Bearna, Baile Chlair and Oranmore. The types of services provided by the city reach beyond the administrative area of Galway city/county.
2	Key Towns	Key Towns are large towns with a high level of self-sustaining employment and services that act as regional economic drivers and play a significant role for a wide catchment area.
3	Strategic Potential	Self-Sustaining town with a moderate level of services. Commuter town. Potential for significant employment opportunities, access to main road and rail infrastructure.
4	Self-Sustaining Towns	Self-sustaining towns with high levels of population growth, economic base reliant on key Towns and Galway City suburbs and Metropolitan Area Strategic Plan (MASP) area. Commuter towns
5	Small Growth Towns	Towns with moderate level of population. Coomuter towns . Greater growth required to sustain population base
6	Small Growth Villages	These small growth villages provide a more limited range of services to smaller hinterlands than the small growth towns.
7	Rural Settlements(116) and Rural Area	These settlements provide basic services to their community such as convenience goods and primary education and religious services. The rural area refers to those parts outside the recognised rural settlements

In considering significant realistic alternatives for placing of individual settlements under alternative typologies, the planning authority has taken into account the objectives of the NPF and the Northern and Western RSES. As a result, there is very little scope to consider reasonable alternatives for most settlements under the hierarchy. Nonetheless, there are strategic reasonable alternatives for some of the settlements.

These are:

Type 1 (i) Alternatives for Gort and Loughrea

- **Alternative A:** Designate Gort and Loughrea as Self Sustaining Growth Towns
- **Alternative B:** Designate Loughrea only as a Self Sustaining Town

Type 1 (ii) Alternatives for Portumna and Headford

- **Alternative A:** Designate Headford and Portumna as a Small Growth Town
- **Alternative B:** Designate Portumna and Headford as Self-Sustaining Towns

Type 1 (iii) Alternatives for Rural Settlements and Rural Area

- **Alternative A:** Designate the Rural Settlements within this level (7) dispersed throughout the county to meet rural generated housing needs.
- **Alternative B:** Do not designate the Rural Settlements, settlements to remain in Open Countryside

6.4 Type 2: Alternatives for Population Allocations

Allocating higher or lower population allocations/future growth to different settlements within the County may provide reasonable alternatives for consideration.

- **Type 2 – Alternative A:** Allocate significant population allocation to the settlements in Level 1, 2 and 3 of the settlement hierarchy, with limited growth in Level 4, 5 and 6 and minimal growth identified in Level 7
- **Type 2 – Alternative B:** Continued Growth of the MASP and Key Towns and dispersed pattern of growth across the other settlements and open countryside

6.5 Type 3: Alternatives for Rural Areas

Rural Areas under Strong Urban Pressure

- **Type 3 – Alternative A:** Designate Rural Areas under Strong Urban Pressure that require various criteria to be demonstrated in advance of planning permission being granted for a single dwelling for permanent occupation.
- **Type 3 – Alternative B:** Do not designate Rural Areas under Strong Urban Pressure and assess each planning application on its merits.

6.6 Type 4: 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 Northern and Western RSES. Requirements relating to land use zoning provided for by the NPF and RSES have significantly limited the availability of alternatives for the various settlements. Reasonable alternatives for land use zoning are identified on Table 6.2.

Table 6.2 Land Use Zoning Alternatives

Typology	Settlement	Available Reasonable Alternative
MASP	Bearna	New Residential Zoning: A. South of R336 lands (outside Flood Zone A) zoned as TC/Infill Residential B. South of R336 zoned, all lands (within Flood Zone A) zoned as TC/Infill Residential
	Oranmore	Set 1 A. Lands (within Flood Zone A) zoned Open Space/Recreation and Amenity; B. Lands (within Flood Zone A) zoned Residential Phase 1 Set 2 A. Lands to the south of the Plan area zoned Residential Phase 2 B. Lands to the south of the Plan area removed from Plan boundary
	Baile Chláir	A. Lands to the West of the Plan boundary zoned Residential Phase 2 B. Lands to the West of the Plan boundary zoned Community Facilities
	Briarhill	A. To prepare a Framework Plan for Briarhill for integration into the County Development Plan that is centred around the principles of good placemaking and provides for phased development at this key strategic growth area. B. Not preparing any focused Plan or land use zoning for Briarhill.
	Garraun	A. To prepare a Framework Plan for Garraun for integration into the County Development Plan that is centred around the principles of good placemaking and provides for phased development at this key strategic growth area. B. Zoning Garraun generally as a reserve area, potentially to be developed under future Plan periods, post 2028.
Key Towns	Ballinasloe	Not applicable – LAP to be prepared
	Tuam	Not applicable – LAP to be prepared
Strategic Potential	Athenry	Not applicable – LAP to be prepared
Self Sustaining Towns	Gort	Not applicable – LAP to be prepared
	Loughrea	Not applicable – LAP to be prepared
Small Growth Towns	Clifden	Set 1 A. Residential Phase 2 lands removed to the north of the Galway Clifden Road, boundary reduced B. Residential Lands Phase 2 lands zoned north of the Clifden Galway Road Set 2 A. To the north of Clifden Glen Lands zoned to Tourism from Residential Phase 2. B. To the north of Clifden Glen Lands zoned to Residential Phase 2.
	Maigh Cuilinn	A. Lands to the east of the N59 approach into Maigh Cuilinn zoned Agriculture B. Lands to the east of the N59 approach into Maigh Cuilinn zoned Residential Phase 2
	Headford	A. Lands to the north of Headford Village removed from Plan boundary B. Lands to the north of Headford village zoned Residential Phase 2
	Oughterard	A. Lands zoned with excess Residential Lands(2005 2011) Plan to the W of Plan boundary B. More compact residential zoning
	Portumna	Set 1 A. Lands to the west of the N65 zoned Residential Phase 2 B. Lands to the west of the N65 town zoned Phase 1 Set 2 A. Lands to the west of Portumna town on the R352 zoned Tourism B. Lands to the west of Portumna town on the R352 removed from Plan boundary
Small Growth Villages	An Cheathrú Rua	A. Consolidation of Plan boundary-Residential Phase 2 lands removed west of the village B. Residential Phase 2 lands zoned to the west of the village
	An Spidéal	A. Consolidation of Plan boundary-Residential Phase 2 lands removed North of the village B. Residential Phase 2 lands zoned to the North of the village
	Ballygar	A. Lands to the East of Ballygar Village zoned Residential Phase 1 B. Lands to the East of Ballygar village zoned Residential Phase 1 and 2
	Dunmore	A. Lands to the east of R328 (with flood zone A) zoned Open Space B. Lands to the east of R328 (within flood zone A) zoned Residential
	Glenamaddy	A. Lands to the east of the R362 on the village zoned TC with limited development potential beyond these lands B. Lands to the east of the R362 on the approach into the village and beyond the TC lands zoned Residential Phase 2
	Kinvara	A. More compact residential zoning to the south of the N67 in the village zoned Residential Phase 2 B. Lands zoned to the south of the N67 in the village zoned Residential Phase 2 (2005 2011)
	Moylough	A. Lands to the west of the N63, on the approach to the village Zoned Residential Phase 1, more compact development B. Lands to the west of the N63 on the approach to the village Zoned Residential Phase 1 and 2 more sprawl

Section 7 Evaluation of Alternatives

7.1 Introduction

This section provides a comparative evaluation of the likely significant environmental effects⁷⁹ 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.

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 Objectives⁸⁰

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
Biodiversity, Flora and Fauna	BFF	No net contribution to biodiversity losses or deterioration	<ul style="list-style-type: none"> To preserve, protect, maintain and, where appropriate, enhance the terrestrial, aquatic and soil biodiversity, particularly EU designated sites and protected species Ensure no adverse effects on the integrity of any European site, with regard to its qualifying interests, associated conservation status, structure and function Safeguard national, regional and local designated sites and supporting features which function as stepping stones for migration, dispersal and genetic exchange of wild species Enhance biodiversity in line with the National Biodiversity Strategy and its targets To protect, maintain and conserve the County's natural capital
Population and Human Health	PHH	Improve quality of life for all ages and abilities based on high-quality, serviced, well connected and sustainable residential, working, educational and recreational environments	<ul style="list-style-type: none"> Promote economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management Ensure that existing population and planned growth is matched with the required public infrastructure and the required services Safeguard the County's citizens from environment-related pressures and risks to health and well-being
Soil (and Land)	S	Ensure the long-term sustainable management of land	<ul style="list-style-type: none"> Protect soils against pollution, and prevent degradation of the soil resource Promote the sustainable use of infill and brownfield sites over the use of greenfield within the County Safeguard areas of prime agricultural land and designated geological sites
Water	W	Protection, improvement and sustainable management	<ul style="list-style-type: none"> Ensure that the status of water bodies is protected, maintained and improved in line with the requirements of the Water Framework Directive Ensure water resources are sustainably managed to deliver proposed regional and County growth targets in the context of existing and projected

⁷⁹ These effects include secondary, cumulative (see also Section 8.2), synergistic, short, medium and long-term permanent and temporary, positive and negative effects.

⁸⁰ See also Section 5

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
		of the water resource	<p>water supply and wastewater capacity constraints ensuring the protection of receiving environments</p> <ul style="list-style-type: none"> • Avoid inappropriate zoning and development in areas at risk of flooding and areas that are vulnerable to current and future erosion, particularly coastal areas • Integrate sustainable water management solutions (such as SuDS, porous surfacing and green roofs) into development proposals
Material Assets	MA	Sustainable and efficient use of natural resources	<ul style="list-style-type: none"> • Optimise existing infrastructure and provide new infrastructure to match population distribution proposals in the County - this includes transport infrastructure • Ensure access to affordable, reliable, sustainable and modern energy for all which encourages a broad energy generation mix to ensure security of supply – wind, solar, hydro, biomass, energy from waste and traditional fossil fuels • Promote the circular economy, reduce waste, and increase energy efficiencies • Ensure there is adequate sewerage and drainage infrastructure in place to support new development • Reduce the energy demand from the transport sector and support moves to electrification of road and rail transport modes • Encourage the transition to a zero-carbon economy by facilitating the development of a grid infrastructure to support renewables and international connectivity. Reduce the average energy consumption per capita including promoting energy efficient buildings, retrofitting, smart-buildings, cities and grids
Air	A	Support clean air policies that reduce the impact of air pollution on the environment and public health	<ul style="list-style-type: none"> • To avoid, prevent or reduce harmful effects on human health and the environment as a whole resulting from emissions to air from all sectors with particular reference to emissions from transport, residential heating, industry and agriculture • Maintain and promote continuing improvement in air quality through the reduction of emissions and promotion of renewable energy and energy efficiency • Promote continuing improvement in air quality • Reduction of emissions of sulphur dioxide, nitrogen oxides, volatile organic compounds, ammonia and fine particulate matter which are responsible for acidification, eutrophication and ground-level ozone pollution • Meet Air Quality Directive standards for the protection of human health – Air Quality Directive • Significantly decrease noise pollution by 2020 and move closer to WHO recommended levels
Climatic Factors	C	Achieving transition to a competitive, low carbon, climate-resilient economy that is cognisant of environmental impacts	<ul style="list-style-type: none"> • To minimise emissions of greenhouse gasses • Integrate sustainable design solutions into the County's infrastructure (e.g. energy efficient buildings; green infrastructure) • Contribute towards the reduction of greenhouse gas emissions in line with national targets • Promote development resilient to the effects of climate change • Promote the use of renewable energy, energy efficient development and increased use of public transport
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 would be part of a wider Plan envisaging – in compliance with the robust policy framework in place at national, regional and local level – sustainable development and compact growth in County Galway generally. As such, common environmental effects (as detailed on Table 7.2) would be present under Plans adopting each of the different alternatives, albeit to varying degrees.

Table 7.2 Effects common to Plans adopting each of the different alternatives

Environmental Component	Significant Positive Effect, likely to occur	Potentially Significant Adverse Environmental Effects, if unmitigated
Biodiversity and Flora and Fauna	<ul style="list-style-type: none"> Contribution towards protection of ecology (including designated sites, ecological connectivity, habitats) by facilitating development of lands (including those within and adjacent to the 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. 	<p>Arising from both construction and operation of development and associated infrastructure:</p> <ul style="list-style-type: none"> Loss of/damage to biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance to biodiversity and flora and fauna; Habitat loss, fragmentation and deterioration, including patch size and edge effects; and Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species such as birds and bats.
Population and Human Health	<ul style="list-style-type: none"> Promotion of economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management. Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands (including those within and adjacent to the 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. 	<ul style="list-style-type: none"> Potential adverse effects arising from flood events. Potential interactions if effects arising from environmental vectors.
Soil	<ul style="list-style-type: none"> Contribution towards the protection of soils (including those used for agriculture) and designated sites of geological heritage by facilitating development of lands (including those within and adjacent to the 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. 	<ul style="list-style-type: none"> Potential adverse effects on the hydrogeological and ecological function of the soil resource, including as a result of development on contaminated lands. Potential for riverbank and coastal erosion.
Water	<ul style="list-style-type: none"> Contribution towards the protection of water by facilitating development of lands (including those within and adjacent to the 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. 	<ul style="list-style-type: none"> Potential adverse effects upon the status of water bodies and entries to the WFD Register of Protected Areas (ecological and human value), arising from changes in quality, flow and/or morphology. Increase in flood risk and associated effects associated with flood events.

Environmental Component	• Significant Positive Effect, likely to occur	• Potentially Significant Adverse Environmental Effects, if unmitigated
Material Assets	<ul style="list-style-type: none"> • Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands (including those within and adjacent to the County's settlements) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-served lands elsewhere in the County and beyond. • Contribution towards limits in increases in energy demand from the transport sector by facilitating sustainable compact growth. 	<ul style="list-style-type: none"> • Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Failure to adequately treat surface water run-off that is discharged to water bodies (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Failure to comply with drinking water regulations and serve new development with adequate drinking water (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Increases in waste levels. • Potential impacts upon public assets and infrastructure. • Interactions between agriculture and soil, water, biodiversity and human health - including phosphorous and nitrogen deposition as a result of agricultural activities and the production of secondary inorganic particulate matter.
Air and Climatic Factors	<ul style="list-style-type: none"> • Contribution towards climate mitigation and adaptation by facilitating compact development of lands (including those within and adjacent to the County's settlements) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-served lands elsewhere in the County and beyond. 	<ul style="list-style-type: none"> • Potential conflict between development under the Plan and aiming to reduce carbon emissions in line with local, national and European environmental objectives. • Potential conflicts between transport emissions, including those from cars, and air quality. • Potential conflicts between increased frequency of noise emissions and protection of sensitive receptors. • Potential conflicts with climate adaptation measures including those relating to flood risk management.
Cultural Heritage	<ul style="list-style-type: none"> • Contributes towards protection of cultural heritage elsewhere in the County by facilitating development within existing settlements. 	<ul style="list-style-type: none"> • Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities.
Landscape	<ul style="list-style-type: none"> • Contributes towards protection of wider landscape and landscape designations by facilitating development within existing settlements. 	<ul style="list-style-type: none"> • Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape.

7.3.1 Assessment of Type 1: Alternatives for Population Allocations

Type 1 (i) Alternatives for Gort and Loughrea

- **Alternative A:** Designate Gort and Loughrea as Self Sustaining Growth Towns
- **Alternative B:** Designate Loughrea only as a Self Sustaining Town

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

By facilitating population and employment growth commensurate to the attributes of Gort and Loughrea, **Alternative A** would provide for a more sustainable Settlement Hierarchy and a greater level of sustainable development at a County level. Alternative A would help to facilitate a more compact form of development at these settlements that would help to maximise benefits from the infrastructural investment and to the wider network of villages surrounding these towns. Alternative A would not increase pressure in lower-level settlements, which are generally

less well-serviced and less-well connected, and the open countryside– and would, as a result, avoid potential adverse significant effects on various environmental components.

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

Type 1 (ii) Alternatives for Portumna and Headford

- **Alternative A:** Designate Headford and Portumna as a Small Growth Town
- **Alternative B:** Designate Portumna and Headford as Self-Sustaining Towns

Alternative A would focus on localised sustainable growth and employment related development that would strengthen and support the local base of Headford and Portumna. It would also provide a realistic and suitable alternative to one off housing in the countryside. By facilitating population and employment growth commensurate to its attributes, Alternative A would provide for a more sustainable Settlement Hierarchy and a greater level of sustainable development at a County level and at a town level in Headford and Portumna.

Alternative A would result in a lower number of car journeys, supporting efforts to improve sustainable mobility and meet greenhouse gas emission reduction targets. This alternative would help to facilitate a more compact form of development at these settlements that would help to maximise benefits from infrastructural investment. Alternative A would provide for higher levels of brownfield and infill development (and associated adverse environmental effects) in better serviced, better connected and more sensitive locations. This type of development would result in less potential environmental impacts, including on water, drinking water, human health, ecology and landscape designations.

Alternative B would not be line with the two settlements of Gort and Loughrea identified as self-sustaining towns. The settlements of Headford and Portumna would not have the same level of services and employment base which would result in increased populations for these towns, but the employment opportunities would not be present.

A greater level of sprawl and higher dependence on outbound commuting for employment means that Alternative B would be likely to result in a greater extent of significant effects on various environmental components and would not be as sustainable as Alternative A. Alternative B would result in a higher number of car journeys, conflicting with efforts to improve sustainable mobility and meet greenhouse gas emission reduction targets. The greater degree of sprawl would reduce efficiencies with regard to infrastructural investment. This alternative would provide for higher levels of greenfield development (and associated adverse environmental effects) in less well-serviced, less-well connected and more sensitive locations surrounding these settlements. This type of development would result in a higher adverse environmental impact, including effects on water, drinking water, human health, ecology and landscape designations.

Type 1 (iii) Alternatives for Rural Settlements and Rural Area

- **Alternative A:** Designate the Rural Settlements within this level (7) dispersed throughout the county to meet rural generated housing needs.
- **Alternative B:** Do not designate the Rural Settlements, settlements to remain in Open Countryside

The settlements are primarily residential in nature. Some of the villages in the rural settlements are served by public mains water and/or wastewater supply, whilst there are others that are unserved. The purpose of these settlements is to provide an alternative to rural housing within a low-density environment.

Alternative A, by providing focus to and targeted policy objectives for the Rural Villages, would facilitate a viable alternative to one-off housing in the open countryside. Development within these settlements would be more likely to be served by infrastructure (including water services infrastructure) and more likely to protect the environment including the status of ground and surface waters, water used for drinking water, human health, biodiversity and flora and fauna and the landscape. Development would be required to be subject to siting, design, protection of residential amenities and normal development management criteria, subject to the satisfactory provision of infrastructure and services and in keeping with the character of the settlement.

Alternative B, by not providing a focus to and targeted policy objectives for Rural Villages would be less likely to provide a viable alternative to one-off housing in the open countryside. Development within the open countryside would be less likely to be served by infrastructure (including water services infrastructure) and less likely to protect the environment including the status of ground and surface waters, water used for drinking water, human health, biodiversity and flora and fauna and the landscape. Alternative B would be the least sustainable of these two alternatives and would be most harmful to the environment.

Type 1 alternatives are assessed against Strategic Environmental Objectives on Table 7.3.

Table 7.3 Assessment⁸¹ of Type 1 Alternatives against Strategic Environmental Objectives

Alternative (selected alternative for the Plan in bold)	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
Type 1 (i) Alternatives for Gort and Loughrea				
Alternative A: Designate Gort and Loughrea as Self Sustaining Growth Towns	PHH MA A C BFF S W CH L		PHH MA A C BFF S W CH L	
Alternative B Designate Loughrea only as a Self Sustaining Town		PHH MA A C BFF S W CH L		PHH MA A C BFF S W CH L
Type 1 (ii) Alternatives for Portumna and Headford				
Alternative A: Designate Headford and Portumna as a Small Growth Town	PHH MA A C BFF S W CH L		PHH MA A C BFF S W CH L	
Alternative B: Designate Portumna and Headford as Self-Sustaining Towns		PHH MA A C BFF S W CH L		PHH MA A C BFF S W CH L
Type 1 (iii) Alternatives for Rural Settlements and Rural Areas				
Alternative A: Designate the Rural Settlements within this level (7) dispersed throughout the county to meet rural generated housing needs.	PHH MA A C BFF S W CH L		PHH MA A C BFF S W CH L	
Alternative B: Do not designate the Rural Settlements, settlements to remain in Open Countryside.		PHH MA A C BFF S W CH L		PHH MA A C BFF S W CH L

⁸¹ 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.

7.3.2 Assessment of Type 2: Alternatives for Population Allocations

- **Type 2 – Alternative A:** Allocate significant population allocation to the settlements in Level 1, 2 and 3 of the settlement hierarchy, with limited growth in Level 4, 5 and 6 and minimal growth identified in Level 7
- **Type 2 – Alternative B:** Continued Growth of the MASP and Key Towns and dispersed pattern of growth across the other settlements and open countryside

The concentration of growth in the larger settlements in the County (i.e. MASP, Ballinasloe, Tuam and Athenry) under **Alternative A** will ensure there are settlements suitably located in the County with the capacity to grow at a sustainable level where there are opportunities to consolidate development in the existing urban footprint through infill and brownfield development. These settlements have a number of positive attributes including a broad range of services, transport links, a strong employment base, and capacity to facilitate population and economic growth. By providing for a concentration in the larger settlements in the County, Alternative A would result in lower levels of commuting, benefiting efforts to improve sustainable mobility and meet greenhouse gas emission reduction targets the most. Development in these centres would be better serviced and there would be a reduced need for greenfield development (and associated adverse environmental effects, including effects on water, drinking water, human health, ecology and landscape designations) in less well-served, less-well connected and more sensitive locations in the County, including the open countryside and smaller settlements as identified in Levels 4-6.

A more dispersed pattern of development as identified in **Alternative B** that would result in the expansion of the smaller towns and villages in the County. Development is more likely to be on greenfield lands as there are few infill and brownfield sites available. Services and public transport are more limited and there would be a greater dependence on commuting for employment. Development would be more likely to occur on greenfield lands as there are less infill and brownfield sites available in Rural Settlements and the Open Countryside. Greenfield development (and associated adverse environmental effects, including effects on water, drinking water, human health, ecology and landscape designations) would be in less well-served, less-well connected and more sensitive locations in the County, including the open countryside and smaller settlements. The more dispersed population approach has the potential to undermine the role of the larger settlements and make it more difficult to deliver key infrastructure and placemaking projects.

Type 2 alternatives are assessed against Strategic Environmental Objectives on Table 7.4.

Table 7.4 Assessment of Type 2 Alternatives against Strategic Environmental Objectives

Alternative (selected alternative for the Plan in bold)	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
Alternative A: Allocate significant population allocation to the settlements in Level 1, 2 and 3 of the settlement hierarchy, with limited growth in Level 4, 5 and 6 and minimal growth identified in Level 7	PHH MA A C BFF S W CH L		PHH MA A C BFF S W CH L	
Alternative B: Continued Growth of the MASP and Key Towns and dispersed pattern of growth across the other settlements and open countryside		PHH MA A C BFF S W CH L		PHH MA A C BFF S W CH L

7.3.1 Assessment of Type 3: Alternatives for Rural Areas

- **Type 3 (i) Alternative A:** Designate Rural Areas under Strong Urban Pressure that require various criteria to be demonstrated in advance of planning permission being granted for a single dwelling for permanent occupation.
- **Type 3 (i) Alternative B:** Do not designate Rural Areas under Strong Urban Pressure and assess each planning application on its merits.

Alternative A provides for a robust and transparent policy approach to manage rural housing.

Restricting the development of single dwellings in rural areas that are under strong urban influence/pressure 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.

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

Alternative B Provides a vague and unclear policy approach to rural housing and risks facilitating a significant increase in urban-generated one-off housing in the open countryside which will undermine the role of small towns and villages and have consequences for the environment.

Not restricting the development of single dwellings in rural areas that are under strong urban influence/pressure 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 housing 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.

Type 3 alternatives are assessed against Strategic Environmental Objectives on Table 7.5.

Table 7.5 Assessment of Type 3 Alternatives against Strategic Environmental Objectives

Alternative (selected alternative for the Plan in bold)	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. Designate Rural Areas under Strong Urban Influence/Pressure that require various criteria to be demonstrated in advance of planning permission being granted for a single dwelling for permanent occupation.	PHH MA A C BFF S W CH L		PHH MA A C BFF S W CH L	
B. Do not designate Rural Areas under Strong Urban Influence/Pressure and assess each planning application on its merits.		PHH MA A C BFF S W CH L		PHH MA A C BFF S W CH L

7.3.2 Assessment of Type 4: Alternatives for Land Use Zoning

Alternatives for Land Use Zoning are assessed on Table 7.6.

Table 7.6 Assessment of Type 4 Alternatives against Strategic Environmental Objectives

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 Lesser degree	to a Lesser degree	to a Greater degree	
Bearna	A New Residential Zoning: South of R336 lands (outside Flood Zone A) zoned as TC/Infill Residential	PHH MA A C BFF S W CH L		PHH MA A C BFF S W CH L		Open Space would be an appropriate use for these lands and would be to be in compliance with the Flood Risk Management Guidelines. New Residential lands could be zoned elsewhere in the settlement on lands with low levels of flood risk. Such residential development would reduce the need for development elsewhere in the County, on less well-served, less-well connected, more sensitive lands – and associated adverse environmental effects.
	B New Residential Zoning: South of R336 zoned, all lands (within Flood Zone A) zoned as TC/Infill Residential		PHH MA A C BFF S W CH L		PHH MA A C BFF S W CH L	New Residential would be an inappropriate use for these lands and would be unlikely to be in compliance with the Flood Risk Management Guidelines. Due to the elevated flood risk, the development of this site would be hindered and development pressures may present elsewhere in the County, on less well-served, less-well connected, more sensitive lands – and associated adverse environmental effects.
Oranmore Set 1	A Lands (within Flood Zone A) zoned Open Space/Recreation and Amenity	PHH MA A C BFF S W CH L		PHH MA A C BFF S W CH L		Open Space would be an appropriate use for these lands and would be to be in compliance with the Flood Risk Management Guidelines. New Residential lands could be zoned elsewhere in the settlement on lands with low levels of flood risk. Such residential development would reduce the need for development elsewhere in the County, on less well-served, less-well connected, more sensitive lands – and associated adverse environmental effects.
	B Lands (within Flood Zone A) zoned Residential Phase 1		PHH MA A C BFF S W CH L		PHH MA A C BFF S W CH L	New Residential would be an inappropriate use for these lands and would be unlikely to be in compliance with the Flood Risk Management Guidelines. Due to the elevated flood risk, the development of this site would be hindered and development pressures may present elsewhere in the County, on less well-served, less-well connected, more sensitive lands – and associated adverse environmental effects.
Oranmore Set 2	A Lands to the south of the Plan area zoned Residential Phase 2		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.
	B Lands to the south of the Plan area removed from Plan boundary	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.
Baile Chláir	A Lands to the West of the Plan boundary zoned Residential Phase 2		BFF PHH S MA A C CH L		BFF PHH S MA A C CH L	There are various other alternative lands for residential development that would contribute more to the proper planning of the town. Residential zoning on these lands would be unnecessary and there would be a need to provide for tourism zoning elsewhere. 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 Residential zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.
	B Lands to the West of the Plan boundary zoned Community Facilities	BFF PHH S MA A C CH L		BFF PHH S MA A C CH L		There is an identified planning need for community facilities development in Baile Chláir. Providing for this use within the settlement boundary would help to minimise the occurrence of this type of development outside of the town, potentially on less well-connected, less well-served lands – with associated potential adverse environmental effects on environmental components such as water, drinking water, human health, ecology and landscape designations. This alternative would provide

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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 Lesser degree	to a Lesser degree	to a Greater degree	
						for a more compact form of development that would help to maximise benefits from infrastructural investment and it would contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health).
Briarhill	A. To prepare a Framework Plan for Briarhill for integration into the County Development Plan that is centred around the principles of good placemaking and provides for phased development at this key strategic growth area.					The preparation of a Framework Plan for Briarhill for integration into the County Development Plan that is centred around the principles of good placemaking and provides for phased development at this key strategic growth area would benefit proper planning, sustainable development and environmental protection and management. Such a Framework Plan would make development at this location, which has proximity to services, jobs and infrastructure and is well-serviced and well-connected, more likely. Development at Briarhill would reduce the need to develop lands that are less well-serviced and connected and potentially more sensitive. A focus on placemaking would make Briarhill a more desirable location to live and work. Phasing would help to both maximise benefits from infrastructural investment and ensure that new development is accompanied by appropriate infrastructure and services.
	B. Not preparing any focused Plan or land use zoning for Briarhill.					Not preparing any focused Plan or land use zoning for Briarhill would stymie proper planning, sustainable development and environmental protection and management. The absence of a co-ordinated Plan for Briarhill would make development at this location, which has proximity to services, jobs and infrastructure and is well-serviced and well-connected, less likely. In the absence of a Framework Plan, there would be a greater need to develop lands elsewhere that are less well-serviced and connected and potentially more sensitive. The absence of phasing would make both maximising benefits from infrastructural investment and ensuring that new development is accompanied by appropriate infrastructure and services more difficult.
Garraun	A. To prepare a Framework Plan for Garraun for integration into the County Development Plan that is centred around the principles of good placemaking and provides for phased development at this key strategic growth area.					The preparation of a Framework Plan for Garraun for integration into the County Development Plan that is centred around the principles of good placemaking and provides for phased development at this key strategic growth area would benefit proper planning, sustainable development and environmental protection and management. Such a Framework Plan would make development at this location, which has proximity to services, jobs and infrastructure and is well-serviced and well-connected, more likely. Development at Garraun would reduce the need to develop lands that are less well-serviced and connected and potentially more sensitive. A focus on placemaking would make Garraun a more desirable location to live and work. Phasing would help to both maximise benefits from infrastructural investment and ensure that new development is accompanied by appropriate infrastructure and services.
	B. Zoning Garraun generally as a reserve area, potentially to be developed under future Plan periods, post 2028.					Not preparing any focused Plan or land use zoning for Garraun would stymie proper planning, sustainable development and environmental protection and management. The zoning of Garraun generally as a reserve area, potentially to be developed under future Plan periods, post 2028, would make development at this location, which has proximity to services, jobs and infrastructure and is well-serviced and well-connected, less likely. In the absence of a Framework Plan, there would be a greater need to develop lands elsewhere that are less well-serviced and connected and potentially more sensitive. The absence of phasing would make both maximising benefits from infrastructural investment and ensuring that new development is accompanied by appropriate infrastructure and services more difficult.
Clifden Set 1	A New Residential Zoning: Residential Phase 2 lands removed to the north of the Galway Clifden Road, boundary reduced	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.
	B New Residential Zoning: Residential Lands Phase 2 lands zoned north of the Clifden Galway Road		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.
Clifden Set 2	A To the north of Clifden Glen Lands zoned to Tourism from Residential Phase 2.	BFF PHH S MA A C CH L		BFF PHH S MA A C CH L		There is an identified planning need for tourism development in Clifden. Providing for this use within the settlement boundary would help to minimise the occurrence of this type of development outside of the town, potentially on less well-connected, less well-served lands – with associated potential adverse environmental effects on environmental components such as water, drinking water, human health, ecology and landscape designations. This alternative would provide for a more compact form of development that would help to maximise benefits from infrastructural investment and it would contribute towards efforts to improve sustainable mobility (with associated effects on energy, air, noise and human health).

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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 Lesser degree	to a Lesser degree	to a Greater degree	
	B To the north of Clifden Glen Lands zoned to Residential Phase 2.		BFF PHH S MA A C CH L		BFF PHH S MA A C CH L	There are various other alternative lands for residential development that would contribute more to the proper planning of the town. Residential zoning on these lands would be unnecessary and there would be a need to provide for tourism zoning elsewhere. 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 Residential zoning would be likely to result in higher levels of sprawl and associated avoidable potential adverse environmental effects.
Maigh Cuilinn	A Lands to the east of the N59 approach into Maigh Cuilinn zoned Agriculture	BFF PHH S MA A C CH L		BFF PHH S MA A C CH L		Agricultural zoning would be compatible with the topography of these lands. Residential zoning allocated to the town could be provided for elsewhere within the town, contributing towards a more compact form of development that would help to maximise benefits from infrastructural investment. 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 the need to develop lands elsewhere, outside of the settlement, for residential uses 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.
	B Lands to the east of the N59 approach into Maigh Cuilinn zoned Residential Phase 2		BFF PHH S MA A C CH L		BFF PHH S MA A C CH L	Land topography is a physical constraint to the development of these lands. Allocating some of Maigh Cuilinn's allotted residential zoning to these lands would be likely to place greater pressure on lands outside of the settlement for residential development, potentially on less well-connected, less well-served lands – with associated potential adverse environmental effects on environmental components such as water, drinking water, human health, ecology and landscape designations. Lands developed outside of the settlement would be likely to result in inefficiencies infrastructural investment and higher emissions from transport (with associated effects on energy, air, noise and human health).
Headford	A Lands to the north of Headford Village removed from Plan boundary	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.
	B Lands to the north of Headford village zoned Residential Phase 2		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.
Oughterard	A Lands zoned with excess Residential Lands(2005 2011) Plan to the West of Plan boundary		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.
	B More compact residential zoning	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.
Portumna Set 1	A Lands to the west of the N65 zoned Residential Phase 2	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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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 Lesser degree	to a Lesser degree	to a Greater degree	
	B Lands to the west of the N65 town zoned Phase 1		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.
Portumna Set 2	A Lands to the west of Portumna town on the R352 zoned Tourism		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.
	B Lands to the west of Portumna town on the R352 removed from Plan boundary	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.
An Cheathrú Rua	A Consolidation of Plan boundary-Residential Phase 2 lands removed west of the village	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.
	B Residential Phase 2 lands zoned to the west of the village		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.
An Spidéal	A Consolidation of Plan boundary-Residential Phase 2 lands removed north of the village	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.
	B Residential Phase 2 lands zoned to the north of the village		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.
Ballygar	A Lands to the East of Ballygar Village zoned Residential Phase 1	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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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 Lesser degree	to a Lesser degree	to a Greater degree	
	B Lands to the East of Ballygar village zoned Residential Phase 1 and 2		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.
Dunmore	A Lands to the east of R328 (with flood zone A) zoned Open Space	PHH MA A C BFF S W CH L		PHH MA A C BFF S W CH L		Open Space would be an appropriate use for these lands and would be to be in compliance with the Flood Risk Management Guidelines. New Residential lands could be zoned elsewhere in the settlement on lands with low levels of flood risk. Such residential development would reduce the need for development elsewhere in the County, on less well-serviced, less-well connected, more sensitive lands – and associated adverse environmental effects.
	B Lands to the east of R328 (within flood zone A) zoned Residential		PHH MA A C BFF S W CH L		PHH MA A C BFF S W CH L	New Residential would be an inappropriate use for these lands and would be unlikely to be in compliance with the Flood Risk Management Guidelines. Due to the elevated flood risk, the development of this site would be hindered and development pressures may present elsewhere in the County, on less well-serviced, less-well connected, more sensitive lands – and associated adverse environmental effects.
Glenamaddy	A Lands to the east of the R362 on the village zoned TC with limited development potential beyond these lands	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.
	B Lands to the east of the R362 on the approach into the village and beyond the TC lands zoned Residential Phase 2		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.
Kinvara	A More compact residential zoning to the south of the N67 in the village zoned Residential Phase 2	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.
	B Lands zoned to the south of the N67 in the village zoned Residential Phase 2 (2005 2011)		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.
Moylough	A Lands to the west of the N63, on the approach to the village Zoned Residential Phase 1, more compact development	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.
	B Lands to the west of the N63 on the approach to the village Zoned Residential Phase 1 and 2 more sprawl		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.

7.4 Reasons for Choosing the Selected Alternatives in light of Other Reasonable Alternatives Considered

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

These alternatives have been incorporated into the Plan having regard to both:

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

Section 8 Evaluation of Plan Provisions

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.

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 Objectives⁸²

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
Biodiversity, Flora and Fauna	BFF	No net contribution to biodiversity losses or deterioration	<ul style="list-style-type: none"> To preserve, protect, maintain and, where appropriate, enhance the terrestrial, aquatic and soil biodiversity, particularly EU designated sites and protected species Ensure no adverse effects on the integrity of any European site, with regard to its qualifying interests, associated conservation status, structure and function Safeguard national, regional and local designated sites and supporting features which function as stepping stones for migration, dispersal and genetic exchange of wild species Enhance biodiversity in line with the National Biodiversity Strategy and its targets To protect, maintain and conserve the County's natural capital
Population and Human Health	PHH	Improve quality of life for all ages and abilities based on high-quality, serviced, well connected and sustainable residential, working, educational and recreational environments	<ul style="list-style-type: none"> Promote economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management Ensure that existing population and planned growth is matched with the required public infrastructure and the required services Safeguard the County's citizens from environment-related pressures and risks to health and well-being
Soil (and Land)	S	Ensure the long-term sustainable management of land	<ul style="list-style-type: none"> Protect soils against pollution, and prevent degradation of the soil resource Promote the sustainable use of infill and brownfield sites over the use of greenfield within the County Safeguard areas of prime agricultural land and designated geological sites
Water	W	Protection, improvement and sustainable management of the water resource	<ul style="list-style-type: none"> Ensure that the status of water bodies is protected, maintained and improved in line with the requirements of the Water Framework Directive Ensure water resources are sustainably managed to deliver proposed regional and County growth targets in the context of existing and projected water supply and wastewater capacity constraints ensuring the protection of receiving environments Avoid inappropriate zoning and development in areas at risk of flooding and areas that are vulnerable to current and future erosion, particularly coastal areas Integrate sustainable water management solutions (such as SuDS, porous surfacing and green roofs) into development proposals

⁸² See also Section 5

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
Material Assets	MA	Sustainable and efficient use of natural resources	<ul style="list-style-type: none"> • Optimise existing infrastructure and provide new infrastructure to match population distribution proposals in the County - this includes transport infrastructure • Ensure access to affordable, reliable, sustainable and modern energy for all which encourages a broad energy generation mix to ensure security of supply – wind, solar, hydro, biomass, energy from waste and traditional fossil fuels • Promote the circular economy, reduce waste, and increase energy efficiencies • Ensure there is adequate sewerage and drainage infrastructure in place to support new development • Reduce the energy demand from the transport sector and support moves to electrification of road and rail transport modes • Encourage the transition to a zero-carbon economy by facilitating the development of a grid infrastructure to support renewables and international connectivity. Reduce the average energy consumption per capita including promoting energy efficient buildings, retrofitting, smart-buildings, cities and grids
Air	A	Support clean air policies that reduce the impact of air pollution on the environment and public health	<ul style="list-style-type: none"> • To avoid, prevent or reduce harmful effects on human health and the environment as a whole resulting from emissions to air from all sectors with particular reference to emissions from transport, residential heating, industry and agriculture • Maintain and promote continuing improvement in air quality through the reduction of emissions and promotion of renewable energy and energy efficiency • Promote continuing improvement in air quality • Reduction of emissions of sulphur dioxide, nitrogen oxides, volatile organic compounds, ammonia and fine particulate matter which are responsible for acidification, eutrophication and ground-level ozone pollution • Meet Air Quality Directive standards for the protection of human health – Air Quality Directive • Significantly decrease noise pollution by 2020 and move closer to WHO recommended levels
Climatic Factors	C	Achieving transition to a competitive, low carbon, climate-resilient economy that is cognisant of environmental impacts	<ul style="list-style-type: none"> • To minimise emissions of greenhouse gasses • Integrate sustainable design solutions into the County's infrastructure (e.g. energy efficient buildings; green infrastructure) • Contribute towards the reduction of greenhouse gas emissions in line with national targets • Promote development resilient to the effects of climate change • Promote the use of renewable energy, energy efficient development and increased use of public transport
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 8.4 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 8.2.

Other policies, plans and programmes that have been considered by the assessment of effects include those which are detailed under Section 2.5 (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 Northern and Western Regional Spatial and Economic Strategy, adjoining County Development Plans and Local Area Plans);
- Galway 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, the 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 2021, the National Adaptation Framework 2018, and the Galway Climate Change Adaptation Strategy 2019 and Climate Action Charter 2019);
- Water services, waste management, transport and energy infrastructure plans (e.g. Irish Water’s Water Services Strategic Plan and associated Capital Investment Plan, Connacht-Ulster Regional Waste Management Plan and Transportation Policies and Strategies); and
- Environmental protection and management plans (e.g. River Basin Management Plan 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 is consistent with those described on Table 8.2. 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 Galway.

A variety of the issues covered by the Plan provisions are regional issues which are considered: at Regional Assembly level, in the Northern and Western 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 Northern and Western region would potentially conflict with a number of environmental components, across the wider Northern and Western 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.

8.3 Overall Evaluation

Galway County Council have integrated various recommendations arising from the SEA, AA and SFRA processes into the Plan (see Section 9). Table 8.2 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.

Taking into account, *inter alia*, the detailed mitigation which has been integrated into the Plan (including that which is identified at Section 9), it has been determined that significant residual adverse environmental effects will not occur.

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 8.2 Overall Evaluation – Effects arising from the Plan

Environmental Component	Environmental Effects, in combination with the wider planning framework			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	<ul style="list-style-type: none"> Contribution towards protection of ecology (including designated sites, ecological connectivity, habitats) by facilitating development of lands (including those within and adjacent to the 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-served 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. 	<p>Arising from both construction and operation of development and associated infrastructure:</p> <ul style="list-style-type: none"> Loss of/damage to biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance to biodiversity and flora and fauna; Habitat loss, fragmentation and deterioration, including patch size and edge effects; and Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species such as birds and bats. 	<ul style="list-style-type: none"> Loss of an extent of non-protected habitats and species arising from the replacement of semi-natural land covers with artificial surfaces. Losses or damage to ecology (these would be in compliance with relevant legislation). 	BFF

Environmental Component	Environmental Effects, in combination with the wider planning framework			SEO Codes
	Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP 2018, the Northern and Western RSES, adjacent Development Plans and lower-tier land use plans.			
	Significant Positive Effect, likely to occur	Potentially Significant Adverse Environmental Effects, if unmitigated	Likely Residual Adverse Non-Significant Effects	
Population and Human Health	<ul style="list-style-type: none"> Promotion of economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management. Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands (including those within and adjacent to the 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. 	<ul style="list-style-type: none"> Potential adverse effects arising from flood events. Potential interactions if effects arising from environmental vectors. 	<ul style="list-style-type: none"> Potential interactions with residual effects on environmental vectors – please refer to residual adverse effects under “Soil”, “Water” and “Air and Climatic Factors” below. 	PHH
Soil	<ul style="list-style-type: none"> Contribution towards the protection of soils (including those used for agriculture) and designated sites of geological heritage by facilitating development of lands (including those within and adjacent to the 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. 	<ul style="list-style-type: none"> Potential adverse effects on the hydrogeological and ecological function of the soil resource, including as a result of development on contaminated lands. Potential for riverbank and coastal erosion. 	<ul style="list-style-type: none"> Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces. Riverbank and coastal erosion will continue to occur naturally over time and is likely to be enhanced by climate change. 	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 Northern and Western 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	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Potential adverse effects upon the status of water bodies and entries to the WFD Register of Protected Areas (ecological and human value), arising from changes in quality, flow and/or morphology. Increase in flood risk and associated effects associated with flood events. 	<ul style="list-style-type: none"> Any increased loadings as a result of development to comply with the River Basin Management Plan. Flood related risks remain due to uncertainty with regard to extreme weather events – however such risks will be mitigated by measures that have been integrated into the Plan. 	W
Material Assets	<ul style="list-style-type: none"> Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands (including those within and adjacent to the 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 sustainable compact growth, sustainable mobility, sustainable design and energy efficiency. 	<ul style="list-style-type: none"> Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity ensures the mitigation of potential conflicts). Failure to adequately treat surface water run-off that is discharged to water bodies (water services infrastructure and capacity ensures the mitigation of potential conflicts). Failure to comply with drinking water regulations and serve new development with adequate drinking water (water services infrastructure and capacity ensures the mitigation of potential conflicts). Increases in waste levels. Potential impacts upon public assets and infrastructure. Interactions between agriculture and soil, water, biodiversity and human health - including phosphorous and nitrogen deposition as a result of agricultural activities and the production of secondary inorganic particulate matter. 	<ul style="list-style-type: none"> Exceedance of capacity in critical infrastructure risks remain, including due to uncertainty with regard to climate – however, such risks will be mitigated by: measures, including those requiring the timely provision of critical infrastructure, and compliance with the Water Framework Directive and associated River Basin Management Plan. Residual wastes to be disposed of in line with higher-level waste management policies. Any impacts upon public assets and infrastructure to comply with statutory planning/consent-granting framework. 	MA

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 Northern and Western 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	<ul style="list-style-type: none"> Contribution towards climate mitigation and adaptation by facilitating compact development of lands (including those within and adjacent to the County's settlements) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-served lands elsewhere in the County and beyond. In combination with other plans, programmes etc., contribution towards the objectives of the wide policy framework relating to climate mitigation and adaptation, and associated contribution towards maintaining and improving air quality and managing noise levels, including through measures relating to: <ul style="list-style-type: none"> Sustainable compact growth; Sustainable mobility, including walking, cycling and public transport; Drainage, flood risk management and resilience; Sectors including agriculture, forestry, energy and buildings; and Sustainable design, energy efficiency and green infrastructure. 	<ul style="list-style-type: none"> Potential conflict between development under the Plan and aiming to reduce carbon emissions in line with local, national and European environmental objectives. Potential conflicts between transport emissions, including those from cars, and air quality. Potential conflicts between increased frequency of noise emissions and protection of sensitive receptors. Potential conflicts with climate adaptation measures including those relating to flood risk management. 	<ul style="list-style-type: none"> An extent of travel related greenhouse gas and other emissions to air. This has been mitigated by provisions which have been integrated into the Plan, including those relating to sustainable compact growth and sustainable mobility. Interactions between noise emissions and sensitive receptors. Various provisions have been integrated into the Plan to ensure that noise levels at sensitive receptors will be minimised. 	AC
Cultural Heritage	<ul style="list-style-type: none"> Contributes towards protection of cultural heritage elsewhere in the County by facilitating development within existing settlements. Contributes towards protection of cultural heritage within existing settlements by facilitating brownfield development and regeneration. 	<ul style="list-style-type: none"> Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities. 	<ul style="list-style-type: none"> Potential effects on known architectural and archaeological heritage and unknown archaeology however, these will occur in compliance with legislation. 	CH
Landscape	<ul style="list-style-type: none"> Contributes towards protection of wider landscape and landscape designations by facilitating development within existing settlements. 	<ul style="list-style-type: none"> Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape. 	<ul style="list-style-type: none"> Landscapes will change overtime as a result of natural changes in vegetation cover combined with new developments that will occur in compliance with the Plan's landscape protection measures. 	L

8.4 Instances whereby Environmental Considerations were not integrated into the Plan

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

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

However, a number of alterations were adopted by the Elected Members as part of the Plan that are particularly internally inconsistent with the overall approach provided for by the Plan, including those which are identified on Table 3.1 and were advised against by the Plan-preparation/SEA process. Also included on Table 3.1 is advice that was provided by the SEA for consideration in advance of adoption of the Plan.

Table 8.3 Alterations Advised Against but Adopted

Alteration Ref.	Commentary provided in advance of Plan Adoption	Recommendation provided in advance of Plan Adoption
Volume 1 - 7.8 Volume 1 - 7.9 Volume 1 - 7.10 Volume 1 - 7.23 Volume 2 - 19.1	<p>These alterations would not provide the most evidence-based framework for development and have the potential to undermine sustainable development and proper planning, including compact growth, by placing non-evidence-based restrictions on future growth. They do not align with higher level policy or guidance. These amendments have the potential to push development that would be appropriate in certain locations to more sensitive, less well-served, less well-connected locations.</p> <p>Any potentially conflict between flood risk and the uses possible under the Open Space zoning provided under Amendment No. Volume 1 7.23 and Amendment No. Volume 2 19.1 would be mitigated by other Proposed Material Alterations to the text of Volume 2 that qualify what types of uses would be permissible.</p>	Do not adopt as part of Draft Plan
Volume 2 - 2.1	This alteration would potentially conflict proper flood risk management and not comply with the Flood Risk Management Guidelines. There would be potential risk to environmental components including human health and material assets.	<p>Do not adopt as part of Draft Plan where non-compliance with the Flood Risk Management Guidelines has been advised.</p> <p>Where such proposals are being adopted it is recommended that the proposal is modified in order to integrate the following requirement, with explicit notification provided on zoning maps:</p> <p>“Inappropriate Development on Flood Zones: Where a development/land use is proposed within any area subject to this objective the development proposal will need to be accompanied by a detailed hydrological assessment and robust SUDS design which demonstrates the capacity to withstand potential flood events to maintain water quality and avoid potential effects to ecological features.</p> <ul style="list-style-type: none"> • Any development proposals should be considered with caution and will be required to comply with The Planning System and Flood Risk Management Guidelines for Planning Authorities/Circular PL2/2014 & the associated Development Management Justification Test. • Climate Change should be duly considered in any development proposal. • Protect the riparian zones of watercourse systems throughout the plan area through a general 10 metre protection buffer from rivers within the plan area as measured from the near river bank, (this distance may be increased and decreased on a site by site basis, as appropriate). • Any development proposals submitted for this site will require a detailed ecological report (s), carried out by suitably qualified personnel for the purposes of informing Appropriate Assessment Screening by Galway County Council, the competent authority.

Alteration Ref.	Commentary provided in advance of Plan Adoption	Recommendation provided in advance of Plan Adoption
		<ul style="list-style-type: none"> The relevant lands will be outlined and flagged with a symbol on the land use zoning map and on the GIS system of Galway County Council so that staff and the public are aware of the special conditions/constraints attached. A briefing will be provided to relevant staff within Galway County Council on the special conditions and constraints on relevant lands."
Volume 1 - 4.1 Volume 1 - 4.2 Volume 1 - 4.3 Volume 1 - 4.4	These alterations would dilute the management of rural housing (including in the Rural Metropolitan Area, Rural Area Under Strong Urban Pressure-GCTPS-Outside Rural Metropolitan Area Zone 1 and Rural Housing Zone 4 - Landscape Classification 2, 3 and 4) and have the potential to result in more housing in these areas with associated additional, unnecessary and potentially significant adverse effects on various environmental components, including landscape, biodiversity, surface and ground water, human health and sustainable mobility and climate emission reduction targets. This would present potential conflicts with legislative requirements including the European Habitats and Water Framework Directives that would be challenging to mitigate.	Do not adopt as part of Draft Plan
Volume 2 - 2.2 Volume 2 - 3.1 Volume 2 - 3.5 Volume 2 - 6.4 Volume 2 - 6.5 Volume 2 - 7.2 Volume 2 - 7.3 Volume 2 - 7.4 Volume 2 - 7.8 Volume 2 - 7.10 Volume 2 - 9.1 Volume 2 - 9.4 Volume 2 - 9.5 Volume 2 - 9.6 Volume 2 - 9.8 Volume 2 - 9.9 Volume 2 - 10.2 Volume 2 - 11.1 Volume 2 - 12.2 Volume 2 - 15.1 Volume 2 - 20.1	<p>These alterations would not be consistent with established population targets and/or the proper planning and sustainable development of the County. As a result they would present additional, unnecessary and potentially significant adverse effects on various environmental components, including soil, water, biodiversity, air and climatic factors and material assets.</p> <p>For alterations relating to zoning, much of the zoning proposed is considered to be premature in the context of current population targets.</p> <p>Potentially significant adverse unnecessary effects, would be likely to include:</p> <ul style="list-style-type: none"> Effects on non-designated habitats and species Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces Increased loadings on water bodies Conflict with efforts to maximise sustainable compact growth and sustainable mobility Occurrence of adverse visual impacts <p>Where such alterations are further from the centre of settlements, potentially significant unnecessary adverse effects would be likely to include:</p> <ul style="list-style-type: none"> Difficulty in providing adequate and appropriate waste water treatment as a result of zoning outside of established built development envelopes of settlements Adverse impacts upon the economic viability of providing for public assets and infrastructure Adverse impacts upon carbon emission reduction targets in line with local, national and European environmental objectives Conflicts between transport emissions, including those from cars, and air quality Conflicts between increased frequency of noise emissions and protection of sensitive receptors Potential effects on human health as a result of potential interactions with environmental vectors <p>Alteration Volume 2 - 3.5 would potentially conflict proper flood risk management and not comply with the Flood Risk Management Guidelines. There would be potential risk to environmental components including human health and material assets. Note that in instances whereby a land use zoning objective for Open Space or Tourism or Community Infrastructure is being provided by an alteration to areas previously unzoned by the Draft Plan, potential effects would be mitigated by other Proposed Material Alterations to the text of Volume 2 that qualify what types of uses would be permissible.</p> <p>Proposed Material Alteration No. Volume 2 - 3.1 related to land use zoning and is immediately adjacent to the Cregganna Marsh SPA and has the potential, if unmitigated, to impact upon the integrity of this site.</p> <p>Proposed Material Alteration No. Volume 2 - 3.5 relate to land use zoning and intersect the Galway Bay Complex SAC and have the potential, if unmitigated, to impact upon the integrity of the SAC.</p>	<p>Do not adopt as part of Draft Plan</p> <p>Where such proposals are being adopted and where non-compliance with the Flood Risk Management Guidelines has been advised it is recommended that the proposal is modified in order to integrate the following requirement, with explicit notification provided on zoning maps:</p> <p>"Inappropriate Development on Flood Zones: Where a development/land use is proposed within any area subject to this objective the development proposal will need to be accompanied by a detailed hydrological assessment and robust SUDS design which demonstrates the capacity to withstand potential flood events to maintain water quality and avoid potential effects to ecological features.</p> <ul style="list-style-type: none"> Any development proposals should be considered with caution and will be required to comply with The Planning System and Flood Risk Management Guidelines for Planning Authorities/Circular PL2/2014 & the associated Development Management Justification Test. Climate Change should be duly considered in any development proposal. Protect the riparian zones of watercourse systems throughout the plan area through a general 10 metre protection buffer from rivers within the plan area as measured from the near river bank, (this distance may be increased and decreased on a site by site basis, as appropriate). Any development proposals submitted for this site will require a detailed ecological report (s), carried out by suitably qualified personnel for the purposes of informing Appropriate Assessment Screening by Galway County Council, the competent authority. The relevant lands will be outlined and flagged with a symbol on the land use zoning map and on the GIS system of Galway County Council so that staff and the public are aware of the special conditions/constraints attached. A briefing will be provided to relevant staff within Galway County Council on the special conditions and constraints on relevant lands."

Alteration Ref.	Commentary provided in advance of Plan Adoption	Recommendation provided in advance of Plan Adoption
	Proposed Material Alteration No. Volume 2 - 9.4 relates to land use zoning and an access road to these lands intersects the Lough Corrib SAC and has the potential, if unmitigated, to impact upon the integrity of the SAC.	

8.5 Appropriate Assessment and Strategic Flood Risk Assessment

Stage 2 Appropriate Assessment (AA) and Strategic Flood Risk Assessment (SFRA) have been undertaken alongside the preparation of the Draft Plan.

The requirement for AA is provided under the EU Habitats Directive (Directive 1992/43/EEC). The AA assesses the effects of the Plan on European Sites designated for certain habitats and species. The conclusion of the AA is that the Plan will not affect the integrity of the Natura 2000 network⁸³.

SFRA is required by '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. Recommendations from the SFRA have been integrated into the Plan.

Various policies and objectives have been integrated into the Plan through the SEA, SFRA and AA processes. The preparation of the Plan, SEA, AA and SFRA has taken place concurrently and the findings of the AA and SFRA have informed both the Plan and the SEA.

8.6 Integration of Climate Action into the Plan⁸⁴

The Plan will contribute towards climate action in combination with:

- The Climate Action Plan that identifies 493 climate mitigation and/or adaptation actions, including: Action 214 Rollout of Social Housing National Retrofitting Programme in 2021 with retrofitted properties required to reach BER B2 or equivalent; Action 190 Ensure national, regional, and local planning frameworks encourage and facilitate the development of district heating where appropriate to facilitating compact urban development; and Action 78 Implement the National Planning Framework. The Climate Action Plan also identifies local authorities as the lead stakeholder on a number of steps under certain actions – such as those relating to Carbon Pricing and Cross-cutting policies, Citizen Engagement, Community Leadership and Just Transition and Adaptation.
- The National Planning Framework, which has identified National Strategic Outcome Objectives 8 “Build Climate Resilience” and 9 “Support the transition to low carbon and clean energy” under National Strategic Outcome 8 “Transition to a Low Carbon and Climate Resilient Society”.
- The Northern and Western Regional Spatial and Economic Strategy that has identified various Regional Policy Objectives relating to climate action, including:
 - RPO 4.16 The NWRA shall co-ordinate the identification of potential renewable energy sites of scale in collaboration with Local Authorities and other stakeholders within 3 years of the adoption of the RSES. The identification of such sites (which may extend to include energy storage solutions) will be based on numerous site selection criteria including environmental matters, and potential grid connections. RPO 4.17 To position the region to avail of the emerging global market in renewable energy by: Stimulating the development and deployment of the most advantageous renewable energy systems; Supporting research and innovation; Encouraging skills development and transferability; Raising awareness and public understanding of renewable energy and encourage market opportunities for the renewable energy industry to promote the development and growth of renewable energy businesses; Encourage the development of the transmission and distribution grids to facilitate the development of renewable energy projects and the effective utilisation of the energy generated from renewable sources having regard to the future potential of the region over the lifetime of the Strategy and beyond.
 - RPO 4.18 Support the development of secure, reliable and safe supplies of renewable energy, to maximise their value, maintain the inward investment, support indigenous industry and create jobs.

⁸³ Except as provided for in Article 6(4) of the Habitats Directive, viz. There must be:

(a) no alternative solution available;

(b) imperative reasons of overriding public interest for the plan/programme/project to proceed; and

(c) adequate compensatory measures in place.

⁸⁴ This section is informed by content from Section 2.2.2 of the Draft Plan

- RPO 4.20 Support and encourage the development of the bio-economy sector, and facilitate its development for energy production, heat, and storage distribution, in particular advocating Combined Heat and Power Units integrated into District Heating networks, in combination with Pyrogenic Carbon Capture and Storage (PyCCS) or Bio-Energy Carbon capture and storage (BECCS) all to be done in collaboration with EPA and other regulators.
- RPO 4.21 Promote innovative new building design and retrofitting of existing buildings, both private properties, and publicly owned, to improve building energy efficiency, energy conservation and the use of renewable energy sources following National Regulations, and Policy.
- RPO 5.1 The Assembly will support through CARO and Local Authorities the preparation and implementation of Local Climate Strategies which will, inter alia, address vulnerability to climate risks and provide prioritised actions in accordance with the guiding principles of the National Adaptation Framework.
- PO 6.51 Promote values and policies that make it easy to commute between home, work and school across the region in a way that contributes to a healthy, attractive and climate-friendly region.

Progressing climate action is a priority for the County Development Plan which will be done through a Climate Strategy which incorporates national and regional policy through an approach which includes mitigation and adaptation. This is outlined fully under Chapter 14 of the Plan. The two components of climate action are critical in order to build resilience and adapt to the changing climate in a planned and structured way.

Climate Mitigation Measures from the Plan encompass sectors including:

- Buildings
- Agriculture, Land Management and Forestry
- Transport
- Energy Production
- Minerals
- Resource Management

Climate Adaptation Measures from the Plan encompass sectors including:

- Buildings
- Agriculture, Land Management and Forestry
- Water Management
- Infrastructure, including flood defences
- Wildlife and biodiversity
- Economy and Tourism
- Human Health, Risk and Insurance

8.7 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 will not affect the interrelationships between these components. The presence of significant interrelationships between environmental components is identified on Table 8.4.

Table 8.4 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		Yes	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								

8.8 Detailed Evaluation⁸⁵

For an explanation of SEO codes e.g. **BFF, PHH, S, W**, etc. refer to Table 8.1 on page 105.

The following applies to each of the sub-sections 8.8.1 to 8.8.17 below:

The Plan is situated in a hierarchy of documents setting out public policy for, among other things, land use planning, infrastructure, sustainable development, tourism, environmental protection and environmental management, such as the National Planning Framework, the National Development Plan, the National Adaptation Framework, the Climate Action Plan and the Regional Spatial and Economic Strategy for the Northern and Western Region (for additional detail please refer to Section 2.5 “*Relationship with other relevant Plans and Programmes*” in this report).

These other existing policies, plans etc. have been subject to their own environmental assessment processes, as relevant, and already provide for various measures that have been compiled into the Plan. The Plan aligns with these documents and will be incorporated into the review and preparation of these documents.

Lower tier plans and projects must be consistent and comply with the provisions of the Plan and of these other policies, plans etc. and will be subject to their own project level EIA and AA requirements as relevant. An assessment of cumulative effects is provided at Section 8.2 of this report.

8.8.1 Chapter 2: Core Strategy, Settlement Strategy and Housing Strategy

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs – unlikely to be mitigated	Mitigated Conflicts	No Likely interaction with status of SEOs
Provisions of this Chapter comprise those relating to the Plan's Core Strategy, Settlement Strategy and Housing Strategy. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p>Commentary</p> <p>The assessment of the Plan's Core Strategy, Settlement Strategy and Housing Strategy against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> • Environmental effects detailed under subsections 8.2 to 8.7 of this report; and • Assessments of the selected alternatives for the Plan provided at Section 7 of this report. <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, 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 settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. 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.</p>				

⁸⁵ The Plan's provisions 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 Plan provisions 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 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.

The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.

The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 “Mitigation Measures” of this report. By integrating SEA recommendations into the Plan, Galway County Council is helping to ensure that:

- The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and
- The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.

The Core Strategy, Settlement Strategy and Housing Strategy would contribute towards sustainable development and the protection and management of the environment.

8.8.2 Chapter 3: Placemaking, Regeneration and Urban Living

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs – unlikely to be mitigated	Mitigated Conflicts	No Likely interaction with status of SEOs
Provisions of this Chapter comprise those relating to Placemaking, Regeneration and Urban Living. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p>Commentary</p> <p>The assessment of the Plan’s Placemaking, Regeneration and Urban Living provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> • Environmental effects detailed under subsections 8.2 to 8.7 of this report; and • Assessments of the selected alternatives for the Plan provided at Section 7 of this report. <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County’s towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, 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 settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. 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.</p> <p>The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.</p> <p>The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 “Mitigation Measures” of this report. By integrating SEA recommendations into the Plan, Galway County Council is helping to ensure that:</p> <ul style="list-style-type: none"> • The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and • The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised. <p>The People, Places and Housing provisions in this Chapter of the Plan would contribute towards sustainable development and the protection and management of the environment, including provisions under all headings; Placemaking, Compact Growth and Regeneration and Urban Living.</p>				

8.8.3 Chapter 4: Rural Living and Development

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs – unlikely to be mitigated	Mitigated Conflicts	No Likely interaction with status of SEOs
Provisions of this Chapter comprise those relating to Rural Living and Development. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p>Commentary</p> <p>Refer also to commentary under sub-sections 8.1 to 8.7.</p> <p>The assessment of the Plan's Rural Development and Natural Resources provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> • Environmental effects detailed under subsections 8.2 to 8.7 of this report; and • Assessments of the selected alternatives for the Plan provided at Section 7 of this report. <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, 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 settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. 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.</p> <p>Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.</p> <p>Agriculture and forestry are essential to the sustenance of rural populations and associated existing sustainable rural management practices, which can often sustain biodiversity.</p> <p>Agriculture is essential to the sustenance of rural populations and associated existing sustainable rural management practices which can often sustain biodiversity. Agriculture is however a source of waste and emissions of ammonia from agricultural activities (e.g. manure handling, storage and spreading) and the production of secondary inorganic particulate matter can have significant effects on water, soil, water, biodiversity and human health.</p> <p>Forestry and access to forestry for amenity would contribute towards the sustenance of rural populations and can improve the biodiversity value of the countryside. Depending on how it is developed, forestry has the potential to adversely affect various environmental components including biodiversity and flora and fauna, water and human health, the landscape.</p> <p>Fishing and aquaculture together with related development (such as infrastructure and buildings in riverbank locations) has the potential to adversely affect various environmental components including biodiversity and flora and fauna, water and human health.</p> <p>An extractive industry is essential for sustainable development however it presents the potential for significant adverse environmental effects to arise with regard to all environmental components, if unmitigated.</p> <p>In certain locations, due to the soils and drainage, certain waste water treatment systems do not provide the necessary level of treatment and other options should be investigated such as wetland systems or clusters of rural serviced sites. In other areas various systems will work subject to the relevant requirements.</p> <p>Alternatives relating to Rural Areas have been identified and considered as part of the Plan-preparation and SEA processes. The Plan has integrated the most sustainable and environmentally responsible alternatives for rural areas – refer also to Sections 6 and 7.</p> <p>Various Rural provisions in this Chapter of the Plan would contribute towards sustainable development and the protection and management of the environment.</p>				

8.8.4 Chapter 5: Economic, Enterprise and Retail

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs – unlikely to be mitigated	Mitigated Conflicts	No Likely interaction with status of SEOs
Provisions of this Chapter comprise those relating to the Economy, Enterprise and Retail. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p>Commentary</p> <p>The assessment of the Plan's Economic, Enterprise and Retail provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> Environmental effects detailed under subsections 8.2 to 8.7 of this report; and Assessments of the selected alternatives for the Plan provided at Section 7 of this report. <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, 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 settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. 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.</p> <p>The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.</p> <p>The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Galway County Council is helping to ensure that:</p> <ul style="list-style-type: none"> The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised. <p>Mitigation has been integrated into various Economic, Enterprise and Retail provisions, including EL 1 and EL 2 ("sensitive environments or environmentally sensitive economic activities" and "enhancement, preservation and protection of the environment and cultural resources").</p>				

8.8.5 Chapter 6: Transport and Movement

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs – unlikely to be mitigated	Mitigated Conflicts	No Likely interaction with status of SEOs
Provisions of this Chapter comprise those relating to Transport and Movement. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p>Commentary</p> <p>Refer also to commentary under sub-sections 8.1 to 8.7.</p> <p>The assessment of the Plan's Transport and Movement provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> Environmental effects detailed under subsections 8.2 to 8.7 of this report; and Assessments of the selected alternatives for the Plan provided at Section 7 of this report. <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, 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 settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. 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.</p>				

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The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.

Many of the provisions in this Chapter primarily contribute towards maximising sustainable mobility and associated interactions with emissions to air (including noise and greenhouse gas emissions), energy usage, air quality and human health. The facilitation of journeys by car, in particular, would give rise to emissions to air. The Plan references various projects that are provided for by higher level plans and programmes. New roads and other transport infrastructure projects that are not already provided for by existing plans/programmes or are not already permitted, are required by PRP 2 to be subject to feasibility assessment. Feasible projects must be subject to a Corridor and Route Selection Process.

The development of new greenways, blueways, peatways and walking and cycling routes, including those between County Galway, adjoining counties and beyond has the potential to contribute towards sustainable mobility and a better management of movements in sensitive areas, thereby benefitting various environmental components including habitats at certain locations. The development of these projects, however, presents a variety of potentially adverse environmental effects that would, if unmitigated, have the potential to arise from both the construction and operation of such developments and/or their ancillary infrastructure. These types of infrastructure are often constructed in ecologically and visually sensitive areas adjacent to the banks of rivers and streams. Potential adverse effects would be mitigated both by measures which have been integrated into the Plan which provide for and contribute towards environmental protection, environmental management and sustainable development (including those identified at Section 9 of this report) and by measures arising from lower tier assessments (including those for the preparation of lower tier plans and projects). Projects would need to be subject to normal planning and environmental assessment processes, as well as complying with the Corridor and Route Selection Process under Policy Objective PRP 2. The development of green infrastructure can achieve synergies with regard to the provision of open space amenities, sustainable mobility, the sustainable management of water, the protection and management of biodiversity, the protection of cultural heritage and the protection of protected landscape sensitivities.

The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Galway County Council is helping to ensure that:

- The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and
- The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.

8.8.6 Chapter 7: Infrastructure, Utilities and Environmental Protection

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs – unlikely to be mitigated	Mitigated Conflicts	No Likely interaction with status of SEOs
Provisions of this Chapter comprise those relating to Infrastructure, Utilities and Environmental Protection. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p>Commentary</p> <p>Refer also to commentary under sub-sections 8.1 to 8.7.</p> <p>The assessment of the Plan's Infrastructure, Utilities and Environmental Protection provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> • Environmental effects detailed under subsections 8.2 to 8.7 of this report; and • Assessments of the selected alternatives for the Plan provided at Section 7 of this report. <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, 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 settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. 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.</p> <p>The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.</p> <p>Provisions relating to water supply and wastewater and surface water drainage would, by protecting water resources, providing safe drinking water and appropriately treating waste water, contribute towards the protection of various environmental components including: human health, biodiversity and flora and fauna, the status of waters, flood risk management and soil. There would be potential for significant adverse environmental effects upon various environmental components to arise during construction of water services infrastructure. Such potential significant adverse effects could also arise during operation: the protection of human health, biodiversity and flora and fauna and the status of waters, could all be conflicted with by outflows and abstractions.</p> <p>Waste Management provisions incorporate circular economy principles that are supported in the RSES.</p>				

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Provisions under the headings of Construction and Environmental Management Plans, Air Quality, Noise Pollution, Light Pollution, Soil Quality, Soil Protection, Contamination and Remediation and Major Accidents and Seveso Sites would primarily contribute towards the protection and management of the environment, with all environmental components benefitted.

Electricity and gas provisions contribute towards the framework for the development of energy. These Objectives would contribute towards achieving various government objectives and targets including those relating to climate mitigation and reducing greenhouse gas emissions and increasing the amount of energy to be consumed from renewable sources. The development of renewable energy would have the potential to adversely impact upon the environment, if unmitigated.

Information Communications Technology infrastructure has the potential to result in significant adverse effects and require significant levels of energy to operate. Information and Communication Infrastructure provisions would ensure that telecommunications structures are located to minimise and /or mitigate any adverse impacts on communities, public rights of way and the built or natural environment.

The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Galway County Council is helping to ensure that:

- The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and
- The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.

8.8.7 Chapter 8: Tourism and Landscape

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs – unlikely to be mitigated	Mitigated Conflicts	No Likely interaction with status of SEOs
Provisions of this Chapter comprise those relating to Tourism and Landscape. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p>Commentary</p> <p>The assessment of the Plan's Tourism and Landscape provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> • Environmental effects detailed under subsections 8.2 to 8.7 of this report; and • Assessments of the selected alternatives for the Plan provided at Section 7 of this report. <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, 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 settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. 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.</p> <p>This Chapter contributes towards the provision of land use activities and developments relating to tourism – and would be likely to contribute towards an increase in the number and dwell time of visitors and associated potential adverse effects. Such effects would include in-combination effects arising from services and infrastructure to service development, including tourism. Examples may include developments/operation of developments relating to water services, transport, energy, access or accommodation. The mitigation of potential adverse effects arising would be contributed towards by Plan provisions including those relating to infrastructure capacity, visitor management, green infrastructure and ecosystem services.</p> <p>The development of new greenways, blueways, peatways and walking and cycling routes, including those between County Galway, adjoining counties and beyond has the potential to contribute towards sustainable mobility and a better management of movements in sensitive areas, thereby benefitting various environmental components including habitats at certain locations. The development of these projects, however, presents a variety of potentially adverse environmental effects that would, if unmitigated, have the potential to arise from both the construction and operation of such developments and/or their ancillary infrastructure. These types of infrastructure are often constructed in ecologically and visually sensitive areas adjacent to the banks of rivers and streams. Potential adverse effects would be mitigated both by measures which have been integrated into the Plan which provide for and contribute towards environmental protection, environmental management and sustainable development (including those identified at Section 9 of this report) and by measures arising from lower tier assessments (including those for the preparation of lower tier plans and projects). Projects would need to be subject to normal planning and environmental assessment processes, as well as complying with the Corridor and Route Selection Process under Policy Objective PRP 2. The development of green infrastructure can achieve synergies with regard to the provision of open space amenities, sustainable mobility, the sustainable management of water, the protection and management of biodiversity, the protection of cultural heritage and the protection of protected landscape sensitivities.</p> <p>The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.</p>				

The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 “Mitigation Measures” of this report. By integrating SEA recommendations into the Plan, Galway County Council is helping to ensure that:

- The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and
- The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.

Various provisions in this Chapter of the Plan would contribute towards sustainable development and the protection and management of the environment and provisions relating to landscape would primarily contribute towards the protection and management of the environment, with all environmental components benefitted.

8.8.8 Chapter 9: Marine and Coastal Management

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs – unlikely to be mitigated	Mitigated Conflicts	No Likely interaction with status of SEOs
Provisions of this Chapter comprise those relating to Marine and Coastal Management. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p>Commentary</p> <p>The assessment of the Plan’s Marine and Coastal Management provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> • Environmental effects detailed under subsections 8.2 to 8.7 of this report; and • Assessments of the selected alternatives for the Plan provided at Section 7 of this report. <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County’s towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, 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 settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. 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.</p> <p>The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.</p> <p>The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 “Mitigation Measures” of this report. By integrating SEA recommendations into the Plan, Galway County Council is helping to ensure that:</p> <ul style="list-style-type: none"> • The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and • The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised. <p>The provisions contained in the Plan for the protection of coastal assets (settlement, infrastructural, ecological, cultural, recreational and amenity) will help to facilitate the orderly development of the County.</p> <p>Coastal defences and protection measures have the potential to result in significant adverse environmental effects during construction and operation on most environmental components. These types of infrastructure are often constructed in ecologically and visually sensitive areas along the coast.</p> <p>Fishing and aquaculture together with related development (such as infrastructure and buildings in riverbank locations) has the potential to adversely affect various environmental components including biodiversity and flora and fauna, water and human health.</p> <p>Most of these provisions specifically provide for the protection and management of the environment, benefitting the protection of biodiversity, the status of waters, human health, the landscape, land and cultural heritage.</p>				

8.8.9 Chapter 10: Natural Heritage, Biodiversity and Green Infrastructure

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs – unlikely to be mitigated	Mitigated Conflicts	No Likely interaction with status of SEOs
Provisions of this Chapter comprise those relating to Natural Heritage, Biodiversity and Green Infrastructure. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p>Commentary:</p> <p>The assessment of the Plan's Natural Heritage, Biodiversity and Green Infrastructure provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> • Environmental effects detailed under subsections 8.2 to 8.7 of this report; and • Assessments of the selected alternatives for the Plan provided at Section 7 of this report. <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, 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 settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. 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.</p> <p>The focus of most of the provisions in this Chapter is the protection and management of the County's natural heritage (including biodiversity, water, soil and landscape).</p> <p>The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.</p> <p>The development of new greenways, blueways, peatways and walking and cycling routes, including those between County Galway, adjoining counties and beyond has the potential to contribute towards sustainable mobility and a better management of movements in sensitive areas, thereby benefitting various environmental components including habitats at certain locations. The development of these projects, however, presents a variety of potentially adverse environmental effects that would, if unmitigated, have the potential to arise from both the construction and operation of such developments and/or their ancillary infrastructure. These types of infrastructure are often constructed in ecologically and visually sensitive areas adjacent to the banks of rivers and streams. Potential adverse effects would be mitigated both by measures which have been integrated into the Plan which provide for and contribute towards environmental protection, environmental management and sustainable development (including those identified at Section 9 of this report) and by measures arising from lower tier assessments (including those for the preparation of lower tier plans and projects). Projects would need to be subject to normal planning and environmental assessment processes, as well as complying with the Corridor and Route Selection Process under Policy Objective PRP 2. The development of green infrastructure can achieve synergies with regard to the provision of open space amenities, sustainable mobility, the sustainable management of water, the protection and management of biodiversity, the protection of cultural heritage and the protection of protected landscape sensitivities.</p> <p>The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Galway County Council is helping to ensure that:</p> <ul style="list-style-type: none"> • The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and • The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised. 				

8.8.10 Chapter 11: Community Development and Social Infrastructure

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs – unlikely to be mitigated	Mitigated Conflicts	No Likely interaction with status of SEOs
Provisions of this Chapter comprise those relating to Community Development and Social Infrastructure. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p>Commentary</p> <p>The assessment of the Plan's Community Development and Social Infrastructure provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> • Environmental effects detailed under subsections 8.2 to 8.7 of this report; and • Assessments of the selected alternatives for the Plan provided at Section 7 of this report. 				

Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, 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 settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. 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.

The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.

The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Galway County Council is helping to ensure that:

- The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and
- The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.

8.8.11 Chapter 12: Architecture, Archaeology and Culture

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs – unlikely to be mitigated	Mitigated Conflicts	No Likely interaction with status of SEOs
Provisions of this Chapter comprise those relating to Architecture, Archaeology and Culture. For more details, please refer to the Plan	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p>Commentary</p> <p>The assessment of the Plan's Architecture, Archaeology and Culture provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> • Environmental effects detailed under subsections 8.2 to 8.7 of this report; and • Assessments of the selected alternatives for the Plan provided at Section 7 of this report. <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, 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 settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. 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.</p> <p>The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.</p> <p>The focus of most of the provisions in this Chapter is the protection and management of the County's built heritage (including archaeological heritage and architectural heritage).</p> <p>The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Galway County Council is helping to ensure that:</p> <ul style="list-style-type: none"> • The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and • The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised. 				

8.8.12 Chapter 13: Gaeltacht and The Islands

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs – unlikely to be mitigated	Mitigated Conflicts	No Likely interaction with status of SEOs
Provisions of this Chapter comprise those relating to Gaeltacht and The Islands. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p>Commentary</p> <p>The assessment of the Plan's Gaeltacht and The Islands provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> Environmental effects detailed under subsections 8.2 to 8.7 of this report; and Assessments of the selected alternatives for the Plan provided at Section 7 of this report. <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, 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 settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. 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.</p> <p>The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.</p> <p>The focus of many of the provisions in this Chapter is the protection and management of the Gaeltacht's and The Islands' natural and cultural heritage.</p> <p>The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Galway County Council is helping to ensure that:</p> <ul style="list-style-type: none"> The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised. 				

8.8.13 Chapter 14: Climate Change, Energy and Renewable Energy

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs – unlikely to be mitigated	Mitigated Conflicts	No Likely interaction with status of SEOs
Provisions of this Chapter comprise those relating to Climate Change, Energy and Renewable Energy. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p>Commentary:</p> <p>The assessment of the Plan's Climate Change, Energy and Renewable Energy provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> Environmental effects detailed under subsections 8.2 to 8.7 of this report; and Assessments of the selected alternatives for the Plan provided at Section 7 of this report. <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, 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 settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. 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.</p> <p>The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.</p>				

The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 “Mitigation Measures” of this report. By integrating SEA recommendations into the Plan, Galway County Council is helping to ensure that:

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- The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.

Climate Action provisions would contribute towards sustainable development and the protection and management of the environment.

Flood risk management provisions would contribute towards the protection and management of human health, biodiversity, flora and fauna, cultural heritage, water status and existing infrastructure and services. Flood risk management infrastructure (if required) has the potential to result in significant adverse environmental effects during construction and operation on most environmental components. These types of infrastructure are often constructed in ecologically and visually sensitive areas and adjacent to the banks of rivers and streams and along the coast. Potential adverse effects will be mitigated both by measures which have been integrated into the Plan (including those identified at Section 9 of this report) and by measures arising from lower tier assessments.

Various provisions in this Chapter contribute towards the framework for the development of energy. These Policies Objectives would contribute towards achieving various government objectives and targets including those relating to climate mitigation and reducing greenhouse gas emissions and increasing the amount of energy to be consumed from renewable sources. The development of renewable energy would have the potential to adversely impact upon the environment, if unmitigated. Further general commentary on the types of potential effects arising from a range of renewable energy types is provided below.

Wind Energy

Positive Effects: Contribution towards renewable energy and minimisation of greenhouse gases targets

Potential Negative Effects, if unmitigated:

- Potential impacts include those associated with construction and operation of the turbines and ancillary facilities and infrastructure (including roads and electrical infrastructure)
- Potential human health impact: shadow flicker, noise, and impacts arising from landslides
- Potential impact upon designated and non-designated biodiversity and flora and fauna including birdlife and marine habitats
- Potential interactions leading to change in structure of soil and geology and changes to drainage
- Potential impacts on water status during construction – this could interact with drinking water sources and biodiversity
- Potential impacts upon the context of protected archaeological and architectural heritage – including the context of this heritage – as well as unknown archaeological heritage
- Potential impacts upon traffic during construction due to transportation of turbine components
- Changes to the character of areas would be likely to occur however visual impacts would depend on various factors including the size, number and spacing of the turbines, perception of the relevant areas and any cumulative effect arising from multiple wind farms

Solar Energy

Positive Effects: Contribution towards renewable energy and minimisation of greenhouse gases targets

Potential Negative Effects, if unmitigated:

- Potential impacts on architectural heritage – including the context of this heritage – at micro scale
- Potential impacts on habitats and species and micro scale
- Large scale installations may have visual impacts – these would depend on perception of the relevant area -, however these are unlikely to be provided for

Bio-Energy

Positive Effects: Contribution towards renewable energy and minimisation of greenhouse gases targets. Can provide for the use of agricultural and other wastes

Potential Negative Effects, if unmitigated:

- Potential impact upon designated and non-designated biodiversity and flora and fauna arising from changes in vegetation. Soil structure may also be impacted upon.
- Changes in farming practices may lead to changes in drainage and runoff which could impact upon biological and chemical status of waters - - this could interact with drinking water sources and biodiversity
- Potential human health impact: odour and noise from operation of plants
- Potential impacts upon traffic during operation due to transportation of fuel to plants
- Fuels derived from bio-mass still produce emissions however these are less than those derived from fossil fuels
- Changes to the land cover of areas could occur however visual impacts would depend on perception of the relevant area;
- Biomass plants may have visual impacts - these would depend on perception of the relevant area

Hydro-Energy

Positive Effects: Contribution towards renewable energy and minimisation of greenhouse gases targets

Potential Negative Effects, if unmitigated:

- Depending on the scale and location of the development there is potential for impacts to occur on biodiversity, in particular aquatic biodiversity
- Potential to impact upon the morphological, biological and chemical status of waters - this could interact with drinking water sources (in freshwater) and biodiversity
- Potential interactions leading to change in structure of soil and geology and sediment regimes in off-shore areas
- Operation could impact upon flood risk elsewhere
- Potential impacts upon archaeological heritage or nearby architectural heritage, including context
- Changes to the character of locations may occur however visual impacts would depend upon, inter alia, the size of the installation, ancillary facilities and the perception and visibility of the relevant area

<p>Geothermal Energy</p> <p>Positive Effects: Contribution towards renewable energy and minimisation of greenhouse gases targets.</p> <p>Potential Negative Effects, if unmitigated:</p> <ul style="list-style-type: none"> • Potential impacts upon the status of waters and ecology contained within, especially arising from changes in the temperature of groundwater which can impact upon the structure and ecology of the aquifer and any dependent surface waters - this could interact with drinking water sources • Potential interactions leading to change in structure of soil and geology • Potential impacts upon archaeology, including unknown underground archaeology • Potential impacts upon on site water services • Potential impacts upon context of archaeological and architectural heritage arising from surface installation <p>Please also refer to Section 8.6 “Integration of Climate Action into the Plan”.</p>

8.8.14 Chapter 15: Development Management

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs – unlikely to be mitigated	Mitigated Conflicts	No Likely interaction with status of SEOs
Provisions of this Chapter comprise those relating to Development Management. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p>Commentary</p> <p>The assessment of the Plan's Development Management provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> • Environmental effects detailed under subsections 8.2 to 8.7 of this report; and • Assessments of the selected alternatives for the Plan provided at Section 7 of this report. <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, 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 settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. 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.</p> <p>The focus of most of the provisions in this Chapter is the protection and management of the County's environment and the achievement of proper planning and sustainable development.</p> <p>The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.</p> <p>The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 “Mitigation Measures” of this report. By integrating SEA recommendations into the Plan, Galway County Council is helping to ensure that:</p> <ul style="list-style-type: none"> • The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and • The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised. <p>Various Development Management provisions in this Chapter of the Plan would contribute towards sustainable development and the protection and management of the environment.</p>				

8.8.15 Volume 2: Metropolitan Area Strategic Plan

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs – unlikely to be mitigated	Mitigated Conflicts	No Likely interaction with status of SEOs
Provisions of this Volume comprise those relating to the Metropolitan Area Strategic Plan, Small Growth Towns and Small Growth Villages. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p>Commentary</p> <p>The assessment of the Metropolitan Area Strategic Plan (MASP) provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> • Environmental effects detailed under subsections 8.2 to 8.7 of this report; and • Assessments of the selected alternatives for the Plan provided at Section 7 of this report. <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, 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 settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. 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.</p> <p>The provisions in the MASP would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.</p> <p>Environmental considerations were integrated into the land use zoning for settlements in the MASP through an interdisciplinary approach involving Planners and environmental specialists. 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 Northern and Western RSES. The detailed Plan preparation process undertaken by the Planning Department combined with specialist seeks to facilitate zoning that will help to avoid inappropriate development being permitted in areas of elevated sensitivity, such as in areas at risk of flooding or ecological sensitivity;</p> <ul style="list-style-type: none"> • The detailed Plan preparation process undertaken by the Planning Department combined with specialist input from the SEA and AA process facilitated zoning that avoids impacts upon sensitive ecology and European Sites. The AA concludes that the Plan, including Volume 2 will not affect the integrity of the Natura 2000 network of European Sites⁸⁶. • 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. • The planning team also took into account other environmental considerations including sustainable mobility and sensitivities relating to cultural heritage, landscape and water, as well as taking into account overlay mapping of environmental sensitivities (see County level mapping at Figure 4.27 on page 82). <p>Where reasonable alternatives in relation to the application of land use zoning were identified by the Planning Team as being available these were considered by the iterative Plan-preparation/SEA process (see Sections 6 and 7 of this report).</p> <p>There are a wide range of land use types identified under most 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 ecological sensitivities may limit the types of uses that may be possible at certain sites. The written provisions of Volume 2 were informed by the SEA, AA and SFRA process – many of the Objectives from the Metropolitan Area Strategic Plan would contribute towards the protection and management of the environment.</p> <p>The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Galway County Council is helping to ensure that:</p> <ul style="list-style-type: none"> • The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and • The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised. 				

⁸⁶ 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.

8.8.16 Volume 2: Small Growth Towns

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs – unlikely to be mitigated	Mitigated Conflicts	No Likely interaction with status of SEOs
Provisions of this Volume comprise those relating to the Metropolitan Area Strategic Plan, Small Growth Towns and Small Growth Villages. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p>Commentary</p> <p>Refer also to commentary under sub-sections 8.1 to 8.7.</p> <p>The assessment of the Small Growth Town provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> • Environmental effects detailed under subsections 8.2 to 8.7 of this report; and • Assessments of the selected alternatives for the Plan provided at Section 7 of this report. <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, 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 settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. 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.</p> <p>The provisions for Small Growth Towns would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.</p> <p>Environmental considerations were integrated into the land use zoning for Small Growth Towns through an interdisciplinary approach involving Planners and environmental specialists. 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 Northern and Western RSES. The detailed Plan preparation process undertaken by the Planning Department combined with specialist seeks to facilitate zoning that will help to avoid inappropriate development being permitted in areas of elevated sensitivity, such as in areas at risk of flooding or ecological sensitivity;</p> <ul style="list-style-type: none"> • The detailed Plan preparation process undertaken by the Planning Department combined with specialist input from the SEA and AA process facilitated zoning that avoids impacts upon sensitive ecology and European Sites. The AA concludes that the Plan, including Volume 2 will not affect the integrity of the Natura 2000 network of European Sites⁸⁷. • 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. • The planning team also took into account other environmental considerations including sustainable mobility and sensitivities relating to cultural heritage, landscape and water, as well as taking into account overlay mapping of environmental sensitivities (see County level mapping at Figure 4.27 on page 82). <p>Where reasonable alternatives in relation to the application of land use zoning were identified by the Planning Team as being available these were considered by the iterative Plan-preparation/SEA process (see Sections 6 and 7 of this report).</p> <p>There are a wide range of land use types identified under most 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 ecological sensitivities may limit the types of uses that may be possible at certain sites. The written provisions of Volume 2 were informed by the SEA, AA and SFRA process – many of the Objectives for Small Growth Towns would contribute towards the protection and management of the environment.</p> <p>The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Galway County Council is helping to ensure that:</p> <ul style="list-style-type: none"> • The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and • The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised. 				

⁸⁷ 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.

8.8.17 Volume 2: Small Growth Villages

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs – unlikely to be mitigated	Mitigated Conflicts	No Likely interaction with status of SEOs
Provisions of this Volume comprise those relating to the Metropolitan Area Strategic Plan, Small Growth Towns and Small Growth Villages. For more details, please refer to the Plan.	BFF PHH S W MA A C CH L		BFF PHH S W MA A C CH L	
<p>Commentary</p> <p>The assessment of the Small Growth Villages provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:</p> <ul style="list-style-type: none"> • Environmental effects detailed under subsections 8.2 to 8.7 of this report; and • Assessments of the selected alternatives for the Plan provided at Section 7 of this report. <p>Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the County and to focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the County's towns and villages; and sustainable development elsewhere, including in the rural area of the County. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, 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 settlements to become more desirable places to live – so that they can sustainably accommodate new residents and maintain and improve services to existing and future communities. 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.</p> <p>The provisions for Small Growth Villages would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the County, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.</p> <p>Environmental considerations were integrated into the land use zoning for Small Growth Villages through an interdisciplinary approach involving Planners and environmental specialists. 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 Northern and Western RSES. The detailed Plan preparation process undertaken by the Planning Department combined with specialist seeks to facilitate zoning that will help to avoid inappropriate development being permitted in areas of elevated sensitivity, such as in areas at risk of flooding or ecological sensitivity;</p> <ul style="list-style-type: none"> • The detailed Plan preparation process undertaken by the Planning Department combined with specialist input from the SEA and AA process facilitated zoning that avoids impacts upon sensitive ecology and European Sites. The AA concludes that the Plan, including Volume 2 will not affect the integrity of the Natura 2000 network of European Sites⁸⁸. • 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. • The planning team also took into account other environmental considerations including sustainable mobility and sensitivities relating to cultural heritage, landscape and water, as well as taking into account overlay mapping of environmental sensitivities (see County level mapping at Figure 4.27 on page 82). <p>Where reasonable alternatives in relation to the application of land use zoning were identified by the Planning Team as being available these were considered by the iterative Plan-preparation/SEA process (see Sections 6 and 7 of this report).</p> <p>There are a wide range of land use types identified under most 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 ecological sensitivities may limit the types of uses that may be possible at certain sites. The written provisions of Volume 2 were informed by the SEA, AA and SFRA process – many of the Objectives for Small Growth Villages would contribute towards the protection and management of the environment.</p> <p>The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Galway County Council is helping to ensure that:</p> <ul style="list-style-type: none"> • The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and • The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised. 				

⁸⁸ 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.

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

Mitigation was achieved through the:

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

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, Galway 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:

- Settlement and Community;
- Housing and Rural Housing Design;
- Renewable Energy;
- Transportation and Infrastructure;
- Natural and Cultural Heritage; and
- Climate Action.

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 Plan.

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 Northern and Western RSES.

The detailed Plan preparation process undertaken by the Planning Department combined with specialist seeks to facilitate zoning that will help to avoid inappropriate development being permitted in areas of elevated sensitivity, such as in areas at risk of flooding or ecological sensitivity. Various provisions have been integrated into the Plan that provide for flood risk management and ecological protection and 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 Plan

Various provisions have been integrated into the text of the Plan through the Plan-preparation and SEA, SFRA and AA processes. 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 help to minimise 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	Recommendations integrated into the Plan, included in:
Various – see below	Various – see below	<p>MM1 Monitoring. The Council shall, in conjunction with the Regional Assembly and other sources as relevant, implement the monitoring programme as set out in the SEA Environmental Report and Statement. This will include the preparation of stand-alone SEA Monitoring Reports:</p> <ol style="list-style-type: none"> 1. To accompany the report required of the manager under section 15(2) of the Act, including information in relation to progress on, and the results of, monitoring the significant environmental effects of implementation of the Development Plan 2. On the significant environmental effects of implementing the Plan, in advance of the beginning of the review of the next Plan. <p>PRP 2 Corridor and Route Selection Process. Policy objectives relating to new roads and other transport infrastructure projects that are not already provided for by existing plans/ programmes or are not already permitted, are subject to the undertaking of feasibility assessment, taking into account planning need, environmental sensitivities as identified in the SEA Environmental Report and the policy objectives of the Plan relating to sustainable mobility. Where feasibility is established, a Corridor and Route Selection Process will be undertaken where appropriate, for relevant new road infrastructure in two stages: Stage 1 – Route Corridor Identification, Evaluation and Selection; and Stage 2 – Route Identification, Evaluation and Selection..</p> <p>WM 5 Construction and Environmental Management Plans. Construction Environment Management Plans 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:</p> <ol style="list-style-type: none"> 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, Heritage and Local Government; 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. <p>WM 6 Waste Management. To continue to meet the 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.</p> <p>WM7 Recycling Infrastructure. To provide for the provision of recycling infrastructure throughout the county where it is considered necessary and support the provision of additional recycling infrastructure throughout the county.</p> <p>WM 8 Sustainable Waste Management Practices. Promote and facilitate communities to become involved in environmental awareness activities and community based recycling initiatives or environmental management initiatives that will lead to local sustainable waste management practices.</p> <p>WM 9 Separate Collection of Waste. Encourage and support the provision of separate collection of waste in accordance with the requirements of the Waste Management (Food Waste) Regulations 2009, the Waste Framework Directive Regulations, 2011 and other relevant legislation.</p> <p>MAS 1 Separation Distances from SEVESO Sites. To ensure that appropriate distances are maintained between any proposed development and any existing Seveso II establishment, in the interest of the health and safety of the occupiers of the proposed development.</p> <p>MAS 2 Soil Protection Measures. To require that, the siting of new establishments, or modification of existing establishments classified under the Seveso II Directive, and new development in the vicinity of existing establishments shall take into account the need to prevent major accidents involving hazardous substances and safeguard both the public and the environment.</p> <p>MAS 3 SEVESO III Sites. Take into account the provisions of the Major Accidents Directive, relating to the control of major accident hazards involving dangerous substances, and the recommendations of the Health and Safety Authority in the assessment of all planning applications located within the consultation distance of such sites.</p> <p>TI 4 Tourism and Infrastructure Capacity. The potential environmental effects of a likely increase in tourists/tourism-related traffic volumes in particular locations/along particular routes shall be considered and mitigated as appropriate. Such a consideration should include potential impacts on existing infrastructure (including drinking water, wastewater, waste and transport) resulting from tourism proposals. Galway County Council will support Irish Water and Fáilte Ireland to ensure that tourism is serviced by adequate and appropriate water services infrastructure.</p> <p>MCH 2 Marine Based Environment. It is a policy objective of the Local Authority to protect and enhance where appropriate marine biodiversity in accordance with proper planning and sustainable development.</p> <p>MCC 1 Environmental Values of the Coast. Protect the amenity, character, visual, recreational, economic potential and environmental values of the coast. Ensure that natural coastal defences including sand dunes, beaches and coastal wetlands are not compromised by inappropriate development.</p> <p>MCC 2 Protection of Coastal Habitats. To strictly control the nature and pattern of development within coastal areas and ensure that it is designed and landscaped to the highest standards and sited appropriately so as not to detract from the visual amenity of the area.</p> <ol style="list-style-type: none"> (a) Development shall be prohibited where the development poses a significant or potential threat to coastal habitats or features, and/or where the development is likely to result in altered patterns of erosion or deposition elsewhere along the coast; (b) To prohibit development along the coast outside existing towns and villages where such development is not adequately safeguarded over the lifetime of the development without the need to construct additional coastal defences. <p>MCC 3 Protection of Coastal Area. It is a policy objective to protect the Coastal Area through the following measures:</p>

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
		<p>(a) Ensure that conservation works undertaken in coastal areas are in accordance with best practice and measures to protect the coast, the coastal edge and coastal habitats are supported;</p> <p>(b) Seek to prevent the unauthorised removal of sand and related beach material;</p> <p>(c) Protect, enhance and conserve beaches in the County from inappropriate development and seek to maintain the current status of the designated Blue Flag beaches and Green Coasts and to increase the number of beaches and coasts holding this status in the future;</p> <p>(d) Facilitate an Integrated Coastal Zone Management approach to ensure the conservation, management and protection of man-made and natural resources of the coastal zone; MCC 4 Integrated Framework Management Plan. Support the preparation of an Integrated Galway Bay Framework Management Plan by all relevant stakeholders to provide for the sustainable and integrated development of the Galway Bay Area in a co-ordinated manner</p> <p>GICT 3 Tourism Development within An Gaeltacht and Islands. (a) Encourage and facilitate the development of the tourism potential of the Gaeltacht and Islands in a manner that respects, builds on, protects and enhances the cultural, built and natural heritage and local amenities of the area;</p> <p>(b) Provide where feasible, and support the provision of tourism infrastructure and services including, walking, cycling and water-based infrastructure and short-term guest accommodation facilities throughout the Gaeltacht area in appropriate locations. Such infrastructure and services shall seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance and ensuring that any new projects, such as greenways, are developed at suitable locations.</p> <p>AD1 Sustainable Agriculture Practices. To facilitate the development of sustainable agricultural practices and facilities within the county, subject to complying with best practice guidance, normal planning and environmental criteria and the development management standards in Chapter 15 Development Management and Standards.</p> <p>AD3 Modernisation of Agriculture Buildings. To facilitate the modernisation of agriculture and to encourage best practice in the design and construction of new agricultural buildings and installations to protect the environment, natural and built heritage and residential amenity.</p>
<p>Biodiversity and flora and fauna</p>	<p>Arising from both construction and operation of development and associated infrastructure:</p> <ul style="list-style-type: none"> • Loss of/damage to biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance to biodiversity and flora and fauna; • Habitat loss, fragmentation and deterioration, including patch size and edge effects; and • Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species such as birds and bats. 	<p>Also refer to detailed measures for settlements contained in Volume 2 of the Plan.</p> <p>LP 1 Lighting Schemes. To require that all developments shall ensure lighting schemes are designed so that excessive light spillage is minimised to ensure light pollution in the surrounding environment including residential amenity, wildlife and near public roads is limited. Such lighting schemes shall be submitted and agreed with the Planning Authority.</p> <p>LP 2 Lighting and Climate Action. To require the use of low energy LED (or equivalent) lighting in support of Climate Action.</p> <p>LP 3 Dark Skies. To encourage the maintenance of dark skies in rural areas and to limit light pollution in urban and rural areas.</p> <p>F2 Sustainable Development. To encourage the development of a well-managed sustainable forestry sector, which is compatible with the protection of the environment including the avoidance of likely significant effects on European sites (SACs and SPAs) and is planted, managed and harvested in accordance with the Forest Service Guidelines for Landscape, Forest Harvesting and Environmental, Archaeology, Biodiversity and Water Quality.</p> <p>F3 Native Woodlands. To ensure that existing native woodlands are protected and enhanced and, where appropriate, encourage the conversion of coniferous forest to native woodlands with a focus on opportunities for habitat linkage and wider eco-services.</p> <p>F4 Forestry Development. To encourage forestry and forestry related development, as a means of diversifying from traditional agriculture activity with a preference for native species.</p> <p>F5 Deforestation. To promote the avoidance of deforestation or commercial afforestation within European sites unless directly relating to the management of the site for its qualifying interests.</p> <p>MEQ2 "Protection of the Environment. The Council shall require the following in relation to the management of authorised aggregate extraction</p> <p>(a) All quarries shall comply with the requirements of the EU Habitats Directive, the Planning and Development (Amendment) Act 2010 and by the guidance as contained within the DoEHLG Quarries and Ancillary Facilities Guidelines 2004, the EPA Guidelines 'Environmental Management in the Extractive Industry: Non Scheduled Minerals 2006 (including any updated/superseding documents) and to DM Standard 21 of this Development Plan;</p> <p>(b) Require development proposals on or in the proximity of quarry sites, to carry out appropriate investigations into the nature and extent of old quarries (where applicable). Such proposals shall also investigate the nature and extent of soil and groundwater contamination and the risks associated with site development works together with appropriate mitigation;</p> <p>(c) Require Development Proposals to assess the potential impact of extraction in areas where geo-morphological interest, groundwater and important aquifers, important archaeological features and Natural Heritage Areas are located;</p> <p>d) Have regard to the Landscape Character Assessment of the County and its recommendations;</p> <p>(e) Ensure that any quarry activity has minimal adverse impact on the road network and that the full cost of road improvements, including during operations and at time of closure, which are necessary to facilitate those industries are borne by the industry itself.</p> <p>(f) Ensure that the extraction of minerals or aggregates does not adversely impact on residential or environmental amenity;</p> <p>(g) Protect all known un-worked deposits from development that might limit their scope for extraction."</p> <p>NHB 1 Natural Heritage and Biodiversity of Designated Sites, Habitats and Species. Protect and where possible enhance the natural heritage sites designated under EU Legislation and National Legislation (Habitats Directive, Birds Directive, European Communities (Birds and Natural Habitats) Regulations 2011 and Wildlife Acts) and extend to any additions or alterations to sites that may occur during the lifetime of this plan. Protect and, where possible, enhance the plant and animal species and their habitats that have been identified under European legislation (Habitats and Birds Directive) and protected under national Legislation (European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477 of 2011), Wildlife Acts 1976-2010 and the Flora Protection Order (SI 94 of 1999). Support the protection, conservation and enhancement of natural heritage and biodiversity, including the protection of the integrity of European sites, that form part of the Natura 2000 network, the protection of Natural Heritage Areas, proposed Natural Heritage Areas, Ramsar Sites, Nature Reserves, Wild Fowl Sanctuaries (and other designated sites including any future designations) and the promotion of the development of a green/ ecological network."</p> <p>NHB 2 European Sites and Appropriate Assessment. To implement Article 6 of the Habitats Directive and to ensure that Appropriate Assessment is carried out in relation to works, plans and projects likely to impact on European sites (SACs and SPAs), whether directly or indirectly or in combination with any other plan(s) or project(s). All assessments must be in compliance with the European Communities (Birds and Natural Habitats) Regulations 2011. All such projects and plans will also be required to comply with statutory Environmental Impact Assessment requirements where relevant.</p> <p>NHB 3 Protection of European Sites. No plans, programmes, or projects etc. 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.*</p>

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
		<p>NHB 4 Ecological Appraisal of Biodiversity. Ensure, where appropriate, the protection and conservation of areas, sites, species and ecological/networks of biodiversity value outside designated sites. Where appropriate require an ecological appraisal, for development not directly connected with or necessary to the management of European Sites, or a proposed European Site and which are likely to have significant effects on that site either individually or cumulatively.</p> <p>NHB 5 Ecological Connectivity and Corridors. Support the protection and enhancement of biodiversity and ecological connectivity in non-designated sites, including woodlands, trees, hedgerows, semi-natural grasslands, rivers, streams, natural springs, wetlands, stonewalls, geological and geo-morphological systems, other landscape features and associated wildlife areas where these form part of the ecological network and/or may be considered as ecological corridors in the context of Article 10 of the Habitats Directive.</p> <p>NHB 6 Implementation of Plans and Strategies. Support the implementation of any relevant recommendations contained in the National Heritage Plan 2030, the National Biodiversity Plan, the All Ireland Pollinator Plan and the National Peatlands Strategy and any such plans and strategies during the lifetime of this plan.</p> <p>NHB 7 Mitigation Measures. Require mitigating measures in certain cases where it is evident that biodiversity is likely to be affected. These measures may, in association with other specified requirements, include establishment of wildlife areas/corridors/parks, hedgerow, tree planting, wildflower meadows/marshes and other areas. With regard to residential development, in certain cases, these measures may be carried out in conjunction with the provision of open space and/or play areas.</p> <p>NHB 8 Increased Awareness of the County's Biodiversity and Natural Heritage. Facilitate increased awareness of the County's biodiversity and natural heritage through the provision of information to landowners and the community generally, in cooperation with statutory and other partners.</p> <p>NHB 9 Protection of Bats and Bats Habitats. Seek to protect bats and their roosts, their feeding areas, flight paths and commuting routes. Ensure that development proposals in areas which are potentially important for bats, including areas of woodland, linear features such as hedgerows, stonewalls, watercourses and associated riparian vegetation which may provide migratory/foraging uses shall be subject to suitable assessment for potential impacts on bats. This will include an assessment of the cumulative loss of habitat or the impact on bat populations and activity in the area and may include a specific bat survey. Assessments shall be carried out by a suitably qualified professional and where development is likely to result in significant adverse effects on bat populations or activity in the area, development will be prohibited or require mitigation and/or compensatory measures, as appropriate. The impact of lighting on bats and their roosts and the lighting up of objects of cultural heritage must be adequately assessed in relation to new developments and the upgrading of existing lighting systems.</p> <p>NHB 10 NPWS & Integrated Management Plans. Article 6(1) of the Habitats Directive requires that Member States establish the necessary conservation measures for European sites involving, if need be, appropriate management plans specifically designed for the sites or integrated into other development plans. The NPWS's current priority is to identify site specific conservation objectives; management plans may be considered after this is done. Where Integrated Management Plans are being prepared by the NPWS for European sites (or parts thereof), the NPWS shall be engaged with in order to ensure that plans are fully integrated with the Plan and other plans and programmes, with the intention that such plans are practical, achievable and sustainable and have regard to all relevant ecological, cultural, social and economic considerations, including those of local communities.</p> <p>NHB 11 Increases in Visitor Numbers to Semi-Natural Areas, Visitor and Habitat Management. Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that any new projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Where relevant, the Planning Authority and those receiving permission for development under the Plan shall seek to manage any increase in visitor numbers and/or any change in visitor behaviour in order to avoid significant effects, including loss of habitat and disturbance. Management measures may include ensuring that new projects and activities are a suitable distance from ecological sensitivities. Visitor/Habitat Management Plans will be required for proposed projects as relevant and appropriate.</p> <p>WTWF 1 Wetland Sites Protect and conserve the ecological and biodiversity heritage of the wetland sites in the County. Ensure that an appropriate level of assessment is completed in relation to wetland habitats that are subject to proposals which would involve drainage or reclamation that might destroy, fragment or degrade any wetland in the county. This includes lakes and ponds, turloughs, watercourses, springs and swamps, marshes, fens, heath, peatlands, some woodlands as well as some coastal and marine habitats. Protect Ramsar sites under The Convention on Wetlands of International Importance (especially as Waterfowl Habitat).</p> <p>P 1 Protection of Peatlands. Ensure that peatland areas which are designated (or proposed for designation) as NHAs, SACs or SPAs are conserved for their ecological, climate regulation, education and culture, archaeological potential including any ancient walkways (toghers) through bogs.</p> <p>P 2 Best Practice in Peatland conservation and management. Work in partnership with relevant stakeholders on all suitable peatland sites to demonstrate best practice in sustainable peatland conservation, management and restoration techniques and to promote their heritage and educational value subject to Ecological Impact Assessment and Appropriate Assessment Screening, as appropriate.</p> <p>P3 Framework Plans. Seek to support relevant agencies such as Bord na Mona in advancing rehabilitation works for the peatlands and related infrastructure, to provide for the future sustainable and environmentally sensitive use of peatlands sites including for amenity purposes.</p> <p>IS 1 Control of Invasive and Alien Invasive Species. It is a policy objective of the Planning Authority to support measures for the prevention and eradication of invasive species.</p> <p>IS 2 Invasive Species Management Plan. Ensure that proposals for development do not lead to the spread or introduction of invasive species. If developments are proposed on sites where invasive species are currently or were previously present, an invasive species management plan will be required. A landscaping plan will be required for developments near water bodies and such plans must not include alien invasive species.</p> <p>PO 1 Delivery of All Ireland Pollinator Plan To facilitate the delivery of the All Ireland Pollinator Plan where possible. In the interest of preserving and enhancing biodiversity and working in conjunction with the All Ireland Pollinator Plan, it shall be the policy objective of the Planning Authority to ensure that at least 20% of the green space on all housing estates being built will have to be dedicated, developed and maintained as a pollinator zone. The area dedicated can be confined to one single lot or various lots around the site providing that the total area of the lots meets the minimum requirement of 20%. The pollinator zones should be planted with a mix of pollinator friendly-bulbs, self-seeding annuals and biennials, perennials, shrubs, trees, fruit trees and fruit bushes and the majority of this planting should consist of native plants.</p> <p>TWHS 1 Trees, Hedgerows, Natural Boundaries and Stone Walls Protect and seek to retain important trees, tree clusters and tree boundaries, ancient woodland, natural boundaries including stonewalls, existing hedgerows particularly species rich roadside and townland boundary hedgerows, where possible and replace with a boundary type similar to the existing boundary. Ensure that new development proposals take cognisance of significant trees/tree stands and that all planting schemes developed are suitable for the specific site and use suitable native variety of trees of Irish provenance and hedgerows of native species. Seek Tree Management Plans to ensure that trees are adequately protected during development and incorporated into the design of new developments.</p> <p>TWHS 2 Planting of Trees and Woodlands</p>

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Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
		<p>Encourage and promote in co-operation with Coillte and the Department of Agriculture, Food and the Marine and other organisations, the planting of trees and woodlands, as an important means of contributing to its objective of sustaining, protecting and enhancing the County's biodiversity, natural resources, amenity, landscape and developing tourism product. Encourage community woodlands in urban/urban fringe areas utilising funding available through schemes such as the NeighbourWood and Native Woodland Schemes.</p> <p>TWHS 3 Protection of Forestry Protect all substantial areas of deciduous forest, other than areas of commercial forestry. Proposals for development in these areas should seek to interact with the landscape character of the forested areas and its limits while also enhancing the forested areas so as to increase biodiversity value.</p> <p>BMSP 8 Jetty/Marina Development. Support the preparation of a feasibility study for a jetty/marina development in the vicinity of Bearna Pier and any necessary marine/foreshore works to facilitate public access to and use of the area around the pier, such as breakwaters. This feasibility study shall take account of the requirements to comply with the European Habitats Directive</p> <p>CT 2 Water Sports To encourage the development of coastal tourism in areas such as water-sports and water-related activities and events subject to normal planning and environmental criteria</p> <p>CT3 Tourism Development To support proposals for tourism development in coastal areas where it can be demonstrated that there will be no negative impacts on the amenities of the area, the integrity of the natural environment or the economic value of the County's coastline and beaches.</p> <p>CT 4 Blue Flags To continue to work with An Taisce, the local community and other relevant stakeholders to retain and increase the number of Blue Flag awards in the County.</p> <p>CT 5 Tourism Products To support the protection and enhancement of our islands, coastline and waterways as tourism products and attractions, subject to community and environmental carrying capacity.</p> <p>HT 3 Sustainable Tourism Industry To support the development of a more sustainable tourism industry which minimises adverse impacts on local communities, the built heritage, landscapes, habitats and species; leaving them undiminished as a resource for future generations, while supporting social and economic prosperity.</p> <p>GICT 3 Tourism Development within An Ghaeltacht and Islands (a) Encourage and facilitate the development of the tourism potential of the Gaeltacht and Islands in a manner that respects, builds on, protects and enhances the cultural, built and natural heritage and local amenities of the area; (b) Provide where feasible and support the provision of tourism infrastructure and services including, walking, cycling and water-based infrastructure and short-term guest accommodation facilities throughout the Gaeltacht area in appropriate locations. Such infrastructure and services shall seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance and ensuring that any new projects, such as greenways are developed at suitable locations.</p> <p>RE4 Solar Energy Developments. Promote and facilitate solar farm developments in suitable locations, having regard to areas of the County designated for this purpose in the Local Authority Renewable Energy Strategy. The Planning Authority will assess any planning application proposals for solar energy production having due regard to the Habitats Directive and to the detailed policy objectives and Development Standards set out in the Local Authority Renewable Energy Strategy.</p>
<p>Population and human health</p>	<ul style="list-style-type: none"> • Potential adverse effects arising from flood events. • Potential interactions if effects arising from environmental vectors. 	<p>Also refer to measures under other environmental components including Soil, Water and Air and Climatic Factors.</p> <p>AQ 1 Ambient Air Quality 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 (CAFÉ) 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 (SI No. 180 of 2011) (or any updated/superseding documents).</p> <p>AQ 2 Assessment of Air Quality To require developments which would have the potential to have adverse impacts on air quality to carry out assessments of the impact of the development on air quality.</p> <p>AQ 3 Air Quality Mitigation Measures To require the use of appropriate mitigation measures such as dust dampeners to minimise the potential impacts of developments on air quality.</p> <p>AQ 4 Air Purification Galway County Council shall encourage landscaping and deciduous tree planting in an environmentally sensitive manner within towns and villages as a means of air purification, the filtering of suspended particles and the improvement of their micro-climate.</p> <p>AQ 5 Radon Galway County Council shall have regard, to 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 Development Plan).</p> <p>NP 1 Galway County Council Noise Action Plan 2019-2023 To implement the Galway County Council Noise Action Plan 2019-2023 (and any subsequent Plan) in order to avoid, prevent and reduce the harmful effects, including annoyance, due to environmental noise exposure.</p> <p>NP 2 Developments within Noise Maps (Noise Action Plan 2019-2023) To require that where new developments are proposed within the noise limits of the noise maps for the designated sections of roads in the County, appropriate mitigation measures are undertaken so as to prevent harmful effects from environmental noise.</p> <p>NP3 Noise Impact Assessments To require an assessment of impact of the development on noise levels, having regard to the provisions of the Environmental Protection Agency Acts 1992 and 2003 and the EPA Noise Regulations 1994 when assessing planning application.</p>

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
		<p>NP 4 Noise Pollution and Regulation Restrict development proposals causing noise pollution in excess of best practice standards and regulate and control activities likely to give rise to excessive noise, other than those activities which are regulated by the EPA</p> <p>NP 5 Noise Mitigation Measures Require activities likely to give rise to excessive noise to install noise mitigation measures and monitors. The provision of a noise audit may be required where appropriate.</p> <p>SQ 3 Soil Protection, Contamination and Remediation Adequate and appropriate investigations shall be carried out into the nature and extent of any soil and groundwater contamination and the risks associated with site development work, where brownfield development is proposed. All undeveloped, contaminated sites shall be remediated to internationally accepted standards prior to redevelopment. All applications shall be accompanied by a report from a qualified, expert consultant remediation incorporating international best practice and expertise on innovative ecological restoration techniques including specialist planting and green initiatives that create aesthetically improved sites, healthy environments and contribute to the provision of new green open spaces as integral parts of newly created areas. 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.</p> <p>MAS 1 Separation Distances from SEVESO Sites To ensure that appropriate distances are maintained between any proposed development and any existing Seveso II establishment, in the interest of the health and safety of the occupiers of the proposed development.</p> <p>MAS 2 Soil Protection Measures To require that, the siting of new establishments, or modification of existing establishments classified under the Seveso II Directive, and new development in the vicinity of existing establishments shall take into account the need to prevent major accidents involving hazardous substances and safeguard both the public and the environment.</p> <p>MAS 3 SEVESO III Sites Take into account the provisions of the Major Accidents Directive, relating to the control of major accident hazards involving dangerous substances, and the recommendations of the Health and Safety Authority in the assessment of all planning applications located within the consultation distance of such sites.</p>
Soil	<ul style="list-style-type: none"> • Potential adverse effects on the hydrogeological and ecological function of the soil resource, including as a result of development on contaminated lands. • Potential for riverbank and coastal erosion. 	<p>Also refer to measures under other environmental components including Water.</p> <p>SQ 1 Soil Impact Assessments Ensure good soil quality throughout the county by requiring developments of a certain nature (as specified in the relevant environmental legislation) to carry out assessments of the impact of the development on soil quality.</p> <p>SQ 2 Soil Protection Measures To ensure that adequate soil protection measures are undertaken where appropriate.</p> <p>SQ 3 Soil Protection, Contamination and Remediation Adequate and appropriate investigations shall be carried out into the nature and extent of any soil and groundwater contamination and the risks associated with site development work, where brownfield development is proposed. All undeveloped, contaminated sites shall be remediated to internationally accepted standards prior to redevelopment. All applications shall be accompanied by a report from a qualified, expert consultant remediation incorporating international best practice and expertise on innovative ecological restoration techniques including specialist planting and green initiatives that create aesthetically improved sites, healthy environments and contribute to the provision of new green open spaces as integral parts of newly created areas. 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.</p> <p>PG 1 Geological and Geo-Morphological Systems Protect and conserve geological and geo-morphological systems, county geological heritage sites and features from inappropriate development that would detract from their heritage value and interpretation and ensure that any plan or project affecting karst formations, eskers or other important geological and geo-morphological systems are adequately assessed with regard to their potential geophysical, hydrological or ecological impacts on the environment.</p> <p>PG 2 Geological Heritage of County Galway Support the implementation of recommendations made in the Geological Heritage of County Galway – An Audit of County Geological Sites in County Galway (2019). Consult with the Geological Survey of Ireland when undertaking, approving or authorising developments which are likely to impact on County Geological Sites or involve significant ground excavations including sites identified as part of the Geological Heritage of County Galway – An Audit of County Geological Sites in County Galway (2019).</p> <p>PG 3 Promotion of and Access to Geological Sites Encourage greater awareness of the geological heritage sites of the county and promote, where appropriate, public access to geological and geomorphological sites and avoid inappropriate development.</p> <p>ESK 1 Protection of Eskers Systems Protect and conserve the landscape, natural heritage and biodiversity value of esker systems in the county. Assess applications for quarrying and other proposed developments with reference to their status or relative importance, for example, amenity, landscape and scientific value in the context of the overall esker system.</p> <p>ESK 2 Esker Areas Have regard to the Landscape Character Assessment of the County of Galway and its recommendations relating to the Esker areas and any other subsequent relevant reports/ data.</p> <p>UGG 1 UNESCO Global Geopark Status. To continue to work in partnership with all relevant stakeholders to facilitate and support the ongoing work of the Joyce Country and Western Lakes aspiring Geopark and its application for full UNESCO Global Geopark status. Support initiatives in relation to the Burren Lowlands, The Burren and Cliffs of Moher UNESCO Global Geopark that relate to the county.</p>

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
Water	<ul style="list-style-type: none"> • Potential adverse effects upon the status of water bodies and entries to the WFD Register of Protected Areas (ecological and human value), arising from changes in quality, flow and/or morphology. • Increase in flood risk and associated effects associated with flood events. 	<p>Also refer to measures under other environmental components including Soil and Material Assets.</p> <p>RH 11 Waste Water Treatment provision.</p> <p>Provide for sustainable rural housing in the county in accordance with the EPA Code of Practice: Wastewater Treatment Systems for Single Houses (2009).</p> <p>AD4 Agriculture Waste.</p> <p>To ensure agricultural waste is managed and disposed of in a safe, efficient and sustainable manner having regard to the environment and in full compliance with the European Communities Good Agricultural Practice for the Protection of Waters Regulations (2014) and relevant best practice guidelines.</p> <p>WS 1 Enhancement of Water Supply Infrastructure Liaise with Irish Water, to maximise the potential of existing capacity and to facilitate the timely delivery of new water services infrastructure, to facilitate existing and future growth.</p> <p>WS 2 Protection of Water Supplies Collaborate with Irish Water and the Group Water Federation Scheme to protect, conserve and enhance all existing and potential water resources in the County to ensure compliance with the European Union (Drinking Water) Regulations 2014 (as amended) and compliance of water supplies with the parameters identified in these Regulations.</p> <p>WS 3 River Basin Management Plan for Ireland 2018-2021 Support the implementation of the relevant recommendations and measures as outlined in the relevant River Basin Management Plan 2018-2021, and associated Programme of Measures, or any such plan that may supersede same during the lifetime of this plan.</p> <p>WS 4 Requirement to Liaise with Irish Water – Water Supply Ensure that new developments are adequately serviced with a suitable quantity and quality of drinking water supply and require that all new developments intending to connect to a public water supply liaise with Irish Water with regard to the water (and wastewater) infrastructure required.</p> <p>WS 5 Private Water Supply Support the provision of a private water supply in instances where there is no public water supply or where the existing supply does not have sufficient capacity to serve the proposed development. This will only be considered where it can be demonstrated that the proposed water supply meets the standards set out in the EU and national legislation and guidance including adherence to Article 6 of the EU Habitats Directive, and would not be prejudicial to public health or would not significantly impact negatively on the source or yield of an existing supply."</p> <p>WS 6 Water Framework Directive Support the preparation of Drinking Water Safety Plans and Source Protection Plans to protect sources of public water supply, in accordance with the requirements of the Water Framework Directive.</p> <p>WS 7 Water Quality Require that new development proposals would ensure that there would not be an unacceptable impact on water quality and quantity including surface water, ground water, designated source protection areas, river corridors and associated wetlands.</p> <p>WS 8 Proliferation of Septic Tanks Encourage the use of high standard treatment plants to minimise the risk of groundwater pollution.</p> <p>CWS 1 Water Conservation with all Developments To ensure all developments incorporate water conservation measures such as rainwater harvesting to minimise wastage of water supply.</p> <p>CWS 2 Water Mains Rehabilitation To assist Irish Water in their commitment to water conservation and support efforts to tackle leakage through find and fix (active leakage control) and water mains rehabilitation.</p> <p>CWS 3 Promotion of Water Conservation To support Irish Water in promoting public awareness and involvement in water conservation measures by households, business and industry.</p> <p>WW 1 Enhancement of Wastewater Supply Infrastructure Work in conjunction with Irish Water to maximise the potential of existing capacity and to facilitate the delivery of new wastewater services infrastructure, to facilitate future growth in the county.</p> <p>The Ballinasloe area will not be suitable or considered appropriate siting for a regional Connaught/Ulster waste management facility and/or as a regional or County sludge hub given its proximity to Environmentally sensitive sites including Natura 2000, SPC, SACs under Habitat, Birds and Wildlife Directives, proximity to River Suck and Shannon, floodplain and groundwater risks/conflicts, unsatisfactory water status with regard to Water framework obligations and River Basin Management plans, interference with progressive sustainable development plans with regard to National Cycleway Spur, Suck Bathing and emerging Water recreation feasibility plans, and in keeping with Environmental Justice Principles of affording the population and environment of Ballinasloe the opportunity to evolve, flourish and regenerate after repeated chronic siting of waste facilities in the area in order to guarantee that those living in Ballinasloe have equal access to a healthy, safe, and sustainable environment, as well as equal protection from environmental harm.</p> <p>The Tuam Area will not be suitable or considered appropriate siting for a regional Connaught/Ulster waste management facility and/or as a regional or County sludge hub given its proximity to the SAC Lough Corrib and River Clare flood plain and the processing or associated treatment will not be permitted in the lifetime of the plan. "</p> <p>WW 2 Delivery of Wastewater Infrastructure Liaise and co-operate with Irish Water in the implementation and delivery of the Water Services Strategic Plan (2015) and the Irish Water Investment Plan 2020-2024 and other relevant investment works programmes of Irish Water in the delivery of infrastructure within the county.</p> <p>The Ballinasloe area will not be suitable or considered appropriate siting for a regional Connaught/Ulster waste management facility and/or as a regional or County sludge hub given its proximity to Environmentally sensitive sites including Nature 2000, SPC, SACs under Habitat, Birds and Wildlife Directives, proximity to River Suck and Shannon, floodplain and groundwater risk/conflicts, unsatisfactory water status with regard to Water framework obligations and River Basin Management plans, interference with progressive sustainable development plans with regard to National Cycleway Spur, Suck Bathing and emerging Water recreation feasibility plans, and in keeping with Environmental Justice Principles of affording the population and environment of Ballinasloe the opportunity to evolve, flourish and regenerate after repeated chronic siting of waste facilities in the area in order to guarantee that those living in Ballinasloe have equal access to a healthy, safe and sustainable environment, as well as equal protection from environmental harm.</p> <p>The Tuam Area will not be suitable or considered appropriate siting for a regional Connaught/Ulster waste management facility and/or as a regional or County sludge hub given its proximity to the SAC Lough Corrib and River Clare flood plain and the processing or associated treatment will not be permitted in the lifetime of this plan. 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Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
		<p>WW 3 The Greater Galway Area Strategic Drainage Study To seek to accelerate and support the delivery of the Greater Galway Area Strategic Drainage Study and the associated solutions as identified in the RSES as an essential infrastructure requirement in conjunction with the Department of the Environment, Climate and Communications, Irish Water and Galway City Council.</p> <p>WW 4 Requirement to Liaise with Irish Water – Wastewater Ensure that new developments will only be permitted which are adequately serviced with sufficient capacity for appropriate collection, treatment and disposal (in compliance with the Water Framework Directive and River Basin Management Plan) to the public sewer unless provided for otherwise by the plan. Developers shall liaise with Irish Water with regard to the wastewater (and water) infrastructure to ensure sufficient capacity is available prior to the submission of a planning application. "</p> <p>WW 5 Serviced Sites Support the servicing of small towns and villages including initiatives to provide an alternative to one-off housing in the countryside, in accordance with the National Planning Framework.</p> <p>WW 6 Private Wastewater Treatment Plants Ensure that private wastewater treatment plants, where permitted, are operated in compliance with Environmental Protection Agency (EPA) Code of Practice for Domestic Waste Water Treatment System 2021 (Population Equivalent ≤10).</p> <p>WW 7 Sustainable Drainage Systems To require the use of Sustainable Drainage Systems to minimise and limit the extent of hard surfacing and paving and require the use of SuDS measures be incorporated in all new development (including extensions to existing developments). All development proposals shall be accompanied by a comprehensive SuDS assessment including run-off quantity, run off quality and impacts on habitat and water quality.</p> <p>WW 8 Storm Water Infrastructure To support the improvement of storm water infrastructure and to increase the use of sustainable drainage and reduce the risk of flooding in urban environments.</p> <p>AF 1 Marine Aquaculture To support the sustainable development of marine aquaculture and fishing industries, so as to maximise their contribution to jobs and growth in coastal communities where it can be demonstrated that the development will not have significant adverse effects on the environment.</p> <p>SF 1 Shellfish Waters Directive To continue to work with local communities, relevant stakeholders and with the Department of Agriculture, Food and Marine to ensure the proper and successful implementation of the Shellfish Waters Directive along County Galway's coastline.</p> <p>SF 2 Protection of Shellfish Waters To seek to protect the quality of designated shellfish waters off the County Galway coast.</p> <p>WR 1 Water Resources Protect the water resources in the plan area, including rivers, streams, lakes, wetlands, springs, turloughs, surface water and groundwater quality, as well as surface waters, aquatic and wetland habitats and freshwater and water dependant species in accordance with the requirements and guidance in the EU Water Framework Directive 2000 (2000/60/EC), the European Union (Water Policy) Regulations 2003 (as amended), the River Basin District Management Plan 2018 – 2021 and other relevant EU Directives, including associated national legislation and policy guidance (including any superseding versions of same) and also have regard to the Freshwater Pearl Mussel Sub-Basin Management Plans.</p> <p>WR 2 River Basin Management Plans It is a policy objective of the Planning Authority to implement the programme of measures developed by the River Basin District Projects under the Water Framework Directive in relation to: Surface and groundwater interaction, Dangerous substances, Hydro-morphology, Forestry, On site wastewater treatment systems, Municipal and industrial discharges, Urban pressures, Abstractions.</p> <p>WTWF 1 Wetland Sites Protect and conserve the ecological and biodiversity heritage of the wetland sites in the County. Ensure that an appropriate level of assessment is completed in relation to wetland habitats that are subject to proposals which would involve drainage or reclamation that might destroy, fragment or degrade any wetland in the county. This includes lakes and ponds, turloughs, watercourses, springs and swamps, marshes, fens, heath, peatlands, some woodlands as well as some coastal and marine habitats. Protect Ramsar sites under The Convention on Wetlands of International Importance (especially as Waterfowl Habitat).</p> <p>IW 1 Inland Waterways (a) Protect and conserve the quality, character and features of inland waterways by controlling developments close to navigable and non-navigable waterways in accordance with best practice guidelines. (b) Preserve, protect and enhance Galway's inland lakes and waterways for their amenity and recreational resource amenity. (c) Protect the riparian zones of watercourse systems throughout the County, recognising the benefits they provide in relation to flood risk management and their protection of the ecological integrity of watercourse systems and ensure they are considered in the land use zoning in Local Area Plans. (d) The Planning Authority will support in principle the development and upgrading of the Inland Waterways and their associated facilities in accordance with legislation, best practice and relevant management strategies, key stakeholders and bodies including Waterways Ireland. (e) Ensure all abstractions of water will be subject to assessment for compliance with the requirements of Article 6 of the Habitats Directive. (f) Seek to provide additional accesses to lake shores and rivers for public rights of way, parking and layby facilities, where appropriate. (g) Developments shall ensure that adequate soil protection measures are undertaken, where appropriate, including investigations into the nature and extent of any soil/groundwater contamination.</p> <p>FL 1 Flood Risk Management Guidelines It is the policy objective of Galway County Council to support, in co-operation with the OPW, the implementation of the EU Flood Risk Directive (2007/60/EC), the Flood Risk Regulations (SI No. 122 of 2010) and the DEHLG/OPW publication The Planning System and Flood Risk Management Guidelines (2009) (and any updated/superseding legislation or policy guidance) and Department Circular PL2/2014 or any updated / superseding version.</p> <p>FL 2 Flood Risk Management and Assessment Comply with the requirements of the DoEHLG/OPW The Planning System and Flood Risk Management Guidelines for Planning Authorities and its accompanying Technical Appendices Document 2009 (including any updated/superseding documents). This will include the following:</p>

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
		<p>(a) Avoid, reduce and/or mitigate, as appropriate in accordance with the Guidelines;</p> <p>(b) Development proposals in areas where there is an identified or potential risk of flooding or that could give rise to a risk of flooding elsewhere will be required to carry out a Site-Specific Flood Risk Assessment, and justification test where appropriate, in accordance with the provisions of The Planning System and Flood Risk Management Guidelines 2009 (or any superseding document); Any flood risk assessment should include an assessment of the potential impacts of climate change, such as an increase in the extent or probability of flooding, and any associated measures necessary to address these impacts;</p> <p>(c) Development that would be subject to an inappropriate risk of flooding or that would cause or exacerbate such a risk at other locations shall not normally be permitted;</p> <p>(d) Galway County Council shall work with other bodies and organisations, as appropriate, to help protect critical infrastructure, including water and wastewater, within the County, from risk of flooding.</p> <p>FL 3 Principles of the Flood Risk Management Guidelines The Planning Authority shall implement the key principles of flood risk management set out in the Flood Risk Management Guidelines as follows:</p> <p>(a) Avoid development that will be at risk of flooding or that will increase the flooding risk elsewhere, where possible;</p> <p>(b) Substitute less vulnerable uses, where avoidance is not possible; and</p> <p>(c) Mitigate and manage the risk, where avoidance and substitution are not possible.</p> <p>Development should only be permitted in areas at risk of flooding when there are no alternative, reasonable sites available in areas at lower risk that also meet the objectives of proper planning and sustainable development. Vulnerable development in areas which have the highest flood risk should be avoided and/or only considered in exceptional circumstances (through a prescribed Justification Test) if adequate land or sites are not available in areas which have lower flood risk</p> <p>FL 4 Flood Relief Schemes The Planning Authority shall support and co-operate with the Office of Public Works (OPW) in the delivery of Flood Relief Schemes.</p> <p>FL 5 Catchment Planning The Planning Authority will support the OPW's CFRAM Programme and catchment-based Flood Planning Groups, especially 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.</p> <p>FL 6 Surface Water Drainage and Sustainable Drainage Systems (SuDs) Maintain and enhance, as appropriate, the existing surface water drainage system in the County. Ensure that new developments are adequately serviced with surface water drainage infrastructure and promote the use of Sustainable Drainage Systems in all new developments. Surface water run-off from development sites will be limited to pre-development levels and planning applications for new developments will be required to provide details of surface water drainage and sustainable drainage systems proposals.</p> <p>FL 7 Protection of Waterbodies and Watercourses Protect waterbodies and watercourses within the County from inappropriate development, including rivers, streams, associated undeveloped riparian strips, wetlands and natural floodplains. This will include protection buffers in riverine, wetland and coastal areas as appropriate.</p> <p>FL 8 Flood Risk Assessment for Planning Applications and CFRAMS 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 69. Site-specific Flood Risk Assessment (FRA) is required for all planning applications in areas at elevated risk of flooding, even for developments appropriate 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 Planning Authority shall have regard to the results of any CFRAM Studies in the assessment of planning applications. Development proposal will need to be accompanied by a Development Management Justification Test in addition to the site-specific Flood Risk Assessment. Where only a small proportion of a site is at risk of flooding, the sequential approach shall be applied in site planning, in order to seek to ensure that no encroachment onto or loss of the flood plain occurs and/or that only water compatible development such as Open Space would be permitted for the lands which are identified as being at risk of flooding within that site. In Flood Zone C, where the probability of flooding is low (less than 0.1%, Flood Zone C), site-specific Flood Risk Assessment may be required and the developer should satisfy themselves that the probability of flooding is appropriate to the development being proposed.</p> <p>In addition to the County Plan SFRA datasets (including the Flood Zones, CFRAMS mapping, historical and predictive groundwater mapping, predictive pluvial mapping and historical flood risk indicator mapping, such as the Benefitting Lands mapping), new and emerging datasets (such as the OPW's National Fluvial Mapping that will supersede existing PFRA fluvial mapping for catchments greater than 5km²) must be consulted by prospective applicants for developments and will be made available to lower-tier Development Management processed in the Council. Applications for developments in coastal areas and associated assessments shall also consider wave overtopping and coastal erosion.</p> <p>FL 9 SFRA of Lower Tier Plans Lower tier plans shall undertake SFRA (Strategic Flood Risk Assessment) in compliance with the Flood Risk Management Guidelines.</p> <p>FL 10 SFRA/FRA and Climate Change SFRAs and site-specific FRAs shall 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) shall be consulted with to this effect.</p> <p>FL 11 FRA and Environmental Impact Assessment (EIA) Flood risk may constitute a significant environmental effect of a development proposal that in certain circumstances may trigger a sub-threshold EIA. FRA should therefore be an integral part of any EIA undertaken for projects within the County.</p> <p>FL 12 Inland Fisheries It is a policy objective of the Planning Authority 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 County Galway.</p> <p>FL 13 CFRAM It is a policy objective of the Planning Authority to take account of and incorporate into local planning policy and decision making, including possible future variations to this plan, CFRAM measures that may be published in the future, including planned investment measures for managing and reducing flood risk.</p>

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		<p>FL 14 Flood Vulnerable Zones It is a policy objective of the Planning Authority to ensure that applications pertaining 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.</p> <p>FL 15 Flood Risk Management Ensure each flood risk management activity is examined to determine actions required to embed and provide for effective climate change adaptation as set out in the OPW Climate Change Sectoral Adaptation Plan for Flood Risk Management applicable at the time.</p> <p>FL 16 Benefitting Land Applications for development on land identified as benefitting land may be prone to flooding, and as such site-specific flood risk assessments may be required in these areas.</p> <p>FL 17 Consultation with OPW Consult with the OPW in relation to proposed developments in the vicinity of drainage channels and rivers for which the OPW are responsible and retain a strip on either side of such channels where required, to facilitate maintenance access thereto. In addition, promote the sustainable management and uses of water bodies and avoid culverting or realignment of these features.</p> <p>FL 18 Inappropriate Development on Flood Zones Where a development/land use is proposed within any area subject to this objective the development proposal will need to be accompanied by a detailed hydrological assessment and robust SUDS design which demonstrates the capacity to withstand potential flood events to maintain water quality and avoid potential effects to ecological features.</p> <ul style="list-style-type: none"> • Any development proposals should be considered with caution and will be required to comply with The Planning System and Flood Risk Management Guidelines for Planning Authorities/Circular PL2/2014 & the associated Development Management Justification Test. • Climate Change should be duly considered in any development proposal. • Protect the riparian zones of watercourse systems throughout the plan area through a general 10 metre protection buffer from rivers within the plan area as measured from the near riverbank, (this distance may be increased and decreased on a site by site basis, as appropriate). • Any development proposals submitted for this site will require a detailed ecological report (s), carried out by suitably qualified personnel for the purposes of informing Appropriate Assessment Screening by Galway County Council, the competent authority. • The relevant lands will be outlined and flagged with a symbol on the land use zoning map and on the GIS system of Galway County Council so that staff and the public are aware of the special conditions/constraints attached. • A briefing will be provided to relevant staff within Galway County Council on the special conditions and constraints on relevant lands.
<p>Air and Climatic Factors</p>	<ul style="list-style-type: none"> • Potential conflict between development under the Plan and aiming to reduce carbon emissions in line with local, national and European environmental objectives. • Potential conflicts between transport emissions, including those from cars, and air quality. • Potential conflicts between increased frequency of noise emissions and protection of sensitive receptors. • Potential conflicts with climate adaptation measures including those relating to flood risk management. 	<p>Also refer to Plan's various sustainable transport provisions and detailed measures for Climate Action to Section 8.6 of this SEA Environmental Report "Integration of Climate Action into the Plan".</p> <p>AQ 1 Ambient Air Quality 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 (CAFÉ) 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 (SI No. 180 of 2011) (or any updated/superseding documents).</p> <p>AQ 2 Assessment of Air Quality To require developments which would have the potential to have adverse impacts on air quality to carry out assessments of the impact of the development on air quality.</p> <p>AQ 3 Air Quality Mitigation Measures To require the use of appropriate mitigation measures such as dust dampeners to minimise the potential impacts of developments on air quality.</p> <p>AQ 4 Air Purification Galway County Council shall encourage landscaping and deciduous tree planting in an environmentally sensitive manner within towns and villages as a means of air purification, the filtering of suspended particles and the improvement of their micro-climate.</p> <p>AQ 5 Radon Galway County Council shall have regard, to 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 Development Plan).</p> <p>NP 1 Galway County Council Noise Action Plan 2019-2023 To implement the Galway County Council Noise Action Plan 2019-2023 (and any subsequent Plan) in order to avoid, prevent and reduce the harmful effects, including annoyance, due to environmental noise exposure.</p> <p>NP 2 Developments within Noise Maps (Noise Action Plan 2019-2023) To require that where new developments are proposed within the noise limits of the noise maps for the designated sections of roads in the County, appropriate mitigation measures are undertaken so as to prevent harmful effects from environmental noise.</p> <p>NP3 Noise Impact Assessments To require an assessment of impact of the development on noise levels, having regard to the provisions of the Environmental Protection Agency Acts 1992 and 2003 and the EPA Noise Regulations 1994 when assessing planning application.</p> <p>NP 4 Noise Pollution and Regulation Restrict development proposals causing noise pollution in excess of best practice standards and regulate and control activities likely to give rise to excessive noise, other than those activities which are regulated by the EPA</p> <p>NP 5 Noise Mitigation Measures Require activities likely to give rise to excessive noise to install noise mitigation measures and monitors. The provision of a noise audit may be required where appropriate.</p>

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		<p>CC 1 Climate Change Support and facilitate the implementation of European, National and Regional objectives for climate adaptation and mitigation taking into account other provisions of the Plan (including those relating to land use planning, energy, sustainable mobility, flood risk management and drainage) and having regard to the Climate mitigation and adaptation measures.</p> <p>CC 2 Transition to a low carbon, climate-resilient society It is a policy objective of the Planning Authority 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.</p> <p>CC 3 County Galway Climate Adaptation Strategy 2019-2024 To implement the County Galway Climate Adaptation Strategy 2019-2024 as appropriate.</p> <p>CC 4 Local Authority Climate Action Plan Support the preparation of a Climate Action Plan for County Galway.</p> <p>CC 5 Climate Adaptation and Mitigation To promote, support and direct effective climate action policies and objectives that seek to improve climate outcomes across County Galway through the encouragement and integration of appropriate mitigation and adaptation considerations and measures into all development and decision-making processes.</p> <p>CC 6 Local Authority Renewable Energy Strategy (LARES) To support the implementation of the Renewable Energy Strategy contained in Appendix 1 of the Galway County Development Plan to facilitate the transition to a low carbon county.</p> <p>CC 7 Climate Action Fund Support the delivery of sustainable development projects under the European Green Deal and utilise the Climate Action Fund/ Just Transition Fund established under the National Development Plan to encourage public and private climate mitigation and adaptation projects in line with criteria set out by the Fund at that time.</p> <p>CC 8 Climate Action and Development Location To implement, through the plan and future local areas plans, policies that support and encourage sustainable compact growth and settlement patterns, integrate land use and transportation, and maximise opportunities through development location, form, layout and design to secure climate resilience and reduce carbon dioxide and greenhouse emissions.</p> <p>CC 9 Mainstreaming Climate Change Adaptation Galway County Council shall incorporate climate change adaptation into land use planning, building layouts, energy, transport, natural resource management, forestry, agriculture and marine waters.</p> <p>CC 10 Green Infrastructure Galway County Council shall promote the benefit of open spaces and implement the integration of green infrastructure/networks (e.g., interconnected network of green spaces (including aquatic ecosystems) and other physical features on land) into new development and regeneration proposals in order to mitigate and adapt to climate change.</p>
<p>Material Assets</p>	<ul style="list-style-type: none"> Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity ensures the mitigation of potential conflicts). Failure to adequately treat surface water run-off that is discharged to water bodies (water services infrastructure and capacity ensures the mitigation of potential conflicts). Failure to comply with drinking water regulations and serve new development with adequate drinking water (water services infrastructure and capacity ensures the mitigation of potential conflicts). 	<p>Also refer to measures under other environmental components including Population and Human Health, Cultural Heritage, Soil, Water, Air, various Land Use and Phasing provisions.</p> <p>RH 11 Waste Water Treatment provision Provide for sustainable rural housing in the county in accordance with the EPA Code of Practice: Wastewater Treatment Systems for Single Houses (2009).</p> <p>AD4 Agriculture Waste To ensure agricultural waste is managed and disposed of in a safe, efficient and sustainable manner having regard to the environment and in full compliance with the European Communities Good Agricultural Practice for the Protection of Waters Regulations (2014) and relevant best practice guidelines.</p> <p>WS 1 Enhancement of Water Supply Infrastructure Liaise with Irish Water, to maximise the potential of existing capacity and to facilitate the timely delivery of new water services infrastructure, to facilitate existing and future growth.</p> <p>WS 2 Protection of Water Supplies Collaborate with Irish Water and the Group Water Federation Scheme to protect, conserve and enhance all existing and potential water resources in the County to ensure compliance with the European Union (Drinking Water) Regulations 2014 (as amended) and compliance of water supplies with the parameters identified in these Regulations.</p> <p>WS 3 River Basin Management Plan for Ireland 2018-2021 Support the implementation of the relevant recommendations and measures as outlined in the relevant River Basin Management Plan 2018-2021, and associated Programme of Measures, or any such plan that may supersede same during the lifetime of this plan.</p> <p>WS 4 Requirement to Liaise with Irish Water – Water Supply Ensure that new developments are adequately serviced with a suitable quantity and quality of drinking water supply and require that all new developments intending to connect to a public water supply liaise with Irish Water with regard to the water (and wastewater) infrastructure required.</p> <p>WS 5 Private Water Supply Support the provision of a private water supply in instances where there is no public water supply or where the existing supply does not have sufficient capacity to serve the proposed development. This will only be considered where it can be demonstrated that the proposed water supply meets the standards set out in the EU and national legislation and guidance including adherence to Article 6 of the EU Habitats Directive, and would not be prejudicial to public health or would not significantly impact negatively on the source or yield of an existing supply.</p> <p>WS 6 Water Framework Directive Support the preparation of Drinking Water Safety Plans and Source Protection Plans to protect sources of public water supply, in accordance with the requirements of the Water Framework Directive.</p> <p>WS 7 Water Quality Require that new development proposals would ensure that there would not be an unacceptable impact on water quality and quantity including surface water, ground water, designated source protection areas, river corridors and associated wetlands.</p> <p>WS 8 Proliferation of Septic Tanks Encourage the use of high standard treatment plants to minimise the risk of groundwater pollution.</p> <p>CWS 1 Water Conservation with all Developments To ensure all developments incorporate water conservation measures such as rainwater harvesting to minimise wastage of water supply.</p>

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	<ul style="list-style-type: none"> • Increases in waste levels. • Potential impacts upon public assets and infrastructure. • Interactions between agriculture and soil, water, biodiversity and human health - including phosphorous and nitrogen deposition as a result of agricultural activities and the production of secondary inorganic particulate matter. 	<p>CWS 2 Water Mains Rehabilitation To assist Irish Water in their commitment to water conservation and support efforts to tackle leakage through find and fix (active leakage control) and water mains rehabilitation.</p> <p>CWS 3 Promotion of Water Conservation To support Irish Water in promoting public awareness and involvement in water conservation measures by households, business and industry.</p> <p>WW 1 Enhancement of Wastewater Supply Infrastructure Work in conjunction with Irish Water to maximise the potential of existing capacity and to facilitate the delivery of new wastewater services infrastructure, to facilitate future growth in the county. The Ballinasloe area will not be suitable or considered appropriate siting for a regional Connaught/Ulster waste management facility and/or as a regional or County sludge hub given its proximity to Environmentally sensitive sites including Natura 2000, SPC, SACs under Habitat, Birds and Wildlife Directives, proximity to River Suck and Shannon, floodplain and groundwater risks/conflicts, unsatisfactory water status with regard to Water framework obligations and River Basin Management plans, interference with progressive sustainable development plans with regard to National Cycleway Spur, Suck Bathing and emerging Water recreation feasibility plans, and in keeping with Environmental Justice Principles of affording the population and environment of Ballinasloe the opportunity to evolve, flourish and regenerate after repeated chronic siting of waste facilities in the area in order to guarantee that those living in Ballinasloe have equal access to a healthy, safe, and sustainable environment, as well as equal protection from environmental harm. The Tuam Area will not be suitable or considered appropriate siting for a regional Connaught/Ulster waste management facility and/or as a regional or County sludge hub given its proximity to the SAC Lough Corrib and River Clare flood plain and the processing or associated treatment will not be permitted in the lifetime of the plan. "</p> <p>WW 2 Delivery of Wastewater Infrastructure "Liaise and co-operate with Irish Water in the implementation and delivery of the Water Services Strategic Plan (2015) and the Irish Water Investment Plan 2020-2024 and other relevant investment works programmes of Irish Water in the delivery of infrastructure within the county. The Ballinasloe area will not be suitable or considered appropriate siting for a regional Connaught/Ulster waste management facility and/or as a regional or County sludge hub given its proximity to Environmentally sensitive sites including Nature 2000, SPC, SACs under Habitat, Birds and Wildlife Directives, proximity to River Suck and Shannon, floodplain and groundwater risk/conflicts, unsatisfactory water status with regard to Water framework obligations and River Basin Management plans, interference with progressive sustainable development plans with regard to National Cycleway Spur, Suck Bathing and emerging Water recreation feasibility plans, and in keeping with Environmental Justice Principles of affording the population and environment of Ballinasloe the opportunity to evolve, flourish and regenerate after repeated chronic siting of waste facilities in the area in order to guarantee that those living in Ballinasloe have equal access to a healthy, safe and sustainable environment, as well as equal protection from environmental harm. The Tuam Area will not be suitable or considered appropriate siting for a regional Connaught/Ulster waste management facility and/or as a regional or County sludge hub given its proximity to the SAC Lough Corrib and River Clare flood plain and the processing or associated treatment will not be permitted in the lifetime of this plan. "</p> <p>WW 3 The Greater Galway Area Strategic Drainage Study To seek to accelerate and support the delivery of the Greater Galway Area Strategic Drainage Study and the associated solutions as identified in the RSES as an essential infrastructure requirement in conjunction with the Department of the Environment, Climate and Communications, Irish Water and Galway City Council.</p> <p>WW 4 Requirement to Liaise with Irish Water – Wastewater Ensure that new developments will only be permitted which are adequately serviced with sufficient capacity for appropriate collection, treatment and disposal (in compliance with the Water Framework Directive and River Basin Management Plan) to the public sewer unless provided for otherwise by the plan. Developers shall liaise with Irish Water with regard to the wastewater (and water) infrastructure to ensure sufficient capacity is available prior to the submission of a planning application. "</p> <p>WW 5 Serviced Sites Support the servicing of small towns and villages including initiatives to provide an alternative to one-off housing in the countryside, in accordance with the National Planning Framework.</p> <p>WW 6 Private Wastewater Treatment Plants Ensure that private wastewater treatment plants, where permitted, are operated in compliance with Environmental Protection Agency (EPA) Code of Practice for Domestic Waste Water Treatment System 2021 (Population Equivalent ≤10).</p> <p>WW 7 Sustainable Drainage Systems To require the use of Sustainable Drainage Systems to minimise and limit the extent of hard surfacing and paving and require the use of SuDS measures be incorporated in all new development (including extensions to existing developments). All development proposals shall be accompanied by a comprehensive SuDS assessment including run-off quantity, run off quality and impacts on habitat and water quality.</p> <p>WW 8 Storm Water Infrastructure To support the improvement of storm water infrastructure and to increase the use of sustainable drainage and reduce the risk of flooding in urban environments.</p> <p>WM 1 Connacht and Ulster Waste Management Plan 2015-2021 Support the implementation of the Connacht and Ulster Waste Management Plan 2015-2021 or any updated version of this document within the lifetime of the plan.</p> <p>WM 2 Requirements for Waste Management Support and promote the 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.</p> <p>WM 3 Waste Recovery and Disposal Facilities Support and facilitate the provision of adequate waste recovery and disposal facilities for the County.</p> <p>WM 4 Waste Legalisation To require that all waste disposal shall be undertaken in compliance with the requirements of the Environmental Protection Agency and relevant Waste Management Legislation.</p>

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Cultural Heritage	<ul style="list-style-type: none"> Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities 	<p>AH 1 Architectural Heritage Ensure the protection of the architectural heritage of County Galway, which is a unique and special resource, having regard to the policy guidance contained in the Architectural Heritage Protection Guidelines 2011 (and any updated/superseding document).</p> <p>AH 2 Protected Structures (Refer to Appendix 6) (a) Ensure the protection and sympathetic enhancement of structures including their curtilage and attendant grounds included and proposed for inclusion in the Record of Protected Structures (RPS) that are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest, together with the integrity of their character and setting. (b) Review the Record of Protected Structures in order to provide a comprehensive schedule for the protection of structures of special importance in the County during the lifetime of the plan. (c) Ensure that development proposals are appropriate in terms of architectural treatment, character, scale and form to the existing protected structure and not detrimental to the special character and integrity of the protected structure and its setting. (d) Ensure high quality architectural design of all new developments relating to or which may impact on structures (and their settings) included in the Record of Protected Structures. (e) Promote and ensure best conservation practice through the use of specialist conservation professionals and craft persons. (f) Prohibit development proposals, either in whole or in part, for the demolition of protected structures, save in exceptional circumstances.</p> <p>AH 3 Protection of Structure on the NIAH Give regard to and consideration of all structures which are included in the NIAH for County Galway, which are not currently included in the Record of Protected Structures, in development management functions.</p> <p>AH 4 Architectural Conservation Areas (Refer to Appendix 7) Protect, conserve and enhance the special character of the Architectural Conservation Areas (ACA) included in this plan through the appropriate management and control of the design, location and layout of new development, modifications, alterations or extensions to existing structures, surviving historic plots and street patterns and/or modifications to the character or setting of the Architectural Conservation Area. Works within the ACA shall ensure the conservation of traditional features and building elements that contribute to the character of the area. The special character of an area includes its traditional building stock and material finishes, spaces, streetscape, shop fronts, landscape and setting. New proposals shall have appropriate regard to scale, plot, form, mass, design, materials, colours and function. This will be achieved by: (a) Protecting all buildings, structures, groups of structures, sites, landscapes and all features which contribute to the special character of the ACA from demolition and non-sympathetic alterations. (b) Promote appropriate and sensitive reuse and rehabilitation of buildings and sites within the ACA. (c) Ensure new development within or adjacent to an ACA respects the established character of the area and contributes positively in terms of design, scale, setting and material finishes to the ACA. (d) Promote high quality architectural design within ACAs. (e) Seek the repair and reuse of traditional shopfronts and where appropriate, encourage new shopfronts of a high quality architectural design. (f) Ensure that all new signage, lighting, advertising and utilities to buildings within ACA are designed, constructed, and located in such a manner that they do not detract from the character of the ACA. (g) Protect and enhance the quality of open spaces within ACAs and ensure the protection and where necessary reuse of street furniture and use of appropriate materials during the course of public infrastructure schemes within ACAs. (h) Prohibit development proposals, either in whole or in part for the demolition of a structure within an Architectural Conservation Area that contributes to the special character of the area. (i) Protect structures in ACAs from non-sympathetic alterations and encourage appropriate in-fill developments. (j) Works materially affecting the character of a protected structure or the exterior of a building/ structure within an ACA will require planning permission; (k) Any works carried out to a protected structure or the exterior of a building/structure within an ACA shall be in accordance with best conservation practice and use sustainable and appropriate materials. (l) Ensure that any development, modifications, alterations, or extensions materially affecting the character of a protected structure, or a structure adjoining a protected structure, or a structure within or adjacent to an Architectural Conservation Area (ACA), is sited and designed appropriately and is not detrimental to the character or setting of the protected structure or of the ACA.</p> <p>AH 5 Maintenance and Re-use of existing Building Stock Promote the maintenance and appropriate re-use of the existing stock of buildings with architectural merit as a more sustainable option to their demolition and redevelopment.</p> <p>AH 6 Vernacular Architecture Recognise the importance of the contribution of vernacular architecture to the character of a place and ensure the protection, retention and appropriate revitalisation and reuse of the vernacular built heritage including structures that contribute to landscape and townscape character and resist the demolition of these structures.</p> <p>AH 7 Local Place Names Protect local place names as an important part of the cultural heritage and unique character of an area. Support the use of appropriate names for new developments that reflect the character and heritage of the area and that contribute to the local distinctiveness of a place.</p> <p>AH 8 Energy Efficiency and Traditionally Built Structures Ensure that measures to upgrade the energy efficiency of protected structures and traditionally built historic structures are sensitive to traditional construction methods, employ best practice and use appropriate materials and methods that will not have a detrimental impact on the material, functioning or character of the building.</p> <p>AH 9 Local Landscape and Place Assessment To support proposals from local communities including Tidy Town Committees, Chambers of Commerce and residents' groups in analysing the character of their place and promoting its regeneration for their own use and enjoyment and that of visitors to the area.</p> <p>AH 10 Designed Landscapes Protect the surviving historic designed landscapes in the County and promote the conservation of their essential character, both built and natural. Consider protection of the designed landscape by inclusion in an Architectural Conservation Area. Development proposals in designed landscape shall be accompanied by an appraisal of the contributing elements and an impact assessment.</p> <p>AH 11 Custodianship Promote an inter-disciplinary approach demonstrating best practice with regard to the custodianship of protected structures, recorded monuments and elements of built heritage.</p> <p>AH 12 Placemaking for Towns and villages Promote the value of placemaking in cooperation with communities in their towns, villages and local areas.</p> <p>AH 13 Traditional Building Skills Support and promote traditional building skills, training and awareness of the use of appropriate materials and skills within the Local Authority, community groups, owners and occupiers of traditionally built structures.</p>

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
		<p>AH 14 Design and Landscaping in New Buildings Encourage new buildings that foster an innovative approach to design and acknowledges the diversity of suitable design solutions in appropriate locations while promoting the added economic, amenity and environmental value of good design.</p> <p>ARC 1 Legislative Context Support and promote the preservation, conservation and appropriate management and enhancement of the County's archaeological sites and monuments, together with the settings of these monuments, having regard to the legislative, statutory and policy provisions relevant to the conservation of the archaeological heritage.</p> <p>ARC 2 Archaeological Sites Seek to encourage and promote awareness of and access to archaeological heritage of the County for all, through the provision of information to landowners and the community generally, in co-operation with statutory and other partners.</p> <p>ARC 3 Archaeological Landscapes To facilitate where possible the identification of important archaeological landscapes in the County</p> <p>ARC 4 Protection of Archaeological Sites All planning applications for new development, redevelopment, any ground works, refurbishment, and restoration, etc. within areas of archaeological potential or within close proximity to Recorded Monuments or within the historic towns of County Galway will take account of the archaeological heritage of the area and the need for archaeological mitigation.</p> <p>ARC 6 Burial Grounds Protect the burial grounds, identified in the Record of Monuments and Places, in co-operation with the National Monuments Service of the Department of Housing, Local Government and Heritage. Encourage the local community to manage burial grounds in accordance with best conservation and heritage principles.</p> <p>ARC 7 Battlefield Sites Protect the Battle of Aghrim site and other battlefield sites and their settings.</p> <p>ARC 8 Underwater Archaeological Sites To protect and preserve the archaeological value of underwater archaeological sites and associated features. In assessing proposals for development, the Council will take account of the potential underwater archaeology of rivers, lakes, intertidal and sub-tidal locations.</p> <p>ARC 9 Recorded Monuments Ensure that any development in the immediate vicinity of a Recorded Monument is sensitively designed and sited and does not detract from the monument or its visual amenity.</p> <p>ARC 10 Zones of Archaeological Potential To protect the Zones of Archaeological Potential located within both urban and rural areas and around archaeological monuments generally as identified in the Record of Monuments and Places. Any development within the ZAPs will need to take cognisance of the potential for subsurface archaeology and if archaeology is demonstrated to be present appropriate mitigation (such as preservation in situ/buffer zones) will be required.</p> <p>ARC 11 Industrial and Post Medieval Archaeology Protect and preserve the archaeological value of industrial and post medieval archaeology such as mills, limekilns, bridges, piers, harbours, penal chapels and dwellings. Proposals for refurbishment, works to or redevelopment/conversion of these sites should be subject to careful assessment.</p> <p>ARC 12 Archaeology and Infrastructure Schemes Have regard to archaeological concerns when considering proposed service schemes (including electricity, sewerage, telecommunications, water supply) and proposed roadwork's (both realignments and new roads) located in close proximity to Recorded Monuments and Places and their known archaeological monuments.</p> <p>CUH 1 Cultural heritage Protect and promote the cultural heritage assets and the intangible cultural heritage assets of County Galway as important social and economic assets.</p> <p>CUH 2 Special Places of Historic Interest To protect and promote where possible special places of historical interest.</p> <p>CUH 3 Placenames/Naming of New Developments Promote and preserve local place names, local heritage and the Irish language by ensuring the use of local place names or geographical or cultural names which reflect the history and landscape of their settings in the naming of new residential and other developments. All names will be in the Irish language only. The naming and numbering schemes including associated signage must be submitted to the Planning Authority prior to the commencement of a new development.</p> <p>CUH 4 The Gaeltacht and Linguistic Heritage (a) To protect the linguistic and cultural heritage of the Gaeltacht and to promote Irish as a community language. To promote and facilitate the sustainable development of An Ghaeltacht and Island communities in County Galway. (b) To support organisations involved in the continued promotion and preservation of the Irish language and culture. To work in a positive and encouraging way to create and maintain a bilingual environment in the County, and to ensure the availability of opportunities for the use of spoken and written Irish.</p> <p>CUH 5 Library and Archives (a) To facilitate the development and implementation of Galway Library Development Programme 2016-2021 or subsequent programme and support the development and promotion of the library network in the county. (b) Galway County Council shall support the provision of a purpose built repository, meeting international archival standards, to house, and ensure the preservation, of this important heritage resource.</p>
Landscape	<ul style="list-style-type: none"> Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape. 	<p>Also refer to measures under Biodiversity and Flora and Fauna and Cultural Heritage.</p> <p>Policy Objectives Landscape Conservation and Management</p> <p>LCM 1 Preservation of Landscape Character Preserve and enhance the character of the landscape where, and to the extent that, in the opinion of the Planning Authority, the proper planning and sustainable development of the area requires it, including the preservation and enhancement, where possible of views and prospects and the amenities of places and features of natural beauty or interest.</p> <p>LCM 2 Landscape Sensitivity Classification</p>

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Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
		<p>The Planning Authority shall have regard to the landscape sensitivity classification of sites in the consideration of any significant development proposals and, where necessary, require a Landscape/Visual Impact Assessment to accompany such proposals. This shall be balanced against the need to develop key strategic infrastructure to meet the strategic aims of the plan.</p> <p>LCM 3 Landscape Sensitivity Ratings Consideration of landscape sensitivity ratings shall be an important factor in determining development uses in areas of the County. In areas of high landscape sensitivity, the design and the choice of location of proposed development in the landscape will also be critical considerations.</p> <p>LCM 4 Open/Unfenced Landscape Preserve the status of traditionally open/unfenced landscape. The merits of each case will be considered in light of landscape sensitivity ratings and views of amenity importance.</p> <p>PVSR 1 – Protected Views and Scenic Routes Preserve the protected views and scenic routes as detailed in Maps 8.3 and 8.4 from development that in the view of the Planning Authority would negatively impact on said protected views and scenic routes. This shall be balanced against the need to develop key infrastructure to meet the strategic aims of the plan.</p> <p>TWHS 1 Tentative World Heritage Sites. Protect the Outstanding Universal Value of the tentative World Heritage Sites in County Galway namely the Western Stone Forts and the Burren that are included in the UNESCO Tentative List and engage with other national and international initiatives which promote the special built, natural and cultural heritage of places in the County. Collaborate with landowners, local communities and other relevant stakeholders to achieve World Heritage Site status for the sites identified in County Galway.</p>

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 RSES, the measures identified in the RSES SEAs, including the Northern and Western 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 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 Plan forms 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 Northern and Western 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).

10.4 Reporting

As provided by Policy Objective MM1 “Monitoring and Management”, the Council shall, in conjunction with the Regional Assembly and other sources as relevant, implement the monitoring programme as set out in the SEA Environmental Report and Statement. This will include the preparation of stand-alone SEA Monitoring Reports:

1. To accompany the report required of the manager under section 15(2) of the Act, including information in relation to progress on, and the results of, monitoring the significant environmental effects of implementation of the Development Plan; and

2. On the significant environmental effects of implementing the Plan, in advance of the beginning of the review of the next Plan.

Reporting will seek to 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	<ul style="list-style-type: none"> Condition of European sites 	<ul style="list-style-type: none"> Require all local level land use plans to include ecosystem services and green/blue infrastructure provisions in their land use plans and as a minimum, to have regard to the required targets in relation to the conservation of European sites, other nature conservation sites, ecological networks, and protected species Implement and review, as relevant, County Galway Heritage and Biodiversity Plan 2017-2022 	<ul style="list-style-type: none"> DHLGH report of the implementation of the measures contained in the Habitats Directive - as required by Article 17 of the Directive (every 6 years). DHLGH National Birds Directive Monitoring Report for the under Article 12 (every 3 years) Consultations with the NPWS (see Section 10.4) 	<ul style="list-style-type: none"> Where condition of European sites is found to be deteriorating this will be investigated with the Regional Assembly and the DHLGH to establish if the pressures are related to Plan actions / activities. A tailored response will be developed in consultation with these stakeholders in such a circumstance.
		<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Require all local level land use plans to include ecosystem services and green/blue infrastructure provisions in their land use plans and as a minimum, to have regard to the required targets in relation to the conservation of European sites, other nature conservation sites, ecological networks, and protected species Implement and review, as relevant, County Galway Heritage and Biodiversity Plan 2017-2022 	<ul style="list-style-type: none"> Internal review of local land use plans 	<ul style="list-style-type: none"> Review internal systems
		<ul style="list-style-type: none"> SEAs and AAs as relevant for new Council policies, plans, programmes etc. 	<ul style="list-style-type: none"> Screen for and undertake SEA and AA as relevant for new Council policies, plans, programmes etc. 	<ul style="list-style-type: none"> Internal monitoring of preparation of local land use plans 	<ul style="list-style-type: none"> Review internal systems
		<ul style="list-style-type: none"> Status of water quality in the County's water bodies 	<ul style="list-style-type: none"> Included under Water below 	<ul style="list-style-type: none"> Included under Water below 	<ul style="list-style-type: none"> Included under Water below
		<ul style="list-style-type: none"> Compliance of planning permissions with Plan measures providing for the protection of Biodiversity and flora and fauna – see Chapter 10 “Natural Heritage, Biodiversity and Green Infrastructure” 	<ul style="list-style-type: none"> 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 10 “Natural Heritage, Biodiversity and Green Infrastructure” 	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission 	<ul style="list-style-type: none"> Review internal systems
Population and Human Health	PHH	<ul style="list-style-type: none"> Implementation of Plan measures relating to the promotion of economic growth as provided for by Chapter 5 “Economic, Enterprise and Retail” 	<ul style="list-style-type: none"> For review of progress on implementing Plan objectives to demonstrate successful implementation of measures relating to the promotion of economic growth as provided for by Chapter 5 “Economic, Enterprise and Retail” By 2020 all citizens will have access to speeds of 30Mbps, and that 50% of citizens will be subscribing to speeds of 100Mbps (Also relevant to Material Assets) 	<ul style="list-style-type: none"> Internal review of progress on implementing Plan objectives Consultations with DECC (see Section 10.4) 	<ul style="list-style-type: none"> Review internal systems Consultations with DECC

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Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
		<ul style="list-style-type: none"> Number of spatial concentrations of health problems arising from environmental factors resulting from development permitted under the Plan 	<ul style="list-style-type: none"> No spatial concentrations of health problems arising from environmental factors as a result of implementing the Plan 	<ul style="list-style-type: none"> Consultations with the Health Service Executive and EPA 	<ul style="list-style-type: none"> Consultations with the Health Service Executive and EPA
		<ul style="list-style-type: none"> Proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures 	<ul style="list-style-type: none"> Increase in the proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures 	<ul style="list-style-type: none"> CSO data Monitoring of Galway County Council's Climate Change Adaptation Strategy 2019-2024 	<ul style="list-style-type: none"> Where proportion of population shows increase in private car use above CSO 2016 figures, the Council will coordinate with the Regional Assembly, the DHLGH, DECC and NTA to develop a tailored response.
		<ul style="list-style-type: none"> Number of spatial plans that include specific green infrastructure mapping 	<ul style="list-style-type: none"> Require all local level land use plans to include specific green infrastructure mapping 	<ul style="list-style-type: none"> Internal review of local land use plans 	<ul style="list-style-type: none"> Review internal systems
Soil (and Land)	S	<ul style="list-style-type: none"> Proportion of population growth occurring on infill and brownfield lands compared to greenfield (also relevant to Material Assets) 	<ul style="list-style-type: none"> Maintain built surface cover nationally to below the EU average of 4% as per the NPF In accordance with National Policy Objectives 3c of the National Planning Framework, a minimum of 30% of the housing growth targeted in any settlement is to be delivered within the existing built-up footprint of the settlement To map brownfield and infill land parcels across the County 	<ul style="list-style-type: none"> EPA Geoportal Compilation of greenfield and brownfield development for the DHLGH AA/Screening for AA for each application 	<ul style="list-style-type: none"> Where the proportion of growth on infill and brownfield sites is not keeping pace with the targets set in the NPF and the RSES, the Council will liaise with the Regional Assembly to establish reasons and coordinate actions to address constraints to doing so.
		<ul style="list-style-type: none"> Instances where contaminated material generated from brownfield and infill must be disposed of 	<ul style="list-style-type: none"> Dispose of contaminated material in compliance with EPA guidance and waste management requirements 	<ul style="list-style-type: none"> Internal review of grants of permission where contaminated material must be disposed of 	<ul style="list-style-type: none"> Consultations with the EPA and Development Management
		<ul style="list-style-type: none"> Environmental assessments and AAs as relevant for applications for brownfield and infill development prior to planning permission 	<ul style="list-style-type: none"> Screen for and undertake environmental assessments and AA as relevant for applications for brownfield and infill development prior to planning permission 	<ul style="list-style-type: none"> Internal monitoring of grants of permission 	<ul style="list-style-type: none"> Review internal systems
Water	W	<ul style="list-style-type: none"> Status of water bodies as reported by the EPA Water Monitoring Programme for the WFD 	<ul style="list-style-type: none"> Not to cause deterioration in the status of any surface water or affect the ability of any surface water to achieve 'good status' Implementation of the objectives of the River Basin Management Plan 	<ul style="list-style-type: none"> EPA Monitoring Programme for WFD compliance 	<ul style="list-style-type: none"> Where water bodies are failing to meet at least good status this will be investigated with the DHLGH Water Section, the EPA Catchment Unit, the Regional Assembly and, as relevant, Irish Water to establish if the pressures are related to Plan actions / activities. A tailored response will be developed in consultation with these stakeholders in such a circumstance. Where planning applications are rejected due to insufficient capacity in the WWTP or failure of the WWTP to meet Emission Limit Values, the Council will consider whether it is necessary to coordinate a response with the Regional Assembly, EPA and Irish Water to achieve the necessary capacity.

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Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
		<ul style="list-style-type: none"> Number of incompatible developments permitted within flood risk areas 	<ul style="list-style-type: none"> Minimise developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk 	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission 	<ul style="list-style-type: none"> Where planning applications are being permitted on flood zones, the Council will ensure that such grants are in compliance with the Flood Risk Management Guidelines and include appropriate flood risk mitigation and management measures.
Material Assets	MA	<ul style="list-style-type: none"> Programmed delivery of Irish Water infrastructure for all key growth towns in line with Irish Water Investment Plan and prioritisation programme to ensure sustainable growth can be accommodated Number of new developments granted permission which can be adequately and appropriately served with waste water treatment over the lifetime of the Plan 	<ul style="list-style-type: none"> 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 Facilitate, as appropriate, Irish Water in developing water and wastewater infrastructure See also targets relating to greenfield and brownfield development of land under Soil and broadband under Population and Human Health 	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission Consultations with the Irish Water (see Section 10.4) DHLGH in conjunction with Local Authorities 	<ul style="list-style-type: none"> Where planning applications are rejected due to insufficient capacity in the WWTP or failure of the WWTP to meet Emission Limit Values, the Council will consider whether it is necessary to coordinate a response with the Regional Assembly, EPA and Irish Water to achieve the necessary capacity.
		<ul style="list-style-type: none"> Proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures 	<ul style="list-style-type: none"> Increase in the proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures 	<ul style="list-style-type: none"> CSO data Monitoring of Galway County Council's Climate Change Adaptation Strategy 2019-2024 	<ul style="list-style-type: none"> Where proportion of population shows increase in private car use above CSO 2016 figures, the Council will coordinate with the Regional Assembly, the DHLGH, DECC and NTA to develop a tailored response.
Air	A	<ul style="list-style-type: none"> Proportion of journeys made by private fossil fuel-based car compared to 2016 National Travel Survey levels of 74% NO_x, SO_x, PM10 and PM2.5 as part of Ambient Air Quality Monitoring 	<ul style="list-style-type: none"> Decrease in proportion of journeys made by private fossil fuel-based car compared to 2016 National Travel Survey levels Improvement in Air Quality trends, particularly in relation to transport related emissions of NO_x and particulate matter 	<ul style="list-style-type: none"> CSO data Data from the National Travel Survey EPA Air Quality Monitoring Consultations with Department of Transport and Department of Environment, Climate and Communications (see Section 10.4) 	<ul style="list-style-type: none"> Where proportion of population shows increase in private car use above CSO 2016 figures, Council will coordinate with the Regional Assembly, DHLGH, DECC and NTA to develop a tailored response. See also entry under Population and human health above
Climatic Factors	C	<ul style="list-style-type: none"> Implementation of Plan measures relating to climate reduction targets 	<ul style="list-style-type: none"> For review of progress on implementing Plan objectives to demonstrate successful implementation of measures relating to climate reduction targets 	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission 	<ul style="list-style-type: none"> Review internal systems
		<ul style="list-style-type: none"> A competitive, low-carbon, climate-resilient and environmentally sustainable economy 	<ul style="list-style-type: none"> Contribute towards transition to a competitive, low-carbon, climate-resilient and environmentally sustainable economy by 2050 	<ul style="list-style-type: none"> Monitoring of Galway County Council's Climate Change Adaptation Strategy 2019-2024 EPA Annual National Greenhouse Gas Emissions Inventory reporting Climate Action Regional Office 	<ul style="list-style-type: none"> Where targets are not achieved, the Council will liaise with the Regional Assembly and the Eastern and Midlands Climate Action Regional Office to establish reasons and develop solutions.
		<ul style="list-style-type: none"> Share of renewable energy in transport 	<ul style="list-style-type: none"> Contribute towards the target of the Renewable Energy Directive (2009/28/EC), 		

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Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action	
			for all Member States to reach a 10% share of renewable energy in transport by facilitating the development of electricity charging and transmission infrastructure, in compliance with the provisions of the Plan	<ul style="list-style-type: none"> • Consultations with DECC (at monitoring evaluation - see Section 10.4) 		
		<ul style="list-style-type: none"> • Carbon dioxide (CO₂) emissions across the electricity generation, built environment and transport sectors 	<ul style="list-style-type: none"> • Contribute towards the target of aggregate reduction in carbon dioxide (CO₂) emissions of at least 80% (compared to 1990 levels) by 2050 across the electricity generation, built environment and transport sectors 			
		<ul style="list-style-type: none"> • Energy consumption, the uptake of renewable options and solid fuels for residential heating 	<ul style="list-style-type: none"> • To promote reduced energy consumption and support the uptake of renewable options and a move away from solid fuels for residential heating 			
		<ul style="list-style-type: none"> • Proportion of journeys made by private fossil fuel-based car compared to 2016 levels 	<ul style="list-style-type: none"> • Decrease in the proportion of journeys made by residents of the County using private fossil fuel-based car compared to 2016 levels 	<ul style="list-style-type: none"> • CSO data • Monitoring of Galway County Council's Climate Change Adaptation Strategy 2019-2024 		<ul style="list-style-type: none"> • Where trends toward carbon reduction are not recorded, the Council will liaise with the Regional Assembly and the Eastern and Midlands Climate Action Regional Office to establish reasons and develop solutions.
		<ul style="list-style-type: none"> • Proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures 	<ul style="list-style-type: none"> • Increase in the proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures 	<ul style="list-style-type: none"> • CSO data • Monitoring of Galway County Council's Climate Change Adaptation Strategy 2019-2024 		<ul style="list-style-type: none"> • Where proportion of population shows increase in private car use above CSO 2016 figures, the Council will coordinate with the Regional Assembly, the DHLGH, DECC and NTA to develop a tailored response.
Cultural Heritage	CH	<ul style="list-style-type: none"> • Percentage of entries to the Record of Monuments and Places, and the context these entries within the surrounding landscape where relevant, protected from adverse effects resulting from development which is granted permission under the Plan 	<ul style="list-style-type: none"> • Protect entries to the Record of Monuments and Places, and the context of these entries within the surrounding landscape where relevant, from adverse effects resulting from development which is granted permission under the Plan 	<ul style="list-style-type: none"> • Internal monitoring of likely significant environmental effects of grants of permission 	<ul style="list-style-type: none"> • Where monitoring reveals visitor or development pressure is causing negative effects on designated archaeological or architectural heritage, the Council will work with Regional Assembly, Fáilte Ireland and the National Monuments Service and other stakeholders, as relevant, to address pressures through additional mitigation.. 	
		<ul style="list-style-type: none"> • Percentage of entries to the Record of Protected Structures and Architectural Conservation Areas and their context protected from significant adverse effects arising from new development granted permission under the Plan 	<ul style="list-style-type: none"> • Protect entries to the Record of Protected Structures and Architectural Conservation Areas and their context from significant adverse effects arising from new development granted permission under the Plan 	<ul style="list-style-type: none"> • Consultation with DHLGH (see Section 10.4). 		
Landscape	L	<ul style="list-style-type: none"> • Number of developments permitted that result in avoidable adverse visual impacts on the landscape, especially with regard to landscape and amenity designations included in Land Use Plans, resulting from development which is granted permission under the Plan 	<ul style="list-style-type: none"> • No developments permitted which result in avoidable adverse visual impacts on the landscape, especially with regard to landscape and amenity designations included in Land Use Plans, resulting from development which is granted permission under the Plan 	<ul style="list-style-type: none"> • Internal monitoring of likely significant environmental effects of grants of permission 	<ul style="list-style-type: none"> • Where monitoring reveals developments permitted which result in avoidable adverse visual impacts on the landscape, the Council will re-examine Plan provisions and the effectiveness of their implementation 	

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
SEA Directive (2001/42/EC)	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Carry out an 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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)	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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)	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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)	<ul style="list-style-type: none"> 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. 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. 	<ul style="list-style-type: none"> 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). 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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 Nitrates Directive (91/676/EC)	<ul style="list-style-type: none"> Reducing water pollution caused or induced by nitrates from agricultural sources and – preventing further such pollution. 	<p>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:</p> <ul style="list-style-type: none"> a limit on the amount of livestock manure applied to the land each year set periods when land spreading is prohibited due to risk 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all

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		<ul style="list-style-type: none"> set capacity levels for the storage of livestock manure 	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)	<ul style="list-style-type: none"> 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. 	<p>The IPPC Directive is based on several principles:</p> <ul style="list-style-type: none"> an integrated approach best available techniques, flexibility; and public participation 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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	<ul style="list-style-type: none"> 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). 	<ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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)	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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))	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.
Alternative Fuels Infrastructure Directive (2014/94/EU)	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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)	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and

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		<ul style="list-style-type: none"> 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. 	<p>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.</p>
EU Seveso Directive (2012/18/EU)	<ul style="list-style-type: none"> 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. 	<p>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:</p> <ul style="list-style-type: none"> 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. 	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>
European Union Biodiversity Strategy to 2020	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Outlines six targets and twenty actions to aid European Union in halting the loss to biodiversity and eco-system services. The six targets cover: <ul style="list-style-type: none"> Full implementation of EU nature legislation to protect biodiversity Maintaining, enhancing and protecting for ecosystems, and green infrastructure Ensuring sustainable agriculture, and forestry Sustainable management of fish stocks Reducing invasive alien species Addressing the global need to contribute towards averting global biodiversity loss 	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>
Biodiversity Strategy for 2030 - Bringing nature back into our lives (European Commission, 2020)	<ul style="list-style-type: none"> The EU's biodiversity strategy for 2030 is a comprehensive, ambitious and long-term plan to protect nature and reverse the degradation of ecosystems. The strategy aims to put Europe's biodiversity on a path to recovery by 2030, and contains specific actions and commitments. 	<p>The Strategy contains specific commitments and actions to be delivered by 2030, including:</p> <ul style="list-style-type: none"> Establishing a larger EU-wide network of protected areas on land and at sea, building upon existing Natura 2000 areas, with strict protection for areas of very high biodiversity and climate value. An EU Nature Restoration Plan - a series of concrete commitments and actions to restore degraded ecosystems across the EU by 2030, and manage them sustainably, addressing the key drivers of biodiversity loss. A set of measures to enable the necessary transformative change: setting in motion a new, strengthened governance framework to ensure better implementation and track progress, improving knowledge, financing and investments and better respecting nature in public and business decision-making. Measures to tackle the global biodiversity challenge, demonstrating that the EU is ready to lead by example towards the successful adoption of an ambitious global biodiversity framework under the Convention on Biological Diversity. 	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>
EU Green Infrastructure Strategy	<p>Aims to create a robust enabling framework in order to promote and facilitate Green Infrastructure (GI) projects.</p>	<ul style="list-style-type: none"> 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. 	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>
UNESCO (1972) The Convention for the Protection of the World Cultural and Natural Heritage	<ul style="list-style-type: none"> links concepts of nature conservation and the preservation of cultural properties; and recognizes the way in which people interact with nature, and the fundamental need to preserve the balance between the two. 	<ul style="list-style-type: none"> sets out the duties of States Parties in identifying potential sites and their role in protecting and preserving them; each country pledges to conserve not only the World Heritage sites situated on its territory, but also to protect its national heritage; encourages to integrate the protection of the cultural and natural heritage into regional planning programmes, set up staff and services at their sites, undertake scientific and technical conservation research and adopt measures which give this heritage a function in the day-to-day life of the community. 	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>

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UN (1992) The Convention on Biological Diversity	An overall objective is to develop national strategies for the conservation and sustainable use of biological diversity.	The Convention has three main goals: <ul style="list-style-type: none"> • the conservation of biological diversity (or biodiversity); • the sustainable use of its components; and • the fair and equitable sharing of benefits arising from genetic resources. 	framework for environmental protection and management. Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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 (1992) Framework Convention on Climate Change	It is aimed at stabilising greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.	The Convention acknowledges the vulnerability of all countries to the effects of climate change and calls for special efforts to ease the consequences, especially in developing countries which lack the resources to do so on their own.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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 (ECCP II), Paris climate conference (COP21) 2015 (Paris Agreement)	<p>The UN Kyoto Protocol set of policy measures to reduce greenhouse gas emissions.</p> <p>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.</p> <p>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.</p>	<ul style="list-style-type: none"> • The Kyoto Protocol is implemented through the European Climate Change Programme (ECCP II). • EU member states implement measures to improve on or compliment the 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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 2020 Climate and Energy Package	<ul style="list-style-type: none"> • 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. 	<p>Four pieces of complimentary legislation:</p> <ul style="list-style-type: none"> • 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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	<ul style="list-style-type: none"> • 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. 	<p>To meet the targets, the European Commission has proposed the following policies for 2030:</p> <ul style="list-style-type: none"> • 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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)	<ul style="list-style-type: none"> • 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 (PM₁₀) or up to five years (NO₂, benzene) for complying with limit values, based on conditions and the assessment by the European Commission. 	<ul style="list-style-type: none"> • 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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

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	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Aims to promote increased cooperation between the Member States in reducing air pollution. 	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.	<p>The Directive requires competent authorities in Member States to:</p> <ul style="list-style-type: none"> 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. <p>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.</p>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.
Floods Directive (2007/60/EC)	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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)	<ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> The Drinking Water Abstraction Directive Sampling Drinking Water Directive Exchange of Information on Quality of Surface Freshwater Directive Shellfish Directive Freshwater Fish Directive Groundwater (Dangerous Substances) Directive Dangerous Substances Directive 	<ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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)	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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)	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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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Urban Waste Water Treatment Directive (91/271/EEC)	<ul style="list-style-type: none"> This Directive concerns the collection, treatment and discharge of urban waste water and the treatment and 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. 	<ul style="list-style-type: none"> Notify consumers when remedial action is being undertaken except where the competent authorities consider the non-compliance with the parametric value to be trivial. Urban waste water entering collecting systems shall before discharge, be subject to secondary treatment. 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. 	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>
Environmental Liability Directive (2004/35/EC) as amended by Directive 2006/21/EC, Directive 2009/31/EC and Directive 2013/30/EU	<ul style="list-style-type: none"> Establish a framework of environmental liability based on the 'polluter-pays' principle, to prevent and remedy environmental damage. 	<ul style="list-style-type: none"> 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. 	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>
European Convention on the Protection of the Archaeological Heritage (Valletta 1992)	<ul style="list-style-type: none"> 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. 	<p>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.</p>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>
Convention of the Protection of the Architectural Heritage of Europe (Granada 1995)	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>
ICOMOS (2011) Principles for the Conservation of Industrial Heritage Sites, Structures, Areas and Landscapes ('Dublin Principles')	<ul style="list-style-type: none"> It is aimed to assist in the documentation, protection, conservation and appreciation of industrial heritage as part of the heritage of human societies around the World. 	<ul style="list-style-type: none"> (I) Document and understand industrial heritage structures, sites, areas and landscapes and their values; (II) Ensure effective protection and conservation of the industrial heritage structures, sites, areas and landscapes; 	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all</p>

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		<ul style="list-style-type: none"> (III) Conserve and maintain the industrial heritage structures, sites, areas and landscapes; and (IV) Present and communicate the heritage dimensions and values of industrial structures, sites, areas and landscapes to raise public and corporate awareness, and support training and research. 	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)	<ul style="list-style-type: none"> 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. 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. 	<ul style="list-style-type: none"> 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 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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 Landscape Convention 2000	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Promote protection, management and planning of landscapes. Organise European co-operation on landscape issues. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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)	<p>It identifies three key objectives:</p> <ul style="list-style-type: none"> 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 	<p>Four so called "enablers" will help Europe deliver on these objectives (goals):</p> <ul style="list-style-type: none"> 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. <p>Two additional horizontal priority objectives complete the programme:</p> <ul style="list-style-type: none"> To make the Union's cities more sustainable. To help the Union address international environmental and climate challenges more effectively. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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)	<p>The convention has three main aims:</p> <ul style="list-style-type: none"> 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 	<p>The Parties under the convention recognise the intrinsic value of nature, which needs to be preserved and passed to future generations, they also:</p> <ul style="list-style-type: none"> 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 Caucasus. 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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)	<p>The overall goals of the project are twofold:</p> <ul style="list-style-type: none"> 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. 	<p>The Bali Action Plan is centred on four main building Blocks:</p> <ul style="list-style-type: none"> mitigation adaptation technology financing 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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)	<p>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:</p> <ul style="list-style-type: none"> Mitigation Transparency of actions 	<p>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.</p>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all

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	<ul style="list-style-type: none"> Technology Finance Adaptation Forests Capacity building 		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.
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.	<ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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)	<ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> Registration, Evaluation, Authorisation; and Restriction of chemicals. REACH also aims to enhance innovation and competitiveness of the EU chemicals industry.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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	<ul style="list-style-type: none"> The objective of the Stockholm Convention is to protect human health and the environment from persistent organic pollutants. 	<ul style="list-style-type: none"> Prohibit and/or eliminate the production and use, as well as the import and export, of the intentionally produced Persistent Organic Pollutants (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 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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: <ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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: <ul style="list-style-type: none"> • 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: <ol style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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 Parliament resolutions, including the European Green Deal (EGD) 2020	The deal sets out how to make Europe the first climate-neutral continent by 2050, boosting the economy, improving people's quality of life, caring for nature and leaving no one behind.	<ul style="list-style-type: none"> • It sets out a roadmap with actions to boost the efficient use of resources by moving to a clean, circular economy, restore biodiversity and cut pollution. • It outlines investments required, financing tools available and explains how to ensure a just and inclusive transition. • In order to meet the goal to become climate neutral by 2050 as part of the European Green Deal, the European Union (EU) Commission proposed on 4th March 2020 to bring about the first European Climate Law and legally bind the target of net zero greenhouse gas emissions by 2050. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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 (2018) Clean Air Policy Package	Aims to substantially reduce air pollution across the EU.	The proposed strategy sets out objectives for reducing the health and environmental impacts of air pollution by 2030, and contains legislative proposals to implement stricter standards for emissions and air pollution.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.
Leaders Pledge for Nature 2020	Political leaders (including Taoiseach Michael Martin) participating in the United Nations Summit on Biodiversity in September 2020, representing 75 countries from all regions and the European Union, have committed to reversing biodiversity loss by 2030.	As part of the UN Decade of Action to achieve sustainable development, the leaders commit to achieve the vision of Living in Harmony with Nature by 2050 by undertaking ten actions, including: <ul style="list-style-type: none"> • Putting biodiversity, climate, and the environment at the heart of COVID-19 recovery strategies and investments as well as national and international development and cooperation; • Developing and implementing an ambitious and transformational post-2020 global biodiversity framework for adoption at the 15th meeting of the Conference of the Parties (COP 15) to the UN Convention on Biological Diversity (CBD) in Kunming, China, as a key instrument to reach the SDGs; • Raising ambition and aligning domestic climate policies with the Paris Agreement on climate change, with enhanced nationally determined contributions (NDCs) and long-term strategies consistent with the temperature goals of the Paris Agreement, and the objective of net zero greenhouse gas (GHG) emissions by mid-century, and strengthen climate resilience of economies and ecosystems; and • Mainstream biodiversity into relevant sectoral and cross-sectoral policies at all levels, including in food production, agriculture, fisheries and forestry, energy, tourism, infrastructure and extractive industries, and trade and supply chains, as well as into key international agreements and processes. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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 and the National Development Plan (2018-2027)	<ul style="list-style-type: none"> • 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: <ol style="list-style-type: none"> 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 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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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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	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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)	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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). 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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 (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011, as amended)	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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)	<ul style="list-style-type: none"> The purpose of these Regulations is to support the achievement of favourable conservation status for freshwater pearl mussels 	<ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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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Legislation, Plan, etc.	Summary of high-level aim/ purpose/ objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
<p>European Communities Environmental Objectives (Groundwater) Regulations 2010 (S.I. No. 366 of 2010), as amended (S.I. No. 9 of 2016)</p>	<ul style="list-style-type: none"> 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. 	<p>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.</p> <ul style="list-style-type: none"> 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. 	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>
<p>European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2014 (S.I. No. 31 of 2014)</p>	<ul style="list-style-type: none"> 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 	<p>The Regulations include measures such as:</p> <ul style="list-style-type: none"> 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. 	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>
<p>Climate Action and Low Carbon Development Act 2015</p>	<ul style="list-style-type: none"> 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. 	<p>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:</p> <ul style="list-style-type: none"> 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, 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. 	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>
<p>Climate Action Plan 2021</p>	<ul style="list-style-type: none"> The Climate Action Plan 2021 provides a detailed plan for taking decisive action to achieve a 51% reduction in overall greenhouse gas emissions by 2030 and setting Ireland on a path to reach net-zero emissions by no later than 2050, as committed to in the Programme for Government and set out in the Climate Act 2021. 	<p>The Plan lists the actions needed to deliver on our climate targets and sets indicative ranges of emissions reductions for each sector of the economy. It will be updated annually, including in 2022, to ensure alignment with Ireland's legally binding economy-wide carbon budgets and sectoral ceilings.</p>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>
<p>The Sustainable Development Goals National Implementation Plan (2018 – 2020)</p>	<ul style="list-style-type: none"> 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 an 'SDG Matrix' which identifies the responsible Government Departments for each of the 169 targets. It also includes an 'SDG Policy Map' indicating the relevant national policies for each of the targets. 	<p>The Plan identifies four strategic priorities to guide implementation:</p> <ul style="list-style-type: none"> 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. 	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>
<p>Infrastructure and Capital Investment Plan (2016-2021)</p>	<ul style="list-style-type: none"> €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. 	<ul style="list-style-type: none"> 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. 	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and</p>

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Legislation, Plan, etc.	Summary of high-level aim/ purpose/ objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
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 European 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).	<ul style="list-style-type: none"> 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. 	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. Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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)	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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)	<ul style="list-style-type: none"> 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. 	<p>This document sets out five strategic goals, reflecting the key dimensions of the renewable energy challenge to 2020:</p> <ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.	<p>2030 will represent a significant milestone, meaning:</p> <p>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.</p>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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)	<ul style="list-style-type: none"> 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. 	<p>National climate policy in Ireland:</p> <ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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 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.	<ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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; <i>"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."</i>	<ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.
All Island Grid Study 2008	<ul style="list-style-type: none"> The All Island Grid Study is the first comprehensive assessment of the ability of the electrical power system and, as part of that, the transmission network ("the grid") on the island of Ireland to absorb large amounts of electricity produced from renewable energy sources. The objective of this five-part study is to assess the technical feasibility and the relative costs and benefits associated with various scenarios for increased shares of electricity sourced from renewable energy in the all island power system. 	<p>Key conclusions of the study:</p> <ul style="list-style-type: none"> The presented results indicate that the differences in cost between the highest cost and the lowest cost portfolios are low (7%), given the assumptions made and costs included in the Study. All but the high coal-based portfolio lead to significant reductions of CO₂ emissions compared to portfolio 1 All but the high coal-based portfolio lead to reductions on the dependency of the all island system on fuel and electricity imports. The limitations of the study may overstate the technical feasibility of the portfolios analysed and could impact the costs and benefits resulting. Further work is required to understand the extent of such impact. Timely development of the transmission networks, requiring means to address the planning challenge, is a precondition for implementation of the portfolios considered. Market mechanisms must facilitate the installation of complementary, i.e. flexible, dispatchable plant, so as to maintain adequate levels of system security. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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)	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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]	<ul style="list-style-type: none"> 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. 	<p>The key objectives of the plan are to:</p> <ul style="list-style-type: none"> 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 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 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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 Strategic Plan for Aquaculture Development (2014-2020)	Vision: <i>"Aquaculture in RC is economically, socially and ecologically sustainable, with a developed infrastructure, strong human potentials and an organized"</i>	General development and growth objectives of marine and freshwater aquaculture (2014 – 2020):	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-

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	<p>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."</p>	<ul style="list-style-type: none"> 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 	<p>combination effects (see Section 8.2) may arise. 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.</p>
<p>Construction 2020, A Strategy for a Renewed Construction Sector</p>	<ul style="list-style-type: none"> 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. 	<p>This Strategy therefore addresses issues including:</p> <ul style="list-style-type: none"> 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. 	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>
<p>Sustainable Development: A Strategy for Ireland (1997)</p>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>
<p>National Landscape Strategy for Ireland 2015-2025 and National Landscape Character Assessment (pending preparation)</p>	<ul style="list-style-type: none"> 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: <i>"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."</i> 	<p>The objectives of the National Landscape Strategy are to:</p> <ul style="list-style-type: none"> 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. 	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>
<p>Ireland's National Waste Policy 2020 – 2025</p>	<p>The Policy sets out new targets to tackle waste and move towards a circular economy.</p>	<p>The plan includes halving our food waste by 2030, the introduction of a deposit and return scheme for plastic bottles and cans, a ban on certain single use plastics from July 2021, and a levy on disposable cups. Other measures include applying green criteria and circular economy principles in all public procurement, a waste recovery levy to encourage recycling, and ensuring all packaging is reusable or recyclable by 2030.</p>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>
<p>National Hazardous Waste Management Plan (EPA) 2014-2020</p>	<p>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 included as priorities for the revised Plan period:</p> <ul style="list-style-type: none"> To prevent and reduce the generation of hazardous waste by industry and society generally; 	<p>The revised Plan makes 27 recommendations under the following topics:</p> <ul style="list-style-type: none"> Prevention Collection Self-sufficiency Regulation Legacy issues North-south cooperation Guidance and awareness Implementation 	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>

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	<ul style="list-style-type: none"> 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. 		framework for environmental protection and management.
Ministerial Guidelines such as Sustainable Rural Housing Guidelines and Flood Risk Management Guidelines	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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	<ul style="list-style-type: none"> The vision is: <i>“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.”</i> 	<p>These four goals are interlinked, interdependent and mutually supportive:</p> <ul style="list-style-type: none"> 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 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.	<ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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)	<ul style="list-style-type: none"> Outlines a policy for how a sustainable travel and transport system can be achieved. Sets out five key goals: <ul style="list-style-type: none"> To reduce overall travel demand. To maximise the efficiency of the transport network. To reduce reliance on fossil fuels. To reduce transport emissions. To improve accessibility to transport. 	<ul style="list-style-type: none"> Others lower level aims include: <ul style="list-style-type: none"> 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 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 Improving the fuel efficiency of motorised transport through improved fleet structure, energy efficient driving and alternative technologies strengthening institutional arrangements to deliver the targets 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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	<ul style="list-style-type: none"> 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. 	<p>The three priorities stated in SFILT are:</p> <ul style="list-style-type: none"> 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. <p>In delivering on the steady state maintenance objective set out in SFILT, the Plan includes for:</p> <ul style="list-style-type: none"> 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 To the extent within the Authority’s remit, support for the operation of the existing rail network within the GDA. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.
Delivering a Sustainable Energy Future for Ireland – The Energy	<ul style="list-style-type: none"> White paper setting out a framework for delivering a sustainable energy future in Ireland. Outlines strategic Goals for: 	<p>The underpinning Strategic Goals are:</p> <ul style="list-style-type: none"> Ensuring that electricity supply consistently meets demand Ensuring the physical security and reliability of gas supplies to Ireland 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-

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Policy Framework 2007 – 2020 (2007)	<ul style="list-style-type: none"> Security of Supply Sustainability of Energy Competitiveness of Energy Supply 	<ul style="list-style-type: none"> 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 	combination effects (see Section 8.2) may arise. 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	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.
2030 Climate and Energy Framework	Adopted October 2014, includes EU-wide targets and policy objectives for the period from 2021 to 2030.	Key targets for 2030: <ul style="list-style-type: none"> At least 40% cut in greenhouse gas emissions (from 1990 levels). At least 32% share for renewable energy. This was revised upwards in 2018. At least 32.5% improvement in energy efficiency. This was revised upwards in 2018. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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)	<ul style="list-style-type: none"> 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.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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)	<ul style="list-style-type: none"> This is the second National Energy Efficiency Action Plan for Ireland. 	<ul style="list-style-type: none"> The Plan reviews the original 90 actions outlined in the first Plan and updates/renews/removes them as appropriate. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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 & Climate Plan (NECP) 2021 – 2030	Ireland's National Energy & Climate Plan (NECP) 2021-2030 takes into account energy and climate policies developed up to 2019, the levels of demographic and economic growth identified in the National Planning Framework - Project 2040 and includes all of the climate and energy measures as set out in the National Development Plan 2018-2027.	The planned policies and measures that were identified up to the end of 2019, collectively deliver a 30% reduction by 2030 in non-Emission Trading Systems greenhouse gas emissions (from 2005 levels). Ireland is committed to achieving a 7% annual average reduction in greenhouse gas emissions between 2021 and 2030. The NECP was drafted in line with the current EU effort-sharing approach, before the Government committed to this higher level of ambition, and therefore does not reflect this higher commitment. Ireland is currently developing those policies and measures and intends to integrate the revision of the NECP into the process which will be required for increasing the overall EU contribution under the Paris Agreement.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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	<ul style="list-style-type: none"> The act provides protection and conservation of wild flora and fauna. 	<ul style="list-style-type: none"> 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 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise.

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Actions for Biodiversity (2017-2021) Ireland's National Biodiversity Plan	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 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. 	<p>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.</p> <p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>
National Broadband Plan (2012)	<ul style="list-style-type: none"> Sets out the strategy to deliver high speed broadband throughout Ireland. 	<p>The Plan sets out:</p> <ul style="list-style-type: none"> 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. 	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>
<p>European Communities (Water Policy) Regulations of 2003 (SI 722 of 2003)</p> <p>European Communities (Water Policy) Regulations of 2003 (SI 350 of 2014)</p> <p>European Communities Environmental Objectives (Surface waters) Regulations of 2009 (SI 272 of 2009)</p>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Requires the public to be informed and consulted on the Plan and for progress reports to be published on River Basin Districts (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. 	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>
<p>European Communities Environmental Objectives (Groundwater) Regulations of 2010 (SI 9 of 2010)</p>	<ul style="list-style-type: none"> Transpose the requirements of the Groundwater Directive 2006/118/EC into Irish Legislation. 	<ul style="list-style-type: none"> 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. 	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>
Water Pollution Acts 1977 to 1990	<ul style="list-style-type: none"> The Water Pollution Acts allow Local Authorities the authority regulate and supervise actions relating to water in their division. 	<p>The Water Pollution Acts enable local authorities to:</p> <ul style="list-style-type: none"> 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. 	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>

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<p>Water Services Act 2007</p> <p>Water Services (Amendment) Act 2012</p> <p>Water Services Act (No. 2) 2013</p>	<ul style="list-style-type: none"> 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 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. 	<p>Key strategic objectives include:</p> <ul style="list-style-type: none"> 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 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. 	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>
<p>Irish Water's Water Services Strategic Plan 2015 and associated Proposed Capital Investment Plan (2014-2016)</p>	<ul style="list-style-type: none"> 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. 	<p>Six strategic objectives as follows:</p> <ul style="list-style-type: none"> 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. 	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>
<p>Raised Bog SAC Management Plan and Review of Raised Bog Natural Heritage Areas</p>	<ul style="list-style-type: none"> Aims to meet nature conservation obligations while having regard to national and local economic, social and cultural needs 	<ul style="list-style-type: none"> 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. 	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>
<p>Food Harvest 2020</p>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Seeks for the improvement of all agricultural sectors at all levels in terms of sustainability, environmental consideration and marketing development. 	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>
<p>Agri-vision 2015 Action Plan</p>	<p>Outlines the vision for agricultural industry to improve competitiveness and response to market demand while respecting and enhancing the environment</p>	<p>not applicable</p>	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.</p>
<p>Rural Environmental Protection Scheme (REPS)</p> <p>Agri-Environmental Options Scheme (AEOS)</p>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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. 	<p>Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and</p>

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Green, Low-Carbon, Agri-environment Scheme (GLAS)			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 quality of life in rural areas	At a more detailed level, the programme also: <ul style="list-style-type: none"> • 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 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 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.
Realising our Rural Potential: The Action Plan for Rural Development 2017	The Plan aims to unlock the potential of rural Ireland through a framework of supports at national and local level which will ensure that people who live in rural areas have increased opportunities for employment locally, and access to public services and social networks that support a high quality of life.	The Plan contains 276 actions across five key pillars. The five pillars are: <ul style="list-style-type: none"> • Supporting Sustainable Communities, • Supporting Enterprise and Employment, • Maximising our Rural Tourism and Recreation Potential, • Fostering Culture and Creativity in Rural Communities, and • Improving Rural Infrastructure and Connectivity. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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 Forestry Programme (2014-2020)	<ul style="list-style-type: none"> • Represents Ireland's proposals for 100% State aid funding for a new Forestry Programme for the period 2014 – 2020. 	Measures include the following: <ul style="list-style-type: none"> • 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 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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	<ul style="list-style-type: none"> • The River Basin Management Plan sets out the measures planned to maintain and improve the status of waters. 	<ul style="list-style-type: none"> • 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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: <ul style="list-style-type: none"> • 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 responsibly. • 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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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Flood Risk Management Plans arising from National Catchment Flood Risk Assessment and Management Programme	<ul style="list-style-type: none"> 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.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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	<p>The Draft Bioenergy Plan sets out a vision as follows:</p> <ul style="list-style-type: none"> 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. 	<p>Three high level goals, of equal importance, based on the concept of sustainable development are identified:</p> <ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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 Renewable Electricity Policy and Development Framework (DCCAE) 2016	<p>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.</p>	<p>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.</p>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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 (DTAS) 2017- 2030	<p>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.</p>	<p>Targets for alternative fuel infrastructure include the following:</p> <ul style="list-style-type: none"> AFV forecasts Electricity targets Natural gas (CNG, LNG) targets Hydrogen targets Biofuels targets LPG targets Synthetic and paraffinic fuels targets 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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)	<p>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.</p>	<p>Food Wise 2025 identifies ambitious and challenging growth projections for the industry over the next ten years including:</p> <ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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 Policy Framework for Alternative Fuels Infrastructure for Transport in Ireland 2017 to 2030	<ul style="list-style-type: none"> 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. 	<p>This policy set out to achieve five key goals in transport:</p> <ul style="list-style-type: none"> Reduce overall travel demand Maximise the efficiency of the transport network Reduce reliance on fossil fuels Reduce transport emissions Improve accessibility to transport <p>These goals remain the cornerstone of transport policy and are fully aligned to the objectives of this National Policy Framework.</p>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.	<p>The Plan contains 27 actions focusing on the following areas:</p> <ul style="list-style-type: none"> 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 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.	<p>The Tourism Policy Statement sets three headline targets to be achieved by 2025:</p> <ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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 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.	<p>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.</p> <p>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.</p>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.	<p>Targets for alternative fuel infrastructure include the following:</p> <ul style="list-style-type: none"> AFV forecasts Electricity targets Natural gas (CNG, LNG) targets Hydrogen targets Biofuels targets LPG targets <p>Synthetic and paraffinic fuels targets</p>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.
People Place and Policy - Growing Tourism to 2025, (DTTAS, 2014)	Growing Tourism to 2025 is a policy framework for the development of tourism within the Country.	<p>The framework establishes the overall tourism goal of Government:</p> <ul style="list-style-type: none"> Employment in the tourism sector will be 250,000 by 2025, compared with around 200,000 at present. There will be 10 million visits to Ireland annually by 2025. <p>The Government's ambition is that overseas tourism revenue will reach €5 billion in real terms by 2025.</p>	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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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Waterways Ireland Heritage Plan 2016-2020	The overarching aim of the Plan is to: <i>"Identify and protect the unique waterways heritage and promote its sustainable use for the enjoyment of this and future generations"</i> .	Four objectives of the Plan include the following: <ul style="list-style-type: none"> Objective 1: Fostering partnerships to continue building waterway heritage knowledge through storing information, undertaking research and developing best practice. Objective 2: Promoting awareness, appreciation and enjoyment of our waterway heritage with a focus on community engagement. Objective 3: Promoting the integrated management, conservation, protection and sustainable use of the inland navigable waterway asset. Objective 4: To develop Waterways Ireland as a heritage organisation committed to achieving the aim of this plan. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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 Development and Innovation – A Strategy for Investment 2016-2022, (Fáilte Ireland, 2016)	This strategy sets out the framework and mechanism for the delivery of investment to cities, towns, villages, communities and businesses across the country. It identifies priorities to support innovation in the sector to retain and grow the country's competitiveness in the marketplace. Its ultimate aim is to strengthen the appeal of Ireland for international visitors.	The objectives of the Tourism Development and Innovation Strategy are: <ul style="list-style-type: none"> To successfully and consistently deliver a world class visitor experience; To support a tourism sector that is profitable and achieves sustainable levels of growth and delivers jobs; To facilitate communities to play an enhanced role in developing tourism in their locality, thereby strengthening and enriching local communities; and To recognise, value and enhance Ireland's natural environment as the cornerstone of Irish tourism. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.
Aquaculture Acts 1997 to 2006 (Sea-Fisheries and Maritime Jurisdiction Act 2006 (8/2006), s. 1(3)) Fisheries (Amendment) Act 1997 (23/1997) Fisheries and Foreshore (Amendment) Act 1998 (54/1998), ss. 2, 3 and 4 Fisheries (Amendment) Act 2001 (40/2001) Sea-Fisheries and Maritime Jurisdiction Act 2006 (8/2006)	The Aquaculture and Foreshore Management Division ensures the efficient and effective management of Aquaculture licensing and Foreshore licensing in respect of Aquaculture and Sea Fishery related activities.	The Strategic Objectives of the Aquaculture and Foreshore Management Division are: <ul style="list-style-type: none"> to develop and manage an efficient and effective regulatory framework in respect of Aquaculture licensing and Foreshore licensing of Aquaculture and Sea Fishery related activities; to secure a fair financial return from the State's foreshore estate in the context of Aquaculture licensing and Foreshore licensing in respect of Aquaculture and Sea Fishery related activities; to progressively reduce arrears in the clearing of licence applications.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.
Foreshore Acts 1933 to 2011	The Foreshore Acts require that a lease or licence must be obtained from the Minister for Housing, Planning and Local Government for the carrying out of works or placing structures or material on, or for the occupation of or removal of material from, State-owned foreshore, which represents the greater part of the foreshore. Construction of permanent structures on privately owned foreshore also required the prior permission of the Minister under the Foreshore Act.	<ul style="list-style-type: none"> Developments on the foreshore require planning permission in addition to a Foreshore Lease/Licence/Permission. All Foreshore Leases, Licences Permissions are without prejudice to the powers of the local planning authority. Applicants should, therefore, consult initially with the local planning authority regarding their proposal. In the case of developments on foreshore for, by or on behalf of a Local Authority where an EIS is required, applications should be made to An Bord Pleanála under Part XV, Planning and Development Act 2000. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.
Marine Planning Development Management Bill (General Scheme), 2019	The Bill seeks to establish in law a completely new regime for the maritime area which will replace existing State and development consent regimes and streamline arrangements on the basis of a single consent principle.	One of the aims is to establish a legal basis for An Bord Pleanála and coastal local authorities to consent to development in the maritime area, while retaining existing foreshore and planning permission provisions for aquaculture and sea fisheries related development. It will also provide for a single environmental impact assessment (EIA) and a single appropriate assessment (AA), where applicable.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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 Seafood Operational Programme (2014-2020)	The Operational Programme (OP) supported by the European Maritime and Fisheries Fund (EMFF) in Ireland aims at achieving key national development priorities along with the EU's "Europe 2020" objectives. The OP supports the general reform of the EU's Common Fisheries Policy (CFP) and the development of its Integrated Maritime Policy (IMP) in Ireland. The OP strategy is designed around the Irish national priorities in the agri-food sector: 'Act Smart' by encouraging knowledge and innovation, 'Think Green' through a responsible and sustainable use of resources, 'Achieve Growth' in order to maintain and create jobs.	The Irish OP is organised around the following priorities <ul style="list-style-type: none"> Union Priority 1 (UP1): €67 million (28% of the total allocation) aim at assuring the sustainable development of fishing activities, while protecting the marine environment. Union Priority 2 (UP2): €30 million (12% of the total allocation) will support the Irish National Strategic Plan for Aquaculture that aims at boosting the competitiveness of the aquaculture sector. Union Priority 3 (UP3): €84.8 million (35.4% of the total allocation) will go towards compliance with CFP rules regarding control and data collection. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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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		<ul style="list-style-type: none"> Union Priority 4 (UP4): €12 million (5% of the total allocation) will support local development initiatives — a substantial, eleven-fold increase compared to the 2007-2013 funding period. Union Priority 5 (UP5): €33 million (13.8% of the total allocation) will go towards creating scale in the Irish marketing and processing sectors, starting from the base of very small-scale businesses. Union Priority 6 (UP6): €10.6 million (4% of the total allocation) will be used on measures to improve the knowledge on the state of the marine environment and the level of protection of marine areas. 	framework for environmental protection and management.
Harnessing Our Ocean Wealth: An Integrated Marine Plan for Ireland 2012	Harnessing Our Ocean Wealth is an Integrated Marine Plan (IMP), setting out a roadmap for the Government's vision, high-level goals and integrated actions across policy, governance and business to enable our marine potential to be realised. Implementation of this Plan will see Ireland evolve an integrated system of policy and programme planning for our marine affairs.	<ul style="list-style-type: none"> Sustainable economic growth of marine/ maritime sectors; Increase the contribution to the national GDP; Deliver a business friendly yet robust governance, policy and planning framework; Protect and conserve our rich marine biodiversity and ecosystems; Manage our living and non-living resources in harmony with the ecosystem; Implement and comply with environmental legislation; Building on our maritime heritage, strengthen our maritime identity; Increase our awareness of the value, opportunities and societal benefits; and Engagement and participation by all. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.
All Ireland Pollinator Plan 2015-2020 and 2021-2025 (in preparation)	<p>The All-Ireland Pollinator Plan is an island-wide attempt to reverse declines in pollinating insects in order to ensure the sustainability of our food, avoid additional economic impacts on agriculture, and protect the health of the environment.</p> <p>The main objectives include:</p> <ul style="list-style-type: none"> Making farmland, public land and private land in Ireland pollinator friendly; Raising awareness of pollinators and how to protect them; Managed pollinators – supporting beekeepers and growers; Expanding our knowledge of pollinators and pollination service; and Collecting evidence to track change and measure success. 	<ul style="list-style-type: none"> This voluntary Plan identified 81 actions, shared out between over 100 governmental and non-governmental organisations. A large focus of the Plan is to identify actions to improve the quality and amount of flower-rich habitat. Actions range from creating pollinator highways along our transport routes, to supporting pollinators on farmland, in gardens, businesses, and on public land. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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			
Northern and Western Regional Economic and Spatial Strategy 2020-2032	The Regional Spatial and Economic Strategy provides a long-term strategic planning and economic framework for the Northern and Western Region in order to support the implementation of the National Planning Framework.	The Northern and Western Regional Economic and Spatial Strategy includes provisions for its nine constituent local authorities: Donegal County Council; Leitrim County Council; Cavan County Council; Monaghan County Council; Roscommon County Council; Mayo County Council; Sligo County Council; Galway City Council; Galway County Council.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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 priorities in the Integrated Infrastructure Plan align with the objectives and priorities set out in the Greater Dublin Transport Strategy 2016-2035, focused on improving public and sustainable transport. While the bulk of the Plan relates solely to the Greater Dublin Area, certain areas such as public transport services and activities related to small public service vehicles are dealt with on a national basis.	<p>The Implementation Plan identifies investment proposals for a number of areas including:</p> <ul style="list-style-type: none"> Bus Light Rail; Heavy Rai; Integration Measures and Sustainable Transport Investment; Integrated Service Plan; and Integration and Accessibility. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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	<p>Management planning for nature conservation sites has a number of aims. These include:</p> <ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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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Legislation, Plan, etc.	Summary of high-level aim/ purpose/ objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
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.	<ul style="list-style-type: none"> • 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.
Land Use Plans (including Development Plans Local Area Plans) in force within County Galway and in other adjoining planning authorities	<ul style="list-style-type: none"> • Outline planning objectives for land use development. • Strategic framework for planning and sustainable development including those set out in National Planning Framework and Northern and Western Regional Economic and Spatial Strategy. • Set out the policies and proposals to guide development in the relevant area. 	<ul style="list-style-type: none"> • 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. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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 Galway LECP 2016-2022	<ul style="list-style-type: none"> • The overarching vision for each LECP is: “to promote the well-being and quality of life of citizens and communities 	<ul style="list-style-type: none"> • 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 community development stakeholders. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.
County Galway Landscape Character Assessment and Landscape Character Assessments in adjoining counties	Characterises the geographical dimension of the landscape.	<ul style="list-style-type: none"> • Identifies the quality, value, sensitivity and capacity of the landscape area. • Guides strategies and guidelines for the future development of the landscape. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.
Galway County Heritage and Biodiversity Plan 2017-2022	<p>The aim of the Galway County Heritage and Biodiversity Plan 2017- 2022 is to place heritage and biodiversity at the heart of public life in the County. This will be achieved through increasing awareness, participation, enjoyment, knowledge and understanding of our shared heritage to lead to its proper conservation, management and protection and safeguarding it for future generations.</p> <p>Three overarching objectives have been identified that will underpin the delivery of actions under five key themes. These objectives are:</p> <ul style="list-style-type: none"> • to increase awareness, appreciation and participation; • to gather and share knowledge; and • to manage and conserve our heritage, including biodiversity. 	<p>Actions are specified under the following five themes:</p> <ul style="list-style-type: none"> • community engagement; • education and training; • research and information; • Galway County Council: people, property and works; and • stakeholder engagement and pursuing opportunities with other partners. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.
Galway Noise Action Plan 2019-2023	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	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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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Legislation, Plan, etc.	Summary of high-level aim/ purpose/ objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
Galway County Council's Climate Adaptation Strategy 2019-2024	The Strategy is developed around 4 key themes/goals: 1. Critical Buildings & Infrastructure 2. Natural and Cultural Heritage 3. Water Resources & Flood Risk Management 4. Community Services	The Galway County Council Climate Change Adaptation Strategy 2019-2024 seeks to: <ul style="list-style-type: none"> • Improve education, awareness-raising and capacity on climate change, adaptation (and mitigation), impact reduction and early warning across the Local Authority departments, businesses, communities and individuals; • Integrate climate change measures into policies, strategies and planning, as well as the identification of areas at risk to inform planning and decision making; and • Strengthen resilience and adoptive capacity and develop and implement co-ordinated responses to climate risk where needed. 	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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 Authority Renewable Energy Strategy (LARES)	The Strategy sets out the framework for the delivery of sustainable and renewable energies throughout the County.	The LARES outlines the potential for a range of renewable energy resources and developments and acknowledges the significant contribution that they can make to the county in terms of energy security, reduced reliance on traditional fossil fuels, enabling future energy exports, meeting assigned national targets and the transition to a low carbon economy.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.
Connacht-Ulster 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.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.
Fáilte Ireland Tourism plans, strategies, including those relating to the Wild Atlantic Way	Fáilte Ireland's work includes preparing various plans and strategies for Ireland's Wild Atlantic Way 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.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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.
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.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. 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 Ecological and Geological Designations

SACs (77) and SPAs (19) within or partially within County Galway		
Site Code	Site Name	Sensitive Features
002356	Ardgraique Bog SAC	Sensitive features include: raised bog; degraded raised bog; and rhynchosporion vegetation.
002244	Ardrahan Grassland SAC	Sensitive features include: alpine and subalpine heaths; juniper scrub; orchid-rich calcareous grassland; and limestone pavement.
002200	Aughrim (Aghrane) Bog SAC	Sensitive features include: degraded raised bog.
001228	Aughrusbeg Machair and Lake SAC	Sensitive features include: oligotrophic waters containing very few minerals; and wet heath.
002295	Ballinduff Turlough SAC	Sensitive features include: turloughs.
002199	Ballygar (Aghrane) Bog SAC	Sensitive features include: active raised bog; and degraded raised bog.
000474	Ballymaglancy Cave, Cong SAC	Sensitive features include: caves; and lesser horseshoe bat.
002118	Barnahallia Lough SAC	Sensitive features include: oligotrophic to mesotrophic standing waters; and slender naiad.
000231	Barrougher Bog SAC	Sensitive features include: raised bog; degraded raised bog; and rhynchosporion vegetation.
000238	Caherglassaun Turlough SAC	Sensitive features include: turloughs; and lesser horseshoe bat.
002294	Cahermore Turlough SAC	Sensitive features include: turloughs.
002347	Camderry Bog SAC	Sensitive features include: raised bog; degraded raised bog; and rhynchosporion vegetation.
002293	Carrowbaun, Newhall and Ballylee Turloughs SAC	Sensitive features include: turloughs.
001242	Carrowmagappul Bog SAC	Sensitive features include: raised bog; degraded raised bog; and rhynchosporion vegetation.
000242	Castletaylor Complex SAC	Sensitive features include: turloughs; alpine and subalpine heaths; juniper scrub; orchid-rich calcareous grassland; and limestone pavement.
000248	Cloonmoylan Bog SAC	Sensitive features include: raised bog; raised bog; rhynchosporion vegetation; and bog woodland.
002034	Connemara Bog Complex SAC	Sensitive features include: coastal lagoons; reefs; oligotrophic waters containing very few minerals; oligotrophic to mesotrophic standing waters; dystrophic lakes; floating river vegetation; wet heath; dry heath; molinia meadows; blanket bogs; transition mires; rhynchosporion vegetation; alkaline fens; old oak woodlands; marsh fritillary; Atlantic salmon; and otter.
000218	Coolcam Turlough SAC	Sensitive features include: turloughs.
000252	Coole-Garryland Complex SAC	Sensitive features include: natural eutrophic lakes; turloughs; juniper scrub; orchid-rich calcareous grassland; limestone pavement; and yew woodlands.
002110	Corliskea/Trien/Cloonfelliv Bog SAC	Sensitive features include: raised bog; degraded raised bog; rhynchosporion vegetation; and bog woodland.
001251	Cregduff Lough SAC	Sensitive features include: transition mires; and slender naiad.
002317	Cregg House Stables, Crusheen SAC	Sensitive features include: lesser horseshoe bat.
000255	Croaghill Turlough SAC	Sensitive features include: turloughs.
002350	Curraglehanagh Bog SAC	Sensitive features include: raised bog; degraded raised bog; and rhynchosporion vegetation.
002197	Derrinlough (Cloonkeenleananode) Bog SAC	Sensitive features include: degraded raised bog.
000261	Derrycrag Wood Nature Reserve SAC	Sensitive features include: old oak woodlands.
001257	Dog's Bay SAC	Sensitive features include: annual vegetation of drift lines; embryonic shifting dunes; marram dunes; fixed dunes; and dry heath.
002181	Drummin Wood SAC	Sensitive features include: old oak woodlands.
001926	East Burren Complex SAC	Sensitive features include: hard water lakes; turloughs; floating river vegetation; alpine and subalpine heaths; juniper scrub; calamarian grassland; orchid-rich calcareous grassland; lowland hay meadows; cladium fens; petrifying springs; alkaline fens; limestone pavement; caves; alluvial forests; marsh fritillary; lesser horseshoe bat; and otter.

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SACs (77) and SPAs (19) within or partially within County Galway		
Site Code	Site Name	Sensitive Features
000268	Galway Bay Complex SAC	Sensitive features include: tidal mudflats and sandflats; coastal lagoons; large shallow inlets and bays; reefs; perennial vegetation of stony banks; vegetated sea cliffs of the Atlantic and Baltic coasts; salicornia mud; Atlantic salt meadows; Mediterranean salt meadows; turloughs; juniper scrub; orchid-rich calcareous grassland; cladium fens; alkaline fens; limestone pavement; otter; and common seal.
002213	Glenloughaun Esker SAC	Sensitive features include: orchid-rich calcareous grassland.
002180	Gortacarnaun Wood SAC	Sensitive features include: old oak woodlands.
001271	Gortnandarragh Limestone Pavement SAC	Sensitive features include: limestone pavement.
000278	Inishbofin and Inishshark SAC	Sensitive features include: coastal lagoons; oligotrophic waters containing very few minerals; wet heath; dry heath; and grey sea.
001275	Inisheer Island SAC	Sensitive features include: coastal lagoons; reefs; dry heath; orchid-rich calcareous grassland; lowland hay meadows; and limestone pavement.
000212	Inishmaan Island SAC	Sensitive features include: reefs; perennial vegetation of stony banks; vegetated sea cliffs; embryonic shifting dunes; marram dunes; machairs; dry heath; orchid-rich calcareous grassland; lowland hay meadows; and limestone pavement.
000213	Inishmore Island SAC	Sensitive features include: coastal lagoons; reefs; perennial vegetation of stony banks; vegetated sea cliffs; embryonic shifting dunes; marram dunes; fixed dunes; dunes with creeping willow; humid dune slacks; machairs; dry heath; alpine and subalpine heaths; orchid-rich calcareous grassland; lowland hay meadows; limestone pavement; sea caves; and narrow-mouthed whorl snail.
002111	Kilkieran Bay and Islands SAC	Sensitive features include: tidal mudflats and sandflats; coastal lagoons; large shallow inlets and bays; reefs; Atlantic salt meadows; Mediterranean salt meadows; machairs; oligotrophic to mesotrophic standing waters; lowland hay meadows; otter; common seal; and slender naiad.
000285	Kilsallagh Bog SAC	Sensitive features include: raised bog; degraded raised bog; and rhynchosporion vegetation.
000286	Kiltartan Cave (Coole) SAC	Sensitive features include: caves; and lesser horseshoe bat.
001285	Kiltiernan Turlough SAC	Sensitive features include: turloughs.
002265	Kingstown Bay SAC	Sensitive features include: large shallow inlets and bays.
000295	Levally Lough SAC	Sensitive features include: turloughs.
000296	Lisnageeragh Bog and Ballinastack Turlough SAC	Sensitive features include: turloughs; raised bog; degraded raised bog; and rhynchosporion vegetation.
001774	Lough Carra/Mask Complex SAC	Sensitive features include: oligotrophic waters containing very few minerals; oligotrophic to mesotrophic standing waters; hard water lakes; dry heath; orchid-rich calcareous grassland; cladium fens; alkaline fens; limestone pavement; alluvial forests; lesser horseshoe bat; otter; and slender green feather-moss.
000297	Lough Corrib SAC	Sensitive features include: oligotrophic waters containing very few minerals; oligotrophic to mesotrophic standing waters; hard water lakes; floating river vegetation; orchid-rich calcareous grassland; molinia meadows; raised bog; degraded raised bog; rhynchosporion vegetation; cladium fens; petrifying springs; alkaline fens; limestone pavement; old oak woodlands; bog woodland; freshwater pearl mussel; white-clawed crayfish; and sea lamprey.
002117	Lough Coy SAC	Sensitive features include: turloughs.
000299	Lough Cutra SAC	Sensitive features include: lesser horseshoe bat.
002241	Lough Derg, North-east Shore SAC	Sensitive features include: juniper scrub; cladium fens; alkaline fens; limestone pavement; alluvial forest; and yew woodlands.
000606	Lough Fingall Complex SAC	Sensitive features include: turloughs; alpine and subalpine heaths; juniper scrub; orchid-rich calcareous grassland; cladium fens; limestone pavement; and lesser horseshoe bat.
000301	Lough Lurgeen Bog/Glenamaddy Turlough SAC	Sensitive features include: turloughs; raised bog; degraded raised bog; and rhynchosporion vegetation.
002119	Lough Nageeron SAC	Sensitive features include: oligotrophic to mesotrophic standing waters; and slender naiad.
000304	Lough Rea SAC	Sensitive features include: hard water lakes.
000308	Loughatorick South Bog SAC	Sensitive features include: blanket bogs.
002008	Maumturk Mountains SAC	Sensitive features include: oligotrophic waters containing very few minerals; wet heath; alpine and subalpine heaths; blanket bogs; rhynchosporion vegetation; siliceous rocky slopes; Atlantic salmon; and slender naiad.
002352	Monivea Bog SAC	Sensitive features include: raised bog; degraded raised bog; and rhynchosporion vegetation.
002129	Murvey Machair SAC	Sensitive features include: machairs; and petalwort.
001309	Omey Island Machair SAC	Sensitive features include: machairs; hard water lakes; and petalwort.
000318	Peterswell Turlough SAC	Sensitive features include: turloughs.
002126	Pollagoona Bog SAC	Sensitive features include: blanket bogs.
000319	Pollnacknockaun Wood Nature Reserve SAC	Sensitive features include: old oak woodlands.

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SACs (77) and SPAs (19) within or partially within County Galway		
Site Code	Site Name	Sensitive Features
000322	Rahasane Turlough SAC	Sensitive features include: turloughs.
000216	River Shannon Callows SAC	Sensitive features include: molinia meadows; lowland hay meadows; limestone pavement; alluvial forests; and otter.
000324	Rosroe Bog SAC	Sensitive features include: blanket bogs; and rhynchosporion vegetation.
001312	Ross Lake and Woods SAC	Sensitive features include: hard water lakes; and lesser horseshoe bat.
001313	Rosturra Wood SAC	Sensitive features include: old oak woodlands.
001311	Rusheenduff Lough SAC	Sensitive features include: oligotrophic to mesotrophic standing waters; and slender naiad.
000326	Shankill West Bog SAC	Sensitive features include: raised bog; degraded raised bog; and rhynchosporion vegetation.
000328	Slyne Head Islands SAC	Sensitive features include: reefs; bottle-nosed dolphin; and grey seal.
002074	Slyne Head Peninsula SAC	Sensitive features include: coastal lagoons; large shallow inlets and bays; reefs; annual vegetation of drift lines; perennial vegetation of stony banks; Atlantic salt meadows; Mediterranean salt meadows; embryonic shifting dunes; marram dunes; machairs; oligotrophic waters containing very few minerals; oligotrophic to mesotrophic standing waters; hard water lakes; dry heath; juniper scrub; orchid-rich calcareous grassland; molinia meadows; lowland hay meadows; alkaline fens; bottle-nosed dolphin; petalwort; and slender naiad.
001913	Sonnagh Bog SAC	Sensitive features include: blanket bogs.
001321	Termon Lough SAC	Sensitive features include: turloughs.
002031	The Twelve Bens/Garraun Complex SAC	Sensitive features include: oligotrophic waters containing very few minerals; oligotrophic to mesotrophic standing waters; alpine and subalpine heaths; blanket bogs; rhynchosporion vegetation; siliceous scree; calcareous rocky slopes; siliceous rocky slopes; old oak woodlands; freshwater pearl mussel; Atlantic salmon; otter; and slender naiad.
002130	Tully Lough SAC	Sensitive features include: oligotrophic to mesotrophic standing waters; and slender naiad.
000330	Tully Mountain SAC	Sensitive features include: dry heath; and alpine and subalpine heaths.
002998	West Connacht Coast SAC	Sensitive features include: bottle-nosed dolphin.
002296	Williamstown Turloughs SAC	Sensitive features include: turloughs.
004181	Connemara Bog Complex SPA	Sensitive features include: cormorant; merlin; golden plover; and common gull.
004107	Coole-Garryland SPA	Sensitive features include: whooper swan.
004142	Cregganna Marsh SPA	Sensitive features include: Greenland white-fronted goose.
004170	Cruagh Island SPA	Sensitive features include: manx shearwater; and barnacle goose.
004144	High Island, Inishshark and Davillaun SPA	Sensitive features include: fulmar; barnacle goose; and Arctic tern.
004221	Illaunanoon SPA	Sensitive features include: sandwich tern.
004231	Inishbofin, Omev Island and Turbot Island SPA	Sensitive features include: corncrake.
004152	Inishmore SPA	Sensitive features include: kittiwake; Arctic tern; little tern; and guillemot.
004031	Inner Galway Bay SPA	Sensitive features include: black-throated diver; great northern diver; cormorant; grey heron; light-bellied brent goose; wigeon; teal; red-breasted merganser; ringed plover; golden plover; lapwing; dunlin; bar-tailed godwit; curlew; redshank; turnstone; black-headed gull; common gull; sandwich tern; common tern; wetland and waterbirds.
004042	Lough Corrib SPA	Sensitive features include: gadwall; shoveler; pochard; tufted duck; common scoter; hen harrier; coot; golden plover; black-headed gull; common gull; common tern; Arctic tern; Greenland white-fronted goose; wetland and waterbirds.
004056	Lough Cutra SPA	Sensitive features include: cormorant.
004058	Lough Derg (Shannon) SPA	Sensitive features include: cormorant; tufted duck; goldeneye; common tern; wetland and waterbirds.
004062	Lough Mask SPA	Sensitive features include: tufted duck; black-headed gull; common gull; lesser black-backed gull; common tern; Greenland white-fronted goose; wetland and waterbirds.
004134	Lough Rea SPA	Sensitive features include: shoveler; coot; and wetland and waterbirds.
004096	Middle Shannon Callows SPA	Sensitive features include: whooper swan; wigeon; corncrake; golden plover; lapwing; black-tailed godwit; black-headed gull; wetland and waterbirds.
004089	Rahasane Turlough SPA	Sensitive features include: whooper swan; wigeon; golden plover; black-tailed godwit; Greenland white-fronted goose; wetland and waterbirds.

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SACs (77) and SPAs (19) within or partially within County Galway		
Site Code	Site Name	Sensitive Features
004097	River Suck Callows SPA	Sensitive features include: whooper swan; wigeon; golden plover; lapwing; Greenland white-fronted goose; wetland and waterbird.
004168	Slieve Aughty Mountains SPA	Sensitive features include: hen harrier; and merlin.
004159	Slyne Head to Ardmore Point Islands SPA	Sensitive features include: barnacle goose; sandwich tern; Arctic tern; and little tern.

SACs (59) and SPAs (13) within 15km buffer, but beyond the County boundary		
Site Code	Site Name	Sensitive Features
000014	Ballyailla Lake SAC	Sensitive features include: natural eutrophic lakes.
000016	Ballycullinan Lake SAC	Sensitive features include: cladium fens.
000019	Ballyogan Lough SAC	Sensitive features include: cladium fens.
000020	Black Head-Poulsallagh Complex SAC	Sensitive features include: reefs; perennial vegetation of stony banks; fixed coastal dunes with herbaceous vegetation (grey dunes); floating river vegetation; alpine and subalpine heaths; juniper scrub; orchid-rich calcareous grassland; lowland hay meadows; petrifying springs; limestone pavement; sea caves; and petalwort.
000032	Dromore Woods And Loughs SAC	Sensitive features include: natural eutrophic lakes; hydrophilous tall herb communities; limestone pavement; lesser horseshoe bat; and otter.
000054	Moneen Mountain SAC	Sensitive features include: turloughs; alpine and subalpine heaths; juniper scrub; orchid-rich calcareous grassland; petrifying springs; limestone pavement; marsh fritillary; and lesser horseshoe bat.
000057	Moyree River System SAC	Sensitive features include: floating river vegetation; alkaline fens; limestone pavement; caves; lesser horseshoe bat; and otter.
000440	Lough Ree SAC	Sensitive features include: natural eutrophic lakes; orchid-rich calcareous grassland; active raised bog; degraded raised bog; alkaline fens; limestone pavement; bog woodland; alluvial forests; and otter.
000461	Ardkill Turlough SAC	Sensitive features include: turloughs.
000475	Carrowkeel Turlough SAC	Sensitive features include: turloughs.
000479	Cloughmoyne SAC	Sensitive features include: limestone pavement.
000480	Clyard Kettle-Holes SAC	Sensitive features include: turloughs; and cladium fens.
000484	Cross Lough (Killadoon) SAC	Sensitive features include: perennial vegetation of stony banks.
000503	Greaghans Turlough SAC	Sensitive features include: turloughs.
000504	Kilglassan/Caheravoostia Turlough Complex SAC	Sensitive features include: turloughs.
000525	Shrule Turlough SAC	Sensitive features include: turloughs.
000541	Skealaghan Turlough SAC	Sensitive features include: turloughs.
000566	All Saints Bog and Esker SAC	Sensitive features include: orchid-rich calcareous grassland; raised bog; degraded raised bog; rhynchosporion vegetation; and bog woodland.
000575	Ferbane Bog SAC	Sensitive features include: raised bog; degraded raised bog; and rhynchosporion vegetation.
000576	Fin Lough (Offaly) SAC	Sensitive features include: alkaline fens; and geyer's whorl snail.
000580	Mongan Bog SAC	Sensitive features include: raised bog; degraded raised bog; and rhynchosporion vegetation.
000581	Moyclare Bog SAC	Sensitive features include: raised bog; degraded raised bog; and rhynchosporion vegetation.
000588	Ballinturly Turlough SAC	Sensitive features include: turloughs.
000592	Bellanagare Bog SAC	Sensitive features include: raised bog; degraded raised bog; and rhynchosporion vegetation.
000597	Carrowbehy/Caher Bog SAC	Sensitive features include: raised bog; degraded raised bog; and rhynchosporion vegetation.
000600	Cloonchambers Bog SAC	Sensitive features include: raised bog; degraded raised bog; and rhynchosporion vegetation.
000604	Derrinea Bog SAC	Sensitive features include: raised bog; degraded raised bog; and rhynchosporion vegetation.

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SACs (59) and SPAs (13) within 15km buffer, but beyond the County boundary

Site Code	Site Name	Sensitive Features
000607	Errit Lough SAC	Sensitive features include: hard water lakes.
000609	Lisduff Turlough SAC	Sensitive features include: turloughs.
000610	Lough Croan Turlough SAC	Sensitive features include: turloughs.
000611	Lough Funshinagh SAC	Sensitive features include: turloughs.
000612	Mullygollan Turlough SAC	Sensitive features include: turloughs.
000641	Ballyduff/Clonfinane Bog SAC	Sensitive features include: raised bog; degraded raised bog; rhynchosporion vegetation; and bog woodland.
000647	Kilcarren-Firville Bog SAC	Sensitive features include: raised bog; degraded raised bog; and rhynchosporion vegetation.
000919	Ridge Road, SW of Rapemills SAC	Sensitive features include: orchid-rich calcareous grassland.
000996	Ballyvaughan Turlough SAC	Sensitive features include: turloughs.
001529	Lough Cahasy, Lough Baun And Roonah Lough SAC	Sensitive features include: coastal lagoons; perennial vegetation of stony banks; embryonic shifting dunes; marram dunes; fixed dunes; and machairs.
001536	Mocorha Lough SAC	Sensitive features include: cladium fens.
001625	Castlesampson Esker SAC	Sensitive features include: turloughs; and orchid-rich calcareous grassland.
001637	Four Roads Turlough SAC	Sensitive features include: turloughs.
001683	Liskeenan Fen SAC	Sensitive features include: cladium fens.
001776	Pilgrim's Road Esker SAC	Sensitive features include: orchid-rich calcareous grassland.
001912	Glendree Bog SAC	Sensitive features include: blanket bogs.
001932	Mweelrea/Sheeffry/Erriff Complex SAC	Sensitive features include: coastal lagoons; annual vegetation of drift lines; Atlantic salt meadows; Mediterranean salt meadows; embryonic shifting dunes; marram dunes; decalcified dune heath; dunes with creeping willow; machairs; oligotrophic waters containing very few minerals; oligotrophic to mesotrophic standing waters; dystrophic lakes; floating river vegetation; wet heath; dry heath; alpine and subalpine heaths; juniper scrub; hydrophilous tall herb communities; blanket bogs; transition mires; rhynchosporion vegetation; petrifying springs; alkaline fens; siliceous scree; calcareous rocky slopes; siliceous rocky slopes; geyser's whorl snail; narrow-mouthed whorl snail; freshwater pearl mussel; Atlantic salmon; otter; petalwort; and slender naiad.
002157	Newgrove House SAC	Sensitive features include: lesser horseshoe bat.
002165	Lower River Shannon SAC	Sensitive features include: sandbanks; estuaries; tidal mudflats and sandflats; coastal lagoons; large shallow inlets and bays; reefs; perennial vegetation of stony banks; vegetated sea cliffs; salicornia mud; Atlantic salt meadows; Mediterranean salt meadows; floating river vegetation; molinia meadows; alluvial forests; freshwater pearl mussel; sea lamprey; brook lamprey; river lamprey; Atlantic salmon; bottle-nosed dolphin; and otter.
002206	Scohaboy (Sopwell) Bog SAC	Sensitive features include: degraded raised bog.
002207	Arragh More (Derrybreen) Bog SAC	Sensitive features include: degraded raised bog.
002214	Killeglan Grassland SAC	Sensitive features include: orchid-rich calcareous grassland.
002245	Old Farm Buildings, Ballymacrogan SAC	Sensitive features include: lesser horseshoe bat.
002246	Ballycullinan, Old Domestic Building SAC	Sensitive features include: lesser horseshoe bat.
002247	Toonagh Estate SAC	Sensitive features include: lesser horseshoe bat.
002298	River Moy SAC	Sensitive features include: raised bog; degraded raised bog; rhynchosporion vegetation; alkaline fens; old oak woodlands; alluvial forests; white-clawed crayfish; sea lamprey; brook lamprey; Atlantic salmon; and otter.
002312	Slieve Bernagh Bog SAC	Sensitive features include: wet heath; dry heath; and blanket bogs.
002314	Old Domestic Buildings, Rylane SAC	Sensitive features include: lesser horseshoe bat.
002320	Kildun Souterrain SAC	Sensitive features include: lesser horseshoe bat.
002338	Drumalough Bog SAC	Sensitive features include: raised bog; degraded raised bog; and rhynchosporion vegetation.
002339	Ballynamona Bog And Corkip Lough SAC	Sensitive features include: turloughs; raised bog; degraded raised bog; rhynchosporion vegetation; and bog woodland.

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SACs (59) and SPAs (13) within 15km buffer, but beyond the County boundary

Site Code	Site Name	Sensitive Features
002353	Redwood Bog SAC	Sensitive features include: raised bog; degraded raised bog; and rhynchosporion vegetation.
004005	Cliffs of Moher SPA	Sensitive features include: fulmar; kittiwake; guillemot; razorbill; puffin; and chough.
004017	Mongan Bog SPA	Sensitive features include: Greenland white-fronted goose.
004041	Ballyalla Lough SPA	Sensitive features include: wigeon; gadwall; teal; mallard; shoveler; coot; black-tailed godwit; wetland and waterbirds.
004051	Lough Carra SPA	Sensitive features include: common gull.
004064	Lough Ree SPA	Sensitive features include: little grebe; whooper swan; wigeon; teal; mallard; shoveler; tufted duck; common scoter; goldeneye; coot; golden plover; lapwing; common tern; and wetland and waterbirds.
004086	River Little Brosna Callows SPA	Sensitive features include: whooper swan; wigeon; teal; pintail; shoveler; golden plover; lapwing; black-tailed godwit; black-headed gull; Greenland white-fronted goose; wetland and waterbird.
004103	All Saints Bog SPA	Sensitive features include: Greenland white-fronted goose.
004105	Bellanagare Bog SPA	Sensitive features include: Greenland white-fronted goose.
004137	Dovegrove Callows SPA	Sensitive features include: Greenland white-fronted goose.
004139	Lough Croan Turlough SPA	Sensitive features include: shoveler; golden plover; Greenland white-fronted goose; wetland and waterbirds.
004140	Four Roads Turlough SPA	Sensitive features include: golden plover; Greenland white-fronted goose; wetland and waterbirds.
004212	Cross Lough (Killadoon) SPA	Sensitive features include: sandwich tern.
004220	Corofin Wetlands SPA	Sensitive features include: little grebe; whooper swan; wigeon; teal; black-tailed godwit; wetland and waterbird.

Other sites (1 SPA) Connected to County Galway but Beyond 15km Buffer

Site Code	Site Name	Sensitive Features
004077	River Shannon and River Fergus Estuaries SPA	Sensitive features include: cormorant; whooper swan; light-bellied brent goose; shelduck; wigeon; teal; pintail; shoveler; scaup; ringed plover; golden plover; grey plover; lapwing; knot; dunlin; black-tailed godwit; bar-tailed godwit; curlew; redshank; greenshank; black-headed gull; wetland and waterbirds.

NHAs (36) and pNHAs (114) within County Galway

Site Code	Site Name	Site Code	Site Name	Site Code	Site Name	Site Code	Site Name
002344	Annaghbeg Bog NHA	000011	Lough Derg pNHA	000297	Lough Corrib pNHA	001260	Drimcong Wood pNHA
001227	Aughrim Bog NHA	000212	Inishmaan Island pNHA	000299	Lough Cutra pNHA	001261	Eagle Rock pNHA
000229	Ballygar Bog NHA	000213	Inishmore Island pNHA	000301	Lough Lurteen Bog/ Glenamaddy Turlough pNHA	001266	Finish Island Machair pNHA
000235	Bracklagh Bog NHA	000215	Rathbaun Turlough pNHA	000304	Lough Rea pNHA	001267	Furbogh Wood pNHA
001240	Capira/Derrew Bog NHA	000216	River Shannon Callows pNHA	000308	Loughatorick South Bog pNHA	001271	Gortnandarragh Limestone Pavement pNHA
001241	Carna Heath and Bog NHA	000218	Coolcam Turlough pNHA	000311	Monivea Bog pNHA	001275	Inisheer Island pNHA
001244	Castle Ffrench East Bog NHA	000224	Altore Lake pNHA	000314	Oilean Na Ngeabhrog (Illaungurraig) pNHA	001279	Kikerrin Turlough pNHA
000280	Castle Ffrench West Bog NHA	000228	Ballycuirke Lough pNHA	000315	Oilean Na Ngeabhrog (Glencoh Rock) pNHA	001282	Kiltullagh Lough pNHA
002374	Cloon and Laghtanabba Bog NHA	000231	Barroughter Bog pNHA	000318	Peterswell Turlough pNHA	001285	Kiltiernan Turlough pNHA
000245	Clooncullaun Bog NHA	000234	Belclare Turlough pNHA	000319	Polinakockaun Wood Nature Reserve pNHA	001288	Knochmaa Hill pNHA
000249	Cloonoolish Bog NHA	000238	Caherglassaun Turlough pNHA	000320	Pollduagh Cave, Gort pNHA	001289	Leagaun Machair pNHA
000254	Crit Island West NHA NHA	000240	Camderry Bog pNHA	000322	Rahasane Turlough pNHA	001294	Lough Hackett pNHA
001254	Derrinlough Bog NHA	000242	Castletaylor Complex pNHA	000323	Richmond Esker Nature Reserve pNHA	001300	Mace Head Islands pNHA
001255	Derrynagran Bog and Esker NHA	000244	Clonfert Cathedral pNHA	000324	Rosroe Bog pNHA	001302	Mason Island Machair pNHA
002379	Derryooper Bog NHA	000248	Cloonmoylan Bog pNHA	000326	Shankill West Bog pNHA	001306	Mweenish Island Machair pNHA

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NHAs (36) and pNHAs (114) within County Galway

Site Code	Site Name	Site Code	Site Name	Site Code	Site Name	Site Code	Site Name
001264	Eskerboy Bog NHA	000252	Coole-Garryland Complex pNHA	000328	Slyne Head Islands pNHA	001309	Omev Island Machair pNHA
000267	Funshin Bog NHA	000255	Croaghill Turlough pNHA	000330	Tully Mountain pNHA	001311	Rusheenduff Lough pNHA
000281	Keeloges Bog NHA	000256	Curraghlehanagh Bog pNHA	000331	Turlough O'Gall pNHA	001312	Ross Lake and Woods pNHA
001280	Killaclogher Bog NHA	000261	Derrycrag Wood Nature Reserve pNHA	000385	Rostaff Turlough pNHA	001313	Rosturra Wood pNHA
001283	Killure Bog NHA	000263	Drumbulcaun pNHA	000474	Ballymaglancy Cave, Cong pNHA	001318	St. Macdara's Island pNHA
000283	Killmore Bog NHA	000264	Duck Island pNHA	000606	Lough Fingall Complex pNHA	001319	Summerville Lough pNHA
000284	Kilnaborris Bog NHA	000265	Eeshal Island pNHA	000735	Maumtrasna Mountain Complex pNHA	001321	Termon Lough pNHA
000292	Leaha Bog NHA	000268	Galway Bay Complex pNHA	001126	Ardmore Point Grassland pNHA	001322	Turlough Monaghan pNHA
000220	Lough Namucka Bog NHA	000269	Geabhrog Island pNHA	001224	Ardgraigue Bog pNHA	001709	Tiaquin Bog pNHA
000307	Lough Tee Bog NHA	000274	Hen Island pNHA	001228	Aughrusbeg Machair and Lake pNHA	001774	Lough Carra/ Mask Complex pNHA
000310	Meeneen Bog NHA	000275	High Island pNHA	001231	Ballyconneely Bay pNHA	001779	Ballinasloe Esker pNHA
001303	Moorfield Bog NHA	000276	Horse Island Complex pNHA	001233	Ballynakill Bay and Lamb's Island pNHA	001788	Turloughcor pNHA
000221	Moorfield Bog/Farm Cottage NHA	000278	Inishbofin and Inishshark pNHA	001234	Bertraghboy Bay pNHA	001913	Sonnagh Bog pNHA
002364	Moycullen Bogs NHA	000282	Killower Turlough pNHA	001237	Boyouanagh Turlough pNHA	001917	Crump Island Complex pNHA
002431	Oughterard District Bog NHA	000285	Kilsallagh Bog pNHA	001239	Callow Lough pNHA	001926	East Burren Complex pNHA
000321	Raford River Bog NHA	000286	Kiltartan Cave (Coole) pNHA	001242	Carrowmagappul Bog pNHA	001972	Friar Island pNHA
001229	Slieve Aughty Bog NHA	000287	Kiltullagh Turlough pNHA	001247	Cloonascragh Fen and Black Wood pNHA	001973	Cruagh Island pNHA
000247	Slieve Bog NHA	000289	Knockavanny Turlough pNHA	001251	Cregduff Lough pNHA	001974	Inishmuskerry pNHA
000222	Suck River Callows NHA	000295	Levally Lough pNHA	001253	Dernasliggaun Wood pNHA	002008	Maumturk Mountains pNHA
002436	Tooreen Bog NHA	000296	Lisnageeragh Bog and Ballinastack Turlough pNHA	001257	Dog's Bay pNHA	002031	The Twelve Bens/ Garraun Complex pNHA
002074	Slyne Head Peninsula pNHA	002034	Connemara Bog Complex pNHA	002038	Castle Hackett Souterrain pNHA	002062	Old Domestic Building, Heath Island, Tully Lough pNHA
002075	Kinvarra Saltmarsh pNHA	002080	Letterfrack Hostel	002082	Oughterard National School	002083	Killarainy Lodge, Moycullen
002110	Corliskea/ Trien/ Cloonfelliv Bog						

Galway County Geological Sites (134)

Site Code	Site Name	Site Code	Site Name	Site Code	Site Name	Site Code	Site Name
GY001	Altnagalghera-Benchoona-Salrock-Rosroe	GY035	Cloonnacartan	GY068	Gowlan East	GY102	Mannin Thrust
GY002	An Chaladh Mór	GY036	Cong Springs and Pigeon Hole	GY069	Hill 707	GY103	Maumeen
GY003	An Cnapach	GY037	Coole Cave and Polldeelin	GY070	Inish Granite	GY104	Maumtrasna
GY004	Annaghbeg Bog	GY038	Coole-Garryland Complex	GY071	Inishshark	GY105	Moran's Cave
GY005	Aran Islands	GY039	Cornamona	GY072	Inishbofin	GY106	Murvey
GY006	Ardmore	GY040	Corranellistrum	GY073	Inishmacatreer Rohrenkarren	GY107	Oldchapel Quarry
GY007	Aughnanure Castle	GY041	Corranroo Springs	GY074	Inveran Drumlin	GY108	Oughterard - Owenriff Falls
GY008	Aughrim Bog	GY042	Costelloe Murvey Granite Quarry	GY075	Kanrawer Drumlin	GY109	Oughterard Granite
GY009	Ballinasloe Esker	GY043	Costelloe Road Cutting	GY076	Kilkerrin Turlough	GY110	Owenduff Bridge
GY010	Ballybanagher M17 Road Cut	GY044	Cregg Quarry	GY077	Killary Harbour	GY111	Park Esker
GY011	Ballyconneely Bay Drumlin	GY045	Croaghill Turlough	GY078	Killimor Esker	GY112	Peterswell Turlough
GY012	Ballydotia	GY046	Cur Hill	GY079	Kiltullagh Lough	GY113	Pollaloughabo

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Galway County Geological Sites (134)							
Site Code	Site Name	Site Code	Site Name	Site Code	Site Name	Site Code	Site Name
GY013	Ballyglunin Cave	GY047	Curraghduff Middle	GY080	Kinvara Springs	GY114	Pollbehan
GY014	Ballylee Hammerhead Sinks	GY048	Currywongaun	GY081	Knockanbaun Ridge	GY115	Pollnadirk
GY015	Ballymaglancy Cave	GY049	Dawros	GY082	Knockmaa	GY116	Pollnahallia
GY016	Beagh Sink - Pollduagh System	GY050	Derryclare Marble Quarry	GY083	Knockmaa Quarries	GY117	Rahally M6 Road Cut
GY017	Bohaun	GY051	Derrylea Road Cutting	GY084	Knocknagreana	GY118	Rahasane Turlough
GY018	Boleynendorrish River	GY052	Derrynagran Bog and Esker	GY085	Lackavrea	GY119	Roevehagh M18 Road Cuts
GY019	Bothar na Scrathog	GY053	Derryoover Blast Furnace	GY086	Leenaun	GY120	Ross Demesne - Ower Esker
GY020	Boyouanagh Turlough	GY054	Dog's Bay	GY087	Letterfrack Granite	GY121	Roundstone Granite
GY021	Bullaunagh Sinks	GY055	Dogs Bay and Gorteen Bay	GY088	Lettershinna Hill	GY122	Rusheenduff
GY022	Bun na gCeapan	GY056	Doon Hill	GY089	Levally Lough	GY123	Sellerna Bay
GY023	Bunnacunneen	GY057	Doorus	GY090	Lippa	GY124	Shannpheasteen Quarry
GY024	Caherateemore M17 Road Cut	GY058	Dunmore Esker	GY091	Loch na gClocha Ballagh	GY125	Streamstown Bay Marble Quarry
GY025	Caherglassaun Turlough	GY059	East Galway Moraines	GY092	Loch na hUileann - Lochan an Bhurca	GY126	Streamstown Peat
GY026	Cappacasheen Epikarst	GY060	Errisbeg Mountain	GY093	Lough Corrib	GY127	Suck River Callows
GY027	Carrownagappul Bog	GY061	Glencoaghan	GY094	Lough Coy	GY128	Summerville Lough
GY028	Castledaly	GY062	Glengowla Lead Mine	GY095	Lough Lurgeen Bog/Glenamaddy Turlough	GY129	Teernakill South
GY029	Claddaghduff Barnahalia Lough	GY063	Glentrasna Road	GY096	Lough Nafoeey Waterfall	GY130	Toormore M6 Road Cut
GY030	Claddaghduff Streamstown Bay	GY064	Gortgar Drumlins	GY097	Lough Nahasleam	GY131	Tully Shore
GY031	Claggan Quarry	GY065	Gortgarrow Spring	GY098	Lough Namackenbeg	GY132	Two Mile Ditch Quarry
GY032	Cleggan Head	GY066	Gorumna Island	GY099	Lough Oorid Quarry	GY133	Tynagh Mine
GY033	Clements Mine	GY067	Gowla	GY100	Mace Head	GY134	Williamstown Turloughs
GY034	Cloonloan			GY101	Mannin Bay		