

ENVIRONMENTAL REPORT

FOR THE

GALWAY COUNTY DEVELOPMENT PLAN 2015-2021

for: Galway County Council

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Prospect Hill,
Galway



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List of Abbreviations

AA	Appropriate Assessment
CSO	Central Statistics Office
DAHG	Department of Arts, Heritage and the Gaeltacht
DCENR	Department of Communications, Energy and Natural Resources
DEHLG	Department of the Environment, Heritage and Local Government
DECLG	Department of the Environment, Community and Local Government
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
EU	European Union
GSI	Geological Survey of Ireland
NHA	Natural Heritage Area
NIAH	National Inventory of Architectural Heritage
NSS	National Spatial Strategy
RBD	River Basin District
RMP	Record of Monuments and Places
RPS	Record of Protected Structures
RPGs	Regional Planning Guidelines
SAC	Special Area of Conservation
SEA	Strategic Environmental Assessment
SEO	Strategic Environmental Objective
SI No.	Statutory Instrument Number
SPA	Special Protection Area
WFD	Water Framework Directive

Glossary

Appropriate Assessment

The obligation to undertake Appropriate Assessment 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 or project, alone and in combination with other strategic actions and projects, on the integrity of a Natura 2000 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.

Biotic Index Values (Q Values)

The Biotic Index Values, or Q values, are assigned to rivers in accordance with biological monitoring of surface waters - low Q ratings, as low as Q1, are indicative of low biodiversity and polluted waters, and high Q ratings, as high as Q5, are indicative of high biodiversity and unpolluted waters. Good status as defined by the Water Framework Directive equates to approximately Q4 in the national scheme of biological classification of rivers as set out by the Environmental Protection Agency.

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 so that they come 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.

Protected Structure

Protected Structure is the term used in the Planning and Development Act 2000 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 former Department of the Environment, Heritage and Local Government (now Department of Arts, 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 Actions

Strategic actions include: *Policies/Strategies*, which may be considered as inspiration and guidance for action and which set the framework for Plans and programmes; *Plans*, sets of co-ordinated and timed objectives for the implementation of the policy; and *Programmes*, sets of projects in a particular area.

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 can be evaluated in order to help identify which provisions would be likely to result in significant environmental effects and where such effects would be likely to occur, if - in the case of adverse effects - unmitigated.

Section 1 SEA Introduction and Background

1.1 Introduction and Terms of Reference

This is the Strategic Environmental Assessment (SEA) Environmental Report for the Galway County Development Plan 2015-2021. 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. The SEA is carried out in order to comply with the provisions of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004) as amended. This report should be read in conjunction with the Plan.

1.2 SEA Definition

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 insure that these effects are adequately addressed at the earliest appropriate stages of decision-making in tandem with economic, social and other considerations.

1.3 SEA Directive and its transposition into Irish Law

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, referred to hereafter as the SEA Directive, introduced the requirement that SEA be carried out on plans and programmes which are prepared for a number of sectors, including land use planning.

The SEA Directive was transposed into Irish Law through the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (Statutory Instrument Number (SI No. 435 of 2004) and the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004). Both sets of Regulations became operational on 21st July 2004. The Regulations have been 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 (Strategic Environmental Assessment) (Amendment) Regulations 2011 (SI No. 201 of 2011).

1.4 Implications for the Plan and the Planning Authority

Article 7 of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004) as amended requires that Strategic Environmental Assessment is undertaken for the preparation of certain Development Plans.

The findings of the SEA are expressed in this Environmental Report, an earlier version of which accompanied the Draft Plan on public display. This earlier version was altered in order to take account of both: recommendations contained in submissions; and changes were made to the Draft Plan on foot of submissions. The Elected Members of Galway County Council took into account the findings of this report and other related SEA output during their consideration of the Draft Plan and before its adoption.

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

Section 2 The County Development Plan

2.1 Review Process and Statutory Context

Under the Planning and Development Act, 2000 as amended, each Planning Authority is obliged to prepare a development plan for its functional area every six years, the review of which should commence four years after its adoption. Accordingly, the review process of the 2009-2015 Galway County Development Plan (CDP), in preparation of the County Development Plan 2015-2021, began in May 2013 when extensive notification of the review process was given and notice was published and forwarded to the relevant bodies. The CDP has been prepared in accordance with Section 11 and 12 of the Planning and Development Act 2000 (as amended).

2.2 Background to the Plan

The CDP sets out an overall strategy for the proper planning and sustainable development of the functional area of Galway County Council. The Plan presents Galway County Council's outlook for future development of the County up to the period 2021. It also takes account of the longer term vision for the manner in which the County can be developed, while protecting and enhancing its environment through employing the principles of sustainable development in the policies and objectives set out therein.

The Plan builds on the strategies, policies and objectives of the Galway CDP 2009-2015, taking into account recent key development trends and national, regional and local policy developments. In particular, it also takes account of the increased emphasis on flooding, climate change, renewable energy and the need to support economic development. It also takes account of EU requirements including the application of SEA and AA to the Plan.

2.3 Content of the Plan

The Plan has been prepared by Galway County Council and comprises of a written document with maps, and various appendices.

The County Development Plan has been structured into 13 main Chapters which deal with various topics as outlined below:

Chapter No.	Title/Topics
1	Introduction
2	Spatial Strategy, Core and Settlement Strategy
3	Urban and Rural Housing
4	Economic, Tourism and Retail Development
5	Roads and Transportation
6	Water and Wastewater, Waste Management and Extractive Industry
7	Energy/Renewable Energies & Communications Technology
8	Climate Change & Flooding
9	Heritage, Landscape & Environmental Management
10	Cultural, Social & Community Development
11	Agriculture, Fishing, Marine Resources & Forestry
12	Implementation & Monitoring
13	Development Management Standards and Guidelines

2.4 The Plan's Vision

The Vision of the Plan is as follows:

"Enhance the quality of life of the people of Galway and maintain the County as a uniquely attractive place in which to live, work, invest and visit, harnessing the potential of the county's competitive advantages in a sustainable and environmentally sensitive manner."

2.5 The Plan's Strategic Aims

The Strategic Aims of the Plan are detailed below.

Strategic Aim 1 – Promote Regional Development

Promote regional development and growth through harnessing the economic and employment potential of the competitive advantages of County Galway such as its strategic location, quality of life, landscape, heritage and natural resources, in a sustainable and environmentally sensitive manner.

Strategic Aim 2 – Environmental Protection

Afford suitable protection to the environment and natural resources of the County and ensure the fulfilment of environmental responsibilities.

Strategic Aim 3 – Living Landscapes

Recognise the importance of living landscapes where people live, work, visit and enjoy while ensuring they are managed in a sustainable and appropriate manner.

Strategic Aim 4 – Balanced Urban and Rural Areas

Prioritise development within the Hub town of Tuam, the Galway Metropolitan Area, Ballinasloe, the key towns and smaller towns, villages and settlements within the County, while supporting the role of the rural areas in sustaining the rural based economy.

Strategic Aim 5 – Inclusive Communities

Encourage and support the development of inclusive communities which engage and include all members of society facilitating equal physical, social and cultural access and integration.

Strategic Aim 6 – Integrated Development

Ensure a more sustainable and integrated concept of development with regard to land use, transportation, water services, energy supply and waste management over the lifetime of the Plan.

Strategic Aim 7 – Sustainable Transportation

Minimise travel demand and promote the increase of sustainable mobility throughout the county.

Strategic Aim 8 – An Ghaeltacht

Promote the Gaeltacht as an Irish speaking community, recognising its importance locally, nationally and internationally and endeavour to enhance, sustain and protect the remaining Irish speaking communities of the Gaeltacht, where possible.

Strategic Aim 9 – Infrastructural Projects

Facilitate the development of infrastructural projects, which will underpin sustainable development throughout the County and Region during the Plan period.

Strategic Aim 10 – Heritage

Enhance and protect the built heritage and natural environment, including buildings, archaeology, landscape and biodiversity, within the County.

Strategic Aim 11 – Climate Change Adaptation

Engage in efforts to limit the human induced causes of climate change and take account of climate change in planning and delivering work programmes. Engage in efforts to mitigate and adapt to climate change and integrate climate change considerations in planning and delivering work programmes.

2.6 Relationship with other relevant Plans and Programmes

2.6.1 Introduction

The Plan sits within a hierarchy of land use forward planning strategic actions. The Plan must comply with relevant higher level strategic actions and may, in turn, guide lower level strategic actions. The following sections identify a number of these strategic actions, further details of which are contained in the Plan.

A full list of Plan informants are provided in Chapter 1 of the Plan.

2.6.2 The National Spatial Strategy 2002-2020

The National Spatial Strategy (NSS) is the national planning framework for Ireland which promotes self-sustaining growth through building up sufficient scale and critical mass through a network of gateways and hubs. The gateways act at national level and the hubs act at the regional level. The county levels are partnered by the county towns and other larger towns which support the role of smaller towns, villages and rural areas as a focus for business, residential, service and amenity functions.

2.6.3 Regional Planning Guidelines

Ireland is divided into eight regional forward planning regions, Dublin, Midlands, Mid East, Mid-West, South East, South West, West and Border, each with its own regional planning authority composed of Elected Members selected by the constituent local government councils. Regional planning authorities are required, under the Planning and Development (Regional Planning Guidelines) Regulations 2003 (SI No. 175 of 2003), to draw up regional planning guidelines (RPGs), long term strategic planning frameworks, for their relevant region.

The RPGs for the West Region 2010-2022 provide a framework for the long term strategic development of the West Region through setting out goals, policies and objectives in relation to population targets, housing, infrastructure, economic development, environment, amenities, social infrastructure and community development, ensuring the successful implementation of the NSS at regional, county and local level.

2.6.4 Ballinasloe Town Development Plan

The Plan includes the administrative area of what was formerly Ballinasloe Town Council. On foot of a recent amendment to the Planning and Development Act 2000, the provisions and zonings of the Ballinasloe Development Plan (which has undergone SEA and AA) will remain in force to the extent provided for by that Development Plan or until an LAP is prepared for Ballinasloe, whichever is the earlier.

2.6.5 Other Lower Tier Plans

Local Area Plans (LAPs) have been or will be prepared for the towns/areas with a population over 1,500 persons; however, the County Development Plan remains the overarching Plan for the County. LAPs have been prepared for towns including Athenry, Bearna, Clifden, Craughwell, Gaeltacht, Gort, Loughrea, Maigh Cuilinn, Oranmore, Oughterard, Portumna and Tuam.

2.6.6 River Basin Management Plans

Local Authorities, including Galway County Council, have prepared the Shannon International and Western River Basin Management Plans which are implemented in order to help protect and improve waters in the county and wider River Basin Districts. These Plans and their associated Programmes of Measures include provisions to help ensure that water bodies in the districts meet the objectives of the Water Framework Directive.

2.6.7 National Catchment Flood Risk Assessment and Management Programmes

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. The Programme is being implemented through CFRAM Studies which are being undertaken for each of the six river basin districts in Ireland.

CFRAM Studies are being undertaken for the Western and Shannon International 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. The final output from the studies will be CFRAM Plans, to be published in December 2016. The Plans will define the current and future flood risk in the River Basin Districts and set out how this risk can be managed.

2.6.8 Draft National Forestry Programme 2014-2020

The Draft National Forestry Programme 2014-2020, *Forests, Products and People. Ireland's Forest Policy - A Renewed Vision*, is currently being prepared by the Department of Agriculture, Food and the Marine and views of stakeholders are now being sought on the composition of the new proposed forestry measures. These proposed measures represent a continuation of the previous Forestry Programme 2007-2013 which has been effective in supporting the growth and development of the forestry sector and rural economies.

2.6.9 Draft National Peatlands Strategy

The Draft National Peatlands Strategy, prepared by the National Parks and Wildlife Service, will, when finalised, establish principles in relation to Irish peatlands in order to guide Government policy. The Draft Strategy aims to provide a framework for which all of the peatlands within the State can be managed responsibly in order to optimise their social, environmental and economic contribution.

2.6.10 National Strategic Aquaculture Plan

Bord Iascaigh Mhara (BIM) is assisting the Department of Agriculture, Fisheries and the Marine in preparing a National Strategic Aquaculture Plan. The Plan is being prepared in compliance with Strategic EU Guidelines for the Sustainable Development of EU Aquaculture and will be consistent with the aim of the proposal for the Common Fisheries Policy reform to promote aquaculture through "an open method of co-ordination". The NSPA will compliment the National Seafood Operational Programme and will cover the period 2014-2020 (with mid-term assessment in 2017).

2.6.11 New Waste Management Plans

In accordance with Section 22 of the Waste Management Act, 1996 and the Waste Management (Planning) Regulations, 1997, notice was given of the intention to commence

the preparation of new Regional Waste Management Plans in 2013.

There will be three new Plans prepared for the following new waste management planning regions:

- Connacht-Ulster (comprising local authorities Cavan, Donegal, Galway City, Galway County, Leitrim, Mayo, Monaghan, Roscommon and Sligo);
- Eastern-Midland (comprising local authorities: Dublin City, Dun Laoghaire/Rathdown, Fingal, Kildare, Laois, Longford, Louth, Meath, Offaly, South Dublin, Wicklow and Westmeath); and
- Southern (comprising local authorities: Carlow, Clare, Cork City, Cork County, Kerry, Kilkenny, Limerick, Tipperary, Waterford and Wexford)

2.6.12 Smarter Travel 2009

"Smarter Travel, A Sustainable Transport Future, A New Transport Policy for Ireland 2009 - 2020" is the Government's action plan to free towns and cities from traffic congestion, substantially cut CO2 emissions, encourage car based commuters to leave their cars at home, and encourage a shift toward walking, cycling and greater public transport usage.

2.6.13 GRID 25 and associated Implementation Plan

Grid25 is a high-level strategy outlining how EirGrid intends to undertake the development of the electricity transmission grid in the short, medium and longer terms, to support a long-term sustainable and reliable electricity supply. The Grid25 strategy thereby seeks to implement the provisions of the 2007 Government White Paper on Energy - "Delivering a Sustainable Energy Future for Ireland" in terms of development of electricity transmission infrastructure.

The Grid25 Implementation Programme (IP) is a practical strategic overview of how the early stages of Grid25 are intended to be implemented.

2.6.14 Food Harvest 2020

Food Harvest 2020 is a roadmap for the Irish food industry, as it seeks to innovate and expand in response to increased global demand for quality foods. It sets out a vision for the potential growth in agricultural output after the removal of milk quotas in 2015.

2.6.15 Environmental Protection Objectives

The Plan is subject to a number of high level environmental protection policies and objectives with which it must comply, including those which have been identified as Strategic Environmental Objectives in Section 5.

Examples of Environmental Protection Objectives include the aim of the EU Habitats Directive - which is to contribute towards ensuring biodiversity through the conservation of natural habitats and of wild fauna and flora in the European territory of Member States - and the purpose of the Water Framework Directive - which is to establish a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater which, among other things, prevents deterioration in the status of all water bodies and protects, enhances and restores all waters with the aim of achieving good status by 2015.

Section 3 SEA Methodology

3.1 Introduction to the Iterative Approach

This section details how the SEA has been undertaken alongside the preparation of the Plan. Figure 3.1 lays out the main stages in the Plan/SEA preparation process.

The Plan and associated SEA, Appropriate Assessment (AA) and Strategic Flood Risk Assessment (SFRA) documents were prepared in an iterative manner whereby multiple revisions of each document were prepared, each informing subsequent iterations of the others.

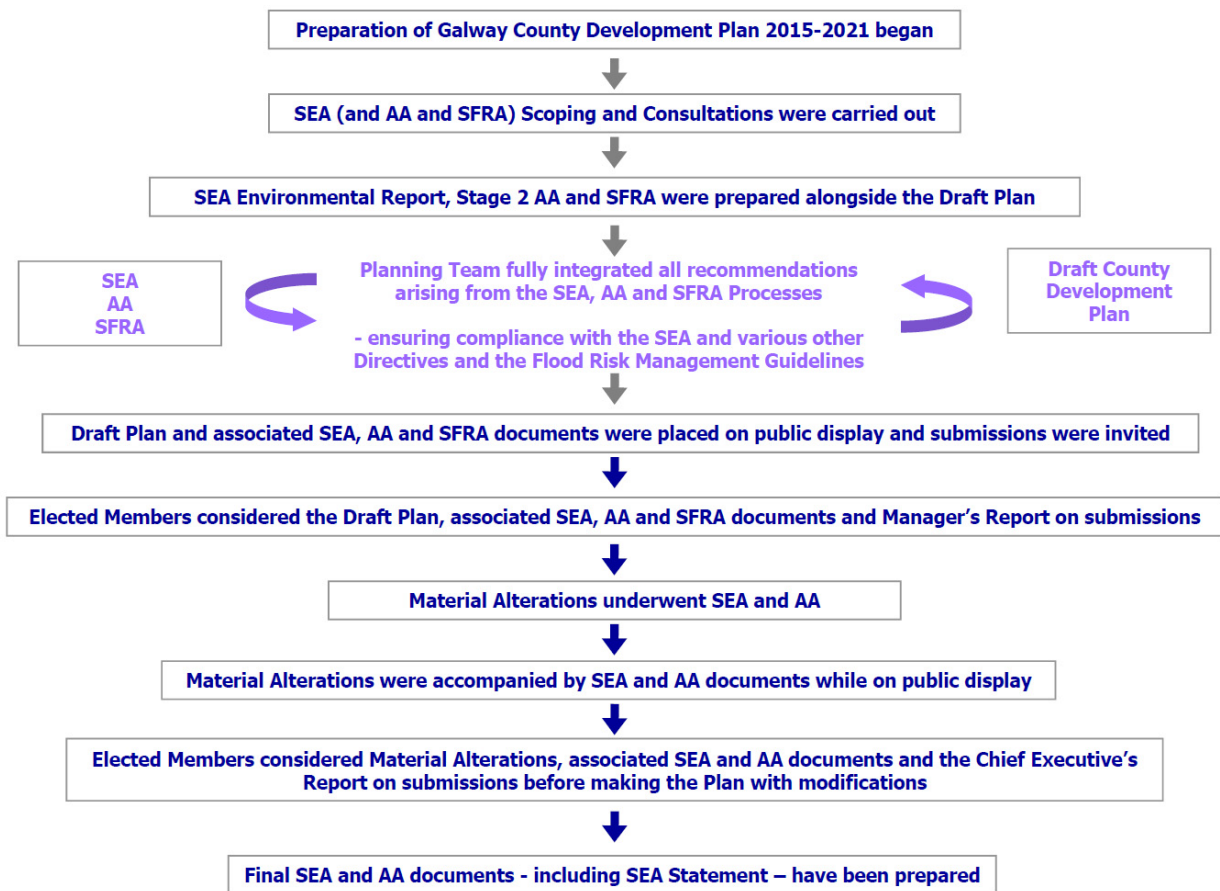


Figure 3.1 County Development Plan and SEA, AA and SFRA Stages

3.2 Appropriate Assessment and Integrated Biodiversity Impact Assessment

3.2.1 Appropriate Assessment

A Stage 2 Appropriate Assessment (AA) has been undertaken alongside the Plan.

The requirement for AA is provided under the EU Habitats Directive (Directive 1992/43/EEC).

The AA concluded that the Plan will not affect the integrity of the Natura 2000 network¹.

The preparation of the Plan, SEA and AA has taken place concurrently and the findings of the AA have informed both the Plan and the SEA. All recommendations made by the AA were integrated into the Plan.

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 (including European sites, other habitats and species of ecological value, and supporting environmental features) were identified for consideration at scoping stage and these are now detailed in Section 4.4.
- Reference to the zone of influence is provided, including at Section 4.4.

Baseline

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

¹ Except as provided for in Section 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.

Alternatives

- Impacts upon biodiversity are considered under each of the alternatives and potential conflicts can be mitigated under 3 alternatives.
- Alternatives incorporate habitat protection aspects.

Impact assessment

- Effects on biodiversity are identified and assessed and the AA gives due consideration to the interrelationship between biodiversity-relevant environmental factors and any 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 consistent and compatible.
- All the AA and SEA mitigation measures have been simultaneously considered for incorporation into the plan/programme/project
- Indicators and associated targets been included in SEA for monitoring European sites.

Reporting

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

Communication and consultation

- Submissions (both written and those made at a Scoping Meeting on 30th May 2013) from both the EPA and NPWS have been taken on board.
- The preparation of the Plan, SEA and AA has taken place concurrently and the findings of the AA have informed both the Plan and the SEA.

3.3 Strategic Flood Risk Assessment

A Strategic Flood Risk Assessment (SFRA) has been undertaken alongside the preparation of the new Plan.

The requirement for SFRA is provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (DEHLG, 2009).

The preparation of the Plan, SEA and SFRA has taken place concurrently and the findings of the SFRA have informed both the Plan and the SEA. All recommendations made by the SFRA have been integrated into the Plan.

3.4 Scoping

3.4.1 Introduction

In consultation with the relevant authorities, 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 which are specified under the SEA Directive².

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

3.4.2 Scoping Meeting

In order to inform the scoping of the SEA, AA and SFRA, a scoping meeting with the EPA and NPWS was held on 30th May 2013.

3.4.3 Scoping Notices

All relevant environmental authorities³ identified under the SEA Regulations as amended, were all 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 Council. Environmental authorities were informed that submissions, or parts of submissions, made on the AA or SFRA would also be taken into account.

² 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.

³ These comprise: Environmental Protection Agency, Department of Communications, Energy and Natural Resources, Department of Agriculture, Fisheries and Food, Department of the Environment, Community and Local Government, Department of Arts, Heritage and the Gaeltacht, Galway City Council, Ballinasloe Town Council, Loughrea Town Council, Tuam Town Council, Mayo County Council, Roscommon County Council, Offaly County Council, North Tipperary County Council and Clare County Council.

3.4.4 Scoping Responses

Submissions were made by the Environmental Protection Agency and the Department of Arts, Heritage and the Gaeltacht. These submissions influenced the scope of the assessments as detailed in the final SEA Scoping Report.

3.5 Environmental Baseline Data

The SEA process is informed by the environmental baseline (i.e. the current state of the environment) to facilitate the identification and evaluation of the likely significant environmental effects of implementing the provisions of the Plan and the alternatives and the subsequent monitoring of the effects of implementing the provisions of the Plan as adopted.

3.6 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, four alternative scenarios for the County Development Plan are examined.

3.7 The SEA Environmental Report

In this Environmental Report the likely environmental effects of the Plan and the alternatives are predicted and their significance evaluated.

The Environmental Report provides the 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.

The Environmental Report has been updated in order to take account of recommendations contained in submissions and in order to take account of changes which are made to the

original, Draft Plan that was placed on public display.

The Environmental Report is required to contain the information specified in Schedule 2 of the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (SI No. 435 of 2004) as amended (see Table 3.1).

3.8 The SEA Statement

An SEA Statement has been prepared which includes information on:

- How environmental considerations have been integrated into the Plan, highlighting the main changes to the Plan which 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.

3.9 Difficulties Encountered

The lack of a centralised data source that could make all environmental baseline data for the county both readily available and in a consistent format posed a challenge to the SEA process. This difficulty is one which has been encountered while undertaking SEAs at local authorities across the country and was overcome by investing time in the collection of data from various sources and through the use of Geographical Information Systems.

Table 3.1 Checklist of Information included in this Environmental Report

Information Required to be included in the Environmental Report	Corresponding Section of this Report
(A) Outline of the contents and main objectives of the plan or programme, and of its relationship with other relevant plans and programmes	Sections 2, 5 and 8
(B) Description of relevant aspects of the current state of the environment and the evolution of that environment without implementation of the plan or programme	Section 4
(C) Description of the environmental characteristics of areas likely to be significantly affected	Sections 4, 7 and 8
(D) Identification of any existing environmental problems which are relevant to the plan or programme, particularly those relating to European protected sites	Section 4
(E) List environmental protection objectives, established at international, EU or national level, which are relevant to the plan or programme and describe how those objectives and any environmental considerations have been taken into account when preparing the Plan	Sections 5, 7, 8 and 9
(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	Non-Technical Summary (Appendix I)
(K) Interrelationships between each environmental topic	Addressed as it arises within each Section

Section 4 Environmental Baseline

4.1 Introduction

The SEA Directive requires that the information on the baseline environment is focused upon the relevant aspects of the environmental characteristics of areas likely to be significantly affected and the likely evolution of the current environment in the absence of the Plan. Being consistent with the strategic provisions of the Plan, this section provides a strategic description of aspects of environmental components which have the greatest potential to be affected by implementation of the Plan, if unmitigated.

Article 5 of the SEA Directive states that the report shall include the information that may *reasonably* be required taking into account:

- Current knowledge and methods of assessment;
- The contents and level of detail in the plan or programme and its stage in the decision-making process; and
- The extent to which certain matters are more appropriately assessed at different levels in that process in order to avoid duplication of the assessment.

What this means in practice is, *inter alia*, with regard to Plan, that SEA involves collating currently available, relevant environmental data; *it does not require major new research*. Where data deficiencies or gaps exist, this should be acknowledged in the report.

4.2 Monitoring Review

As part of the scoping exercise, a monitoring review was undertaken by examining the environmental effects of planning applications upon the environment between 2009 and 2013. The following points summarise this review:

- Biodiversity, Flora and Fauna
 - No conflicts between development granted permission under the 2009-2015 CDP and conservation status of habitats and species under Article 17 of the

Habitats Directive have been identified by the Council.

- No significant ecological networks or parts thereof which provide functional connectivity have been identified as being lost without remediation resulting from development provided for by the CDP.
 - No significant impacts on relevant habitats, species, environmental features or other sustaining resources in Wildlife Sites resulting from development provided for by the CDP have been identified by the Council.
 - No significant impacts on the protection of species listed on Schedule 5 of the Wildlife Act 1976 resulting from development provided for by the CDP have been identified by the Council.
 - Figures from CSO show overall increase (+0.2% of the specified population) in the population involved in land management in the county between 2006 and 2011.
- Population and Human Health
 - No significant effects on human health arising from implementation of the 2009-2015 CDP have been identified.
 - Based on available data from the CSO and the Core Strategy Variation to the 2009-2015 CDP, population changes are in compliance with the provisions of the current CDP (it is anticipated that population growth may be lower than the RPG's / Core Strategy allocations).
 - Soil
 - There is a reduced availability of brownfield land in the County at the end of the CDP's lifespan. It is noted however that there has been

limited development within the lifetime of the 2009-2015 Plan.

- Water
 - The most recent Q values for testing locations within the county are for 2010-2012. The most recent trophic classifications (Lakes and Coastal and Estuarine Water) from the EPA are for the period 2007-2009. For details on these indicators and the current status of surface and ground waters please refer to Section 4.7.
 - In both 2009 and 2012 Clifden Beach failed to achieve both Guide and Mandatory values for bathing water and was designated as Poor Status.
 - All permissions have been granted in compliance with The Planning System and Flood Risk Management Guidelines for Planning Authorities.
- Material Assets
 - Microbiological compliance levels in Public Water Supplies have improved from 98.8% in 2009 to 100% in 2010, 2011 and 2012 whilst chemical compliance levels have changed from 99% in 2009 and 2010 to 99.6% in 2011 and 99.5% in 2012.
 - Between 2009 and 2011 both the total *packaging* recovered by self-complying packagers and the total *collected and brought household waste* have increased.
- Air and Climatic Factors
 - Figures from CSO show an overall decrease of 2.5% of the entire population travelling to work by public transport or non-mechanical means in the county between 2006 and 2011.
- Cultural Heritage
 - No inappropriate development has been granted under the CDP that would affect the

protection of entries to the Record of Monuments and Places.

- No inappropriate development has been granted under the CDP that would affect the protection of entries to the Record of Protected Structures.

- Landscape
 - No complaints have been received from statutory consultees regarding avoidable impacts on the landscape.

4.3 Likely Evolution of the Environment in the Absence of a new Plan

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

As indicated under Section 4.2, the 2009-2015 County Plan has contributed towards environmental protection within County Galway.

If the 2009-2015 Plan was to expire and not be replaced by the new Plan, this would have resulted in a deterioration of the County's planning and environmental protection framework. Although higher level environmental protection objectives – such as those of various EU Directives and transposing Irish Regulations – would still apply, the deterioration of this framework would mean that new development would be less coordinated and controlled. Such development could result in an increase in the occurrence of adverse effects on all environmental components, especially those arising cumulatively. Cumulative effects occur as a result of the addition of many small impacts to create one larger, more significant, impact.

Such adverse effects could include:

- Loss of biodiversity with regard to Natura 2000 Sites and Annexed habitats and species;
- Loss of biodiversity with regard to ecological connectivity and stepping stones;

- Loss of biodiversity with regard to designated sites including Wildlife Sites and species listed on Schedule 5 of the Wildlife Act 1976;
- Loss of population of the county involved in land management;
- Spatially concentrated deterioration in human health;
- Damage to the hydrogeological and ecological function of the soil resource;
- Adverse impacts upon the status and quality of water bodies, including bathing waters;
- Increase in the risk of flooding;
- Failure to provide adequate and appropriate waste water treatment;
- Failure to comply with drinking water regulations and serve new development with adequate drinking water that is both wholesome and clean;
- Increases in waste levels;
- Failure to contribute towards sustainable transport and associated impacts;
- Effects on entries to the Record of Monuments and Places and other archaeological heritage;
- Effects on entries to the Records of Protected Structures and other architectural heritage; and
- Occurrence of adverse visual impacts.

4.4 Biodiversity and Flora and Fauna

4.4.1 Overview of High Value Biodiversity⁴

County Galway contains a variety of natural habitats including many of international nature importance such as blanket bogs, fens, heath, ancient oak woodland, turloughs, species-rich calcareous grassland and limestone pavement. The County also contains a large number of rare, threatened and uncommon species, including a large number of plants and animals that are protected under national and European Union legislation. A number of these species are found within the habitats of high value mentioned below as well as within the County's designated ecological sites (see Section 4.4.4).

4.4.1.1 Peatlands

Peatlands such as raised and blanket bogs, wet and dry heath, and fens are of particular value because of the rarity of these habitats in an international context, and because of the characteristic flora and fauna that live in these wet, peaty and often highly acidic places.

Irish raised bogs account for a significant proportion of all the conservation-worthy raised bogs remaining in Europe. A number of high quality active raised bogs are found in the north and east of County Galway, as well as large areas of cutover and degraded raised bog.

Ireland, and in particular, Galway, contains some of the best examples of intact blanket bog in Europe. The most extensive habitat of nature importance within County Galway is lowland blanket bog, found mainly in south Conamara. 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 Conamara and other upland areas in the County are generally dominated by upland blanket bog, wet, dry and montane heath.

A number of birds live and breed on bogs including Red Grouse, Golden Plover and the Curlew. These birds are very vulnerable to loss of good quality bog habitat and their numbers have been declining for many years. Blanket bog, heath and young coniferous forestry habitats in the Slieve Aughties are important breeding ground for the Hen Harrier.

The coastal areas of Conamara 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 are another important but less abundant peatland type found in Galway, which often occurs 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.

4.4.1.2 Limestone Pavement

Limestone pavement is 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 still be seen in the Aran Islands and around Castletaylor - both areas of which are designated as candidate Special Areas of Conservation - and in the Cow Park in Clarinbridge.

⁴ Text in this section is sourced from the Galway County Biodiversity Action Plan which provides a detailed overview of the County's biodiversity

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. The Irish population of Lesser Horseshoe bats is internationally important as the species is now in serious decline and even extinct in much of Europe.

4.4.1.3 Woodland

Native woodland is a relatively uncommon habitat in County Galway. In west Galway, Derryclare and Ballinahinch in Conamara are important native woodland sites, while in east Galway, significant areas of oak-birch-holly woodland include Gortnacarnaun, Drummin, and Woodford. An extensive area of oak-ash woodland is 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.

Even when dominated by non-native broadleaf trees - such as beech or sycamore -, woodland habitats can support a wide range of plants and animals. Forests such as Portumna Forest Park and Kilcornan Woods in Clarinbridge are home to important populations of Red Squirrel, a species that is in rapid decline in most of the east of the country due to competition from the introduced American Grey Squirrel. The Pine Marten is another important native mammal found in Galway woodlands. Due to centuries of persecution, Pine Marten numbers were critically reduced but now its range is expanding due to legal protection and increasing cover of coniferous forestry and scrub woodland.

4.4.1.4 Eskers

Eskers are distinctive Irish habitats found mostly in the midlands. They are 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. As well as being geomorphological features, eskers are important for the characteristic woodland and grassland habitats they support, including species-rich grasslands with abundant orchids. 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.

4.4.1.5 Freshwater Aquatic Habitats

Turloughs, a priority habitat under the EU Habitats Directive, are 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 north, east and south County Galway and there are a number of exceptional turlough sites in the region such as Coolcam, Croaghill, Ballinastack, Coole-Garryland and Glenamaddy Turloughs. Rahasane Turlough near Craughwell is the largest in Ireland and is important for over-wintering birds.

Galway also has an abundance of permanent freshwater lakes, the largest of which, Lough Corrib divides the geographically distinct regions of the east and west of the County. The shores of Lough Corrib provide habitat for a number of rare plant species including Irish Lady's Tresses, Shrubby Cinquefoil and Alder Buckthorn. Many of the rivers and lakes in County Galway have relatively good water quality (see Section 4.7 *Water*). These water bodies support a number of rare and important plant and animal species including important fisheries of salmon and brown trout.

Surface waters and floodplains are mapped under Section 4.7 *Water*.

The Arctic Char is a very rare fish similar in ecology and appearance to the brown trout. One of the first fish to colonise Ireland after the Ice Age, it is confined to just a few of the cold, deeper lakes including Lough Inagh, Fermoyle Lough and Athry in County Galway. It is now believed that one third of all native populations of the Arctic Char in Ireland are likely to be extinct, while the status of a further twenty one populations is unknown. In Galway, Arctic Char is believed to be extinct in three lakes while the population status of a further thirteen lakes is unknown. Pollan, another very rare fish, is found in Lough Derg. In Western Europe, its distribution is limited to just five lakes in Ireland.

The freshwater pearl mussel (*Margaritifera Margaritifera*) is a bivalve, which is a type of mollusc or snail with a body that is almost completely enclosed between a pair of shells.

The Fresh Water Pearl Mussel is a critically endangered species due to pollution, habitat destruction and over-fishing. It requires particularly clean, clear and well-oxygenated water to survive and in Galway it is restricted to just a few soft-water sites in the west of the County including the Owenriff River in Oughterard. The presence of Freshwater Pearl Mussels in a river system is indicative of water of the highest quality. See Section 4.4.4.10 for information on designation.

The White Clawed Crayfish is protected in Ireland and under EU legislation. It prefers calcareous waters and is found in Lough Corrib, Lough Derg and other rivers of the Shannon catchment. The Irish crayfish population is especially important, as it remains free of a fungal disease that has decimated populations elsewhere in Europe.

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.

4.4.1.6 Coastal Habitats

The coastline of County Galway - including its various offshore islands - stretches for over 2,000 km. It is highly indented and supports a diverse range of habitats including rocky and sandy shores, shingle beaches, and saltwater lagoons.

Coastal sand dunes and grasslands are important habitats for many species of invertebrates including rare snails, dragonfly and butterfly species. Machair (flat sandy grassland) is a priority habitat found only along the coast of Ireland and Scotland. In Ireland the distribution of machair is limited to 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 Conamara including Dog's Bay near Roundstone and Slyne Head. These areas are

awash with orchids and other wildflowers during the summer months.

South Conamara is home to the best site in the country for another priority habitat under EU legislation, coastal lagoons, including some saline lake lagoons situated on peat. The Foxtail Stonewort, a protected species of algae that grows in highly saline lagoons, has only been recorded at five locations in Ireland, three of which are in Conamara.

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 are found off the Aran Islands and Kilkieran Bay (Ireland's first marine cSAC), 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.

Ireland has one of the most species-rich seaweed floras in Europe with many potential 'hot-spots' of seaweed diversity identified including Galway Bay, the coast of the Burren and Conamara. Of particular interest are the maerl beds found in western parts of the coasts of County Galway. These rare habitats are composed of deep deposits of calcareous red algae which produce the distinctive 'coral' beaches found around An Cheathrú Rua.

The Atlantic 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.

4.4.2 Ecological Networks and Connectivity

Ecological networks are important in connecting areas of local biodiversity with each other and with nearby designated sites so as to prevent islands of habitat from being isolated entities. They are composed of linear features, such as treelines, hedgerows and rivers/streams, which provide corridors or stepping stones for wildlife species moving

within their normal range. They are important for the migration, dispersal and genetic exchange of species of flora and fauna particularly for mammals, especially for bats and small birds and facilitate linkages both between and within designated ecological sites, the non-designated surrounding countryside and the more urban areas of the County.

The County is dissected by many rivers and lakes with Lough Corrib, Ireland's second largest lake at its centre. The banks of these aquatic features together with the extensive coastline of the County provide significant connectivity across the County.

Hedgerows are a familiar landscape feature in the countryside of the County, particularly east of Lough Corrib. As well as providing food and shelter for insects, birds and other animals, hedgerows also act as important corridors. Typically, older, denser hedges support a greater abundance and diversity of wildlife.

As traditional species-rich grasslands decline, grassy roadside verges and other marginal grasslands act as important habitats and ecological networks for many species of wild flowers and the invertebrates they support. Because of a management regime which is generally of low-intensity, many grassy verges growing along roads contain a great variety of wild flowers. In Conamara, long stretches of grassy verges may contain a great variety of orchid species.

Manmade structures such as stone walls, bridges and buildings can also be very important for wildlife and provide feeding, hibernating and roosting sites for many species of invertebrates, birds and bats. A diversity of mosses, lichens and other plants are often found on old stone built structures.

4.4.3 Land Cover and Habitat Mapping

4.4.3.1 CORINE Land Cover Mapping

The CORINE land cover mapping⁵ for County Galway classifies land cover under various

⁵ CORINE Land Cover (CLC) is a map of the European environmental landscape based on interpretation of satellite images. Land cover is the observed physical cover, as seen from the ground or through remote sensing, including for example natural or planted vegetation, water and human

headings. CORINE land cover mapping for County Galway for the year 2006 is shown on Figure 4.1.

The mapping shows an overall difference between land cover to the west of Lough Corrib and land cover to the east of the Lough.

The western half of the County is primarily covered by the *peat bogs* category of land cover whereas the eastern half of the County is primarily covered by *pastures* as well as significant portions of *peat bogs* and *complex cultivation patterns*.

Water bodies are spread across the western half of the County as are pockets of *transitional woodland scrub* and *coniferous forest*.

Agricultural lands with natural vegetation are found near the banks of the Corrib system and other lakes as well as being spread across the north of the County - to the south of Headford and to the north west of Tuam - and across the south west corner of the County.

A mosaic of *peat bogs*, *transitional woodland scrub* and *coniferous forests* is found over a wide area located between Gort and Portumna, in the vicinity of the Slieve Aughty Mountains.

Sensitive land cover classes for the year 2006 is shown on Figure 4.2. This map illustrates the land cover that is most sensitive to adverse conditions and includes *peat bogs*, *mixed forests*, *coastal lagoons and salt marshes*. These areas are likely to provide high value habitats for the counties flora and fauna as discussed in Section 4.4.1.

An examination of Landcover differences between the CORINE 2000 data and the data for the year 2006 shows that areas of *transitional woodland scrub* changed to *mixed forest* and *broad leafed forest* by 2006. These changes in the data may reflect the land cover changes as a result of the planting, maturing

constructions which cover the earth's surface. Because of the scale of the CORINE data and the method by which it was collected there are likely to be a number of inaccuracies at the local level. It is noted, however, that the land cover shown on the maps is generally accurate at the County level. The European Environment Agency, in conjunction with the European Space Agency, the European Commission and member countries is currently updating the CORINE land cover database.

and felling of forests. Urbanisation of land occurred throughout the County, mainly in the vicinity of existing towns and villages. Some pastures, agricultural land, transitional woodland scrub, complex cultivation and coniferous mixed forests appear in the 2006 mapping as discontinuous urban fabric, industrial and commercial units and construction sites. These changes between 2000 and 2006 landcover indicate a cumulative loss of natural/ agricultural vegetation and associated habitats - and their flora and fauna - at the fringes of the County's largest settlements. New CORINE data is expected to be published in 2014 – the assessment will take account of this updated data as relevant and appropriate.

4.4.3.2 Ecological Network Classes

Tubridy and Ó Riain behalf of the EPA (2002) have identified a national spread of Ecological Network Classes which have been informed by CORINE land cover data.

The study developed criteria to classify the relative importance of different areas within an Ecological Network.

Five Classes of areas were defined on the basis of *naturalness*. These areas are mapped for County Galway on Figure 4.3.

Class 1 areas are expected to have the following characteristics:

1. Supports natural or near-natural vegetation types.
2. Contains landscape features which act as corridors as well as core areas such as uplands, rivers, lakes and coastline.
3. They contain flora and fauna which are specialists i.e. typical of particular habitats or support migratory species either as feeding, nesting or roosting areas, particularly species such as those listed in Annex 1 of the Birds Directive, Annex 2 and 1V of the Habitats Directive, and in the Red Data Books for plants, vertebrates, plants and stoneworts.

Class 2 areas are expected to have the following characteristics:

1. Supports natural or near-natural vegetation types.
2. While they have many of the species and characteristics which would be expected to occur in a natural or semi-natural area quality has been reduced due to development impacts. This is revealed by water quality analyses, examination of management impacts or field surveys. Therefore the area does not support all expected species or functions.

3. Area has potential to revert to class 1 with management.

Class 3 areas are expected to have the following characteristics:

1. Does not contain natural or semi-natural vegetation types.
2. Flora and fauna is dominated by native species. However many non-native species of plants will be found.
3. Area of little importance for rare or migratory species.
4. Unlikely to be designated.
5. Area subject to low intensity management. Therefore they are unlikely to change if management ceases and they have particular potential for improving biodiversity.

Class 4 areas are expected to have the following characteristics:

1. Habitats in the area have appeared as a result of recent development (within last 100 years).
2. They support a mix of species (native and exotic) and the proportion of non-native plants is between 20-35%.
3. Management is intensive and is contributing to their low biodiversity value
4. Habitats of little importance for rare or migratory species.
5. No designations.

Class 5 areas are expected to have the following characteristics:

1. Does not contain natural or semi-natural vegetation types.
2. They support a mix of species (native and exotic) and the proportion of non-native plants is at least 35% or higher.
3. Management is intensive and is contributing to their low biodiversity value
4. Habitats of little importance for rare or migratory species.
5. No designations.

4.4.4 Designations

4.4.4.1 Introduction

The international significance of Galway's natural heritage is reflected in the fact that a high proportion of the County is designated for nature conservation under European and National legislation.

4.4.4.2 Candidate Special Areas of Conservation and Special Areas of Conservation

Candidate Special Areas of Conservation (cSACs) 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) by the DEHLG

due to their conservation value for habitats and species of importance in the European Union. The sites are *candidate* sites because they are currently under consideration by the Commission of the European Union.

Special Protection Areas (SPAs) have been selected for protection under the 1979 European Council Directive on the Conservation of Wild Birds (79/409/EEC) by the DEHLG due to their conservation value for birds of importance in the European Union.

A total of 72 cSACs have been selected in County Galway for 47 Annex I habitats including 10 priority habitats. Annex I habitats are recognised by the European Union to be of particularly high nature conservation value. Candidate SACs in Galway provide examples of bogs, callows, machair, limestone pavement, headlands, bays, loughs, turloughs, islands, woods and caves.

19 SPAs have been designated in County Galway covering, inter alia, certain bays, loughs, islands, turloughs, callows, woods and marshes. These SPAs along with cSACs comprise Natura 2000 - a network of protected areas throughout the EU established under the Habitats Directive.

SPAs along with SACs comprise Natura 2000 - a network of protected areas throughout the EU established under the Habitats Directive. Management Plans for Natura 2000 sites can help protect whatever is important in Natura 2000 sites while enabling appropriate development.

A Stage 2 Appropriate Assessment (AA) has been undertaken alongside and informs this SEA for the Plan. The requirement for AA is provided under the EU Habitats Directive (Directive 1992/43/EEC). The AA concluded that the Plan will not affect the integrity of the Natura 2000 network⁶.

Figure 4.4 shows the spatial distribution of cSAC and SPA designations across the County. As can be seen from the map, many of these sites overlap with each other. Other categories of designations are present in the County and

are identified in proceeding sections however these generally overlap with those shown on Figure 4.4.

Also shown on Figure 4.4 are the borders of Water Management Units (WMUs) including those which are shared with Counties Mayo, Roscommon, Offaly, Tipperary and Clare. The Zone of Influence of the Plan with respect to impacts upon ecology via surface waters upon ecological resources can be estimated to be all WMUs either wholly within or partially within the County as well as surrounding estuarine and coastal water bodies.

Figure 4.5 maps all cSACs and SPAs designations within 15km of County Galway as well as providing the name and site code for each.

The majority of the western half of the County - including Lough Corrib, inner Galway Bay and most of the County's islands - is covered by designated sites, the largest of which is the Conamara Bog Complex cSAC and Natural Heritage Area (NHA; see Section 4.4.4.3 below) which covers much of the County's peatlands to the west of the Lough Corrib SPA, candidate SAC and proposed NHA. Kilkieran Bay and its islands comprise a candidate SAC and there is a cSAC designation covering part of Inishmore Island and its waters. The Galway Bay Complex cSAC and pNHA and the Inner Galway Bay SPA together cover an area of the Bay stretching from Salthill (in the east of the Galway City) to Aughinish (on the Galway/Clare border) and further into the off County Clare.

The eastern half of the County is covered to a significantly lesser extent by such designations; nevertheless, a number of important areas are located in this half of the County. The Grange/Clare/Albert/Sinking River system which drains into Lough Corrib is part of the Corrib designated system and the designated River Suck and River Shannon Callows and Lough Derg comprise much of the County's eastern border. The Slieve Aughty Mountains SPA covers a wide area located between the settlements of Gort and Portumna.

4.4.4.3 Natural Heritage Areas

Natural Heritage Areas (NHAs) are designated due to their national conservation value for ecological and/or geological/geomorphological heritage. They cover nationally important

⁶ Except as provided for in Section 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.

semi-natural and natural habitats, landforms or geomorphological features, wildlife plant and animal species or a diversity of these natural attributes. NHAs are designated under the Wildlife (Amendment) Act 2000. Proposed NHAs were published on a non-statutory basis in 1995, but have not since been statutorily proposed or designated.

35 NHAs have been designated in County Galway (see Figure 4.6) - mainly covering bog habitats with examples of marshes and eskers also included - and there are a number of sites for which Natural Heritage Area designations are proposed, including various bogs, eskers and woods.

4.4.4.4 Conamara National Park

National parks are almost entirely state owned areas designated nationally with the aims of nature conservation and public recreation and appreciation.

Situated in the West of Ireland in County Galway, Conamara National Park covers some 2,957 hectares of scenic mountains, expanses of bogs, heaths, grasslands and woodlands. Some of the Park's mountains, namely Benbaun, Bencullagh, Benbrack and Muckanaght, are part of the famous Twelve Bens or Beanna Beola range. Conamara National Park was established and opened to the public in 1980.

Much of the present Park lands formed part of the Kylemore Abbey Estate and the Letterfrack Industrial School, the remainder having been owned by private individuals. The Park lands are now wholly owned by the State and managed solely for National Park purposes.

4.4.4.5 Ramsar Sites

Ramsar sites are designated and protected under the Convention of Wetlands of International Importance, especially as Water Fowl Habitat, which was established at Ramsar in 1971 and ratified by Ireland in 1984. Ireland presently has 45 sites designated as Wetlands of International Importance, with surface areas of 66,994 hectares. Three Ramsar sites are located in County Galway comprising 29,997 hectares in total or 44.7% of the national total.

The following synopses⁷ provide details on each of the three sites:

Lough Corrib

Designated: 11/06/96

Area: 17,728 ha

Ramsar site no.: 846

The second largest lake in Ireland supports one of the largest areas of wetland vegetation consisting of reed, sedge and rush communities in the Country. Other habitats include Sessile Oak woodland, calcareous fen, callows grassland, marsh and raised bog with a soak system. The site provides important feeding grounds for waterbirds and supports internationally important numbers of several breeding and wintering waterbirds and nationally important numbers of numerous other waterbird species. The site supports the otter and numerous rare and threatened plant and fish species. Human activities include fishing and hunting.

Cooles Lough and Garryland Wood

Designated: 30/05/90

Area: 364 ha

Ramsar site no.: 473

Part of a low-lying karstic limestone area characterized by a subterranean drainage system and seasonal lakes, known as turloughs, set in a matrix of woodland, limestone heath and grassland. The site together with the adjacent nutrient-poor lakes is the most important turlough complex in Ireland. Many rare species of flora and fauna and communities associated with the turlough to woodland transition are supported. Water levels fluctuate widely. The lakes are fringed by aquatic vegetation grading into grassland, tall grass and herb communities and, beyond the level of summer flooding, into scrub and high forest.

Inner Galway Bay

Designated: 11/06/96

Area: 11,905 ha

Ramsar site no.: 838

The shallow sheltered part of a large sea bay with numerous intertidal inlets and small low islands composed of glacial deposits. The area provides important habitat for marine life

⁷ Ramsar Convention Secretariat (2000) *The Annotated Ramsar List of Wetlands of International Importance* Switzerland: Ramsar Convention Secretariat

along Ireland's west coast. The site supports the richest seaweed flora on the Irish Coast (500+ species) and 65% of the Irish marine algal flora occur in the area. The site supports internationally and nationally important numbers of numerous species of waterbirds. There is a large cormorant colony on Teer Island. Human activities include aquaculture.

4.4.4.6 Nature Reserve

A Nature Reserve is an area of importance to wildlife, which is protected under Ministerial order. There are currently 78 Statutory Nature Reserves. Most are owned by the State but some are owned by organisations or private landowners.

There are eight Nature Reserves in County Galway the descriptions of which are given below⁸:

Ballynastaig Wood and Coole-Garryland Nature Reserves (9.76 ha and 363.58 ha)

Located near Gort, State owned and established in 1983, these two reserves, through their combination of deciduous woods, limestone reefs, lakes and turloughs, constitute one of the most interesting Irish vegetation and faunal complexes still in existence. The Coole-Garryland reserve contains a variety of floral habitats including well-formed high forest on deep pockets of soil, dwarf woodland on limestone pavement, a turlough complex in the Callows and Coole Lake.

Clochar na gCon/Bealacoan Bog Nature Reserve (1,247 ha)

Situated in South Conamara, State owned and established in 1999, this bog forms part of the greater Conamara Bog Complex. It is a classic and intact example of Atlantic or oceanic blanket bog, with a diverse flora which includes a number of scarce plant species and a blanket bog fauna which includes many of Ireland's and Europe's more important and threatened species. Actively growing bog is a priority EU habitat.

Derrycrag Wood and Rosturra Wood Nature Reserves (110.48 and 17.68)

Located near Woodford, State owned and established in 1983, these two Reserves comprise fragments of a once extensive forest

and now contain stands of oak and ash with an understorey of holly and hazel and a rich ground flora.

Leam West Bog Nature Reserve (373.48 ha)

Situated two miles south east of Maam Cross, State owned and established in 1991, this bog is of international importance. It is an area of very diverse blanket bog developed over both acid and base rich rocks at the north east limit of the Conamara blanket bogs. It forms part of one of the largest areas of intact bog in Conamara and it is one of the few sites containing both lowland and highland bog. A large number of habitats occur including rock outcrops, bog pools, extremely wet quaking areas, streams and relatively nutrient rich flushes.

Pollnaknockaun Wood (38.85 ha)

Located 1km north-east of Woodford village, State owned and established in 1983, this is a semi-natural woodland which once formed part of the extensive forest referred to under the Derrycrag Wood and Rosturra Wood Nature Reserves above.

Richmond Esker Nature Reserve (15.7 ha)

Located 4km. north-west of Moylough, State owned and established in 1985, this Nature Reserve is, along with Timahoe Esker Nature Reserve, one of the few esker ridges supporting native woodland left in the country. Although extensively planted with conifers and other exotic species it is planned to expand the native woodland using appropriate management techniques.

4.4.4.7 Shellfish Waters

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

⁸ National Parks and Wildlife Service (various) *Statutory Nature Reserves: County Galway* Dublin: Government of Ireland

There are 3 areas along the County Galway coastline that are identified as Designated Shellfish Waters:

- Kilkieran Bay;
- Clarinbridge/Kinvara Bay; and
- Aughinish Bay.

There are also a number of proposed Designated Shellfish Waters and these include:

- Outer Galway Bay Indreabhán;
- Mannin Bay;
- Clifden Bay/Ardbear Bay;
- Streamstown Bay; and
- Ballinakill Bay.

Shellfish areas are mapped on Figure 4.8.

A number of Pollution Prevention Programmes are in force which contribute towards the protection of Shellfish Areas.

4.4.4.8 Designated Salmonid Waters

The main channel of the River Corrib and the connecting Lough Corrib is designated and protected as a Salmonid Water under the European Communities (Quality of Salmonid Waters) Regulations 1988 (SI No. 293 of 1988). Designated Salmonid Waters are capable of supporting salmon (*Salmo salar*), trout (*Salmo trutta*), char (*Salvelinus*) and whitefish (*Coregonus*). Designated salmonid waters in County Galway are mapped on Figure 4.8.

4.4.4.9 Register of Protected Areas

In response to the requirements of the Water Framework Directive a number of water bodies or parts of water bodies which must have extra controls on their quality by virtue of how their waters are used by people and by wildlife have been listed on Registers of Protected Areas (see also Section 4.7).

The following RPA entries are mapped on Figure 4.8:

- SAC and SPA Rivers and Waterbodies;
- Shellfish Areas and Water Bodies; and
- Salmonid Rivers and Lakes.

4.4.4.10 Freshwater Pearl Mussels

Figure 4.7 shows Freshwater Pearl Mussel, or *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. Four categories of catchments are mapped:

1. Catchments of SAC populations listed in S.I. 296 of 2009⁹;
2. Catchments of other extant populations¹⁰;
3. Catchments with pre-1970 live records (extant populations unlikely, but information insufficient to list as 'extinct')¹¹; and
4. Catchments with presumed extinct populations, but further survey required¹².

⁹ These 27 mussel populations are within SACs designated for the protection of the species. Site-specific conservation objectives for the restoration of these populations and their habitats are being developed by the NPWS. Under S.I. 296 of 2009, 27 draft Sub-basin Management Plans have been developed to provide the programmes of measures necessary to achieve these objectives. Any plans or potentially damaging developments and activities in or overlapping with the catchments must be screened for Appropriate Assessment (Article 6 (3), Habitats Directive).

¹⁰ These mussel populations may lie (in part) within SAC, other nature conservation sites or in the wider countryside. Those populations within SAC were not considered of sufficient quality to warrant designation for the species and detailed restoration objectives, targets, plans or measures are unlikely to be developed. However, the potential effects of any plans, developments or activities on the populations, including the potential to cause 'environmental damage' as per the Environmental Liability Directive and Regulations, must be determined through SEA, EIA or other ecological assessment.

¹¹ While there are no recent records of freshwater pearl mussel from these catchments, in most cases there has been little, if any, survey for the species since 1970. If any plans, or potentially damaging developments and activities are proposed for these catchments, freshwater pearl mussel should be considered as a constraint and dedicated survey is recommended.

¹² These do not occur in County Galway and are the lower Nore catchment and the catchment of the Barrow main channel.

4.4.4.11 Wildfowl Sanctuaries

Wildfowl Sanctuaries are areas that have been excluded from the 'Open Season Order' so that game birds can rest and feed undisturbed.

There are 68 sanctuaries in the State. Shooting of game birds is not allowed in these sanctuaries.

Wildfowl Sanctuaries found in County Galway include:

- Coole Lough (Code: WFS-21);
- Lough Derg (parts) (Code: WFS-22);
- Muckanagh / Cloonlaughnan (Code: WFS-23);
- Lough Rusheen (Code: WFS-62); and,
- Moyne (Code: WFS-63).

4.4.4.12 Important Bird Areas

The Important Bird Areas (IBA) Programme is a BirdLife International initiative aimed at identifying and protecting a network of critical sites for the conservation of the world's birds.

A total of 140 IBAs¹³ have been identified in Ireland, covering an area of about 4,309 km², equivalent to 6% of the land area. Most of these IBAs are coastal, with islands and cliffs being predominantly important for breeding seabirds, Corncrakes and wintering Barnacle Geese, and estuaries for wintering wildfowl.

IBA's identified in County Galway include: Lough Corrib (IE506), Inner Galway Bay (IE057), Kiltiernan Bay and Islands (IE054), Lough Nageeron (IE055), Inishbofin (IE052), and Inishshark (IE053).

4.4.4.13 Other Protected Species/Habitats

In addition to certain species and habitats already mentioned above, other species are protected under law wherever they occur in County Galway such as:

- 'Protected Species and natural habitats' as defined in the Environmental Liability Directive (2004/35/EC) and European Communities (Environmental Liability) Regulations 2008 including annexed habitats and species listed under

Annexes I, II and IV of the EU Habitats Directive and Annex I of the EU Birds Directive;

- Species/Habitats legally protected under the Flora Protection Order in the Wildlife (Amendment) Act 2000;
- Other species of flora and fauna and their key habitats which are protected under the Wildlife Acts 1976-2000 including all native mammals;
- Stepping stones and ecological corridors including nature conservation sites (other than Natura 2000 sites), habitats and species locations covered by Article 10 of the Habitats Directive.

4.4.5 Human Management of Land

Human management of land is essential for the existence of many of the habitats within the managed landscape of the county. Figures from CSO show overall increase (+0.2% of the specified population) in the population involved in land management in the county between 2006 and 2011 - see Table 4.1.

Broad Industrial Group	2006	2011	Change
Agriculture, forestry and fishing	5,749 (8.1%)	5,908 (8.5%)	+159 (+0.4%)
Mining, quarrying and turf production	389 (0.6%)	274 (0.4%)	-115 (-0.2%)
Total Population involved in land management	6,138 (8.7%)	6,182 (8.9%)	+44 (+0.2%)
Total Persons aged 15 years and over	70,617	69,207	-1410 (-2%)

Table 4.1 Persons aged 15 years and over at work in Galway County

4.4.6 Existing Problems

Previous developments such as residential, commercial and transportation have resulted in loss of biodiversity and flora and fauna across the County however legislative objectives governing biodiversity and fauna were not identified as being currently conflicted with.

¹³ Crowe, O., Tierney, N. and Wheeldon, R. 2009. Distribution, extent and status of Ireland's Important Bird Areas. BirdWatch Ireland.

The County Galway Biodiversity Action Plan that was prepared in 2008 identifies that:

- Expansion of towns and villages can cause habitat destruction, fragmentation;
- The loss of traditional stone walls and hedgerows is a concern in certain parts of the county;
- Large scale drainage, fertilisation and reseeded of farmland have resulted in loss of wetlands, hedges and species-rich grasslands as well as in the pollution of ground and surface waters.
- In some parts of the county, there is increasing evidence of habitat change caused by the abandonment of agriculture. In the absence of regular management, lands can become rank and overgrown by weeds, bracken, bramble and scrub, leading to the loss of semi-natural grasslands and an overall loss in diversity.
- A number of introduced plant and animal species have become ecological pests. Some examples include the African Pond Weed, 'Giant Rhubarb' (Gunnera), Japanese Knotweed, Rhododendron, the Zebra Mussel and the American Mink.

Both the Galway County Development Plan 2009-2015 and the new Galway County Development Plan 2015-2021 include measures to address the issues identified by this 2008 document.

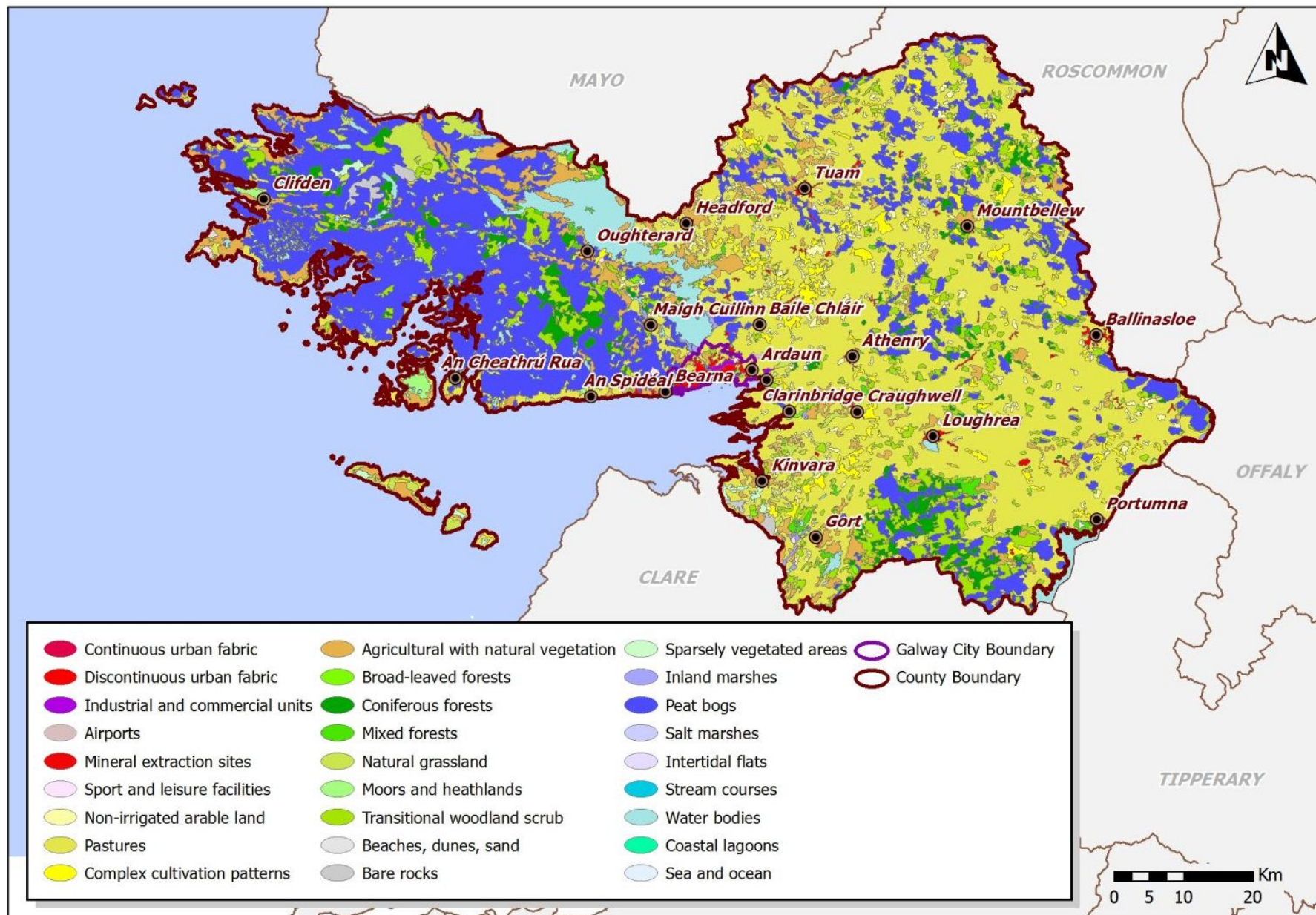


Figure 4.1 CORINE Land Cover Data 2006

Source: EPA (2009)

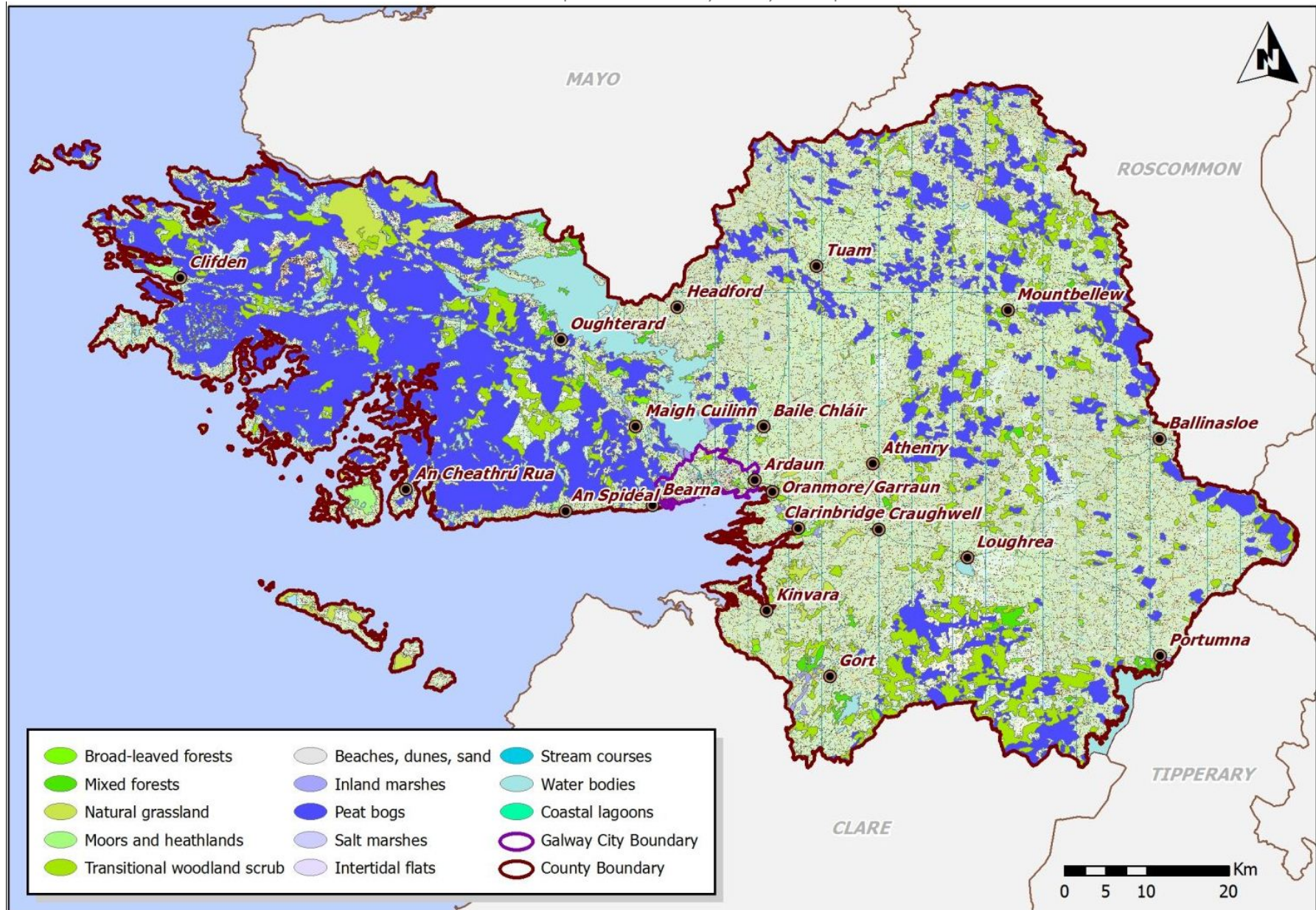


Figure 4.2 CORINE Sensitive Land Cover Classes 2006

Source: EPA (2009)

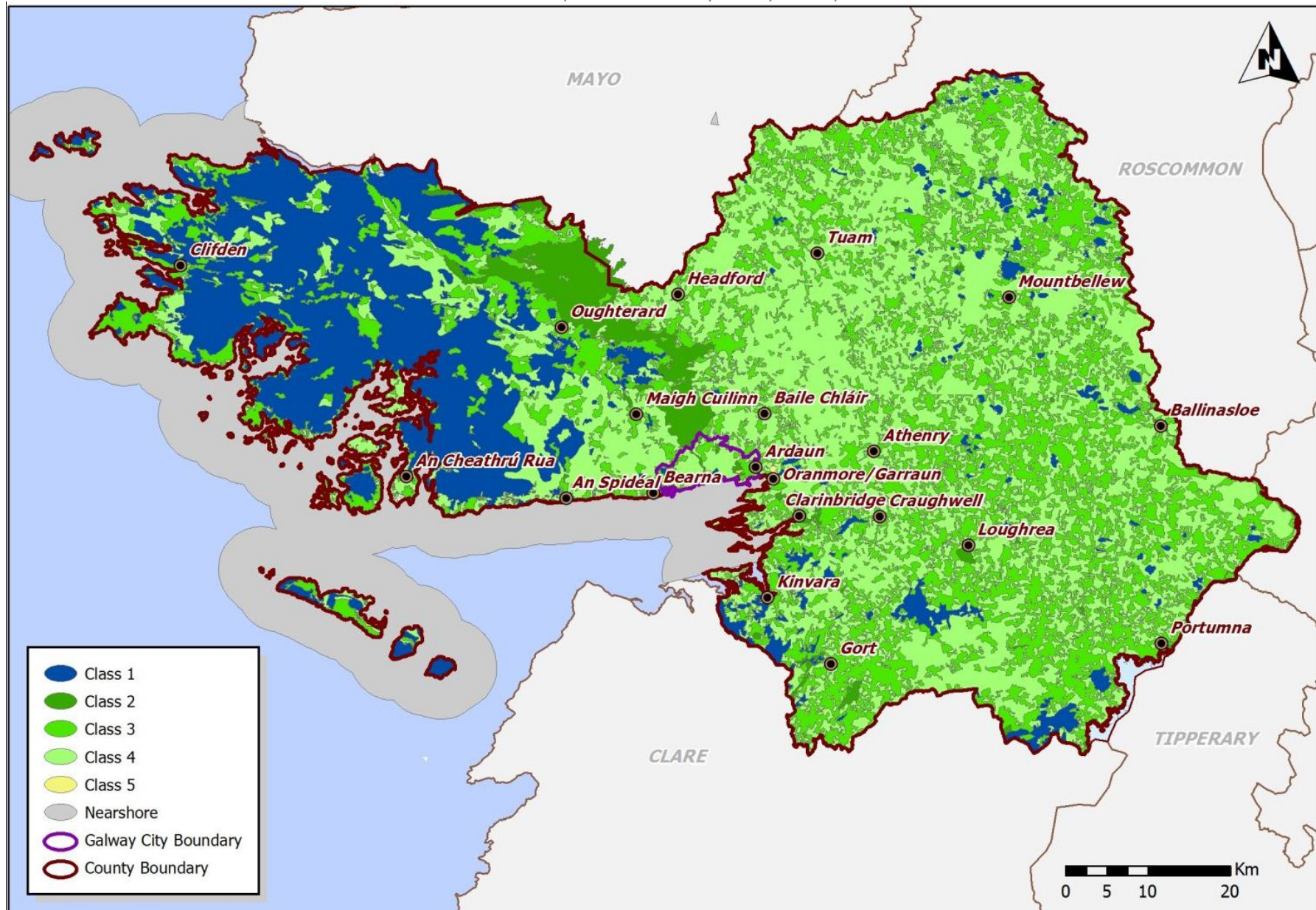


Figure 4.3 EPA Ecological Network Classes

Source: Tubridy and Ó Riain behalf of EPA (2002)

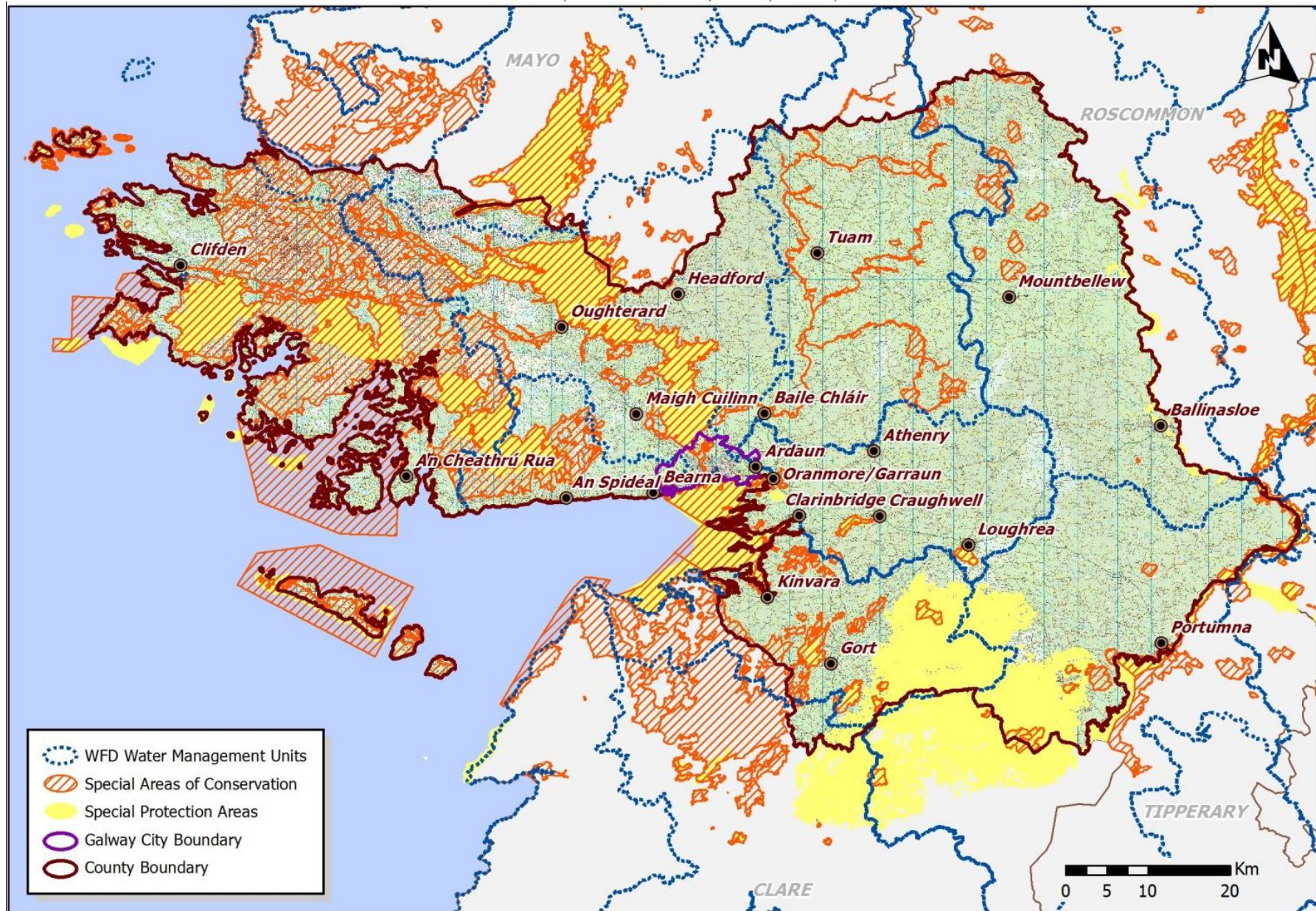


Figure 4.4 SPAs and sSACs with Water Management Units

Source: NPWS (datasets downloaded November, 2013)

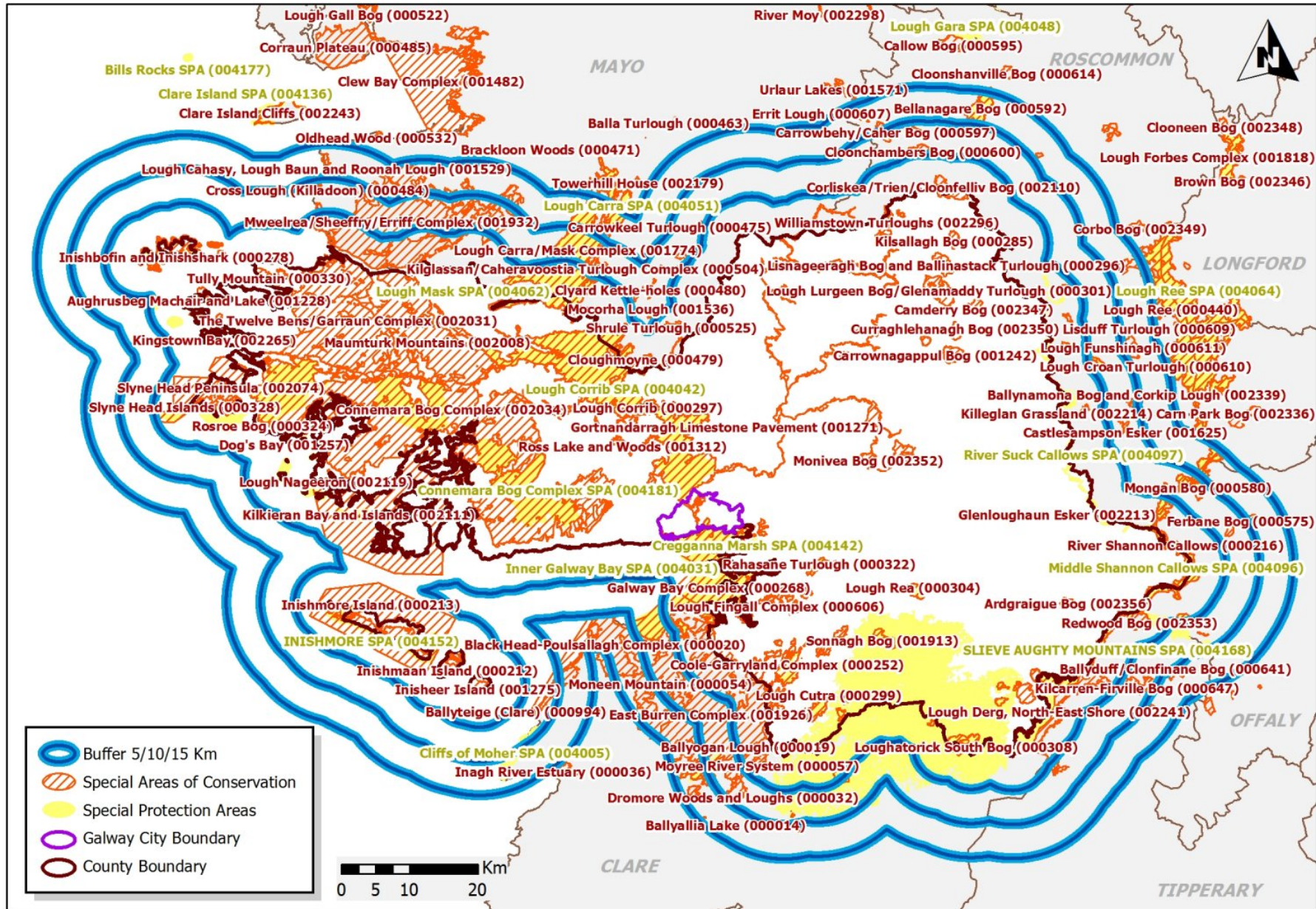


Figure 4.5 SPAs and cSACs with names and 5/10/15km Buffer Areas

Source: NPWS (datasets downloaded November, 2013)

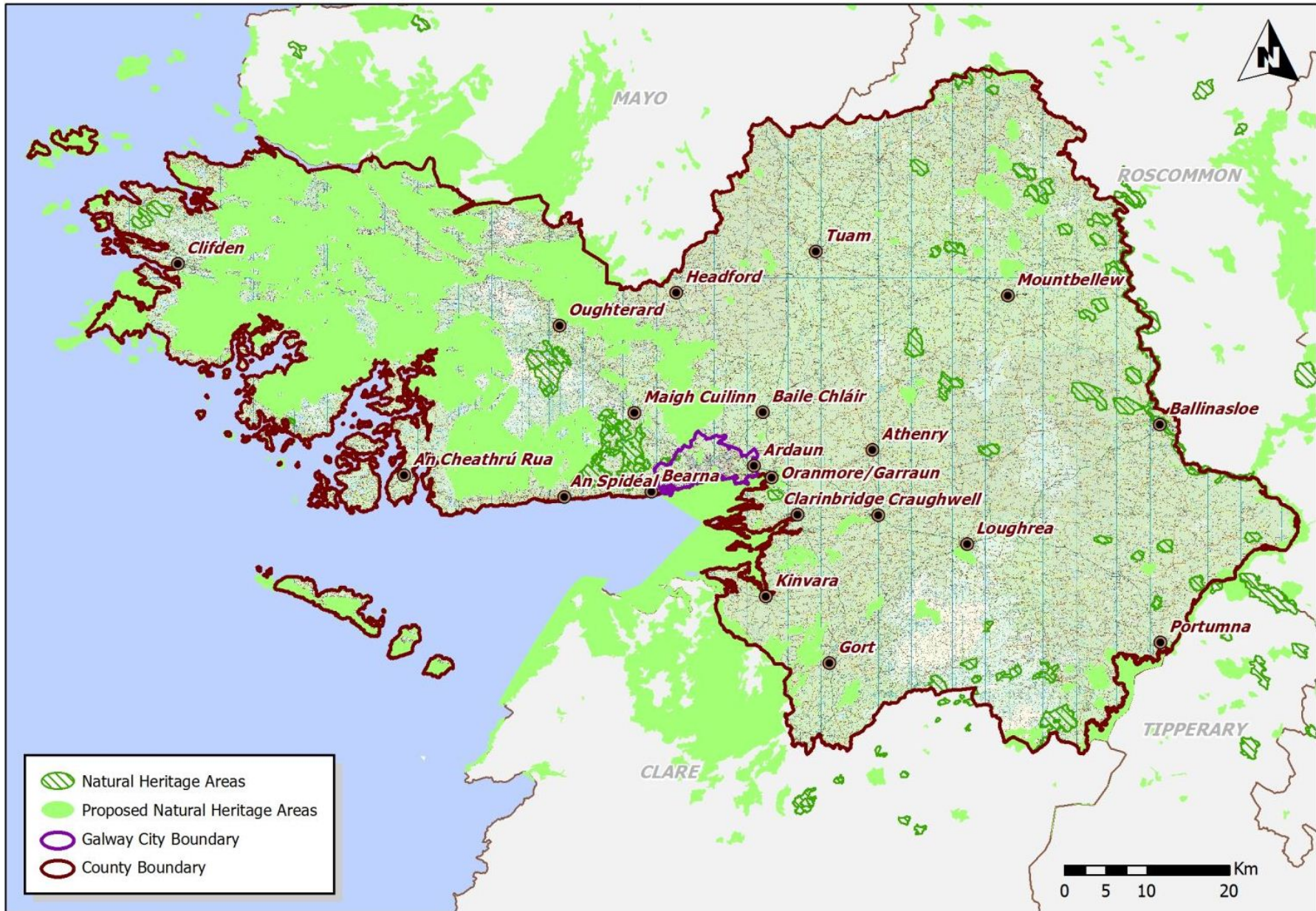


Figure 4.6 NHAs and pNHAs

Source: NPWS (datasets downloaded November, 2013)

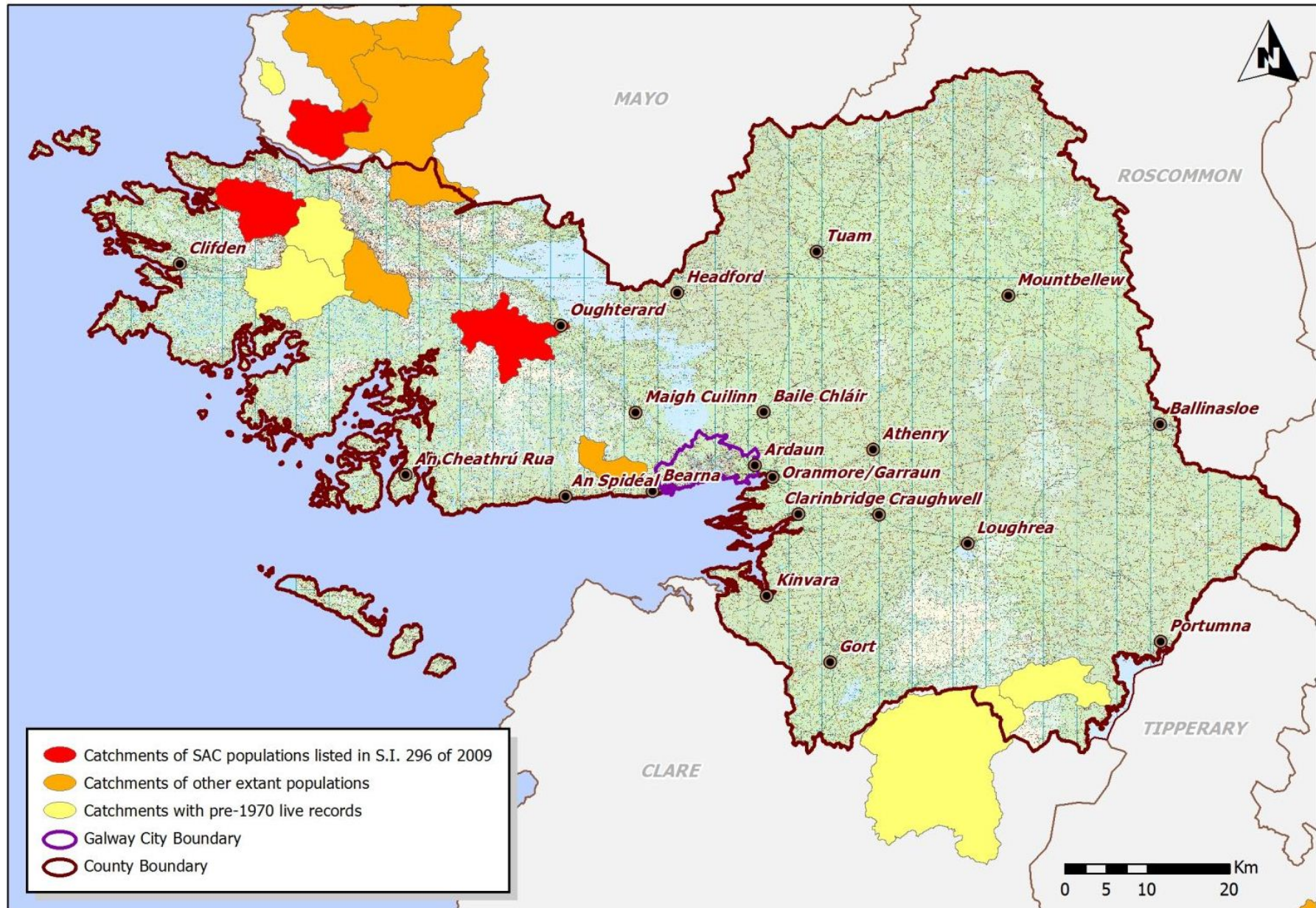


Figure 4.7 Freshwater Pearl Mussel Sensitive Areas

NPWS (datasets downloaded November, 2013)

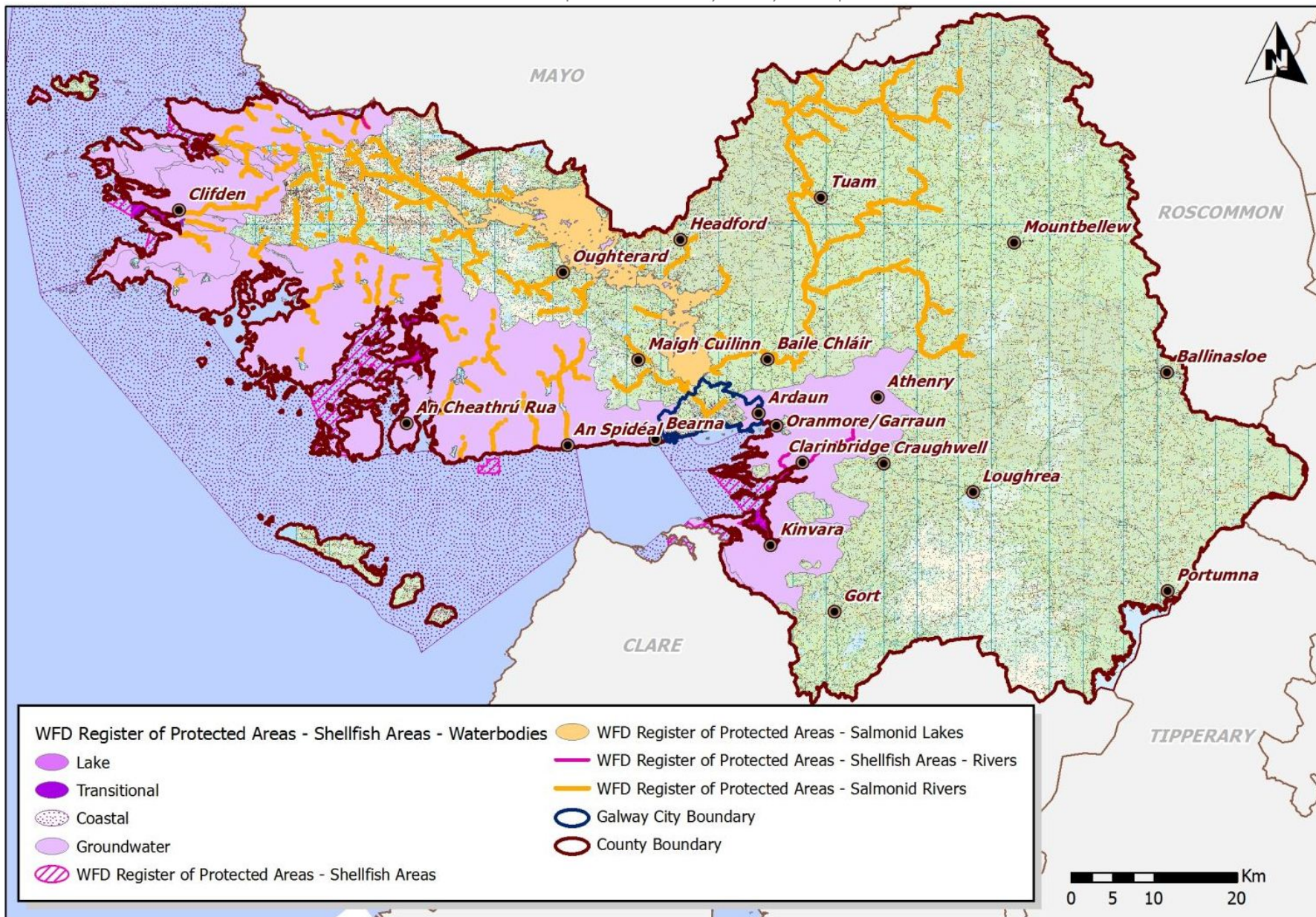


Figure 4.8 Entries to the Registers of Protected Areas

Source: NPWS (datasets downloaded November, 2013)

4.5 Population and Human Health

4.5.1 Population

Population in County Galway rose from 159,256 persons in 2006 to 175,124 persons in 2011. The growth in population has mainly been in the areas closest to Galway City and the area of the county identified as the Galway Transportation and Planning Study boundaries. More rural parts of County Galway have experienced mixed growth with some electoral divisions in the extreme north east, south east, western, and upland areas of the County still experiencing population decline. The 2011 Census highlighted that 75.6% of private households are located in rural areas.

The most populous towns in the county include Ballinasloe, Tuam, Loughrea, Oranmore, Athenry, Gort, Clifden, Bearna, Portumna, Oughterard and Maigh Cuilinn.

4.5.2 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.

4.5.3 Existing Problems

In 2012, 1 monitored bathing water location within the County (Clifden Beach) failed to achieve both Guide and Mandatory values and was designated as *Poor Status* (EPA, 2013).

The most recent EPA Remedial Action List (Q3 of 2013) identifies 12 water supplies in the County that are in need of improvement. These are identified on Table 4.4.

Flood risk indicators provide historic evidence of flooding in various locations across the County. All recommendations made by the Strategic Flood Risk Assessment (undertaken alongside the preparation of the Plan and this SEA Environmental Report) in respect of these areas have been integrated into the Plan.

4.6 Soil

4.6.1 Introduction

Soil is the top layer of the earth's crust. It is formed by mineral particles, organic matter, water, air and living organisms. Soil can be considered as a non-renewable natural resource because it develops over very long timescales. It is an extremely complex, variable and living medium and performs many vital functions including: food and other biomass production, storage, filtration and transformation of many substances including water, carbon, and nitrogen. Soil has a role as a habitat and gene pool, serves as a platform for human activities, landscape and heritage and acts as a provider of raw materials. Such functions of soil are worthy of protection because of their socio-economic as well as environmental importance.

Soils in any area are the result of the interaction of various factors, such as parent material, climate, vegetation and human action.

To date, there is no legislation which is specific to the protection of soil resources. However, there is currently an EU Thematic Strategy on the protection of soil which includes a proposal for a Soil Framework Directive which proposes common principles for protecting soils across the EU.

4.6.2 Subsoils

Quaternary geology comprises the study of soils which have been deposited or formed during the last 2 million years. This quaternary geology - or subsoil - underlies the County's soils and is shown on Figure 4.9.

Glacial deposits and post glacial peat formation have provided the County with the majority of its subsoils.

After the end of the last ice age, bog began to form in the County. Initially peat formation

was confined to shallow lakes and wet hollows and later, the peat spread out to cover larger areas. Most areas were not engulfed until 4,000 years ago when the climate became wetter.

To the west of Lough Corrib, blanket peat comprises subsoil with the exception of areas which are covered by water and upland and coastal areas where the bedrock geology lays exposed.

During the last ice age, which ended around 12,000 years ago, glaciers transported eroded materials to certain areas and deposited them in the form of glacial deposition.

The eastern half of the County is covered by two main subsoil types - tills and cutaway raised bogs.

Although the half of the County to the west of Lough Corrib experienced little or no glacial deposition, much the half of the County to the east of Lough Corrib has been overlain with non-stratified glacial tills which were formed in and beneath the ice which overlay the landscape.

Raised bogs formed in the east of the County in the many post-glacial lakes which covered this part of the County and spread to larger areas when the climate became wetter.

Karsified limestone bedrock forms the subsoil of the south west of the County, in areas around Lough Corrib and in areas within and surrounding Galway City. Blanket bog is found in the Slieve Aughty Mountains.

4.6.3 Soil Types

The County's soil types are mapped on Figure 4.10.

The area of the County to the west of Lough Corrib is generally covered by blanket bog soils with upland areas in Conamara and areas close to the coast covered by acid mineral soils.

The area of the County to the east of Lough Corrib is generally covered with a mix of basic mineral soils and cutaway raised bog, with the latter increasing in occurrence in the north and west of the County. Grey brown podzolic basic mineral soils are deep, well drained soils which are derived from calcareous drift composed

mainly of limestone with some coal shales and sandstone. These soils are relatively fertile, support grasslands and facilitate the production of a wide range of vegetable crops.

The Slieve Aughty foothills are covered by acid mineral soils while the Slieve Aughty uplands are by blanket bog. The County's river floodplains are covered with fertile alluvium.

The majority of soils within the County's towns are *urban soils*. Urban soils are soils which have been disturbed, transported or manipulated by man's activities in the urban environment and are often overlain by a non-agricultural, man-made surface layer that has been produced by mixing, filling, or by contamination of land surfaces in urban and suburban areas.

The most extensive habitat of nature importance within County Galway is lowland blanket bog, found mainly in south Conamara. This and other areas of bog within the County are internationally important - supporting a large variety of rare flora and fauna - and large areas are protected by a number of ecological designations identified under Section 4.4.

Extensive areas of limestone pavement occur to the south of Kinvarra with a number of small, isolated patches occurring along a corridor from Kilcolgan to Tuam and near Maigh Cullinn. These areas of limestone pavement often occur in close association with species-rich calcareous grassland and sometimes support the protected species.

In addition to being a valuable ecological resource, Galway's soils provide employment within the County through areas such as agriculture, forestry, harvesting of peat and tourism.

4.6.4 Sites of Geological Interest

At the end of the last ice glacial deposition features named eskers began to form when silt, sand and gravel were deposited by rivers of glacial melt water under the ice of glaciers. They are long sinuous rounded hills. A number of eskers are found to the east of Tuam and Baile Chláir and between Oranmore and Ballinasloe.

As well as being geomorphological features, eskers are important for the characteristic woodland and grassland habitats they support, including species-rich grasslands with abundant orchids.

The Geological Survey of Ireland (GSI) prepares County Geological Sites Audits however none has been published for County Galway.

4.6.5 Structural Issues in Karst Areas

As outlined above a certain areas within the County are underlain by karsified limestone bedrock.

In a number of places this geological formation has been the subject of slow chemical processes that have led to the decomposition of rock and the formation of 'solution features' such as cracks, fissures and occasional cavities or caves.

These features can adversely interact - sometimes severely - with new developments in two principal ways. Firstly the introduction of new loads on the surface - due to new developments - can cause the underlying rock to become overloaded and settle - with resultant structural degradation overhead. The works that are incidental to development - such as the diversion, concentration of removal of surface or groundwaters - can also lead to structural failure - sometimes over an extensive area. There may also be a possibility for this potential effect to be more severe due to changes in the intensity of rainfall events resulting from climate change.

4.6.6 Landslides

In early 2004, the GSI established a multi-disciplinary team, the Irish Landslides disciplinary team, the Irish Landslides Working Group, with expertise in geology, geomorphology, geotechnical engineering, planning and GIS. One of the main objectives was to build a national database of past landslide events.

There are 7 recorded landslide events in County Galway which are mapped on Figure 4.11 and listed as follows:

- Joyces Country (1821)
- Addergoole More (1745)

- Slieve (1873)
- Kilmore (1909)
- Sonnagh Old (2003)
- Derrybrien (2003)
- Loughatorick North (1890)

4.6.7 Existing Problems

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

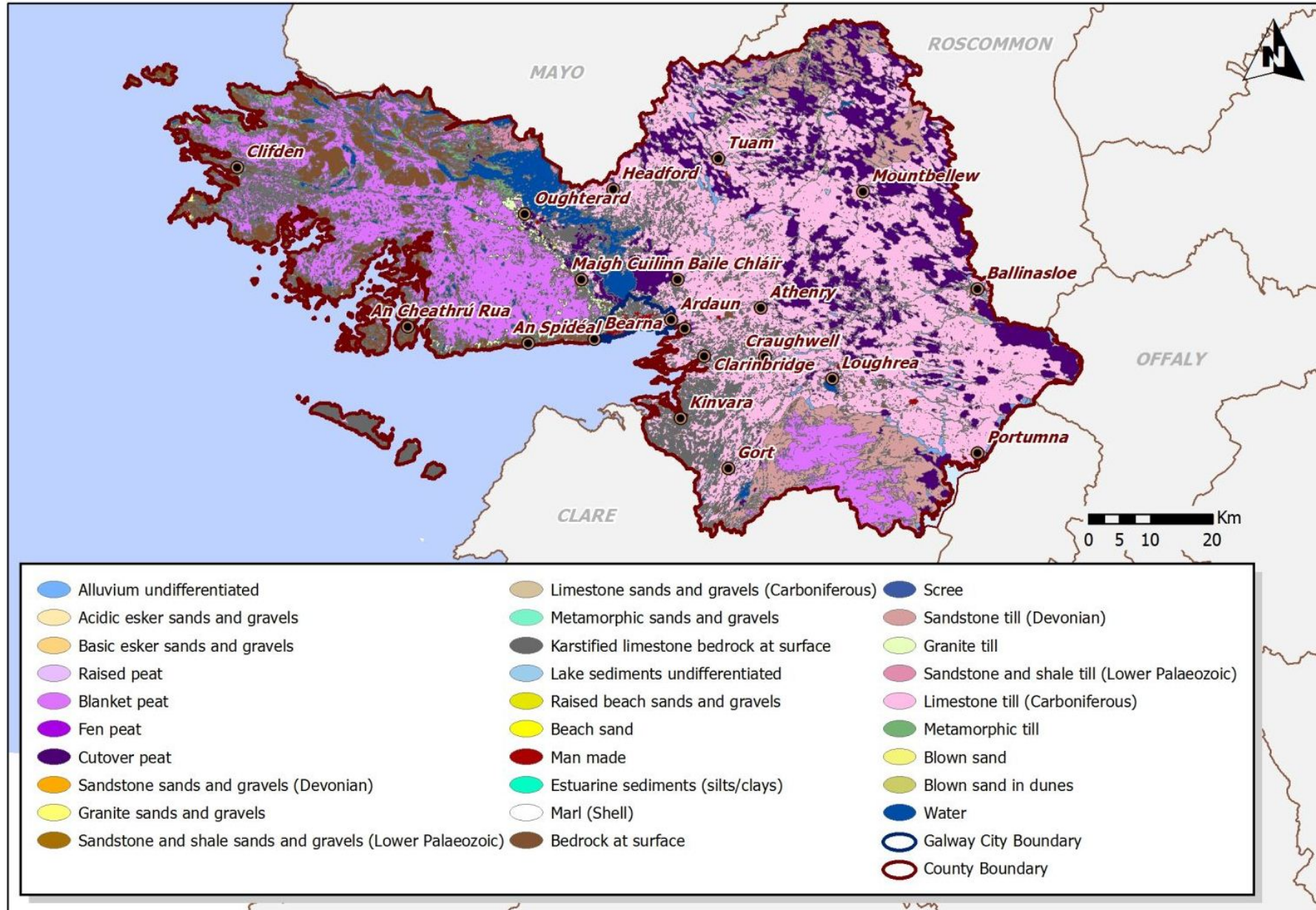


Figure 4.9 Quaternary Geology/Subsoils

Source: Teagasc, GSI, Forest Service & EPA (2006) *Soils and Subsoils Class*

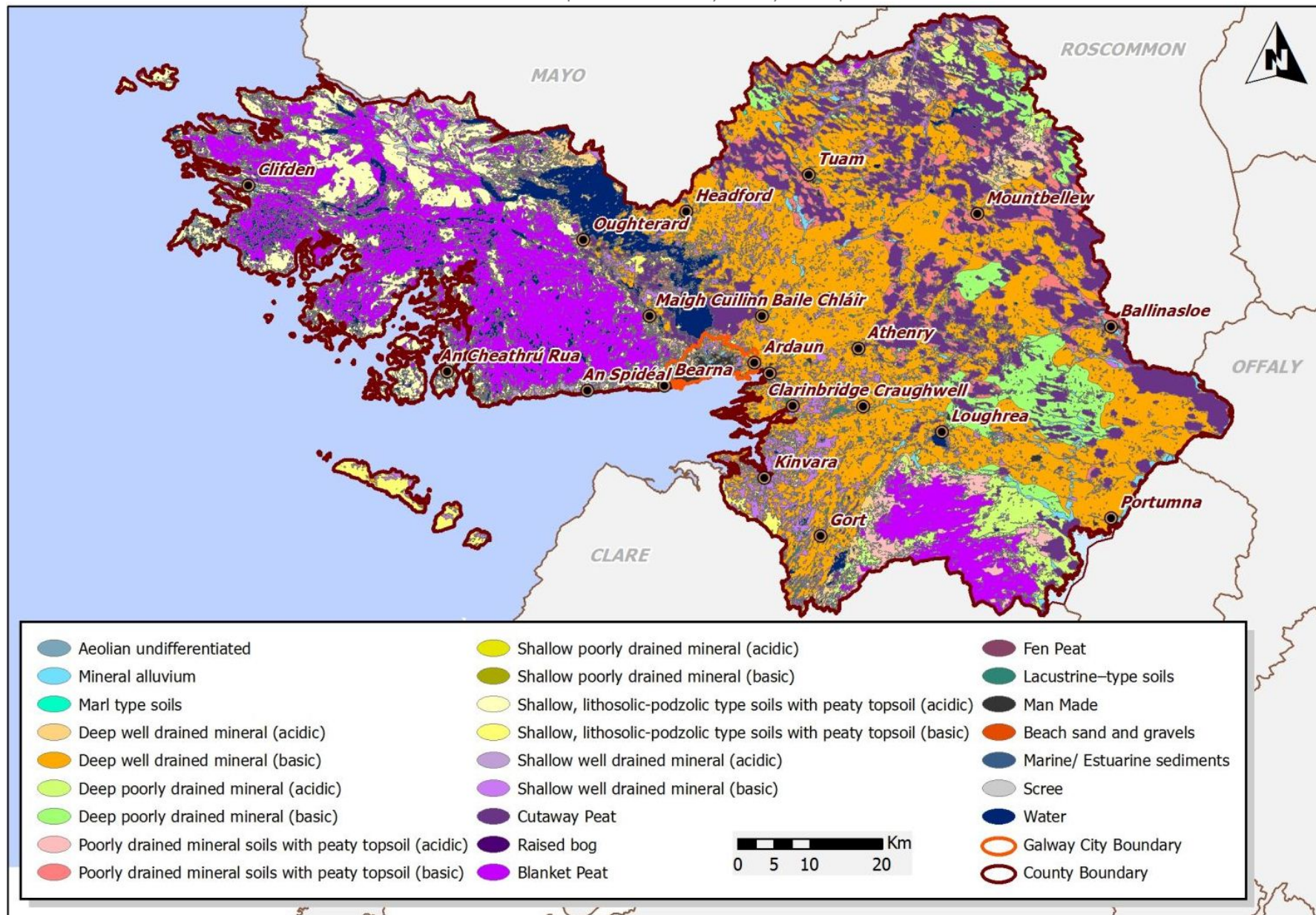


Figure 4.10 Soil Type

Source: Teagasc, GSI, Forest Service & EPA (2006) *Soils and Subsoils Class*

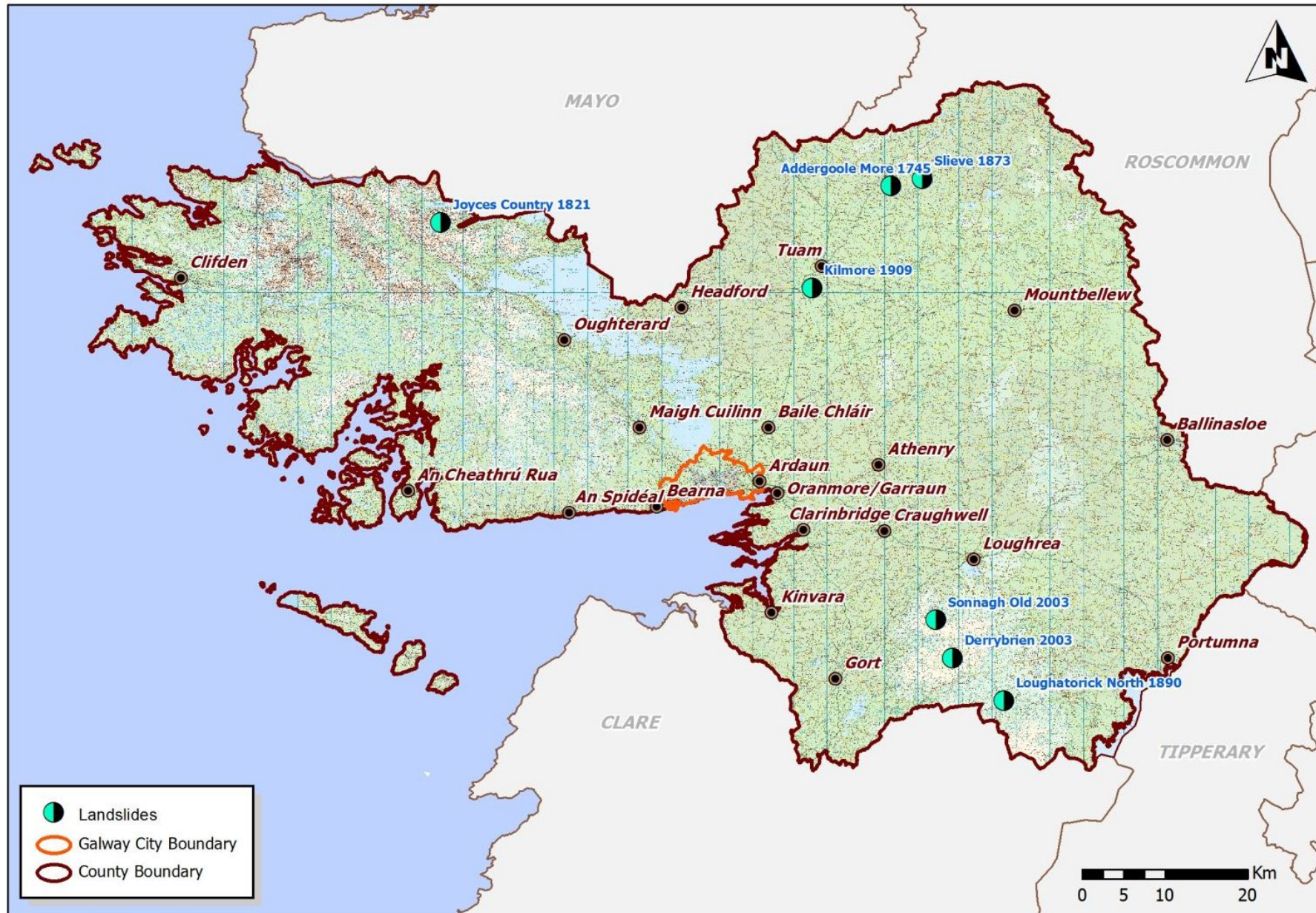


Figure 4.11 Landslides

Source: GSI (2009)

CAAS Ltd. for Galway County Council

4.7 Water

4.7.1 Potential Pressures on Water Quality

Human activities, if not properly managed, can cause deterioration in water quality. Pressures exerted by human activities include the following:

- sewage and other effluents discharged to waters from point sources, e.g. pipes from treatment plants;
- discharges arising from diffuse or dispersed activities on land;
- abstractions from waters; and
- structural alterations to water bodies.

A point source pressure has a recognisable and specific location at which pollution may originate. Examples of significant point source pressures include direct discharges from waste water treatment plants, licensed discharges from industrial activities, landfills, contaminated lands (e.g. disused gas works) and mines.

A diffuse source pressure unlike a point source is not restricted to an individual point or location. The source of a diffuse pressure can be quite extensive. Significant examples of diffuse pressures include runoff from forestry and agricultural lands.

Excessive abstractions from surface waters and groundwater for drinking and industrial purposes can create pressures on the ability of a water body to maintain both chemical and ecological status.

Structural alterations such as river straightening; construction of embankments, weirs, dams, port facilities and dredging can create conditions such that a water body is no longer able to support the natural ecology which would have existed prior to such modifications. These pressures are also referred to as morphological pressures.

4.7.2 The Water Framework Directive

4.7.2.1 Introduction and Requirements

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" by 2015. 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 by 2015.

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 relevant river basin management plan.

4.7.2.2 River Basin Districts and Water Bodies

For the purpose of implementing the WFD, Ireland has been divided into eight river basin districts or areas of land that are drained by a large river or number of rivers and the adjacent estuarine/coastal areas. The management of water resources is on these river basin districts. County Galway falls within the Shannon International and Western RBDs.

Within each river basin district - for the purpose of assessment, reporting and management - water has been divided into groundwater, rivers, lakes, estuarine waters and coastal waters which are in turn divided into specific, clearly defined water bodies.

4.7.2.3 River Basin Management Plans

Local Authorities, including Galway County Council, have prepared the Shannon International and Western River Basin Management Plans which are implemented in order to help protect and improve waters in the county and wider RBDs. The Management

Plans provide specific policies for individual river basins in order to implement the requirements of the WFD.

4.7.3 Surface Water

4.7.3.1 Introduction

The County lies within two major RBDs, the Shannon and the Western.

Figure 4.4 shows Water Management Unit (WMU) boundaries including those which are shared with Counties Mayo, Roscommon, Offaly, Tipperary and Clare. The Zone of Influence with respect to water resources can be estimated to be all WMUs either wholly within or partially within the County, surrounding estuarine and coastal water bodies and all connecting bodies of groundwater.

4.7.3.2 WFD Surface Water Status

The WFD defines '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, 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.

Figure 4.12 and Figure 4.13 illustrate the status of surface water bodies within and surrounding County Galway, as currently available from the EPA¹⁴.

Rivers in the west of the county are generally of a *high* or *good* status while rivers in the east of the county are a mixture of *high*, *good*, *moderate*, *poor* and *bad* status. The status of some rivers is identified as *not monitored* as they were not included in this round of monitoring but may be included in the next round.

The overall status of lakes differs across the county, however; of the 2 largest lakes within the county, Lough Corrib is currently identified as being of *moderate* status and Lough Derg is currently identified as being of *poor* status. As identified in the EPA's Integrated Report¹⁵, of the 28 lakes in the county which are assigned an *ecological* status, 23 are of *high* or *good ecological* status. Aughrusbeg, Corrib Lower and Ross lakes are identified as being of *poor/bad ecological* status, Ballyquirke is identified as being of *poor ecological* status while Tully is identified as being of *moderate ecological* status. The EPA's report also identifies that there are few pressures in Galway, but diffuse pollution from agriculture and septic tanks, and in some instances point sources pose a threat.

The status of transitional and coastal waters is either *good* or *high* apart from in Killary Harbour where the status is *moderate*. Most coastal waters are identified as being *not monitored*.

4.7.3.3 Quality of Rivers

River water quality within the County is monitored by the EPA at a number of locations. Good status as defined by the WFD equates to approximately *Q4* in the national biological classification scheme of rivers as set out by the EPA.

Figure 4.14 maps recent Q values, from 2010 to 2012. Monitoring locations are generally of a *high* or *good* status in the west of the county while monitoring locations in the east of the county are a mixture of *high*, *good*, *moderate* and *poor* status. Of the 276 locations which have data available for 2010 to 2012, 191 (c.69%) are identified as being of either *high* or *good* status, 41 (c.15%) are identified as being of *moderate* status, 42 (c.15%) are identified as being of *poor* status and only 2 (c.1%) are identified as being of *bad* status.

¹⁴ Dataset downloaded November 2013.

¹⁵ EPA (2012) *Integrated Water Quality Report Galway, Mayo and Sligo 2011*

As identified in the EPA's Integrated Report¹⁶, physico-chemical monitoring indicates a modest improvement in water quality in the Abbert (at station 0028), Bearna Stream, Carrowmoneash and Clare (particularly at station 0700) during 2011. However, the Clarinbridge, Dalgan, Kilcolgan and Terryland Rivers all have water quality issues at certain locations. These are mainly caused by diffuse agricultural or municipal pollution or point source pollution from waste water treatment plants.

4.7.3.4 Quality of Lakes

The EPA also monitors the quality of these lakes. Good status as defined by the WFD equates to approximately *Mesotrophic* in the national biological classification scheme of lakes as set out by the EPA. Mesotrophic lakes are lakes with an intermediate level of productivity, greater than oligotrophic lakes, but less than eutrophic lakes. Mesotrophic lakes are commonly clear water lakes and ponds with beds of submerged aquatic plants and medium levels of nutrients.

All classified lakes in County Galway are currently identified as either Oligotrophic or Mesotrophic (EPA, 2007-2009).

4.7.3.5 Quality of Transitional, Coastal and Bathing Waters

Good status as defined by the WFD equates to approximately *Unpolluted* status in the Assessment of Trophic Status of Estuaries and Bays in Ireland (ATSEBI).

All classified Estuaries and Coastal Waters in the county are classified as *Unpolluted*. As identified in the EPA's Integrated Report¹⁷, improvement in the trophic status of the Corrib Estuary receiving water has been seen since the provision of waste water treatment at Mutton Island.

In 2013: 8 of the 12 monitored bathing waters achieved EU Guide and Mandatory values and were designated as being of Good Status; 3 (Céibh an Spidéil, Trá na bhForbacha, Na Forbacha and Trá na mBan, An Spidéal) only achieved the Mandatory values and were designated as Sufficient Status; and 1 (Clifden Beach) failed to achieve both Guide and

Mandatory values and was designated as Poor Status (EPA, 2014). The Quality of Bathing Water in Ireland Report also identifies Traught - Kinvara as being a water exhibiting periodic pollution events which could influence their overall status.

4.7.4 Ground Water

4.7.4.1 Introduction

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.

Groundwater bodies within County Galway follow the pattern of the underlying geology, the empty spaces of which they are contained in. Ground water is important for drinking water supply together as well as the source of some surface waters across County Galway.

4.7.4.2 WFD Groundwater Status

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.

As shown on Figure 4.15 the County's groundwater is a mixture of good and poor status.

In 2011, the EPA's groundwater monitoring programme included 30 monitoring locations in Counties Galway, Mayo and Sligo.

As identified in the EPA's Integrated Report¹⁸:

- In general, the average nitrate concentration at groundwater monitoring locations in County Galway is relatively low when compared to the national average nitrate concentration.

¹⁶ EPA (2012) *Integrated Water Quality Report Galway, Mayo and Sligo 2011*

¹⁷ EPA (2012) *Integrated Water Quality Report Galway, Mayo and Sligo 2011*

¹⁸ EPA (2012) *Integrated Water Quality Report Galway, Mayo and Sligo 2011*

The average nitrate concentration did not exceed the Irish WFD Threshold Value concentration of 37.5 mg/l NO₃ at any monitoring location in County Galway in the period 2007-2011.

- The Irish WFD Threshold Value concentration of 0.035 mg/l P is considered when assessing the contribution of phosphate in groundwater to rivers. In 2011, 83.3% of monitoring locations in Counties Galway, Mayo and Sligo had average concentrations <0.025mg/l P and only two monitoring locations had an average concentration >0.050mg/l P. Overall, there has been a general decrease in phosphate concentrations over the period 2007-2011.
- There is one groundwater body in County Galway classified at poor chemical status for the WFD because of contamination from historic mining activities. Diffuse sources of pollution include nutrient pressures from agricultural activities and domestic wastewater treatment systems (especially nitrates and phosphates) and agrochemicals.

4.7.4.3 Aquifer Productivity and Vulnerability

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

Much of East Galway is underlain by the most productive all of the aquifer ratings, *Regionally Important Karstified Aquifers* (see Figure 4.16). *Locally Important Sand/Gravel Aquifers* occur in small areas throughout the County. These types of aquifers are capable of yielding enough water for boreholes or springs to supply domestic, commercial and industrial uses, depending on the nature and scale of the development. *Poor Bedrock Aquifers* - which are generally unproductive - are found in the south east of the County and in the west.

Aquifer vulnerability refers to the ease with which pollutants of various kinds can enter underground water. Figure 4.17 maps aquifer vulnerability for the County – much of the County is identified as being of *high* or *extreme* vulnerability.

4.7.5 Register of Protected Areas

In addition to risk assessments, the WFD requires that Registers of Protected Areas (RPAs) are compiled for a number 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.

A number of water bodies within and surrounding the County Galway area have been listed on the WFD Register of Protected Areas (RPAs).

The following RPA entries are mapped on Figure 4.8:

- SAC and SPA Rivers and Waterbodies
- Shellfish Areas and Water Bodies
- Salmonid Rivers and Lakes

The following RPA entries are mapped on Figure 4.18:

- Nutrient Sensitive Lakes
- Bathing Water Areas and Water Bodies
- Drinking Water Water Bodies

4.7.6 Flooding

4.7.6.1 Introduction

Flooding is an environmental phenomenon which, as well have causing economic and social impacts, could in certain circumstances pose a risk to human health.

4.7.6.2 EU Floods Directive

European Directive 2007/60/EC on the assessment and management of flood risks requires Member States to carry out a preliminary assessment by 2011 in order to identify the river basins and associated coastal areas at risk of flooding. For such zones, flood risk maps are required to be drawn up by 2013 (this has been pushed back to 2014). Flood risk management plans focused on prevention, protection and preparedness must be established by 2015. The Office of Public Works has prepared Preliminary Flood Risk Assessment (PFRA) maps which identify areas where the risks associated with flooding might be significant. These areas, Areas for Further Assessment (AFAs), are where more detailed assessment is required to more accurately assess the extent and degree of flood risk.

4.7.6.3 DEHLG Flood Risk Management Guidelines

In 2009 the DEHLG published *The Planning System and Flood Risk Management Guidelines for Planning Authorities*. These are aimed at ensuring a more consistent, rigorous and systematic approach which will fully incorporate flood risk assessment and management into the planning system. Planning authorities are required to undertake flood risk identification, assessment and management processes as appropriate when preparing Development Plans and other plans and in the consideration of applications for planning permission.

4.7.6.4 SFRA

A Strategic Flood Risk Assessment (SFRA) has been undertaken alongside the preparation of the new County Plan. This assessment has taken into account, inter alia, various flood risk indicators which are mapped on Figure 4.19.

All recommendations made by the SFRA have been integrated into the Plan.

4.7.7 Existing Problems

Based on available water data, various water bodies within the County will need improvement in order to comply with the objectives of the WFD:

- There are a number of water bodies within the County which are currently identified as being of *moderate*, *poor* and *bad* status.
- Lough Corrib is currently identified as being of *moderate* status and Lough Derg is currently identified as being of *poor* status.
- Killary Harbour is currently identified as being of *moderate* status.
- Of the 276 river monitoring locations which have data available for 2010 to 2012, 41 (c.15%) are identified as being of *moderate* status, 42 (c.15%) are identified as being of *poor* status and 2 (c.1%) are identified as being of *bad* status.
- Parts of the County's groundwater is identified as being of *poor* status.

The EPA's Integrated Report¹⁹ identifies that the Clarinbridge, Dalgan, Kilcolgan and Terryland Rivers all have water quality issues at certain locations. These are mainly caused by diffuse agricultural or municipal pollution or point source pollution from waste water treatment plants.

In 2013 1 monitored bathing water location within the County (Clifden Beach) failed to achieve both Guide and Mandatory values and was designated as *Poor Status* (EPA, 2014).

The Shannon International and Western RBD Management Plans and associated Programmes of Measures include provisions to help ensure that these water bodies meet the objectives of the WFD. The Plan will contribute towards the achievement of the objectives of these Management Plans.

Flood risk indicators provide historic evidence of flooding in various locations across the County. All recommendations made by the Strategic Flood Risk Assessment (undertaken alongside the preparation of the Plan and this SEA Environmental Report) in respect of these areas have been integrated into the Plan.

¹⁹ EPA (2012) *Integrated Water Quality Report Galway, Mayo and Sligo 2011*

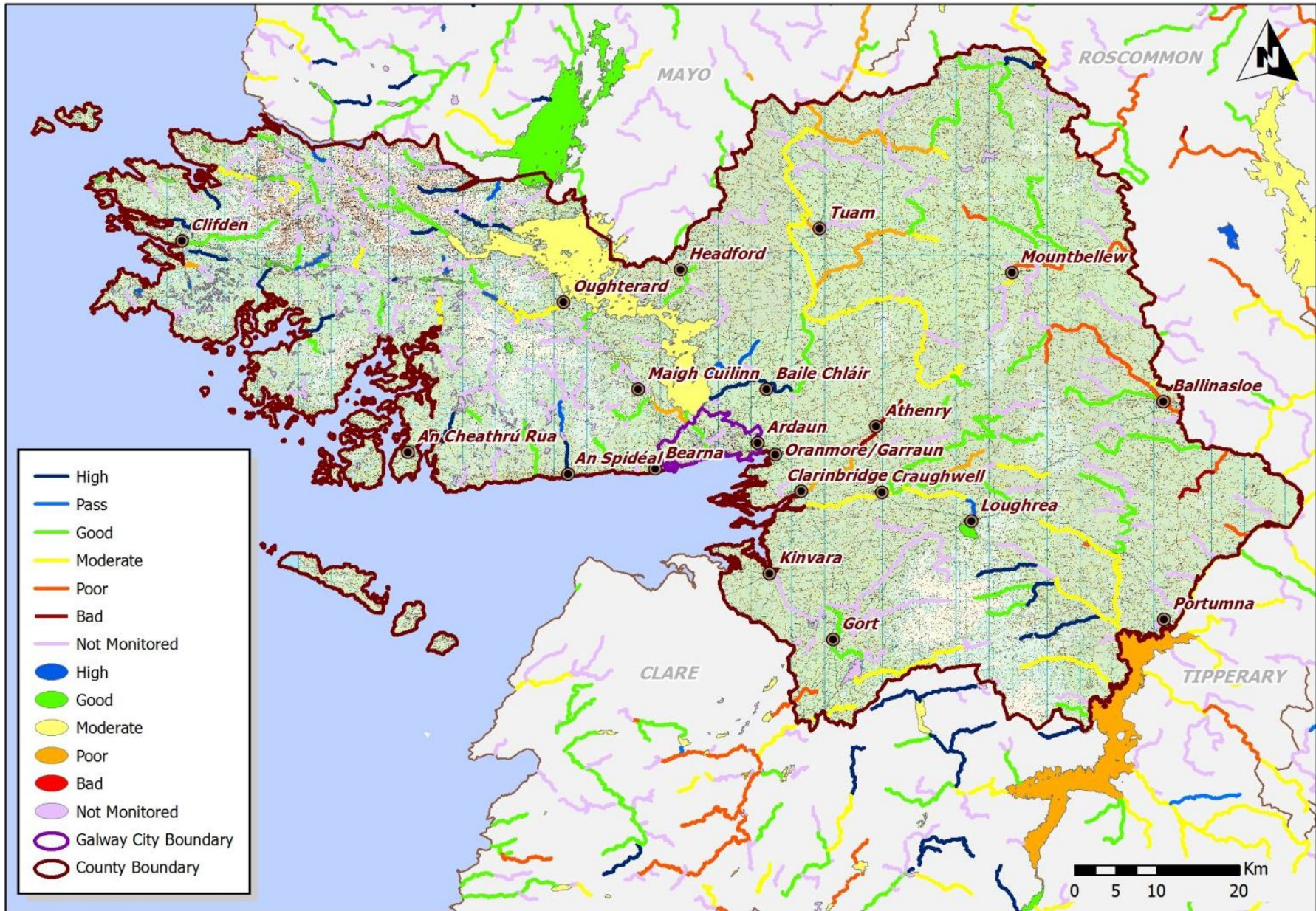


Figure 4.12 WFD Status of Rivers and Lakes

Source: EPA (2011)

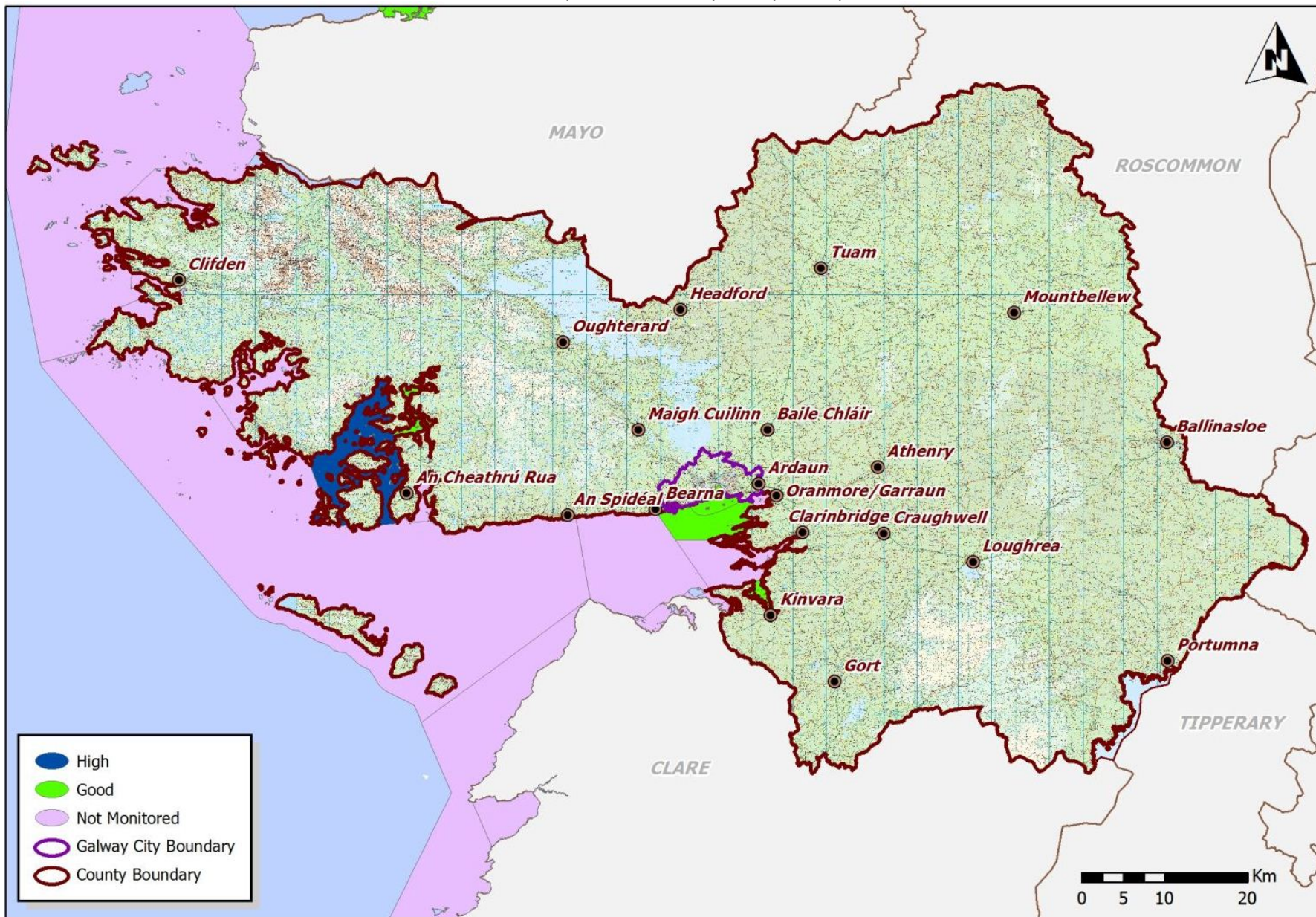


Figure 4.13 WFD Status of Transitional and Coastal Waters

Source: EPA (2011)

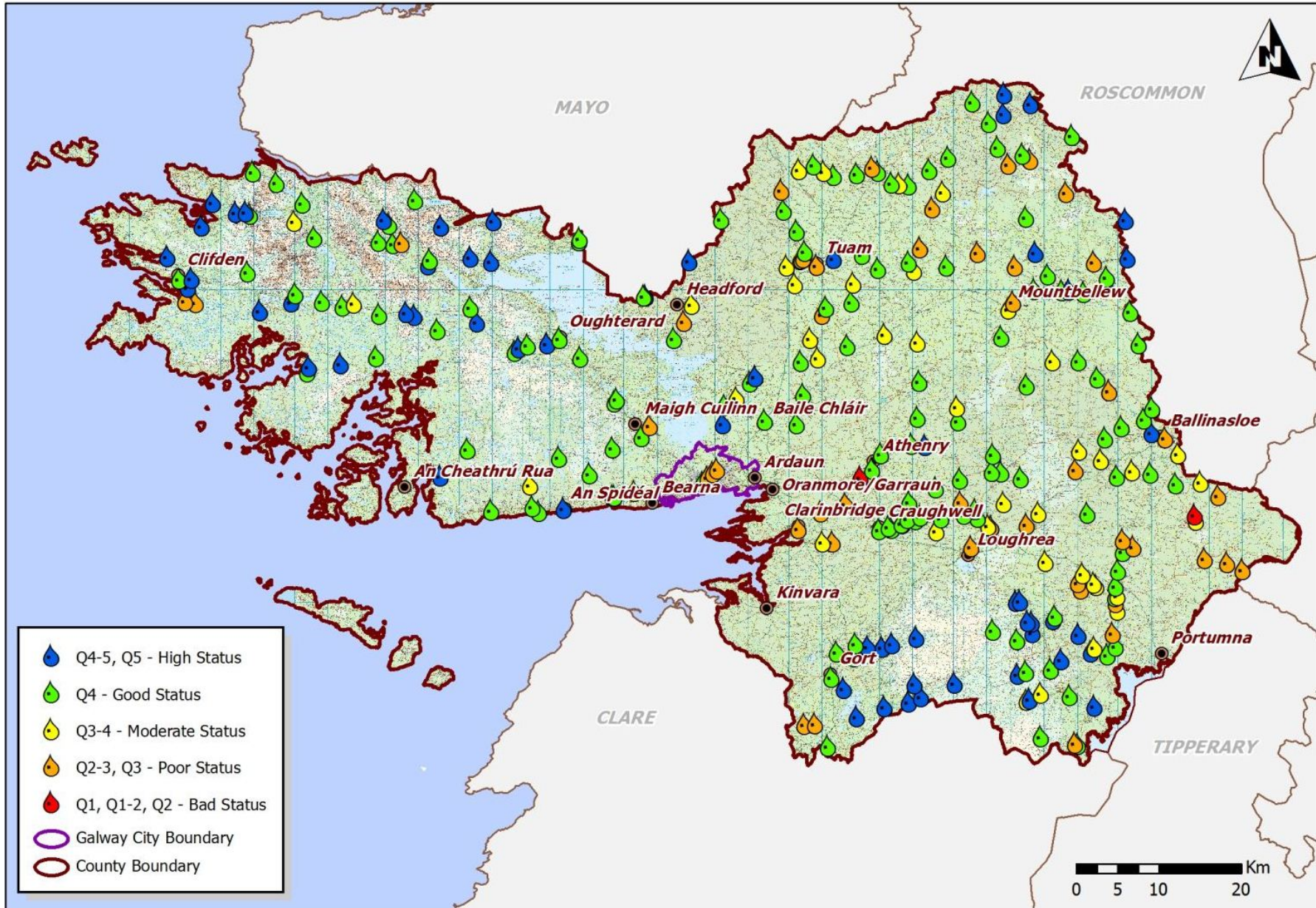


Figure 4.14 2010, 2011 and 2012 Q-Values at Points on Rivers

Source: EPA (Various)

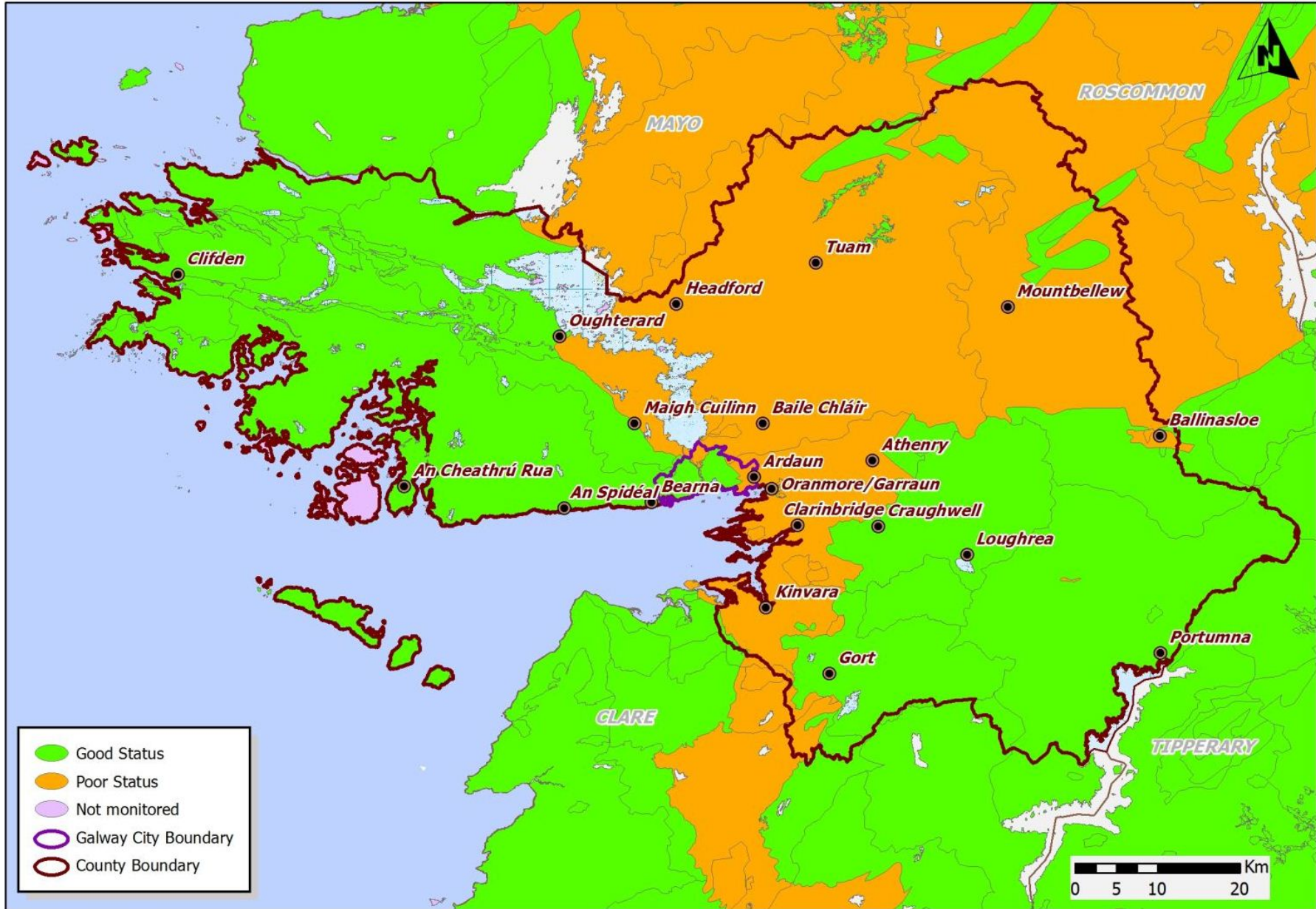


Figure 4.15 WFD Status of Groundwater

Source: EPA (2011)

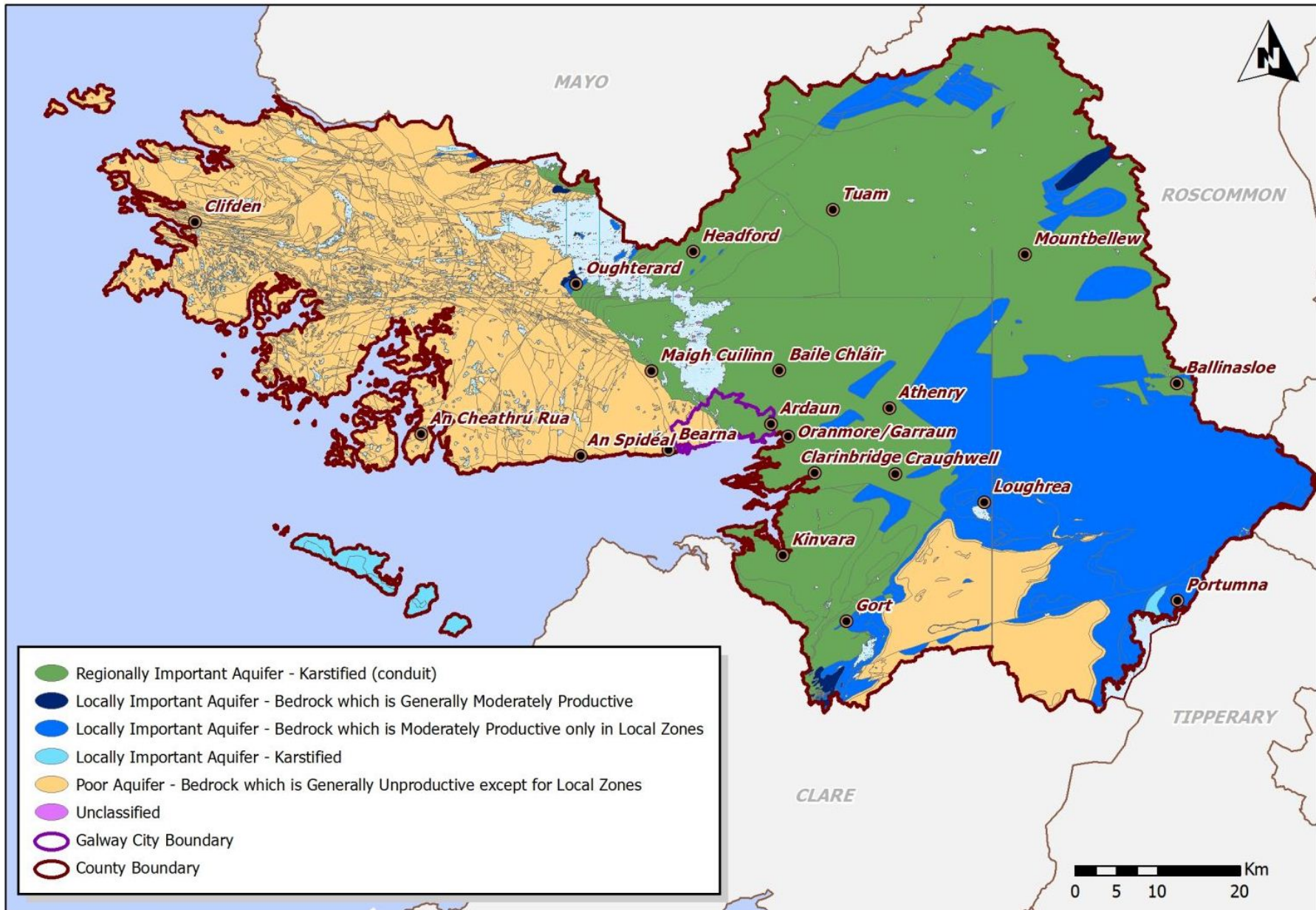


Figure 4.16 Aquifer Productivity

Source: GSI (2006)

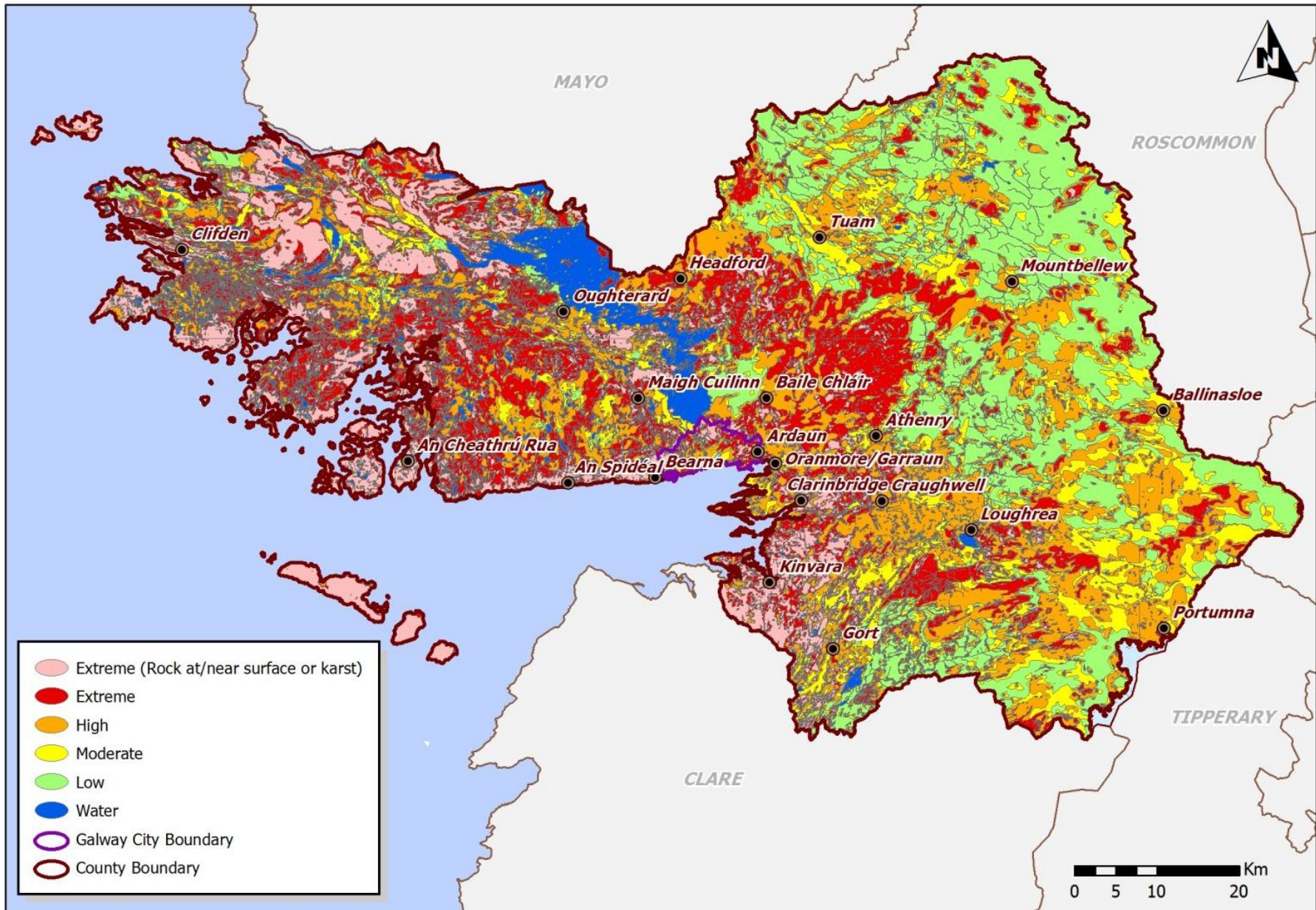


Figure 4.17 Aquifer Vulnerability

Source: GSI (2006)

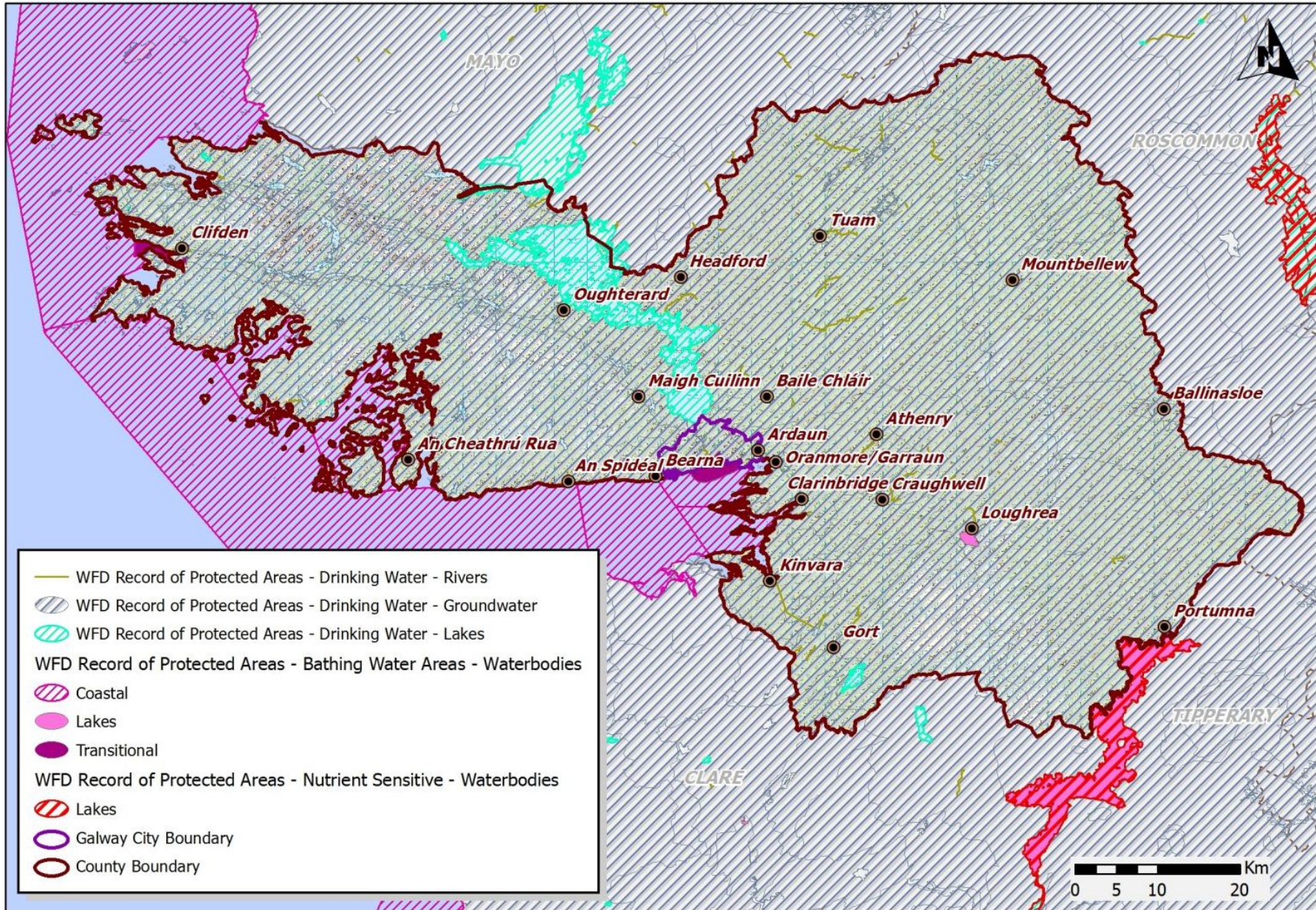


Figure 4.18 Entries to the Registers of Protected Areas

Source: EPA (2011)

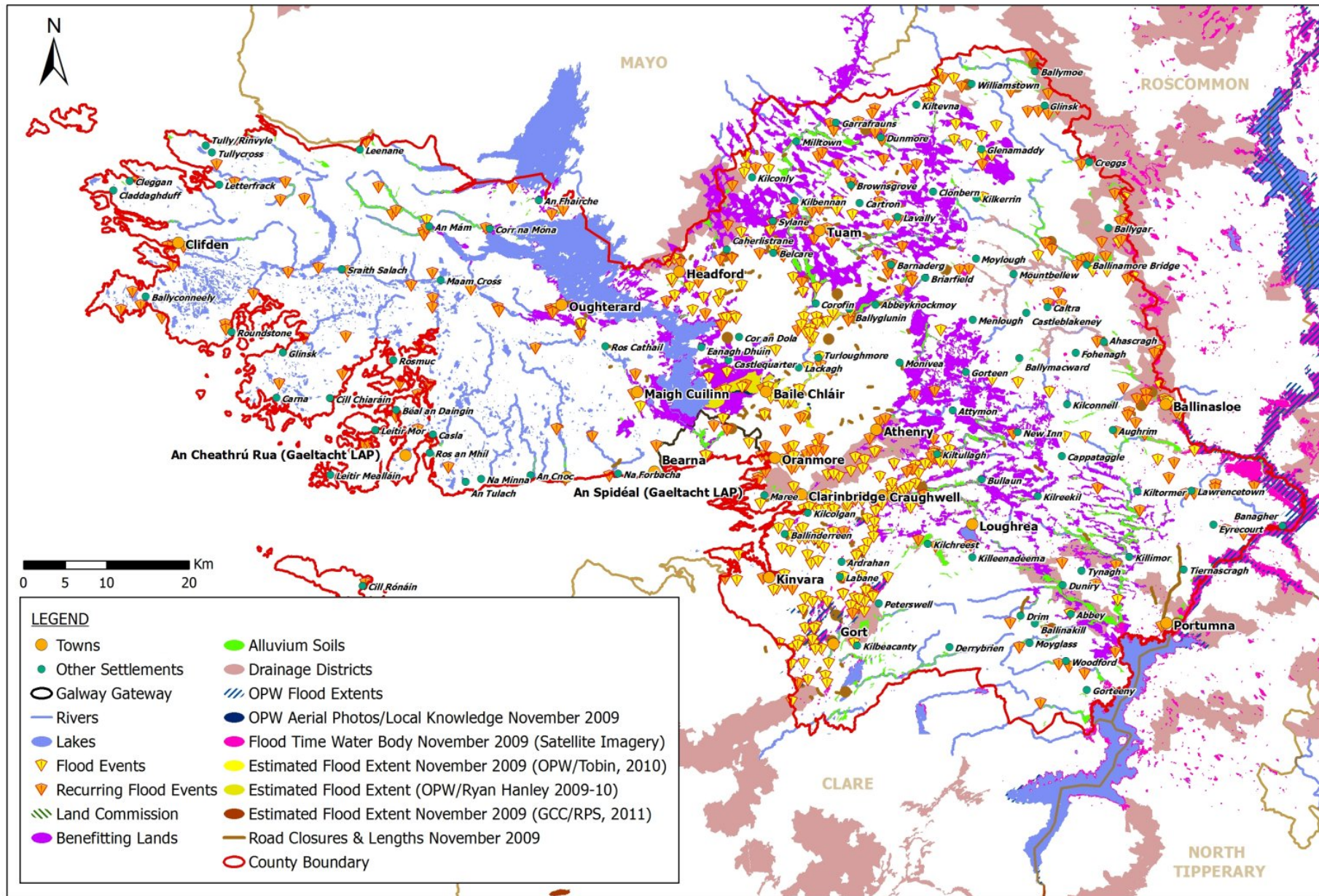


Figure 4.19 Occurrence of Available Historical Flood Risk Indicators

Source: various

of the country - excluding Zones A, B and C.

4.8 Air and Climatic Factors

4.8.1 Ambient Air Quality

4.8.1.1 Introduction and Legislation

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 under the Air Quality Framework Directive 1996 as transposed into Irish law under the Environmental Protection Agency Act 1992 (Ambient Air Quality Assessment and Management) Regulations 1999 (SI No. 33 of 1999).

Four daughter Directives lay down limits or thresholds for specific pollutants. The first two of these directives cover: sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead; and, carbon monoxide and benzene. Two more daughter directives deal with: ozone; and polyaromatic hydrocarbons, arsenic, nickel, cadmium and mercury in ambient air.

4.8.1.2 Air Zones

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

- Zone A: Dublin Conurbation.
- Zone B: Cork Conurbation.
- Zone C: 21 Other cities and large towns including Galway, Limerick, Waterford, Clonmel, Kilkenny, Sligo, Drogheda, Wexford, Athlone, Ennis, Bray, Naas, Carlow, Tralee and Dundalk.
- Zone D: Rural Ireland, i.e. the remainder of the State - small towns and rural areas

The administrative area of Galway County Council is located in Zone D while the administrative area of Galway City Council is located in Zone C.

Air quality within both the County and City areas is currently identified as being "good". The EPA's (EPA, 2013) *Air Quality in Ireland 2012* identifies that air quality in Ireland continues to be good, with no exceedances for the pollutants measured in 2012.

4.8.2 Noise

Noise is unwanted sound. The Environmental Noise Regulations (SI No. 140 of 2006) transpose into Irish law the EU Directive 2002/49/EC relating to the assessment and management of environmental noise, which is commonly referred to as the Environmental Noise Directive or END. The END defines a common approach intended to avoid, prevent or reduce on a prioritised basis the harmful effects, including annoyance, due to exposure to environmental noise. The END 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. Limit values are left to each member state. At this point in time, Ireland does not have any statutory limit values.

4.8.3 Climatic Factors

The key issue involving the assessment of the effects of implementing the plan on climatic factors relates to greenhouse gas emissions arising from transport. It is noted that the Plan contains a number of actions which respond to potential threats to environmental components arising from a changing climate.

Flooding - see Section 4.7.6 - is influenced by climatic factors and that the implications of climate change with regard to flood risk in relevant locations have been considered by the SFRA which has been undertaken for the Plan. There are emerging objectives relating to climate adaptation and that there is likely to be future Guidance for climate change proofing of land use plan provisions as is flagged in the National Climate Change Adaptation Framework (DECLG, 2012). Some of these objectives might relate to green

infrastructure which can achieve synergies with regard to the following:

- Provision of open space amenities;
- Sustainable management of water;
- Protection and management of biodiversity;
- Protection of cultural heritage; and
- Protection of protected landscape sensitivities.

In 2009, Ireland's greenhouse gas emissions decreased across all sectors due to the effects of the economic downturn with a decline in total emissions of 7.9 per cent. In 2010, Ireland's emissions fell by a further 0.7 per cent.

Ireland's emissions profile has changed considerably since 1990, with the contribution from transport more than doubling and the share from agriculture reducing since 1998.

Travel is a source of:

1. Noise;
2. Air emissions; and
3. Energy use (38.8% of Total Final Consumption in Ireland in 2010 was taken up by transport, the largest take up of any sector)²⁰.

Land-use planning contributes to what number and what extent of journeys occur. By addressing journey time through land use planning and providing more sustainable modes and levels of mobility, noise and other emissions to air and energy use can be minimised. Furthermore, by concentrating populations, greenfield development - and its associated impacts - can be minimised and the cost of service provision can be reduced.

Maximising sustainable mobility will also help Ireland meet its emission target for greenhouse gases under the 2020 EU Effort Sharing target which commits Ireland to reducing emissions from those sectors that are not covered by the Emissions Trading Scheme (e.g. transport, agriculture, residential) to 20% below 2005 levels.

Figures from CSO show an overall decrease of 2.5% of the entire population travelling to work by public transport or non-mechanical means in the county between 2006 and 2011 - see below.

Means of Travel	2006	2011	Change
On foot	8862 (8.5%)	7895 (7.4%)	-967 (-1.1%)
Bicycle	920 (0.9%)	944 (0.9%)	+24 (-)
Bus, minibus or coach	11348 (10.9%)	10249 (9.5%)	-1099 (-1.4)
Train, DART or LUAS	315 (0.3%)	400 (0.4%)	+85 (+0.1%)
Total travelling to work by public transport or non-mechanical means	21445 (20.6%)	19488 (18.1%)	-1957 (-2.5%)

Table 4.2 Persons by means of travel to work in Galway County

4.8.4 Existing Problems

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

²⁰ Sustainable Energy Ireland (2011) *Energy in Ireland 1990 – 2010*

4.9 Material Assets

4.9.1 Water Services

4.9.1.1 Irish Water and Timely Provision of Infrastructure

In April 2012, the Irish Government decided to establish Irish Water as an independent State owned subsidiary within the Bord Gáis Éireann Group. Irish Water is Ireland's new national water utility, bringing the water services of the 34 Irish Local Authorities together into one national service provider, with the aim of providing a secure, high quality and sustainable service to the Irish public. Irish Water from the 1st January 2014 is responsible for the operation of public water and wastewater services and provision of these services to over 1.5 million households across Ireland. This involves an expenditure of circa €1.1 billion per annum in the management of national water and wastewater assets, maintenance of the water and wastewater systems, investment and planning, managing capital projects and customer care and billing.

The preparation of the Plan gave cognisance to the provision of water and wastewater infrastructure and the availability of capacity within the public supply networks.

The responsibility for the provision of these services now lies with Irish Water, supported by Galway County Council, as appropriate. While the overarching aim is to protect and enhance the water quality of the County and to ensure the implementation of the Water Framework Directive and Western River Basin Management Plan, the Plan acknowledges that infrastructure availability may be limited in some of the key towns and settlements identified for growth in the Core Strategy Table.

Notwithstanding this, in allocating population to the various towns and villages with the County, strategic decisions were taken based on the proposed role and function of the particular settlement and in the knowledge that infrastructural investment is required. It is considered that inclusion in the Core Strategy would assist in providing a plan led approach to securing the investment necessary in the future. The objectives set out in the Plan clearly assert that development may not proceed unless the necessary water and

wastewater infrastructure is in place to service such development.

4.9.1.2 Waste Water Infrastructure

In County Galway there are a number of different types of wastewater supplies.

c.63% of the population is served by individual septic tanks, c.28% of the population is served by Public Schemes and c.5% of the population is served by other individual treatment types that are not septic tanks.

4.9.1.3 Waste Water Infrastructure Performance

Available waste water infrastructure information from the EPA²¹ is provided on Table 4.3 for both Galway City (some of the County's waste water is treated in the City's waste water treatment plant) and County.

Of the 22 no. treatment plants within the County's administrative area which detailed on Table 4.3:

- 7 plants [Ahascragh, An Cheathrú Rua, Clifden, Eyrecourt, Glenamaddy, Kinvara and An Spidéal] are identified as having failed to meet the effluent quality standards due to lack of secondary treatment;
- 9 plants [Ballygar, Clonbur, Gort, Letterfrack, Loughrea, Mountbellew Moylough Oughterard and Tuam] are identified as having failed to meet all the effluent quality and/or sampling standards (6 failed on effluent quality, 2 failed on sampling standards and 1 failed on both effluent quality and sampling standards); and
- 6 plants [Athenry, Ballinasloe, Dunmore, Headford, Maigh Cuilinn and Portumna] were all identified as having passed the requirements of the Urban Waste Water Treatment Directive.

As identified on Table 4.3, the City's waste water treatment plant passed the requirements of the Directive. Both Oranmore and Bearna are in the Mutton Island agglomeration and managed as part of the City's discharge.

²¹ EPA (2014) *Focus on Urban Waste Water Treatment in 2012*

4.9.1.4 Waste Water Investment

The following is a list of the public waste water schemes which are included and approved in the *Water Services Investment Programme (WSIP) 2010 – 2013* for County Galway. These projects entail improvements/upgrading works and new infrastructure provision and are envisaged to be completed during the lifetime of the Galway County Development Plan 2015 – 2021.

- Athenry Sewerage Scheme [Network & Wastewater Treatment Plant Upgrade; Under review by Irish Water];
- Baile Chláir & Milltown [Sewerage Contract 3 WWTP & Pumping Stations; Tender awarded-will proceed to construction];
- Clifden Sewerage Scheme [Phase 1 Network & Wastewater Treatment Plant; Under construction];
- Kinvara Sewerage Scheme [Network & Wastewater Treatment Upgrade; Approved. To be tendered in 2015];
- Mountbellew Sewerage Scheme [Contract Name TBC; Under review by Irish Water] Oughterard Sewerage Scheme [Network & Wastewater Treatment; Under review by Irish Water];
- Glenamaddy Sewerage Scheme [Review Scope & Commence Construction; Under review by Irish Water. Compliance issues. Priority Status];
- Ballygar Sewerage Scheme [Contract Name TBC / Review Scope & Commence Construction; Early stages of design];
- Galway Sewerage Scheme [Phase 3– Vol E (Galway East Infrastructure) Scheme at Planning; Not currently on CIP but Irish Water aware of importance of Galway County Council attached to the scheme]; and
- An Spidéal Sewerage Scheme [1,000 PE WWTP (DBO) & Collection Network Upgrade (Phase 1); To be reviewed by Irish Water].

4.9.1.5 Sludge Management Plan

The *Galway City Council & County Council Operational Sludge Management Plan* was adopted in January, 2011. The objectives of the Plan are to:

- Identify sources of sludge;

- Estimate rates for sludge production and final destinations for sludge;
- Recommend sustainable options for the management of non-hazardous sludge.

The provision of all new sewerage treatment plants will include works for dealing with any sludge arising from treatment, in accordance with the Sludge Management Plan.

4.9.1.6 Drinking Water Supply

Drinking water in the County is drawn from a variety of sources including Public Main, Group Schemes with local authority sources, Group Scheme with private source and Other Private Source.

Galway County Council is responsible for the operation of 38 Public Water Supplies (PWS) serving a population of 106,824. Approximately 80% of the treated water supplied through this infrastructure network is abstracted from surface water sources. Private supplies provide the alternative for those areas that are not served by a public water supply and comprise mainly of wells for single dwellings and certain private group water schemes for rural settlements.

4.9.1.7 Drinking Water Quality

Drinking water must be clean and wholesome. That means it must meet the relevant water quality standards and must not contain any other substance or micro-organism in concentrations or numbers that constitute a potential danger to human health.

Compliance with the drinking water requirements is determined by comparing the results of analyses submitted by water suppliers to the standard for 48 parameters specified in the European Communities (Drinking Water) Regulations (No. 2), 2007. To ensure that these standards are met, each water supply must be monitored on a regular basis.

Under Section 58 of the Environmental Protection Agency Act 1992 the EPA is required to collect and verify monitoring results for all water supplies in Ireland covered by the European Communities (Drinking Water) Regulations, 2000. The EPA publishes their results in annual reports which are supported by Remedial Action Lists (RALs). The RAL identifies water supplies which are

not in compliance with the Regulations mentioned above.

The EPA's 'The Provision and Quality of Drinking Water in Ireland' (EPA, 2012) Reports identify that microbiological compliance levels in Public Water Supplies in the County have improved from 98.8% in 2009 to 100% in 2010, 2011 and 2012 whilst chemical compliance levels have changed from 99% in 2009 and 2010 to 99.6% in 2011 and 99.5% in 2012.

The most recent EPA Remedial Action List (Q3 of 2013) identifies 12 water supplies that are in need of improvement. These are identified on Table 4.4.

The Shannon International and Western River Basin District Management Plans provide for the protection of various water bodies that are used for drinking water purposes and listed under the WFD Register of Protected Areas. The County Plan includes provisions which will contribute towards the implementation of these Plans.

4.9.1.8 Drinking Water Investment

The following is a list of the public water supply schemes which are included and approved in the *Water Services Investment Programme (WSIP) 2010 – 2013* for County Galway. These projects entail improvements/upgrading works and new infrastructure provision and are envisaged to be completed during the lifetime of the Galway County Development Plan 2015 – 2021.

- Ballinasloe Regional Water Supply Scheme [Network (Ahascragh, Ballinasloe, Kilconnell Advance Works); Under Review by Irish Water];
- Clifden Regional Water Supply Scheme [Under Review by Irish Water];
- Costello Regional Water Supply [Water Treatment Plant Upgrade; Irish Water to appoint a consultant to review this upgrade and an alternative option to supply this area from Terryland WTW in Galway City];
- Loughrea Water Treatment Plant [Emergency Works at Water Treatment Plant; Under review by Irish Water with possibility of extending the Tuam RWSS to supply Loughrea];
- Loughrea Water Treatment Plant [Under review by Irish Water with

possibility of extending the Tuam RWSS to supply Loughrea]; and Loughrea Regional Water Supply Scheme [Contract 1 – Network; Under review by Irish Water with possibility of extending the Tuam RWSS to supply Loughrea]

4.9.1.9 Water Management Strategy

Galway County Councils Water Management Strategy is focused around the conservation of water even where adequate supplies exist, to ensure optimal use of this precious commodity. Conservation measures include not only the monitoring of usage of water and early detection of leaks but also an awareness programme for consumers. Works under the Water Conservation Programme for the County have been progressed and continue to progress.

4.9.2 Waste Management

Between 2009 and 2011 both the total packaging recovered by self-complying packagers and the total collected and brought household waste have increased (EPA National Waste Reports).

The total collected and brought household waste in Galway in 2009 amounted to 48,440(t). This figure rose to 58,484 (t) in 2011. The total packaging recovered by self-complying packagers in 2009 amounted to 151 (t). This figure rose to 458 (t) in 2011 (EPA, 2013).

The Government recently adopted a new approach to waste management through a document called 'A Resource Opportunity – Waste Management Policy in Ireland' published in July 2012. This policy provides a roadmap on how Ireland will move away from an over dependence on landfill, by putting in place the most appropriate technologies and approaches to reduce waste, while at the same time maximising the resources that can be recovered from waste.

The policy is predicated on five principles those being prevention and minimisation, reuse, recycling, recovery and disposal.

The Plan commits the Council to continue to work in tandem with Connacht Waste Management and the Environmental Protection Agency in the implementation and execution of its waste management responsibilities and

duties throughout the duration of the life time of the Plan.

4.9.3 Extractive Industries and Quarries

Extractive industries by their nature are resource based and result in the removal of soil and rock. Quarrying and other extractive industries are recognised as important to the local rural economic development of the County in terms of generating employment and providing raw material to the construction industry. The geology of the County produces aggregate resources in terms of sand, limestone and gravel, which are exploited at quarries throughout the County and the County Plan recognises this resource as a significant economic asset.

In the 2011 Census, 274 people identified that they were employed in mining, quarrying and turf production (see also Section 4.4.5).

4.9.4 Agriculture and Forestry

The Government recognises the opportunities and challenges facing agriculture/fishing and in response the Department of Agriculture Fisheries and Food (in collaboration with An Bord Bia, Teagasc, Bord Iascaigh Mhara, Enterprise Ireland, EPA and Agricultural Consultants) produced the Food Harvest: A vision for agri- food and fisheries 2020 Report in 2013 which sets out a cohesive roadmap for the industry in order to build capacity, adapt to challenge and to grow in the context of emerging opportunities in the decade ahead.

The Census of Agriculture 2010, indicates that agriculture is the predominant land-use within County Galway with 13,445 farms listed within the County and the total area farmed was 347,122.7Ha. The total area farmed and average farm size has increased since 2000. Cattle and sheep are the main type of farming, dairy, pig and poultry farming are also important categories. Equine activities are also practiced but to a lesser degree. Forestry and Horticulture are also practiced within the County.

The actual forest cover of Co. Galway is c.9.84% of the total land area of the County or c.593,966Ha. This compares with 11.01% or 6,889,456 at a national level (up to 2012). Under the afforestation scheme there was c. 380Ha of grazing land planted within the

County in 2012. In order to assist in achieving the national target, the current area of forestry cover in Galway will need to be increased considerably by 2030.

In the 2011 Census, 5,908 people identified that they were employed in agriculture, forestry and mining (see also Section 4.4.5).

4.9.5 Fishing and Marine Resources

The fishing industry in Galway relates not only to commercial fishing (at sea and inland) but also to tourism and recreational activities.

The marine resource is very important to the County as it supports a significant number of waterbased activities, both work and pleasure related. These include trips to islands, both inhabited and uninhabited, boat hire, yachting, adventure sports, pier/shore angling, sea angling, dolphin and bird watching, hiking, visiting heritage sites and festivals. The Aran Islands and Inishbofin are very popular tourist destinations and a number of ferries service the islands on a daily basis. Most islands also have air connectivity with the mainland. Galway County Council recognises the importance of these companies in providing local employment in coastal areas and also in attracting visitors to the area.

Fishing, fish processing, transport, mariculture, aquaculture and related activities including seaweed aquaculture, seaweed harvesting and processing also generate significant employment in the County.

Marine energies (including offshore wind energy/wave and tidal) will in the future play an important role in enhancing energy efficiencies, minimising land use requirements of the power sector and in reducing greenhouse gas emissions. With the proposed investment in grid connections and transmission capacity under Grid West Project marine energies have the potential to create a significant number of jobs within coastal areas and in diversifying the local economy.

There are a number of strategic ports in the County, the most important being Ros an Mhil. Ros an Mhil is the largest and busiest port in the County and is a major fishing port and fish processing location. It is the main base for the Galway and Aran Deep-Sea fishing fleet and is

a major ferry port for passengers and goods for the three Aran Islands.

The Council's policy is to encourage and support an integrated approach to marine enterprise as set out within the national Integrated Marine Plan titled 'Harnessing Our Ocean Wealth' and due to the existing facilities/enterprises, Ros an Mhíl (in collaboration with private business, educational and research institutes such as the Galway Marine Institute) has the potential to develop as a location for a 'maritime/marine cluster' within the County.

4.9.6 Transport

One of the strategic aims of the County Development Plan 2009-2015 was to move towards a more sustainable and integrated concept of development with regard to land use, transportation, water services and energy supply. The spatial/settlement strategy focused development in Tuam Hub Town and key towns and villages along strategic development corridors emerging along the new transportation infrastructure (road and rail) as recommended in the Galway Transportation and Planning Study (GTPS 1999, 2003).

Many of the GTPS's initiatives are still relevant and have informed subsequent policy documents and national guidelines the National Spatial Strategy (NSS), the Regional Planning Guidelines for the West Region (RPG's) and have also informed the Spatial/Settlement Strategies and the transportation strategy of previous Galway County Development Plans.

The integration of land use and transportation continues to be an overarching strategic aim of the Galway County Development Plan 2015-2021.

4.9.7 Renewable Energies and Electricity Transmission

4.9.7.1 Introduction

The Energy White Paper 'Delivering a Sustainable Energy Future for Ireland, Energy Policy Framework 2007-2012' sets out the means of meeting Ireland's future energy requirements and energy efficiencies in an environmentally sensitive and sustainable manner. The National Energy Efficiency Action

Plan 2009-2020 identifies policies and measures aimed at contributing towards achieving a 20% reduction in energy demand across the whole of the economy through energy efficiency measures by 2020.

The Plan recognises that the availability of clean and reliable energy is an essential requirement for the sustainable economic development of the county and is committed to assisting in achieving 40% of Ireland's energy demand from renewable resources and to develop County Galway as a low carbon economy by making provision for renewable energies.

County Galway has, in terms of renewable energy, huge potential for the development of wind, solar, biomass, geothermal, hydro and wave energy. The wave and wind resource along the west coast are among the richest in Europe. The Plan identifies that the Council will collaborate with EirGrid in seeking the enhancement of the existing electricity network and infrastructure at appropriate coastal areas for the promotion of ocean energy (also referred to as blue energy - wave, tidal and offshore wind) and with the Galway Marine Institute in the development of its 'SmartBay Project' (which includes marine observation, communication projects and R&D) in conjunction with large multinationals and small businesses.

A strong transmission grid is essential in order to attract and retain high-tech industrial investment, to ensure competitive energy supplies, to achieve balanced development, to reduce dependency on fossil fuels, and to achieve climate change targets. Moreover, to attract renewable energy development it is important for County Galway that the existing grid infrastructure is reinforced where necessary and expanded to areas not adequately serviced.

4.9.7.2 Wind Energy

Galway County Council has produced a 'County Galway Wind Energy Strategy (WES)' which forms part of this Plan. The Strategy supports a plan led approach to wind energy development in County Galway and sets out Strategic Areas, Acceptable in Principle Areas, and areas Open for Consideration and it is the policy of the Council to maximize wind energy development in all three of these areas on a case by case basis subject to meeting specific requirements and guidance contained within

the Strategy. An aim of the strategy is to meet a minimum target of 500 MW of wind energy in County Galway and to generate the equivalent of over 70% of its electricity needs from wind energy.

4.9.7.3 Wave and Tidal Energy

Located on the Atlantic Coast, County Galway has great opportunity to harness the potential of wave and tidal energy. The White Paper on Energy (2007) has a target of 500MW of electricity generation from ocean power which has to be met by 2020. The Council shall have regard to the Department of Environment, Communication and Natural Resources (DECNR) 'Offshore Renewable Energy Development Plan 2012-2020'.

4.9.8 Existing Problems

16 wastewater treatment plants²² in the county are identified by the EPA (Focus on Urban Waste Water Discharges in Ireland, 2012) as having failed to comply with certain requirements of the Urban Waste Water Regulations (2001).

The most recent EPA Remedial Action List (Q3 of 2013) identifies 12 water supplies in the County that are in need of improvement. These are identified on Table 4.4.

The provisions of the new Plan 2015-2021 will contribute towards protection of the environment with regard to impacts arising from material assets.

²² Ahascragh, An Cheathrú Rua, Clifden, Eyrecourt, Glenamaddy, Kinvara, An Spidéal, Ballygar, Clonbur, Gort, Letterfrack, Loughrea, Mountbellew Moylough Oughterard and Tuam

Galway County Council 2011

Urban area	Reg. No.	Pass or Fail	Reason for failure	Persistent failures	Urban area (p.e)	WWTP (p.e.)	Level of treatment provided	Receiving water	Sensitive area	River Basin District
Ahascragh	D0372-01	No secondary			560	150	Preliminary	River		Shannon
Athenry	D0193-01	Pass			6,000	6,000	Secondary & nutrient	River		Western
Ballinasloe	D0032-01	Pass			11,010	13,500	Secondary & nutrient	River		Shannon
Ballygar	D0371-01	Fail	Quality	✓	944	500	Secondary	River		Shannon
Carraroe	D0388-01	No secondary			850		No treatment	Coastal		Western
Clifden	D0198-01	No secondary			4,779	1,875	Primary	Estuarine		Western
Clonbur	D0374-01	Fail	Sample no.		580	700	Secondary	River		Western
Dunmore	D0370-01	Pass			890	3,000	Secondary & nutrient	River		Western
Eyrecourt	D0375-01	No secondary			702	200	Primary	River		Shannon
Glenamaddy	D0379-01	No secondary			952	300	Primary	Lake		Western
Gort	D0195-01	Fail	Quality		4,836	4,310	Secondary	River		Western
Headford	D0197-01	Pass			1,390	3,000	Secondary & nutrient	River		Western
Kinvara	D0276-01	No secondary			1,270		No treatment	Estuarine	✓	Western
Letterfrack	D0399-01	Fail	Sample no.		500	800	Secondary	River		Western
Loughrea	D0194-01	Fail	Quality		10,000	9,500	Secondary & nutrient	River		Western
Mountbellew	D0219-01	Fail	Quality & sample no.	✓	1,483	700	Secondary	River		Shannon
Moycullen	D0191-01	Pass			3,273	4,000	Secondary & nutrient	River		Western
Moylough	D0403-01	Fail	Quality	✓	600	600	Secondary	River		Shannon
Oughterard	D0192-01	Fail	Quality		1,760	500	Secondary	River		Western
Portumna	D0196-01	Pass			5,833	3,100	Secondary & nutrient	Lake	✓	Shannon
Spiddal	D0396-01	No secondary			693		No treatment	Coastal		Western
Tuam	D0031-01	Fail	Quality		22,440	24,834	Secondary & nutrient	River		Western

Galway City Council 2011

Urban area	Reg. No.	Pass or Fail	Reason for failure	Persistent failures	Urban area (p.e)	WWTP (p.e.)	Level of treatment provided	Receiving water	Sensitive area	River Basin District
Galway City	D0050-01	Pass			91,600	91,600	Secondary	Coastal		Western

Table 4.3 Available Waste Water Treatment Infrastructure Information for Galway City and County

Name of Water Supply	Population Served	Volume Supplied	RAL Heading	Proposed Action Programme
Ballinasloe Rws	6,852	3,195	Elevated levels of THMs above the standard in the Drinking Water Regulations	Upgrade disinfection, provide chlorine and turbidity monitors and pH correction
Ballyconneely P.S.	931	825	Elevated levels of THMs above the standard in the Drinking Water Regulations	pH correction, filter upgrade, UV, Chlorine dioxide, upgrade chlorination and provide contact tank
An Cheathrú Rua PWS	3,875	2,096	Inadequate treatment for Cryptosporidium	pH correction, ozone, filtration, UV and sodium hypochlorite disinfection and contact tank
Dunmore/ Glenamaddy P.S.	1,185	1,089	Elevated levels of THMs above the standard in the Drinking Water Regulations	Ozone filtration and UV disinfection
Glenamaddy	900	371	Poor turbidity removal	Ozone, filtration and UV treatment
Inishere P.S.	274	73	Elevated levels of THMs above the standard in the Drinking Water Regulations	Ozone filtration and UV disinfection
Killimor PWS	500	190	Elevated levels of THMs above the standard in the Drinking Water Regulations	To be replaced by Portumna PWS
Kilkerrin/Moylough	1,800	1,143	Inadequate treatment for Cryptosporidium	Upgrade of treatment plant to include effective barrier against Cryptosporidium
Leenane P.S.	100	894	Inadequate treatment for Cryptosporidium	Pre-chlorination, filtration and UV treatment
Mid Galway	2,083	4,129	Failed to meet E.coli/ Enterococci standard as reported in the Drinking Water Report and needs investigation and improvement if necessary to ensure that the root cause of the problem has been rectified.	Ozone treatment, filtration and UV treatment
Portumna PS	1,228	1,124	Elevated levels of THMs above the standard in the Drinking Water Regulations	Upgrade settlement and coagulation and filters. Install turbidity monitors.
Williamstown PS	180	558	Poor turbidity removal	Ozone treatment, filtration and UV disinfection

Table 4.4 Galway County Council Entries to the Remedial Action List (Q3 of 2013)

4.10 Cultural Heritage

4.10.1 Introduction

Heritage, by definition, means inherited properties, inherited characteristics and anything transmitted by past ages and ancestors. It covers everything, from objects and buildings to the environment. Cultural heritage includes physical buildings, structures and objects, complete or in part, which have been left on the landscape by previous and indeed current generations.

4.10.2 Archaeological Heritage

4.10.2.1 Introduction

Archaeology is the study of past societies through the material remains left by those societies and the evidence of their environment. Archaeological heritage consists of such material remains (whether in the form of sites and monuments or artefacts in the sense of moveable objects) and environmental evidence. As archaeological heritage can be used to gain knowledge and understanding of the past it is of great cultural and scientific importance.

Archaeological sites and monuments vary greatly in form and date; examples include earthworks of different types and periods, (e.g. early historic ringforts and prehistoric burial mounds), megalithic tombs from the Prehistoric period, medieval buildings, urban archaeological deposits and underwater features.

Archaeological sites may have no visible surface features; the surface features of an archaeological site may have decayed completely or been deliberately removed but archaeological deposits and features may survive beneath the surface.

The archaeological heritage of County Galway includes structures, constructions, groups of buildings, developed sites, all recorded monuments as well as their contexts, and moveable objects, situated both on land and underwater.

4.10.2.2 Record of Monuments and Places

County Galway's 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, established under Section 12 of the National Monuments (Amendment) Act 1994, of sites and areas of archaeological significance, numbered and mapped. The RMP includes all known monuments and sites of archaeological importance dating to before 1700 AD, and some sites which date from after 1700 AD.

Figure 4.20 shows the spatial distribution of entries to the RMP.

The majority of known monuments are located to the east of Lough Corrib, in the eastern half of the County, along the coastline, along river and lake banks and within and surrounding settlements such as Galway City, Headford, Tuam, Oranmore, Athenry, Loughrea and Gort - showing that most people have always lived in the same parts of Galway as they do today.

In the western half of the County clusters of monuments are found near the banks of Lough Corrib, within and surrounding Oughterard and in coastal areas to the east of Conamara. A high proportion of monuments are to be found on the County's Islands including the Aran Islands and Inishbofin.

There are a number of national monuments located within County Galway – these are monuments the preservation of which is a matter of national importance by reason of the historical, architectural, traditional, artistic or archaeological interest attaching thereto. There are over 80 national monuments located within County Galway that are in state care i.e. are in the ownership and guardianships of the Minister of Arts, Heritage and the Gaeltacht (National Monuments Service, 2009). There are over 40 national monuments in County Galway that are subject to Preservation Orders (National Monuments Service, 2010).

4.10.3 Architectural Heritage

4.10.3.1 Introduction

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.

The physical form of the individual structures in the countryside and in the towns and villages of County Galway has evolved through many periods. The built heritage which has developed has attained a character that contributes to varied, locally distinctive areas in the County.

4.10.3.2 Record of Protected Structures

The Record of Protected Structures (RPS) included in the Development Plan is legislated for under Section 12 and Section 51 of the Planning and Development Act 2000 as amended.

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

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

- (i) the interior of the structure;
- (ii) the land lying within the curtilage²³ of the structure;
- (iii) any other structures lying within that curtilage and their interiors; and,
- (iv) all fixtures and features which form part of the interior or exterior of any structure or structures referred to in subparagraph (i) or (iii).

²³ 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.

Current entries to the RPS in County Galway are mapped on Figure 4.21.

4.10.3.3 Architectural Conservation Areas

An Architectural Conservation Area (ACA) is a place, area, group of structures or townscape, which is of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest or contributes to the appreciation of a Protected Structure. An ACA may or may not include Protected Structures. In an ACA, protection is placed on the external appearance of such areas or structures. Planning permission must be obtained before significant works can be carried out to the exterior of a structure in an ACA, which might alter the character of the structure, or of the ACA.

The following ACAs are included in the Plan:

1. Athenry town Centre
2. Bearna Pier Road
3. Clarinbridge village centre
4. Clifden Town centre
5. Craughwell village centre
6. Gort town Centre
7. Headford town Centre
8. Loughrea town centre
9. Oranmore town centre
10. Oughterard town centre
11. Portumna town centre
12. Tuam town centre
13. Ballinasloe Town Centre
14. St Brigid's Hospital, Ballinasloe

4.10.4 Existing Problems

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

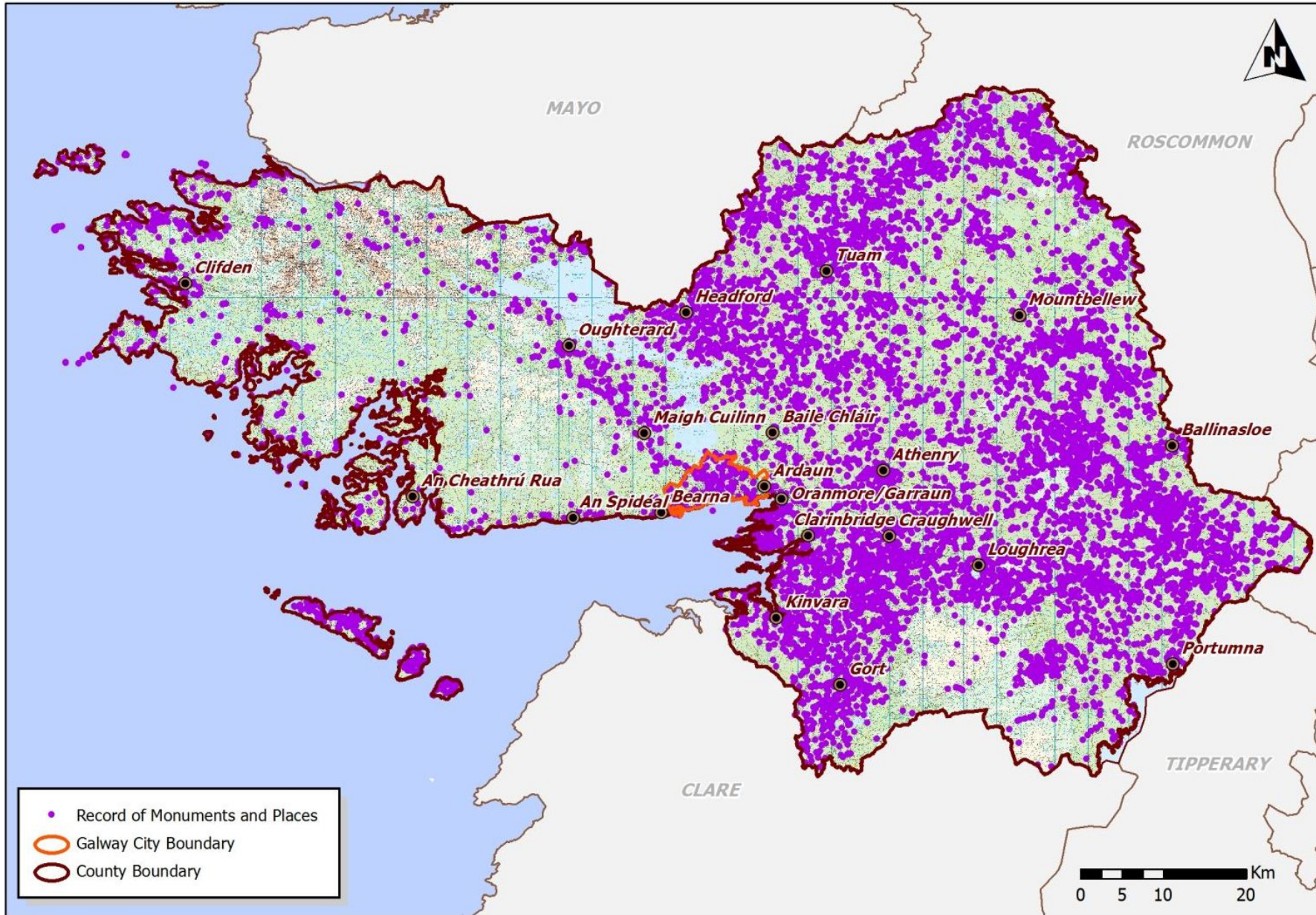


Figure 4.20 Archaeological Heritage - Entries to the Record of Monuments and Places

Source: Galway County Council (Unknown)

CAAS Ltd. for Galway County Council

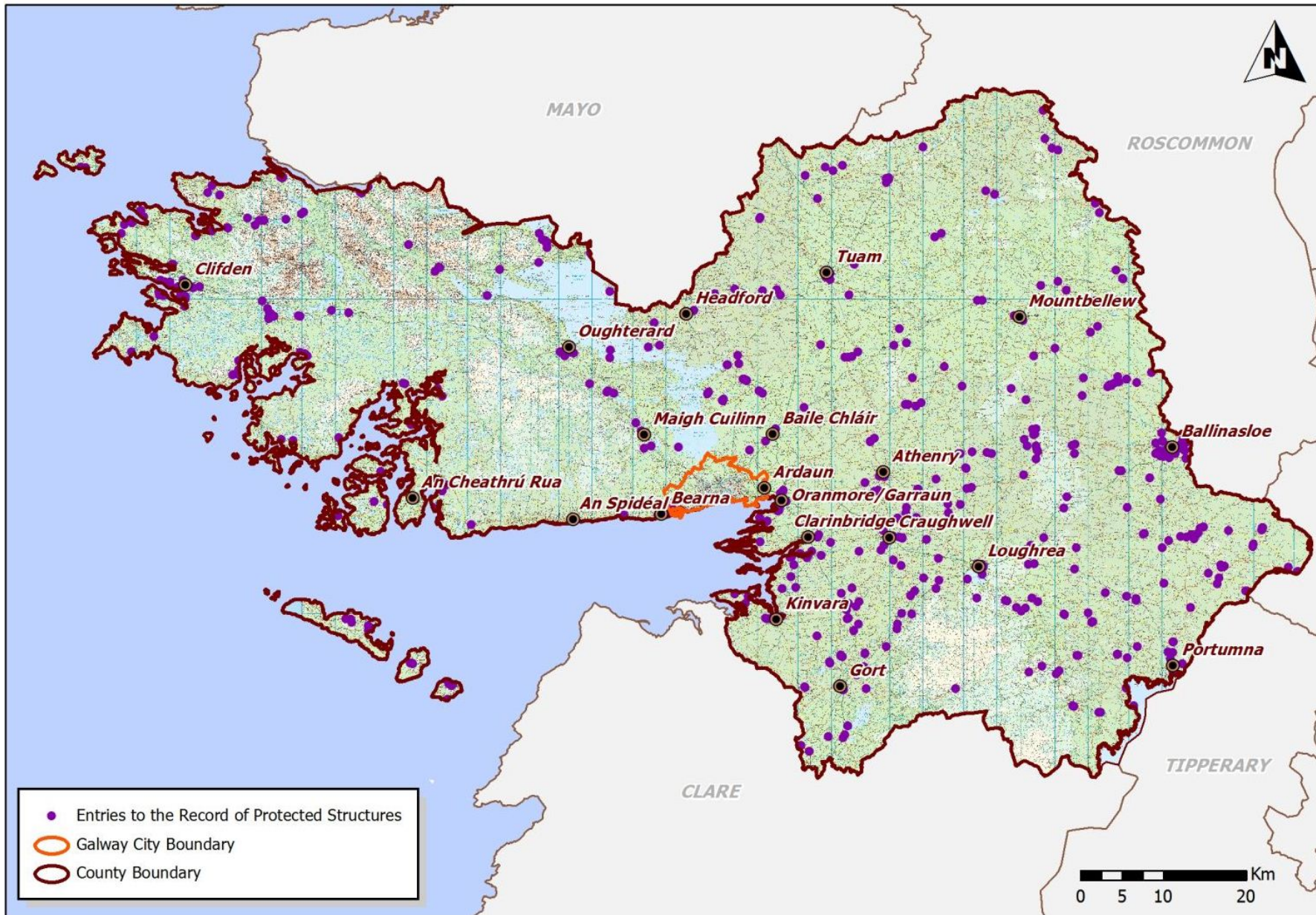


Figure 4.21 Architectural Heritage - Entries to the Record of Protected Structures

Source: Galway County Council (Unknown)

4.11 Landscape

4.11.1 Introduction

Landscapes are areas which are perceived by people and are made up of a number of layers: landform, which results from geological and geomorphological history; landcover, which includes vegetation, water, human settlements, and; human values which are a result of historical, cultural, religious and other understandings and interactions with landform and landcover. County Galway is richly endowed with a variety of landscape types ranging from the quartzite mountain ranges and blanket bogs of Conamara to the fertile patchwork of farmland in east Galway and the bare karst pavements of the Aran Islands and South Galway.

Human interaction with the natural heritage has produced a variety of characteristic landscapes and landscape features. The natural diversity of the landscapes of the County coupled with cultural features such as the archaeological monuments, stonewalls, hedgerows, woodlands, field patterns, settlements and buildings has given the County its distinctive character.

County Galway is richly endowed with a variety of landscape types ranging from the quartzite mountain ranges and blanket bogs of Conamara to the fertile patchwork of farmland in east Galway and the bare karst pavements of the Aran Islands and South Galway.

West Galway is a rugged landscape with mountains, bogs, rivers and lakes. Galway is bounded to the west by an extensive and varied Atlantic coastline, which ranges from cliffs to sand dunes and rocky shores to salt marshes.

East Galway is characterised by a low-lying rolling topography of a fertile limestone plain, rich pasturelands, bog, and the Shannon system with its Callows and Lough Derg. 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.

The County is dissected by many rivers and lakes with Lough Corrib, Ireland's second largest lake at its centre.

A multitude of dry stone walls typifies the landscape of the Aran Islands. Seascapes vary from the steep cliffs of the Aran Islands to sandy beaches and the famous Coral Strand, west of An Cheathrú Rua, to the long fjord-like inlet of Killary harbour.

4.11.2 Legislation

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.

4.11.3 Landscape Character Assessment²⁴

4.11.3.1 Introduction

Galway County Council's (2003) Landscape Character Assessment classifies landscapes in Galway according to their:

- Character (see Figure 4.22);
- Values (see Figure 4.23); and,
- Sensitivity (see Figure 4.24).

Each of these classifications is described below with an overall summary provided on Table 4.5.

4.11.3.2 Landscape Character Areas

Landscape character areas were defined by a combination of professional judgement relating to the physical elements which make up the landscape of an area and the following procedures from the prescribed landscape assessment methodology: physical units (i.e. the combination land form and land cover) comprising visual units (i.e. physical limits of a view) and image units (i.e. physical features such as focal points). 25 character areas were identified as follows:

²⁴ Text in this section is sourced from the Galway Landscape Character Assessment (Galway County Council, 2003)

Area 1: North east Galway (Ballinasloe to Ballymoe)

The landscape is flat to undulating open pastoral land is bound by field hedgerows, with small scattered coniferous plantations of 1-6 km² in size. There are no areas of particular scenic value. This area is primarily rural and includes the settlements of Ballinasloe, Mountbellew Bridge, Glennamaddy, Ballymoe and Dumore.

Area 2: Shannon and Suck River Valley between Portumna and Ballinasloe

The landscape of the river valley is flat bordered by deciduous trees and water-edge planting. Also along the riverbank are recreational facilities for fishing, bird watching and boating. There are local scenic views along the river and to the local heritage sites. Long distant views are to the Aughty Mountains.

Area 3: East central Galway (Athenry, Ballinasloe to Portumna)

The landscape is flat, coarse grassland, occasional clumps of coniferous forestry between 1-3 km² in size, fields defined principally by stone walls. There are no areas of particular scenic value although the stone walls are quite distinct.

Area 4: Southeast Galway (Clarinbridge to Gort)

The landscape is undulating scrubby grassland, bound by field hedgerows without mature trees. The landscape is scenic without being remarkable and there are long distance views of the Slieve Aughty Mountains to the east.

Area 5: Northeast Galway (Tuam environs)

Landscape is flat, fertile pastoral land bound with field hedgerows. There is little or no coniferous forestry or deciduous woodland. There are no areas of particular scenic value.

Area 6: Slieve Aughty Mountains

The landscape is mountainous with areas of both coniferous and deciduous woodland. The landscape is wild, natural and scenic. Long distant glimpse views are available through

the trees towards the lower ground in the surrounding areas.

Area 7: Northwest Lough Derg

This is an enclosed, intimate landscape surrounding the northwestern portion of the Lough. The northern and western water edge within County Galway includes many recreational facilities including forest walks, golf, access to heritage sites and picnic areas. The area is scenic and semi natural.

Area 8: Lower Burren

The landscape is flat to undulating, with poor quality grassland around an abundance of stones and large rocks. The land is open with no hedgerows or trees or built elements and is quite barren yet scenic in a wild natural sense.

Area 9: Indreabhán to Galway City coastline

The coast is flat, comprising rocks and sand merging with natural grassland towards the R336. The coast line commands striking views of County Clare and the Aran Islands. Further inland from the R336 route, there are residential and some light industrial developments which have lowered the scenic value in this area.

Area 10: East Connemara Mountains (Maigh Cuilinn, Sraith Salach to Glinsk)

The landscape is largely mountainous with slopes covered with coniferous forestry. The lower areas comprise rocky out crops and areas of rough grassland around the many small loughs and turloughs. The landscape is scenic although not remarkable.

Area 11: Lough Corrib and environs

Lough Corrib is a wide, dramatic expanse of water including many islands supporting deciduous woodland. The land around the northern part of the Lough is undulating heath, bog and coniferous forestry whereas the land surrounding the southern section is flat, open grassland. The landscape of the Lough and its surrounds is highly scenic and includes many facilities for visitors.

Area 12: South foothills of east Conamara Mountains

The landscape of the foothills is undulating heath and scrubland with regular rocky outcrops. The area is generally undeveloped and has expansive views in a southerly direction across Galway Bay towards County Clare.

Area 13: East Galway Bay (Oranmore to Kinvarra Bay and inland to N18 road)

The coastline is intimate and sinuous with many sheltered inlets. The coast is scenic and relatively undeveloped. The landscape adjacent to the coast comprises pastureland in large fields bordered by mature hedgerows. The existing vegetation screens the coastline from roads and properties inland of the N18 road.

Area 14: West Conamara

The landscape is flat low lying bog and heath with many scattered lakes and turloughs. There is very little development and the landscape is atmospheric and quite distinct although not highly scenic.

Area 15: Leitir Móir and Garmna

The landscape is flat, open, rough grass and scrub with frequent rocky outcrops. There are many small scale residential and community developments within this area most with south and west facing views towards Galway Bay. The landscape is developed yet not spoilt and the overall setting of the low-lying islands and the sea is quite scenic.

Area 16: West foothills of east Connemara Mountains (Gleann Mhac Muirinn Lough environs)

This landscape is flat to undulating, open with little vegetation and comprises lakes and bog land. There is very little development in this area yet it is not of high scenic value.

Area 17: An Cheathrú Rua (Casla Bay to Glinn Chatha)

This area is flat, open and exposed. The landscape comprises wetland and rocky outcrop in-between the many scattered residential dwellings. The landscape is developed yet not spoilt and the overall setting

of the coastal inlet and Kilkieran Bay is quite scenic.

Area 18: Bertraghboy bay and eastern banks

The landscape around Bertraghboy bay is undulating and rises to meet Cnoc Mordain Mountain. The land comprises rough grass and bog in amongst the scattered residential and light industrial developments. The landscape is not particularly scenic although views towards the bay from the many dwellings are expansive and quite dramatic.

Area 19: West Coast (Gorteen bay to Clifden)

The coastline from Gorteen Bay to Clifden is low lying, harsh and exposed and the adjacent land is rough grassland with rocky outcrops. There is very little development within this area and the landscape is generally dramatic and scenic.

Area 20: West Coast (Clifden to mouth of Killary Harbour)

The landscape varies from undulating to mountainous with scattered coniferous forestry up to 1km² in size. There are many residential developments within this area particularly in the Cleggan area, which have reduced the scenic value of the rural landscape land however westerly sea views are expansive and dramatic.

Area 21: Killary Harbour and southern banks

The landscape along the southern banks of the Killary Harbour is steep heath land with no tree cover. There are no developments along this stretch of land except for a visitor center and several parking areas. The scenic value of the landscape is high due to the dramatic aerial views along the Harbour and to the Mweelrea Mountains beyond.

Area 22: Conamara National Park (including Lough Fee, Lough Inagh and Derryclare Lough)

This area comprises a diverse range of natural landscapes from mountains, valleys, and loughs to coniferous and deciduous woodlands. Integrated within this area are visitor facilities sensitively located so as to avoid visual intrusion. The area is unspoiled

and highly scenic with outstanding views throughout.

Area 23: Joyces Country (including Lehanagh Loughs and south Lough Mask)

The landscape of this area includes steep mountains, heath and bog land and rough grass. Within this area woodland is confined to the valley bottom between Maumturk and Bunnacunneen Mountains. In spite of the scattered development and the many parking areas and viewing points this area is highly scenic with dramatic views throughout.

Area 24: Aran Islands

The landscape of the Aran Islands is flat stony and without tree cover. Small fields used for pasture are bound by stone walls. The coast is steep and rocky along the southern side and flat and stony along the northern side. In spite of the many new residential developments on the Aran Islands, the open character of the landscape is highly scenic with expansive dramatic views in all directions.

Area 25: Lough Rea

The landscape of Lough Rea is flat, enclosed and intimate. The Lough is screened to the north and the northeast by the town of the same name and to the south by the wooded slopes of the Slieve Aughty Mountains. There are many small vegetated islands in the Lough which add to its high scenic value. Around the banks of the Lough are many recreational facilities including boating, parking and picnic areas, which sit sensitively within the landscape and do not detract from the intimate landscape setting.

4.11.3.3 Landscape Values

Landscape values were derived for each landscape character area by consideration of environmental and cultural benefits such as visual beauty, ecology, archaeology, social history, religious sites and mythology. Landscape values combining all environmental and cultural benefits were decided through liaison with Galway County Council's Forward Planning Department.

The values were given a score ranging from low to medium to high to outstanding.

The landscape value attributed to each of the landscape character areas identified in Section 4.11.3.2 is shown on Table 4.5.

4.11.3.4 Landscape Sensitivity Classes

Landscape sensitivity is a measure of the ability of the landscape to accommodate change or intervention without suffering unacceptable effects to its character and values. Sensitivity ratings are derived from a combination of landscape values and landscape character.

The following five sensitivity classes were established by the Landscape Character Assessment:

- Class 1 – Low sensitivity;
- Class 2 – Moderate sensitivity;
- Class 3 – High sensitivity;
- Class 4 – Special; and,
- Class 5 – Unique.

The most sensitive landscapes are 'Class 5 - Unique', 'Class 4- Special' and 'Class 3- High sensitivity' while landscapes of lesser sensitivity are 'Class 2- Moderate sensitivity' and 'Class 1- Low sensitivity'.

The landscape sensitivity class attributed to each of the landscape character areas identified in Section 4.11.3.2 is shown on Table 4.5.

4.11.4 Focal Points/Views

Focal points and views were identified as part of the Landscape Character Assessment and these are provided a degree protection from the effects of development under the County Development Plan. There are 122 protected focal points and views in total. They include: long distant views of areas such as Conamara, Lough Corrib, Galway Bay, the Burren, the Slieve Aughty Mountains, the coasts of Galway and North Clare; and, local focal points such as castle ruins, church spires, cemeteries and old mills. Focal points and views are mapped on Figure 4.25.

4.11.5 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.

Area No.	Landscape Character Area	Value	Sensitivity
1	Northeast Galway (Balinasloe to Ballymoe)	Low	Class 1 - Low, with pockets of Class 2 - Moderate
2	Shannon and Suck River Valley between Portumna and Ballinasloe	Medium	Class 4 - Special
3	East central Galway (Athenry, Ballinasloe to Portumna)	Low	Class 1 - Low, with pockets of Class 2 - Moderate
4	Southeast Galway (Clarinbridge to Gort)	Medium	Class 2 - Moderate, with pockets of Class 3-High
5	Northeast Galway (Tuam environs)	Low	Class 1 - Low, with pockets of Class 2-Moderate
6	Slieve Aughty Mountains	Medium	Class 3 - High
7	Northwest Lough Derg	Medium	Class 4 - Special
8	Lower Burren	Outstanding & Medium	Class 4 - Special, with pockets of Class 2 - Moderate
9	Indreabhán to Galway City coastline	High	Class 3 - High, with a parallel strip of Class 4-Special
10	East Connemara Mountains (Maigh Cuilinn, Sraith Salach to Glinsk)	High	Class 3 - High, with pockets of Class 4 - Special
11	Lough Corrib and environs	Outstanding	Class 5 - Unique, with pockets of Class 3 - High & Class 4 - Special
12	South foothills of east Conamara Mountains	Medium	Approximately half Class 4 - Special, and half Class 3 - High
13	East Galway Bay (Oranmore to Kinvarra Bay and inland to N18 road)	High	Class 3 - High with a coastal edge of Class 4 - Special
14	West Conamara	Outstanding	Class 4 - Special
15	Leitir Móir and Garmna	High	Class 3 - High, with a coastal edge of Class 4 - Special
16	West foothills of east Connemara Mountains (Gleann Mhac Muirinn Lough environs)	High	Class 3 - High
17	An Cheathrú Rua (Casla Bay to Glinn Chatha)	High	Class 3 - High, with a coastal edge of Class 4 - Special
18	Bertraghboy bay and eastern banks	High	Class 4 - Special
19	West Coast (Roundstone to Clifden).	Outstanding	Class 4 - Special
20	West Coast (Clifden to mouth of Killary Harbour)	Outstanding	Class 3 - High, with a coastal edge of Class 4 - Special
21	Killary Harbour and southern banks	Outstanding	Class 5 - Unique, with pockets of Class 4 - Special
22	Conamara National Park (including Lough Fee, Lough Inagh and Derryclare Lough)	Outstanding	Class 5 - Unique
23	Joyces Country (including Lehanagh Loughs and south Lough Mask)	Outstanding	Class 5 - Unique, with pockets of Class 4 - Special
24	Aran Islands	Outstanding	Class 5 - Unique, with pockets of Class 4 - Special
25	Lough Rea	High	Class 4 - Special

Table 4.5 Landscape Character Areas and corresponding Values and Sensitivity

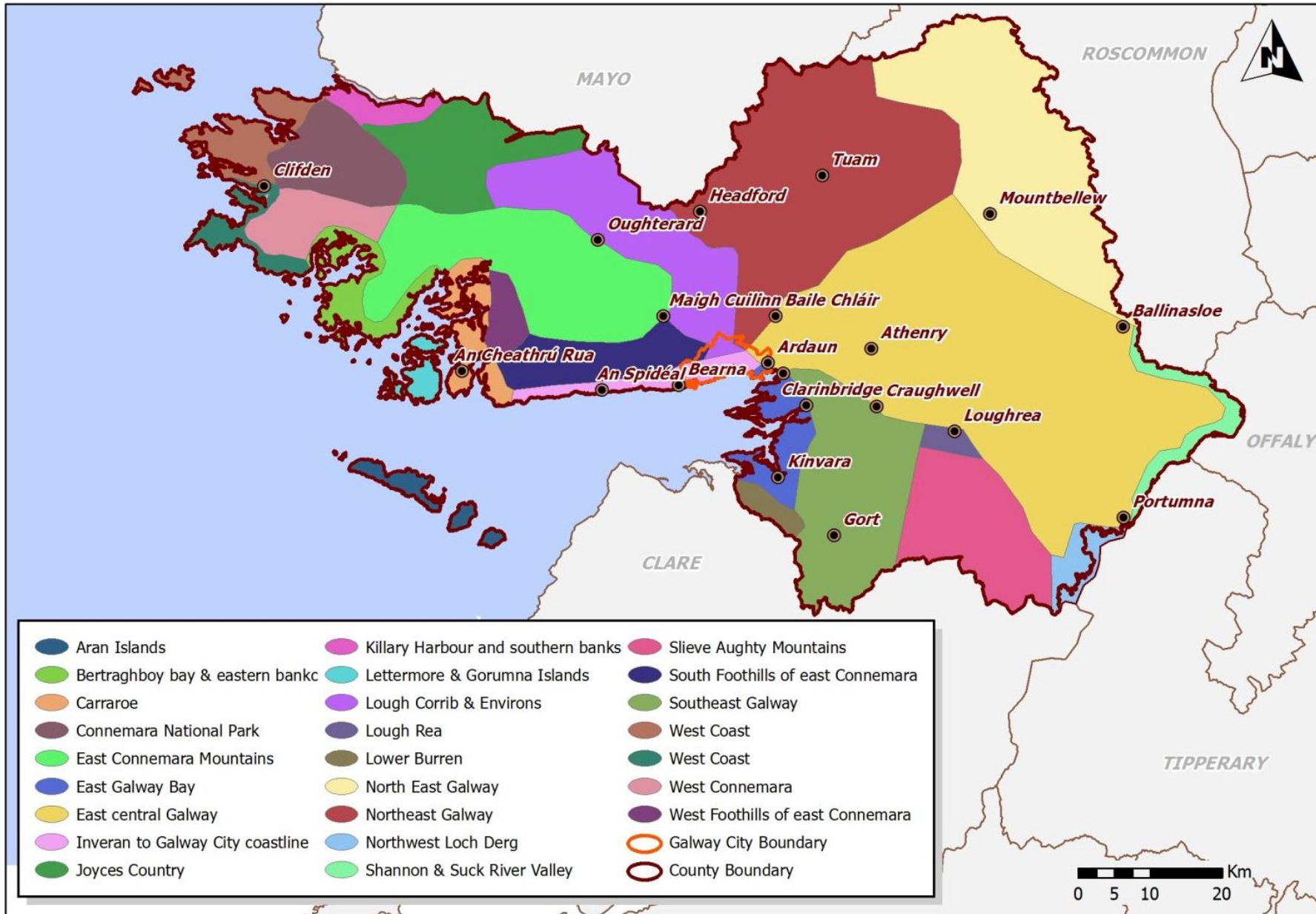


Figure 4.22 Landscape Character Areas

Source: Galway County Council (2009)

CAAS Ltd. for Galway County Council

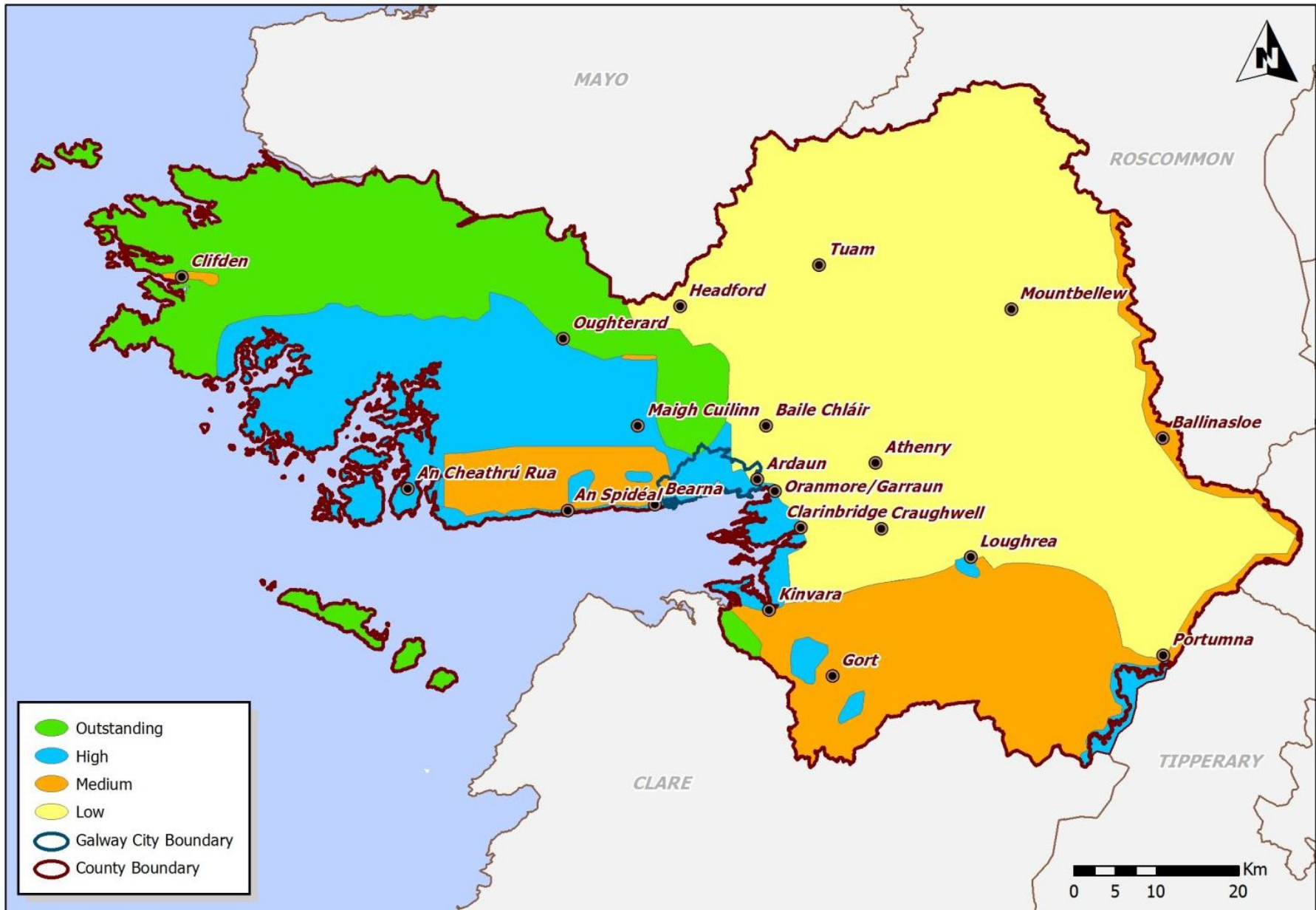


Figure 4.23 Landscape Values

Source: Galway County Council (2009)

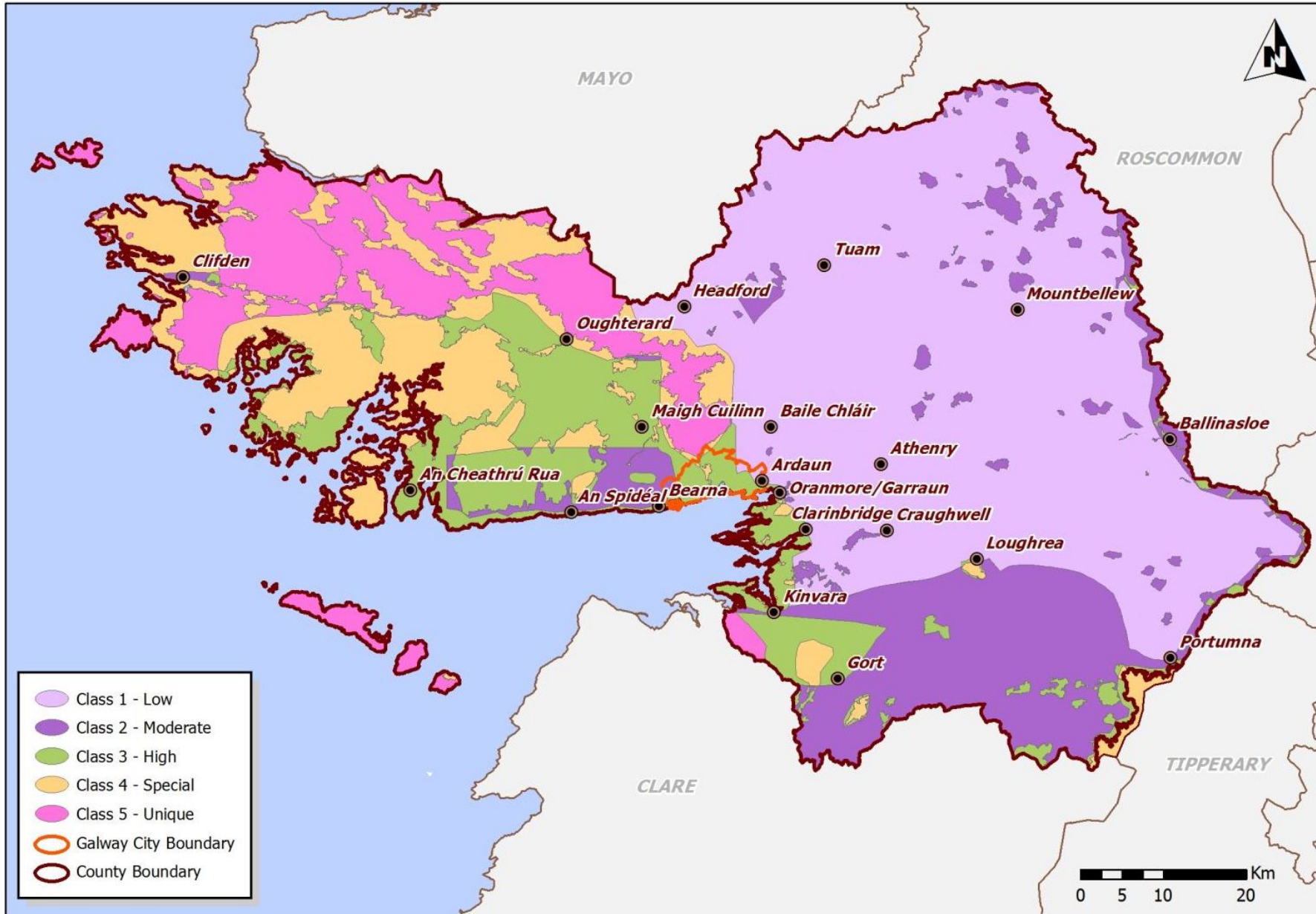


Figure 4.24 Landscape Sensitivity Classification

Source: Galway County Council (2009)

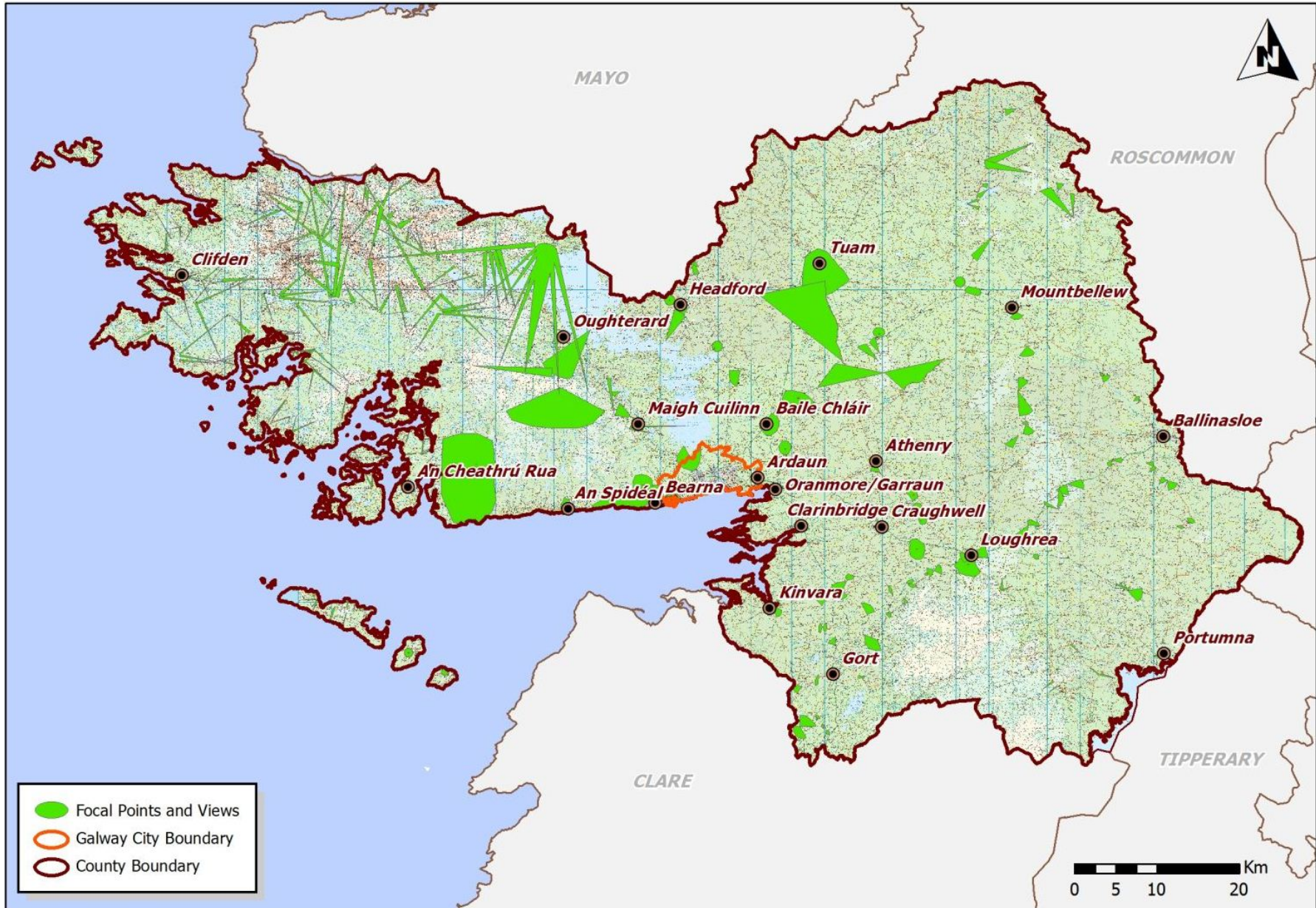


Figure 4.25 Focal Points and Views

Source: Galway County Council (2009)

4.12 Overlay of Environmental Sensitivities

4.12.1 Introduction and Methodology

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 4.26 provides an overlay of environmental sensitivities for the county.

It is emphasised that the occurrence of environmental sensitivities does not preclude development; rather it flags at a strategic level that the mitigation measures - which have already been integrated into the County Development Plan - will need to be complied with in order to ensure that the implementation of the Plan contributes towards environmental protection.

Environmental sensitivities are indicated by colours which range from acute vulnerability (brown) extreme vulnerability (red) to high vulnerability (dark orange) to elevated vulnerability (light orange) to moderate vulnerability (yellow) to low vulnerability (green). 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.

A weighting system applied through Geographical Information System (GIS) software was used in order to calculate the vulnerability of all areas in the County. Environmental considerations are given equal weight as follows, with a slight differentiation is made in certain layers:

- Ecological designations (Special Areas of Conservation, Special Protection Areas, Natural Heritage Areas - 10 points - and proposed Natural Heritage areas - 5 points);
- Cultural Heritage (Architectural Conservation Areas, entries to Records of Protected Structures and entries to the Entries to the Record of Sites and Monuments - 10 points);
- High Amenity Areas and Protected Views - 10 points;
- Geological Sites of Importance - 10 points;
- Sensitive Landcover categories (broad-leaved forests, peat bogs, natural grassland, inland marshes and water bodies - 10 points);
- Entries to the Register of Protected Areas for drinking water lakes and groundwater that is used for drinking water - 10 points;
- Flood extents - 10 points;
- Surface and groundwaters with bad (10 points) and poor (5 points) ecological status; and
- Aquifers which are highly (5 points) or extremely (10 points) vulnerable to pollution.

The scale of sensitivity for each area of the County corresponds to the sensitivity factors: 5 points corresponds to one sensitivity factor; 10 points corresponds to two sensitivity factors; 20 points corresponds to four sensitivity factors and so on. The scores for each area are added together in order to determine overall vulnerability as is shown on Table 4.6.

Score	Vulnerability Class
5-15	Low
20-25	Moderate
30-35	Elevated
40-45	High
50-60	Extreme
>60	Acute

Table 4.6 Overall Vulnerability Classes

4.12.2 Conclusions

As previously referenced, the occurrence of multiple sensitivities in any location does not preclude development; rather it flags at a strategic level that the mitigation measures - which have already been integrated into the County Development Plan as policies and objectives - 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.

Lough Corrib and parts of the western half of the County (including Connemara and the coast) comprise the greatest extent of sensitive areas (ranging from low to acute) on account of sensitivities including: ecological (multiple, overlapping designations); hydrological (multiple, overlapping designations); and landscape (multiple, overlapping designations).

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 remainder of the County is generally of low or moderate vulnerability.

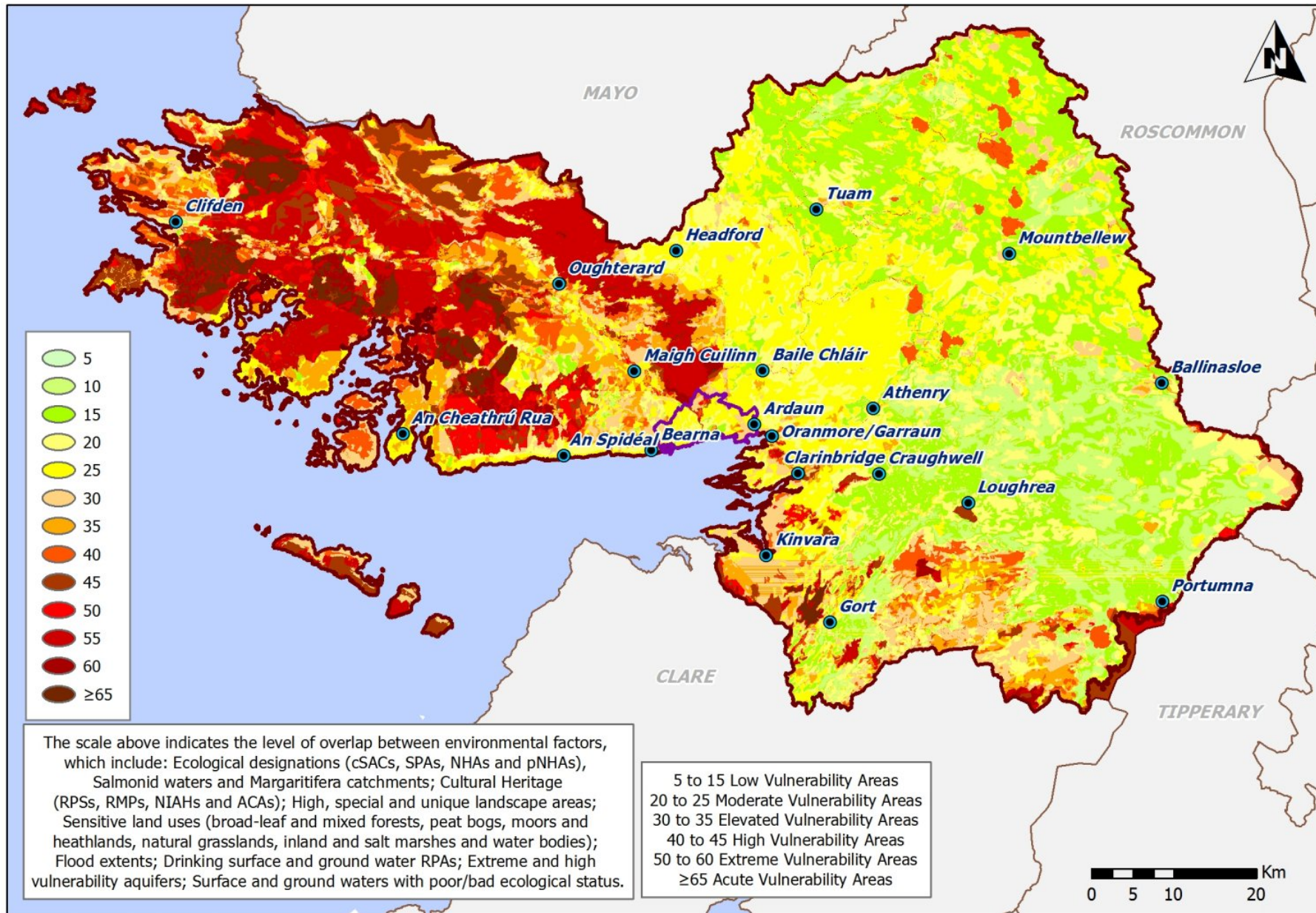


Figure 4.26 Overlay Mapping of Environmental Sensitivities

Source: CAAS (2014)

Section 5 Strategic Environmental Objectives

5.1 Introduction

Strategic Environmental Objectives (SEOs) are methodological measures developed from policies which generally govern environmental protection objectives established at international, Community or Member State level e.g. the environmental protection objectives of various European Directives which 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.

SEOs are distinct from the objectives of the Plan - although they will often overlap - and they are not given statutory weight by virtue of their use in Strategic Environmental Assessments.

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

SEOs were developed taking into account feedback provided by the environmental authorities.

5.2 Biodiversity, Flora and Fauna

5.2.1 International, European, National and County Strategic Actions

5.2.1.1 Habitats Directive 1992

The European Council Directive on the Conservation of natural habitats and of wild fauna and flora (92/43/EEC), referred to as the Habitats Directive, aims to ensure the conservation of certain natural habitats and

species which are at favourable conservation status.

Special Areas of Conservation (SACs) are designated and protected under the Habitats Directive 1992 (92/43/EEC) due to their conservation value for habitats and species of importance in the European Union.

The Habitats Directive establishes Natura 2000, a network of protected areas throughout the EU. SACs together with Special Protection Areas (SPAs) - which are designated under the 1979 Birds Directive - make up the Natura 2000 network of protected sites.

Article 6 of the Habitats Directive provides for the need to undertake Appropriate Assessments of plans or projects which have the potential to impacts upon Natura 2000 sites.

Article 10 of the Habitats Directive recognises the importance of ecological networks as corridors and stepping stones for wildlife, including for migration, dispersal and genetic exchange of species of flora and fauna. The Directive requires that ecological connectivity and areas of ecological value outside the network of designated ecological sites are maintained, and it recognises the need for the management of these areas through land use planning and development policies.

In Ireland, the habitats and species occurring in both SACs and SPAs are protected from effects of development occurring outside their boundaries under Section 18 "Prohibition of works on lands outside a European site" of the European Communities (Natural Habitats) Regulations 1997. The Regulations require that where a development is proposed to be carried out, on any land that is not within a protected site and is liable to have an adverse impact on the protected site in question, including direct, cumulative and indirect impacts, an Appropriate Assessment is required.

The integration of the requirements of Article 6 of the Habitats Directive into the Planning and Development Act 2000 as amended and the European Communities (Birds and Natural Habitats) Regulations 2011 puts the

requirement for Appropriate Assessment into context for both projects and plans.

5.2.1.2 Birds Directive 1979

The 1979 European Council Directive on the Conservation of Wild Birds (79/409/EEC), referred to as the Birds Directive, - as well as its amending acts - seeks to protect, manage and regulate all bird species naturally living in the wild within the European territory of the Member States, including the eggs of these birds, their nests and their habitats; and to regulate the exploitation of these species.

The Directive places great emphasis on the protection of habitats for endangered as well as migratory species, especially through the establishment of a coherent network of Special Protection Areas (SPAs).

SPAs are protected under the Directive and have been designated in Ireland by the Department of Arts, Heritage and the Gaeltacht due to their conservation value for birds of importance in the European Union.

5.2.1.3 European Communities (Birds and Natural Habitats) Regulations 2011

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, as well as addressing transposition failures identified in the CJEU judgements.

The Regulations have been prepared to address several judgments of the Court of Justice of the European Union (CJEU) against Ireland, notably cases C-418/04 and C-183/05, in respect of failure to transpose elements of the Birds Directive and the Habitats Directive into Irish law.

5.2.1.4 UN Convention on Biological Diversity 1992

The United Nations Convention on Biological Diversity 1992 requires the promotion of the conservation and sustainable use of biodiversity.

5.2.1.5 National Biodiversity Plan 2011

The preparation and implementation of Ireland's 2nd National Biodiversity Plan 2011²⁵ 'Actions for Biodiversity 2011 – 2016' complies with an obligation under the UN Convention on Biological Diversity. The Plan has been developed in line with the EU and International Biodiversity strategies and policies.

The measures Ireland will take are presented as 102 actions under a series of 7 Strategic Objectives. Some of the actions within the plan are continuing elements of existing work and many are requirements under existing EU Directives. The objectives cover the conservation of biodiversity in the wider countryside and in the marine environment, both within and outside protected areas; the mainstreaming of biodiversity across the decision making process in the State; the strengthening of the knowledge base on biodiversity; increasing public awareness and participation; and Ireland's contribution to international biodiversity issues, including North South co-ordination on issues of common interest.

5.2.1.6 Wildlife Act 1976 and Wildlife (Amendment) Act 2000

The basic designation for wildlife is the Natural Heritage Area (NHA). 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. Under the Wildlife Amendment Act (2000), NHAs are legally protected from damage from the date they are formally proposed for designation. Proposed NHAs (pNHAs) were published on a non-statutory basis in 1995, but have not since been statutorily proposed or designated - designation will proceed on a phased basis over the coming years.

The Planning and Development Act 2000 as amended defines a 'wildlife site' as:

- (a) an area proposed as a natural heritage area and the subject of a notice made under section 16(1) of the Wildlife (Amendment) Act 2000,
- (b) an area designated as or proposed to be designated as a natural heritage

²⁵ Department of Arts, Heritage, Gaeltacht and the Islands (2002) *National Biodiversity Plan* Dublin: Government of Ireland

area by a natural heritage area order made under section 18 of the Wildlife (Amendment) Act 2000,

(c) a nature reserve established or proposed to be established under an establishment order made under section 15 (amended by section 26 of the Wildlife (Amendment) Act 2000) of the Wildlife Act 1976,

(d) a nature reserve recognised or proposed to be recognised under a recognition 5 order made under section 16 (amended by section 27 of the Wildlife (Amendment) Act 2000) of the Wildlife Act 1976, or

(e) a refuge for fauna or flora designated 10 or proposed to be designated under a designation order made under section 17 (amended by section 28 of the Wildlife (Amendment) Act 2000) of the Wildlife Act 1976.

5.2.1.7 County Biodiversity and Heritage Plans

The aim of the Galway County Biodiversity Action Plan is to promote, protect and enhance the biodiversity of the county for the benefit of both the people of Galway and natural heritage.

The three key action areas and objectives of the Galway County Biodiversity Action Plan are:

- Awareness and participation: To foster a greater awareness and understanding of biodiversity among all sectors of the community, and encourage local people to become actively involved in the promotion, preservation and enhancement of local natural heritage.
- Knowledge: To increase knowledge of biodiversity in County Galway through supporting and promoting research in the county and to facilitate the gathering and dissemination of biodiversity information and data.
- Conservation: To help conserve the biodiversity of County Galway through direct action and through adopting an ecosystem approach to policy development.

The Galway County Heritage Plan 2010-2016 is County Galway's second heritage plan. It is a six year specific action plan of projects to be undertaken in County Galway, directed by Galway County Heritage Forum. The programme delivery is co-ordinated by the County Heritage Officer based in Galway County Council.

The aim of Galway County Heritage Plan is *to place heritage at the heart of the life of the County through increasing awareness, enjoyment, knowledge and understanding of our shared heritage thereby leading to its proper management and protection and safeguarding it for future generations.*

5.2.2 SEOs, Indicators and Targets

SEO B1:	To ensure compliance with the Habitats and Birds Directives with regard to the protection of Natura 2000 Sites and Annexed habitats and species ²⁶
Indicator B1:	Conservation status of habitats and species as assessed under Article 17 of the Habitats Directive
Target B1:	Maintenance of favourable conservation status for all habitats and species protected under national and international legislation to be unaffected by implementation of the Plan ²⁷

²⁶ 'Annexed habitats and species' refer to those listed under Annex I, II & IV of the EU Habitats Directive and Annex I of the EU Birds Directive.

²⁷ Except as provided for in Section 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.

SEO B2:	To ensure compliance with Article 10 of the Habitats Directive with regard to the management of features of the landscape which - by virtue of their linear and continuous structure or their function act as stepping stones (designated or not) - are of major importance for wild fauna and flora and essential for the migration, dispersal and genetic exchange of wild species
Indicator B2:	Percentage loss of functional connectivity without remediation resulting from development provided for by the Plan
Target B2:	No significant ecological networks or parts thereof which provide functional connectivity to be lost without remediation resulting from development provided for in the Plan

SEO B3:	To avoid significant impacts on relevant habitats, species, environmental features or other sustaining resources in designated sites including Wildlife Sites ²⁸ and to ensure compliance with the Wildlife Acts 1976-2010 with regard to the protection of species listed on Schedule 5 of the principal Act
Indicator B3i:	Number of significant impacts on relevant habitats, species, environmental features or other sustaining resources in designated sites including Wildlife Sites resulting from development provided for by the Plan
Target B3i:	Avoid significant impacts on relevant habitats, species, environmental features or other sustaining resources in designated sites including Wildlife Sites resulting from development provided for by the Plan
Indicator B3ii:	Number of significant impacts on the protection of species listed on Schedule 5 of the Wildlife Act 1976
Target B3ii:	No significant impacts on the protection of species listed on Schedule 5 of the Wildlife Act 1976

²⁸ The Planning and Development Act 2000 as amended defines a 'wildlife site'. See Section 5.2.1.

SEO B4:	To sustain 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
Indicator B4:	Population of the county involved in land management
Target B4:	Sustain the population of the county involved in land management

5.3 Population and Human Health

5.3.1 Population

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

- Recreational and development pressure on habitats and landscapes - consideration of SEOs B1, B2 and B3 cover this issue;
- Increase in demand for wastewater treatment at the municipal level - consideration of SEO M1 covers this issue;
- Increase in demand for water supply - consideration of SEO M2 covers this issue;
- Potential development in flood-sensitive areas - consideration of SEO W3 covers this issue; and
- Effect on water quality - consideration of SEOs W1 and W2 cover this issue.

5.3.2 Human Health

5.3.2.1 Overview

The impact of implementing the Plan on human health is determined by the impacts which the Plan will have upon 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 so that they come into contact with human beings. Impacts would be influenced by the extent to which new development is accompanied by

appropriate infrastructure - this relates to SEOs M1 and M2; Impacts upon the quality of water bodies - these relate to SEOs W1 and W2; and the extent of development provided which would affect flood risk - this relates to SEO W3.

5.3.2.2 Emission Limits

Emission limits for discharges to air, soil and water are set with regards to internationally recognised exposure limit values. These are generally set to be many times the safe exposure limit - in order to provide protection. In the event that a land-use plan began to have adverse health effects on surrounding populations it is likely that it would have been identified as being in breach of such emission standards at a very early stage - and long before the manifestation of any adverse health effects in the population.

5.3.3 SEO, Indicator and Target

SEO PHH1:	To protect populations and human health from exposure to incompatible landuses
Indicator PHH1:	Occurrence (any) of a spatially concentrated deterioration in human health arising from environmental factors resulting from development provided for by the Plan, as identified by the Health Service Executive and Environmental Protection Agency
Target PHH1:	No spatial concentrations of health problems arising from environmental factors as a result of implementing the Plan

5.4 Soil

5.4.1 Overview

Soil is potentially subject to a series of threats including erosion, decline in organic matter, local and diffuse contamination, sealing, compaction, decline in biodiversity, salinisation, floods and landslides. A combination of some of these threats can

ultimately lead arid or sub-arid climatic conditions to desertification.

Given the importance of soil and the need to prevent further soil degradation, the Sixth Environment Action Programme²⁹ called for the development of a Thematic Strategy on Soil Protection.

5.4.2 SEO, Indicator and Target

SEO S1:	To avoid damage to the hydrogeological and ecological function of the soil resource in County Galway
Indicator S1:	Soil extent and hydraulic connectivity
Target S1:	To minimise reductions in soil extent and hydraulic connectivity

5.5 Water

5.5.1 The Water Framework Directive 2000

Since 2000, Water Management in the EU has been directed by the Water Framework Directive 2000/60/EC (WFD). The WFD has been transposed into Irish legislation by the European Communities (Water Policy) Regulations 2003 (SI No. 722 of 2003). 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 by 2015.

5.5.2 Quality Standards for Surface Waters

The European Communities Environmental Objectives (Surface Waters) Regulations 2009 (SI No. 272 of 2009) is the final major piece of legislation needed to support the WFD and gives statutory effect to Directive 2008/105/EC on environmental quality standards in the field

²⁹ Decision No 1600/2002/EC of the European Parliament and of the Council of 22nd July 2002 laying down the Sixth Community Environment Action Programme (OJ L 242, 10.9.2002, p. 1).

of water policy. The Surface Waters Regulations also give further effect to the WFD, establishing a framework for Community action in the field of water policy and Directive 2006/11/EC on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community.

The Surface Waters Regulations apply to all surface waters - including lakes, rivers, canals, transitional waters, and coastal waters - and provide, inter alia, for:

- The establishment of legally binding quality objectives for all surface waters and environmental quality standards for pollutants;
- The examination and where appropriate, review of existing discharge authorisations by Public Authorities to ensure that the emission limits laid down in authorisations support compliance with the new water quality objectives/standards;
- The classification of surface water bodies by the EPA for the purposes of the Water Framework Directive;
- The establishment of inventories of priority substances by the EPA, and;
- The drawing up of pollution reduction plans by coordinating local authorities (in consultation with the EPA) to reduce pollution by priority substances and to cease and/or phase out discharges, emissions or losses of priority hazardous substances.

In order to satisfy the overall WFD objective of 'good status', a surface water body must achieve the requirements of the good ecological³⁰ and chemical³¹ status.

The EU's Common Implementation Strategy Guidance Document No. 20 provides guidance on exemptions to the environmental objectives of the Water Framework Directive.

³⁰ Ecological status comprises: biological quality elements, physiochemical conditions and hydromorphological quality elements. The overall ecological status of the water body is determined by the lowest level of status achieved across all quality elements.

³¹ Chemical status assessment is based on compliance with the standards laid down for priority substances by Directive 2008/105/EC on environmental quality standards in the field of water policy (the Surface Waters Regulations give effect to the environmental standards established by this Directive).

5.5.3 Quality Standards and Threshold Values for Ground Water

Detailed provisions to achieve the aims of the WFD for ground water have been presented in a Groundwater Directive (Directive 2006/118/EC on the protection of groundwater against pollution and deterioration).

This Directive sets up environmental objectives of good groundwater quantity and good groundwater quality (chemical status), as well as ensuring a continuity to the 1980 Groundwater Directive (Directive 80/68/EEC on the protection of groundwater against pollution caused by dangerous substances) which is due to be repealed under the WFD by the end of 2013.

Article 3 of the 2006 Directive requires that the assessment of the chemical status of groundwater use both quality standards identified in Annex I of the Directive and threshold values to be set by individual member states.

Groundwater quality standards are environmental quality standards expressed as the concentration of a particular pollutant, group of pollutants or indicator of pollution in groundwater, which should not be exceeded in order to protect human health and the environment. Annex I of the Directive sets standards for two pollutants: Nitrates - 50mg/l - and; Active substances in pesticides³², including their relevant metabolites, degradation and reaction products - 0,1 µg/l and 0,5 µg/l (total³³).

Irish groundwater threshold values³⁴ are currently in the process of being set by the EPA.

³² 'Pesticides' means plant protection products and biocidal products as defined in Article 2 of Directive 91/414/EEC and in Article 2 of Directive 98/8/EC, respectively.

³³ 'Total' means the sum of all individual pesticides detected and quantified in the monitoring procedure, including their relevant metabolites, degradation and reaction products.

³⁴ Threshold values are to be established by Member States for all pollutants and indicators of pollution which characterise groundwater bodies classified as being at risk of failing to achieve good groundwater chemical status under the WFD. Threshold values are required to be established in a way that, should the monitoring results at a

5.5.4 River Basin Management Plans

County Galway is located within the Shannon International and Western River Basin Districts. Each of these districts has a River Basin Management Plan and a Programme of Measures which provide measures to be implemented in order to enable the achievement of the requirements of the WFD.

5.5.5 Bathing Water

The Bathing Water Directive (2006/7/EC) - which entered into force in March 2008 - revises the 1976 Bathing Water Directive with the purpose of: preserving, protecting and improving the quality of the environment and protecting human health by complementing the Water Framework Directive (2000/60/EC). The 2006 Bathing Water Directive is implemented by the Bathing Water Quality Regulations 2008 (SI No. 79) of 2008.

Mandatory and Guide Values are set out for bathing waters in the Directive and transposing Regulations. Mandatory Values are values which 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.

5.5.6 Flooding

5.5.6.1 EU Floods Directive

European Directive 2007/60/EC on the assessment and management of flood risks aims to reduce and manage the risks that floods pose to human health, the environment, cultural heritage and economic activity. The Directive applies to inland waters as well as all coastal waters across the whole territory of the EU.

The Directive requires Member States to carry out a preliminary assessment by 2011 in order to identify the river basins and associated coastal areas at risk of flooding. By 2015 flood

representative monitoring point exceed the thresholds, this will indicate a risk that one or more of the conditions for good groundwater chemical status - with regard to the ability of groundwater to support human uses and with regard to waters used for the abstraction of drinking water - are not being met.

risk management plans focused on prevention, protection and preparedness must be established by 2015.

The Directive is to be carried out in coordination with the Water Framework Directive and flood risk management plans and river basin management plans should be coordinated.

5.5.6.2 DEHLG Flood Risk Management Guidelines

In November 2009 the DEHLG issued *The Planning System and Flood Risk Management Guidelines* for Planning Authorities. These are aimed at ensuring a more consistent, rigorous and systematic approach which will fully incorporate flood risk assessment and management into the planning system.

The Guidelines require the planning system to, among other things:

- Avoid development in areas at risk of flooding, particularly flood plains, unless there are proven sustainability grounds that justify appropriate development and where flood risk can be reduced or managed to an acceptable level, without increasing flood risk elsewhere;
- Adopt a sequential approach to flood risk management when assessing the location for new development based on avoidance, reduction and mitigation of flood risk; and
- Incorporate flood risk assessment into the process of making decisions on planning applications and planning appeals.

5.5.6.3 SFRA

A Strategic Flood Risk Assessment (FRA) has been undertaken and is available alongside the preparation of the new County Plan. The SFRA provides information on a number of flood risk indicators within the county and has facilitated the integration of a number of flood risk management policies/objectives into the Plan.

5.5.7 SEOs, Indicators and Targets

Note that SEOs W1 and W2 also relate to the quality of soils.

SEO W1:	To maintain and improve, where possible, the quality and status of surface waters
Indicator W1i:	Classification of Overall Status (comprised of ecological and chemical status) under the European Communities Environmental Objectives (Surface Waters) Regulations 2009 (SI No. 272 of 2009)
Target W1i:	Not to cause deterioration in the status of any surface water or affect the ability of any surface water to achieve 'good status' ³⁵ by 2015
Indicator W1ii:	Mandatory and Guide values as set by the EU Bathing Water Directive and transposing Bathing Water Quality Regulations (SI No. 79 of 2008)
Target W1ii:	To achieve - as a minimum - Mandatory values and, where possible, to achieve Guide values as set by the EU Bathing Water Directive and transposing Bathing Water Quality Regulations (SI No. 79 of 2008)

³⁵ Good status as defined by the WFD equates to approximately the following in the current national schemes of classification as set out by the EPA:

- *Q4* in the biological classification of *rivers*;
- *Mesotrophic* in the classification of *lakes*; and
- *Unpolluted status* in the Assessment of Trophic Status of Estuaries and Bays in Ireland (ATSEBI).

SEO W2:	To prevent pollution and contamination of ground water
Indicator W2:	Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC
Target W2:	Not to affect the ability of groundwaters to comply with Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC

SEO W3:	To comply as appropriate with the provisions of the Planning System and Flood Risk Management: Guidelines for Planning Authorities (DEHLG, 2009)
Indicator W3:	Number of incompatible developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk
Target W3:	Minimise developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk in compliance with <i>The Planning System and Flood Risk Management Guidelines for Planning Authorities</i>

Section 36 of the Act provides for the making of 6-year Water Services Strategic Plans (WSSPs) in order to:

- to protect human health and the environment;
- to facilitate the provision of sufficient water services for domestic and non-domestic requirements in the area to which the plan relates; and
- to support proper planning and sustainable development, including sustainable use of water resources.

WSSPs are to be made by Water Services Authorities for their functional areas. The Act allows for two or more Water Services Authorities to jointly make a WSSP in relation to all of their combined functional areas, or parts thereof.

WSSPs are required to include information on the following:

- drinking water quality;
- the prevention or abatement of risk to human health or the environment;
- current and projected need for water services;
- arrangements in place or planned for the provision of water services;
- shortfalls in the provision of water services;
- water conservation measures in place or planned;
- monitoring arrangements;
- asset management planning; and
- income and expenditure.

5.6 Material Assets

5.6.1 Water Services Act 2007

The Water Services Act 2007 (SI No. 30 of 2007) incorporates a comprehensive review, update and consolidation of all existing water services³⁶ legislation, and facilitates the establishment of a comprehensive supervisory regime to ensure compliance with specified performance standards.

³⁶ Services, including the provision of water intended for human consumption, which provide storage, treatment or distribution of surface water, groundwater or water supplied by a water services authority, or waste water collection, storage, treatment or disposal.

Section 36 (9) of the Act allows for the making of regulations prescribing the manner in which any matter is to be set out or addressed in a WSSP, notification or consultation requirements and procedures or associated time limits, prior to and after its making.

5.6.2 Urban Waste Water Treatment Directive 2001

The treatment of wastewater is governed by the Urban Waste Water Treatment Directive (91/271/EEC) (amended by Directive 98/15/EEC) transposed into Irish law by the Urban Waste Water Treatment Regulations 2001 (SI No. 254 of 2001). The Directive aims

to protect the environment from the adverse effects of the wastewater discharges by ensuring that wastewater is appropriately treated before it is discharged to the environment. The Regulations stipulate that sewage treatment facilities are in place in all towns by 2005.

Appropriate treatment is essential in order to meet the requirements of the Water Framework Directive (see Section 5.5.1).

5.6.3 Drinking Water Regulations 2007

The European Communities (Drinking Water) Regulations (No. 2) 2007 require the compliance of water intended for human consumption with 48 parameters.

Measures have been integrated into the Development Plan in order to help ensure a clean and wholesome water supply.

5.6.4 Waste Management

The Replacement Waste Management Plan for the Connacht Region 2006 – 2011 was developed by the local authorities of Galway County, Galway City, Leitrim, Mayo, Roscommon and Sligo and covers the period from 2006 to 2011. The 2001 Plan adopted a regional approach to integrated waste management based on the waste hierarchy established in the EU Framework Directive on Waste.

5.6.5 SEOs, Indicators and Target

SEO M1:	To serve new development with adequate and appropriate waste water treatment
Indicator M1:	Number of new developments granted permission which can be adequately and appropriately served with waste water treatment over the lifetime of the Plan
Target M1:	All new developments granted permission to be connected to and adequately and appropriately served by waste

water treatment over the lifetime of the Plan

SEO M2:	To serve new development with adequate drinking water that is both wholesome and clean
Indicator M2:	Number of non-compliances with the 48 parameters identified in the European Communities (Drinking Water) Regulations (No. 2) 2007 which present a potential danger to human health as a result of implementing the Plan
Target M2:	No non-compliances with the 48 parameters identified in the European Communities (Drinking Water) Regulations (No. 2) 2007 which present a potential danger to human health as a result of implementing the Plan

SEO M3:	To reduce waste volumes, minimise waste to landfill and increase recycling and reuse.
Indicator M3i:	Total collected and brought household waste
Target M3i:	Minimise increases in and, where possible, reduce household waste generation
Indicator M3ii:	Packaging recovered (t) by self-complying packagers
Target M3ii:	Maximise increases in packaging recovered (t) by self-complying packagers

5.7 Air and Climatic Factors

5.7.1 Introduction

The impact of implementing the Plan on air quality and climatic factors will be determined by the impacts which the Plan has upon the greenhouse gas emissions arising from transport which relate to SEO C1.

Travel is a source of:

1. Noise;
2. Air emissions; and
3. Energy use (38.8% of Total Final Consumption in Ireland in 2010 was taken up by transport, the largest take up of any sector)³⁷.

Land-use planning contributes to what number and what extent of journeys occur. By addressing journey time through land use planning, noise and other emissions to air and energy use can be minimised. Furthermore, by concentrating populations, greenfield development - and its associated impacts - can be minimised and the cost of service provision can be reduced.

5.7.2 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 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 under the Air Quality Framework Directive 1996 while four daughter Directives lay down limits or thresholds for specific pollutants.

5.7.3 Climatic Factors

The 2020 EU Effort Sharing target commits Ireland to reducing emissions from those sectors that are not covered by the Emissions Trading Scheme (e.g. transport, agriculture and residential) to 20% below 2005 levels.

5.7.4 Noise

Noise is unwanted sound. Traffic noise alone is harming today the health of almost one third of Europeans³⁸.

The Noise Directive - Directive 2002/49/EC relating to the assessment and management of environmental noise - is part of an EU strategy setting out to reduce the number of people affected by noise in the longer term and to provide a framework for developing existing Community policy on noise reduction from source. The Directive requires competent authorities in Member States to:

- Draw up *strategic noise maps* for major roads, railways, airports and agglomerations, using harmonised noise indicators³⁹ and use these maps to assess the number of people which may be impacted upon as a result of excessive noise levels;
- Draw up action plans to reduce noise where necessary and maintain environmental noise quality where it is good; and
- Inform and consult the public about noise exposure, its effects, and the measures considered to address noise.

The Directive does not set any limit value, nor does it prescribe the measures to be used in the action plans, which remain at the discretion of the competent authorities.

5.7.5 SEOs, Indicators and Targets

SEO C1:	To reduce travel related emissions to air and to encourage modal change from car to more sustainable forms of transport
Indicator C1:	Percentage of population travelling to work, school or college by public transport or non-mechanical means
Target C1:	An increase in the percentage of the population travelling to work, school or college by public transport or non-mechanical means

³⁷ Sustainable Energy Ireland (2011) *Energy in Ireland 1990 – 2010*

³⁸ World Health Organization Regional Office for Europe (2003) *Technical meeting on exposure-*

response relationships of noise on health 19-21 September 2002 Bonn, Germany Bonn: WHO

³⁹ [L_{den} (day-evening-night equivalent level) and L_{night} (night equivalent level)]

5.8 Cultural Heritage

5.8.1 Archaeological Heritage

5.8.1.1 Valletta Convention 1992

The European Convention on Protection of the Archaeological Heritage known as the Valletta Convention of 1992. This was ratified by Ireland in 1997 and requires that appropriate consideration be given to archaeological issues at all stages of the planning and development process.

5.8.1.2 National Heritage Plan for Ireland 2002

The core objective of the National Heritage Plan for Ireland 2002⁴⁰ is to protect Ireland's heritage. In this regard the polluter pays and the precautionary principle are operable.

5.8.1.3 National Monuments Acts

Archaeology in Ireland is protected under the National Monuments Acts 1930 to 2004.

Recorded monuments are protected by inclusion on the list and marked on the map which comprises the Record of Monuments and Places (RMP) set out County by County under Section 12 of the National Monuments (Amendment) Act, 1994 by the Archaeological Survey of Ireland. The definition includes Zones of 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 the Environment, Heritage and Local Government under section 12 of the National Monuments (Amendment) Act, 1994.

Direct impacts on national monuments in State or Local Authority care or subject to a preservation order require the consent of the Minister for the Environment, Heritage and Local Government under Section 14 of the National Monuments Act 1930 as amended by Section 5 of the National Monuments (Amendment) Act 2004.

⁴⁰ Department of Arts, Heritage, Gaeltacht and the Islands (2002) *National Heritage Plan for Ireland* Dublin: Government of Ireland

5.8.2 Architectural Heritage

Records of Protected Structures (RPSs) are legislated for under Section 51 of the Planning and Development Act 2000 as amended and include structures which form part of the architectural heritage and which are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest.

Architectural Conservation Areas (ACAs) are places, areas or groups of structures or townscapes which are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest or value, or contribute 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 which might alter the character of the structure or the ACA.

5.8.3 SEO, Indicators and Targets

SEO CH1:	To protect archaeological heritage including entries to the Record of Monuments and Places and/or their context
Indicator CH1:	Percentage of entries to the Record of Monuments and Places - including Zones of Archaeological Potential (and the context of the above within the surrounding landscape where relevant) – protected from adverse effects resulting from development which is granted permission under the Plan
Target CH1:	Protect entries to the Record of Monuments and Places - including Zones of Archaeological Potential (and their context of the above within the surrounding landscape where relevant) from adverse effects resulting from development which is granted permission under the Plan

SEO CH2:	To protect architectural heritage including entries to the Record of Protected Structures and Architectural Conservation Areas and their context
Indicator CH2:	Percentage of entries to the Record of Protected Structures and Architectural Conservation Areas and their context protected from adverse effects resulting from development which is granted permission under the Plan
Target CH2:	Protect entries to the Record of Protected Structures and Architectural Conservation Areas and their context from adverse effects resulting from development which is granted permission under the Plan

	granted permission under the Plan
Target L1:	No developments permitted which result in avoidable impacts on the landscape - especially with regard to the County's landscapes which are most valuable and most sensitive to change and protected focal points and views - resulting from development which is granted permission under the Plan

5.9 Landscape

5.9.1 Overview

The SEO for landscape is guided by the Landscape Character Assessment and landscape designations within the County.

5.9.2 SEO, Indicator and Target

SEO L1:	To avoid significant adverse impacts on the landscape - especially with regard to the County's landscapes which are most valuable and most sensitive to change and protected focal points and views.
Indicator L1:	Number of complaints received from statutory consultees regarding avoidable impacts on the landscape - especially with regard to the County's landscapes which are most valuable and most sensitive to change and protected focal points and views - resulting from development which is

Section 6 Description of Alternative Scenarios

6.1 Introduction

As per the requirements of the SEA Directive, this SEA considers reasonable alternatives for the Plan taking into account the objectives and the geographical scope of the Plan.

This section identifies and describes 4 different alternative scenarios.

The scenarios are evaluated in Section 7 resulting in the identification of potential effects and informing the selection of a preferred alternative for the Plan. The policies and objectives which are required to realise the preferred alternative are evaluated in Section 8.

It is a statutory obligation to have a County Development Plan but, in accordance with the SEA Directive, the likely evolution of the environment in the absence of the Plan must be described (see Section 4.3). Since this is not a feasible alternative it is not included in this stage.

6.2 Rational

The alternatives considered are constrained by the provisions of the RPGs;

- The RPG's population growth target 2016-2022 has been adjusted for the Plan period 2015-2021, meaning that a target of 13,160 persons has been allocated to the Council's administrative area for the plan period.
- The RPGs require that a minimum of 900 persons of the 2016-2022 allocation, or less than ten percent, is assigned to the town of Tuam; there is no alternative to this requirement. Section 8 *Evaluation of Plan Provisions* evaluates the various environmental effects of, inter alia, this allocation.
- The RPGs require that the residual balance of c. 12,000 persons is distributed across the County, as deemed appropriate by the planning authority. The location of this residual

balance is the basis for the alternatives.

6.3 Scenario Descriptions

6.3.1 Scenario A

Concentrating growth in urban areas and settlements

Scenario A (see Figure 6.1) provides for a population target of 13,160 persons for the Plan period 2015-2021 and meets the minimum RPGs requirement for population allocation to the town of Tuam.

This scenario focuses on building strong urban centres and generating critical mass in the Galway Gateway, the Tuam Hub and a restricted number of towns to support enhanced infrastructure and services. These settlements would act as focal points for their rural catchments.

Development outside of these centres would be strictly controlled to retain the character of existing rural areas and a strong environmental protection policy would be implemented.

Growth is distributed across the County in line with the adopted Settlement Hierarchy, also having regard to the Regional Planning Guidelines. This scenario advocates and implements strong and robust environmental protection policies which are applied to various environmental zones within the County.

The majority of the coast and the Conamara Highlands are managed and planned as natural amenities subject to strict interpretation of EU Directives - with the exception of areas designated for natural resource enterprises such as forestry, wind energy and mineral extraction.

The east of the County supports rural enterprises - based on agri-business and service functions set in a matrix of strengthening villages and towns as well as some rural settlement in planned areas.

Rural areas of the County sustain recreation and tourism enterprises as well as

environmental services. Quality of life is the priority in strong towns and villages. A separate and distinctive coastal complex sustains a mixture of marine enterprises, tourism, settlement, and culture and service facilities in an overwhelmingly natural context.

Rural Settlements would be planned in order to evolve into small mixed use urban centres, providing a range of services and employment to their local population.

6.3.2 Scenario B

Focussing growth predominantly into the Hub town of Tuam

Scenario B (not illustrated) provides for a population target of 13,160 persons for the Plan period 2015-2021, the vast majority of which is assigned to the town of Tuam and its environs.

The Tuam and Environs area contains the vast majority of new settlement, infrastructure and enterprise at the expense of other towns and villages within the County which weaken and experience declines in population. As a result, the footprint of Tuam expands significantly.

Development outside of Tuam and Environs would be strictly controlled to retain the character of existing rural areas and a strong environmental protection policy would be implemented.

Rural areas that are not within an area influenced by the Tuam Hub weaken and rural populations decline.

The Plan limits physical development and economic growth in the County's east-west central economic corridor.

6.3.3 Scenario C

Promoting dispersed development throughout the County

Scenario C (see Figure 6.2) provides for a population target of 13,160 persons for the Plan period 2015-2021 and meets the minimum RPGs requirement for population allocation to the town of Tuam.

Apart from the required allocation to Tuam, the location and nature of development is completely dependent upon market demand

and applications are evaluated on a case-by-case basis by the Council - with minimal consideration of planning or environmental protection - and favourable consideration is given to new development wherever it is applied for across the County.

The creation of critical mass in certain locations is not a consideration in this development strategy and, apart from the minimum RPGs requirement for population allocation to the town of Tuam, no specific targets for or limitations on growth are set in the settlement strategy.

The influence of Galway City and Tuam on growth within their commuter zones is strong and significant levels of suburbanisation develop along the roads in the vicinity of these settlements.

Low density greenfield ribbon development emanates from existing settlements along the road corridors thereby expanding the footprints of settlements. Extensive areas of weakly controlled rural housing occur:

- throughout the eastern half of the County around the towns of Tuam, Ballinasloe, Baile Chláir, Athenry, Portumna and Gort;
- in coastal areas stretching from the outer reaches of Galway City westwards to Conamara and on to, and beyond, Clifden;
- in certain areas of inland Conamara;
- between Galway City and Oughterard, Oughterard and Maam, and Maam and the environs of Cong adjacent to County Mayo.

Due to the highly dispersed nature of new settlement and the disproportionate occurrence of rural housing; villages and towns weaken. Limited brownfield development occurs in built up areas which are in need of regeneration. Instances of inappropriately scaled and designed development do occur however at certain locations within a number of the County's larger settlements.

In areas outside of the County's towns and villages, natural resource enterprises such as forestry, wind energy and mineral extraction

are interspersed with large areas of rural housing.

Wind energy development occurs in the western half of the County and in the Slieve Aughty Mountains. There is no strategy as to how to accommodate this development within these areas.

fishing/marine, agriculture and mineral extraction.

The east-west central corridor of the County contains the majority of the settlement, infrastructure and enterprise.

6.3.4 Scenario D

Developing the Hub town of Tuam, supporting the Gateway and key towns while encouraging the development of other settlement centres and appropriate development in the rural areas

Scenario (see Figure 6.3) provides for a population target of 13,160 persons for the Plan period 2015-2021 and meets (and provides more than) the minimum RPGs requirement for population allocation to the town of Tuam.

This scenario follows a strong yet flexible approach to development, placing emphasis on:

- Supporting the Gateway of Galway City and the associated Galway Metropolitan Area;
- Focusing on fostering a critical mass in the Hub town (Tuam) to compliment the Gateway; and
- Promote the development of key towns and smaller villages along strategic development corridors (which focus on established and planned transportation infrastructure), thereby energising rural areas within the County.

Existing settlement strategy to be rationalised based on existing and proposed service infrastructure whilst providing a focus for the continued support of the rural areas.

Rural populations to be supported through this settlement strategy and through a sustainable, flexible approach to maintaining rural economy and population, balanced against responsible environmental protection.

Large areas of natural habitat remain in the West of the County interspersed with recreation and tourism enterprises adjoining extensive areas of natural resource enterprises such as forestry, renewable energy,

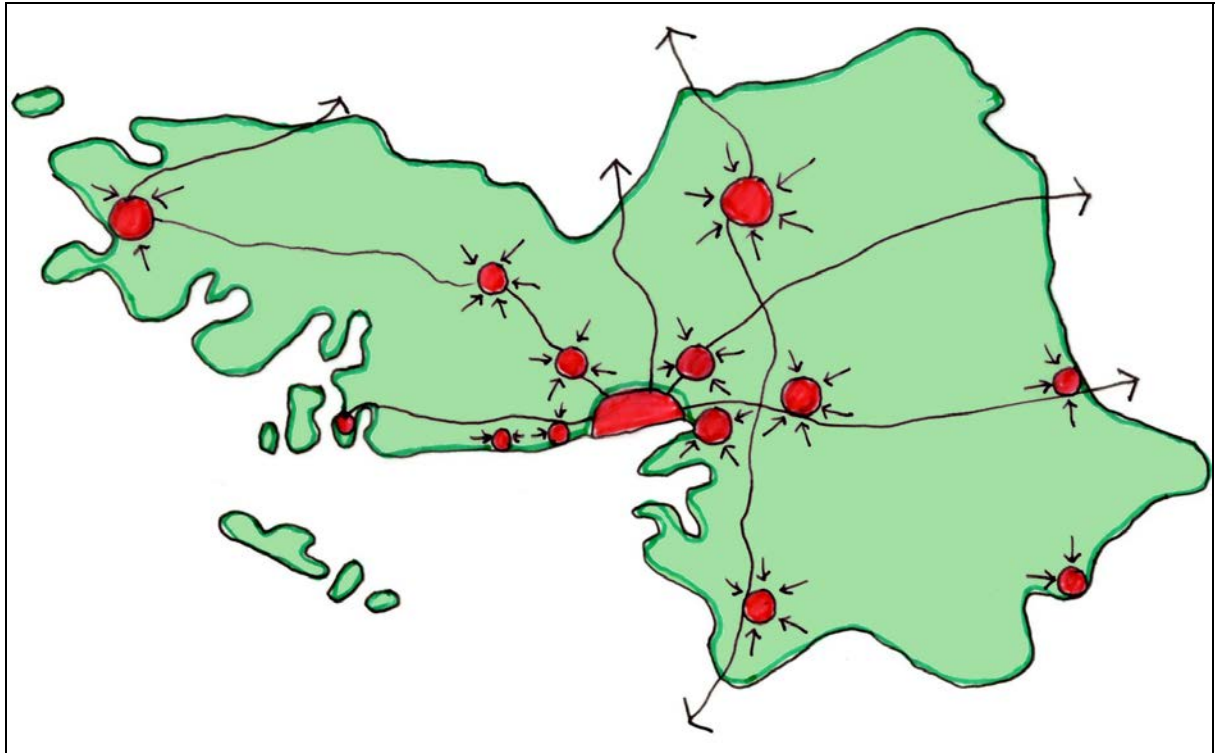


Figure 6.1 Scenario A: *Concentrating growth in urban areas and settlements*

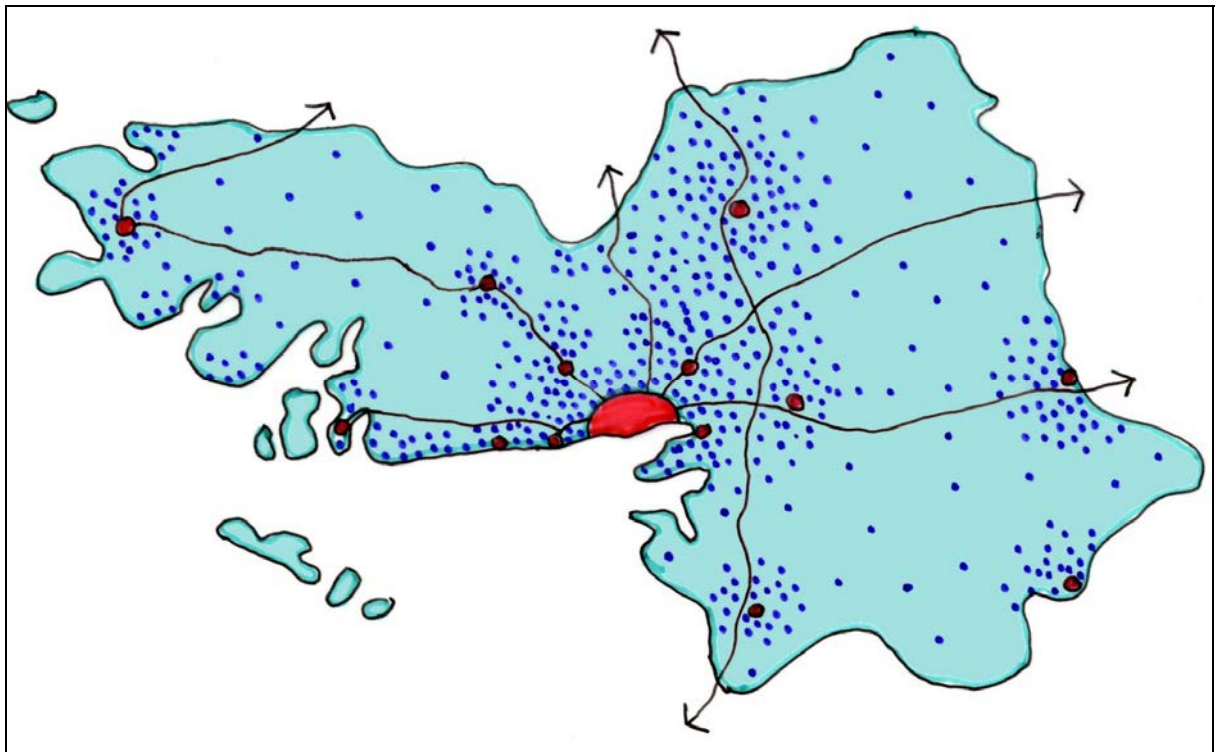


Figure 6.2 Scenario C: *Promoting dispersed development throughout the County*

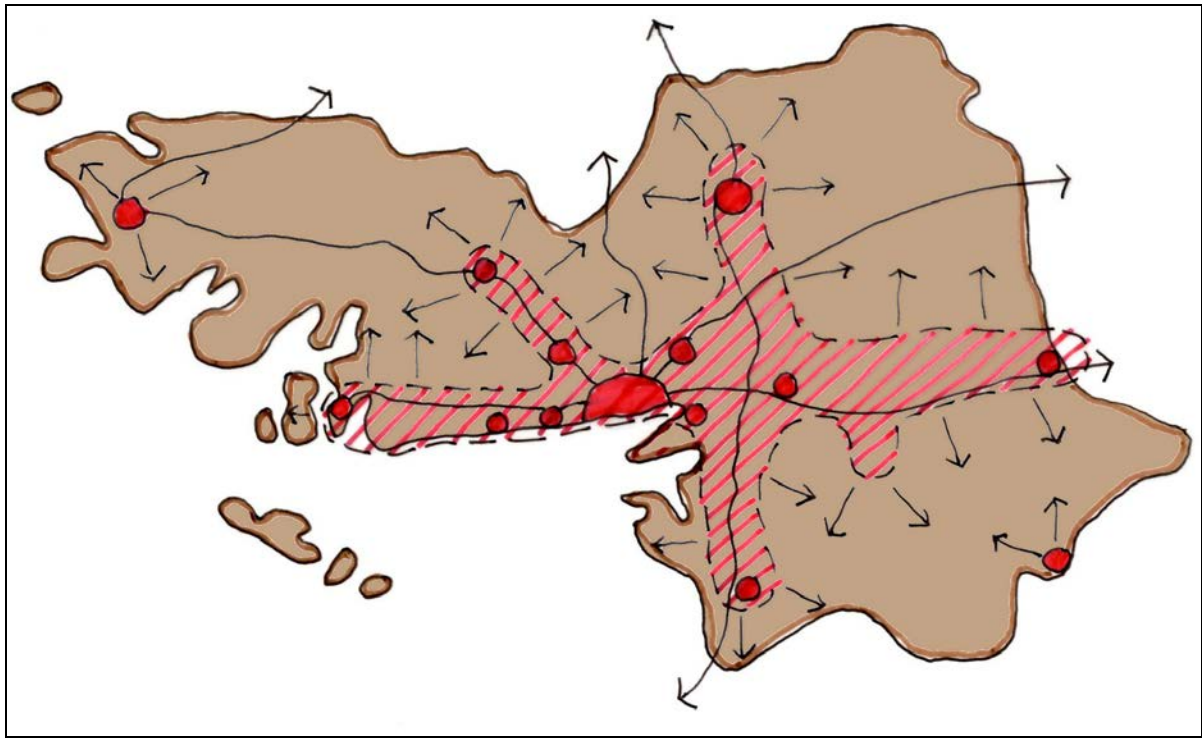


Figure 6.3 Scenario D: *Developing the Hub town of Tuam, supporting the Gateway and key towns while encouraging the development of other settlement centres and appropriate development in the rural areas*

Section 7 Evaluation of Alternative Scenarios

7.1 Introduction

This section provides a comparative evaluation of the environmental effects of implementing the three alternative scenarios.

7.2 Methodology

The description of the environmental baseline together with the maps provided in Section 4 of this report (including the Environmental Sensitivity Overlay Mapping) is used in the evaluation.

Strategic Environmental Objectives (SEOs) identified in Section 5 and reproduced overleaf are also used.

The provisions of the alternatives are evaluated using compatibility criteria (see Table 8.1 below) in order to determine how they would be likely to affect the status of the SEOs. The SEOs and the alternatives are arrayed against each other to identify which interactions - if any - would cause effects on specific components of the environment. Where the appraisal identifies a likely conflict with the status of an SEO the relevant SEO code is entered into the conflict column - e.g. B1 which stands for the SEO likely to be affected - in this instance 'to ensure compliance with the Habitats Directive with regard to the protection of Natura 2000 Sites and Annexed habitats and species'⁴¹.

The interactions identified are reflective of likely significant environmental effects⁴²;

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 environmental component to which the SEO relates.
2. Interactions that would probably conflict with the status of an SEO and would be unlikely to be mitigated

would be likely to result in a significant negative effect on the environmental component to which the SEO relates.

3. Interactions that would potentially conflict with the status of an SEO and would be likely to be mitigated would be likely to result in potential significant negative effects however these effects could be mitigated (for the chosen alternative these effects are mitigated by measures which have been integrated into the Plan).

⁴¹ 'Annexed habitats and species' refers to those listed under Annex I, II & IV of the EU Habitats Directive and Annex I of the EU Birds Directive.

⁴² These effects include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects.

Table 7.1 Strategic Environmental Objectives⁴⁴

SEO Code	SEO
B1	To ensure compliance with the Habitats and Birds Directives with regard to the protection of Natura 2000 Sites and Annexed habitats and species ⁴³
B2	To ensure compliance with Article 10 of the Habitats Directive with regard to the management of features of the landscape which - by virtue of their linear and continuous structure or their function act as stepping stones - are of significant importance for wild fauna and flora and/or essential for the migration, dispersal and genetic exchange of wild species
B3	To avoid significant impacts on relevant habitats, species, environmental features or other sustaining resources in designated sites including Wildlife Sites and to ensure compliance with the Wildlife Acts 1976-2010 with regard to the protection of species listed on Schedule 5 of the principal Act
B4	To sustain 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
PHH1	To protect populations and human health from exposure to incompatible landuses
S1	To avoid damage to the hydrogeological and ecological function of the soil resource in County Galway
W1	To maintain and improve, where possible, the quality and status of surface waters
W2	To prevent pollution and contamination of ground water
W3	To comply as appropriate with the provisions of the Planning System and Flood Risk Management: Guidelines for Planning Authorities (DEHLG, 2009)
M1	To serve new development with adequate and appropriate waste water treatment
M2	To serve new development with adequate drinking water that is both wholesome and clean
M3	To reduce waste volumes, minimise waste to landfill and increase recycling and reuse.
C1	To reduce travel related emissions to air and to encourage modal change from car to more sustainable forms of transport
CH1	To protect archaeological heritage including entries to the Record of Monuments and Places and/or their context
CH2	To protect architectural heritage including entries to the Record of Protected Structures and Architectural Conservation Areas and their context
L1	To avoid significant adverse impacts on the landscape - especially with regard to the County's landscapes which are most valuable and most sensitive to change and protected focal points and views

Table 7.2 Criteria for appraising the effect of Alternatives provisions on SEOs

Likely to Improve status of SEOs	Probable Conflict with status of SEOs- unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated
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⁴³ 'Annexed habitats and species' refer to those listed under Annex I, II & IV of the EU Habitats Directive and Annex I of the EU Birds Directive.

⁴⁴ See Section 5.1 for a description of Strategic Environmental Objectives.

7.3 Cumulative Effects

Cumulative effects are one of the types of effects which have been considered in 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 2 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; and,
- Potential *inter-Plan* cumulative effects - these arise when the effects of the implementation of one plan occur in combination with those of other plans or developments.

A variety of potential *intra-Plan* cumulative environmental effects occur when considering the implementation of the alternatives. The interrelationships between environmental components that determine these potential effects are identified on Table 8.4 e.g. interrelationships between: human health and water quality; human health and air quality; and human health and flood risk.

With regard to potential *inter-Plan* cumulative environmental effects, these occur as a result of the combination of: potential environmental effects which are identified by the assessment as arising from alternatives; and the effects arising from other legislation, plans, programmes or developments arising. Other legislation, plans, programmes or developments arising which have been considered by the assessment of environmental effects include, but are not limited to, those which are identified on Table 8.5 in Section 8 (additional detail on a number of these plans etc. is provided under Section 2.6, Section 4 and Section 5 of this report).

The SEA (and AA) undertaken for the County Development Plan have taken account of the Council's obligation to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management.

In considering the relationship with legislation and other plans and programmes it is important to note that the County Development Plan will be implemented within areas that have existing plans and programmes for a range of sectors [e.g. water management, land use, energy] at a range of levels [e.g. national, river basin district, regional, county and local] that are already subject to more specific higher and lower tier SEA and AA.

The assessment of the likely *inter-Plan* cumulative environmental effects requires knowledge of the likely effects of all plans/developments under consideration. The assessment is limited in this instance as there has been limited assessment of the likely types of developments provided for by other policies, plans and programmes that could occur in combination with the implementation of the County Development Plan. Taking into account available information, the key potential *inter-Plan* cumulative environmental effects that are included in the assessment relate to effects upon the status of surface and ground waters and associated interactions (in combination with Regional Planning Guidelines, Development Plans, Local Area Plans and River Basin Management Plans), such as those related to ecology and drinking water resources, and potential effects upon the landscape. Other potential *inter-Plan* cumulative environmental effects include those occurring on various environmental components within areas where the Ballinasloe Town Development Plan and Local Area Plans for the following settlements are in force Athenry, Bearna, Clifden, Craughwell, Gaeltacht, Gort, Loughrea, Maigh Cuilinn, Oranmore, and Tuam and the potential cumulative visual impact of development in county boundary areas.

Additional cumulative effects are identified throughout the text of the evaluation.

7.4 Potentially Significant Adverse Effects

A number of potentially significant adverse environmental effects which are common to all alternatives and are described on the Table below.

For the chosen alternative these effects are mitigated by measures which have been integrated into the Plan.

Environmental Component	Potential Effect
Biodiversity and Flora and Fauna	<ul style="list-style-type: none"> o Loss of biodiversity with regard to Natura 2000 Sites and Annexed habitats and species (see baseline Section 4.4) o Loss of biodiversity with regard to ecological connectivity and stepping stones (see baseline Section 4.4) o Loss of biodiversity with regard to designated sites including Wildlife Sites and species listed on Schedule 5 of the Wildlife Act 1976 (see baseline Section 4.4)
Population and Human Health	<ul style="list-style-type: none"> o Spatially concentrated deterioration in human health (see baseline Section 4.5)
Soil	<ul style="list-style-type: none"> o Damage to the hydrogeological and ecological function of the soil resource (see baseline Section 4.6)
Water	<ul style="list-style-type: none"> o Adverse impacts upon the status and quality of water bodies, including bathing waters (see baseline Sections 4.7.3 and 4.7.4) o Increase in the risk of flooding (see baseline Section 4.7.6)
Material Assets	<ul style="list-style-type: none"> o Failure to provide adequate and appropriate waste water treatment (see baseline Section 4.9.1) o Failure to comply with drinking water regulations and serve new development with adequate drinking water that is both wholesome and clean (see baseline Section 4.9.1) o Increases in waste levels (see baseline Section 4.9.2)
Air and Climatic Factors	<ul style="list-style-type: none"> o Failure to contribute towards sustainable transport and associated impacts (see baseline Section 4.8)
Cultural Heritage	<ul style="list-style-type: none"> o Effects on entries to the Record of Monuments and Places and other archaeological heritage (see baseline Section 4.10.2) o Effects on entries to the Records of Protected Structures and other architectural heritage (see baseline Section 4.10.3)
Landscape	<ul style="list-style-type: none"> o Occurrence of adverse visual impacts (see baseline Section 4.11)

Table 7.3 Potentially Significant Adverse Environmental Effects common to all alternatives

7.5 Scenario A

Concentrating growth in urban areas and settlements

7.5.1.1 General Effects

This Scenario will have different effects in different areas, which are considered on an area-by area basis below. A number of general impacts will affect all areas under the following headings:

A. Greenfield Development and associated effects

By limiting greenfield development outside of the main centres, allowing for densities to be maximised and making efficient use of serviced land, this scenario would minimise adverse effects associated with such development including those relating to sustainable mobility, water, flood risk, water services, human health soil and the landscape⁴⁵.

B. Water, Water Services, Ecology and Human Health

Having regard to the shallow soils, vulnerable aquifers and poor patterns on adequate installation or operation of effluent treatment systems, it is likely that this scenario will help to reduce or prevent significant further declines in the status of surface and groundwaters, including those used for drinking water⁴⁶. This is likely to occur because of the provision of adequate of the infrastructure to collect, treat and dispose of effluents arising⁴⁷. This, in turn, will have direct, indirect and cumulative positive effects on human health⁴⁸, economic development and on the resources necessary to sustain ecology⁴⁹.

C. Ecology

Having regard to the significance, sensitivity, extent and integrity of existing designated habitats and species throughout the County - and in particular in the concentrations in the areas mentioned in Section 7.5.1.2 - it is likely that this scenario will help to avoid or reduce direct, indirect and cumulative effects on designated sites and species and the resources necessary to sustain them and ecological corridors and stepping stones⁵⁰.

However, it is extremely important to understand, and accept, that these habitats and their associated species are manifestations of a landscape that has been altered and managed by human beings for the majority⁵¹ of their existence since the last Ice Age. Thus the discontinuation of human occupancy and use – due to restrictive rural planning policies – is a significant negative factor in contributing to the cessation of the management regime that gives rise to and sustains these habitats and species⁵².

D. Landscape

Having regard to the existence of extensive areas of landscapes that are highly valued at a national level as scenic and tourism resources and to the vulnerability of those resources – due to the open and largely unenclosed nature of the landscape - it is likely that this scenario will avoid or reduce direct, indirect and cumulative effects on the appearance and character of vulnerable and valued landscapes⁵³.

However, it is extremely important to understand, and accept, that these landscapes have been altered and managed by human beings for the majority⁵⁴ of their existence since the last Ice Age.

⁴⁵ SEOs B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 L1

⁴⁶ SEOs W1 W2 M2

⁴⁷ SEO M1

⁴⁸ SEO PHH1

⁴⁹ SEOs B1 B2 B3

⁵⁰ SEOs B1 B2 B3

⁵¹ Agriculture in Ireland is estimated to have been a significant environmental modifier for about six thousand years. Unmodified post-Glacial habitats existed for about four thousand years prior to that time.

⁵² SEOs B1 B2 B3 B4

⁵³ SEO L1

⁵⁴ Agriculture in Ireland is estimated to have been a significant environmental modifier for about six thousand years. Unmodified post-Glacial habitats existed for about four thousand years prior to that time.

Thus the discontinuation of continuation human occupancy and use - due to restrictive rural planning policies - is a potentially significant negative factor in contributing to the cessation of the management regime that gives rise to and sustains these landscapes.

E. Sustainable Mobility and associated effects

Having regard to the concentrated settlement pattern that are likely to result from this scenario there are likely to be commensurately lower levels of movements of private cars and other transport⁵⁵. This will give rise to reduced volumes of traffic with associated reductions in congestion and economic losses as well as direct reductions in emissions and energy usage⁵⁶ and avoidance or reduction of indirect effects due to the need for new or improved road capacity - resulting in fewer impacts on ecology, landscape, cultural heritage and infrastructure⁵⁷.

7.5.1.2 Area Effects

A. The Lough Corrib Catchment

Having regard to the high concentrations of designations for scenery, ecology and the extreme vulnerability of surface and ground waters, localised potential for flooding together with the absence of adequate infrastructure and the existing high levels of existing settlements, this area will experience an avoidance or reduction of adverse environmental effects as well as an improvement of existing environmental issues in this area⁵⁸.

B. The Conamara Highlands

Having regard to the high concentrations of designations for scenery and ecology together with the absence of infrastructure, this area will experience no additional levels of adverse environmental effects⁵⁹.

C. The Coast

Having regard to the high concentrations of designations for scenery, ecology and the vulnerability of waters together with the absence of adequate infrastructure and the existing high levels of existing settlements, this area will experience significant improvements in environmental conditions because of improved environmental infrastructure that will be economically feasible for concentrated patterns of development⁶⁰.

D. East Galway

Having regard to the deeper soils, less vulnerable aquifers, lower concentrations of ecological designations, lower scenic significance, lower concentration of dwelling and greater frequency of existing settlements with associated infrastructure - this area will experience relatively few additional adverse effects on environmental resources - other than those that already exist.

7.5.2 Scenario B

Focussing growth predominantly into the Hub town of Tuam

7.5.2.1 General Effects

This Scenario will have different effects in different areas, which are considered on an area-by area basis below. A number of general impacts will affect all areas under the following headings:

A. Greenfield Development and associated effects

By providing for the vast majority of new development in the Tuam and Environs area and limiting new development elsewhere, this scenario would be likely to:

⁵⁵ SEO C1

⁵⁶ SEOs C1 HH1

⁵⁷ SEOs B1 B2 B3 CH1 CH2 L1

⁵⁸ SEOs B1 B2 B3 PHH1 S1 W1 W2 M1 M2

⁵⁹ SEOs B1 B2 B3 HH1 S1 W1 W2 M1 M2 C1 L1

⁶⁰ SEOs B1 B2 B3 HH1 S1 W1 W2 M1 M2 C1 L1

- Concentrate greenfield development and associated potential effects within the Tuam and Environs area⁶¹; and
- Avoid greenfield development and associated effects⁶² elsewhere in the county.

B. Water, Water Services, Ecology and Human Health

It is likely that this scenario will help to reduce or prevent significant further declines in the status of surface and groundwaters (including those used for drinking water⁶³) beyond the River Nanny, River Clare and the Lower Corrib as development is focused upon one area of the County only. This, in turn, will have direct, indirect and cumulative positive effects on human health⁶⁴ and on the resources necessary to sustain ecology⁶⁵.

However, within the Tuam and Environs area, difficulties in providing waste water services could give rise to conflicts⁶⁶. In order to mitigate these conflicts and prevent the occurrence of exceedances in the assimilative capacities of the River Nanny, River Clare and Lough Corrib, significant investment in waste water treatment infrastructure would be needed.

C. Ecology

Outside of the Tuam and Environs area, having regard to the significance, sensitivity, extent and integrity of existing designated habitats and species, it is likely that this scenario will help to avoid or reduce direct, indirect and cumulative effects on designated sites and species and the resources necessary to sustain them and ecological corridors and stepping stones⁶⁷.

However, within the Tuam and Environs area, ecological connectivity and stepping stones would be adversely affected by new development and impacts upon the Lough Corrib SAC, SPA and pNHA would be likely unless there was significant investment in waste water treatment infrastructure that would not cause exceedances of the assimilative capacities of the River Nanny, River Clare and Lough Corrib.

It is extremely important to understand, and accept, that habitats and their associated species within the County are manifestations of a landscape that has been altered and managed by human beings for the majority⁶⁸ of their existence since the last Ice Age. Thus the discontinuation of human occupancy and use outside of the Tuam and Environs area – due to restrictive rural planning policies – is a significant negative factor in contributing to the cessation of the management regime that gives rise to and sustains these habitats and species⁶⁹.

D. Landscape

Having regard to the existence of extensive areas of landscapes that are highly valued at a national level as scenic and tourism resources and to the vulnerability of those resources – due to the open and largely unenclosed nature of the landscape - it is likely that this scenario will avoid or reduce direct, indirect and cumulative effects on the appearance and character of vulnerable and valued landscapes⁷⁰. Within the Tuam and Environs area, the appearance of the landscape would change significantly due to the extent of new development. According to the County's Landscape Character Assessment (LCA), the Tuam and Environs area is identified as being of both Low sensitivity and Low value and it contains a designated focal point/view.

⁶¹ SEOs B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 L1

⁶² SEOs B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 L1

⁶³ SEOs W1 W2 M2

⁶⁴ SEO PHH1

⁶⁵ SEOs B1 B2 B3

⁶⁶ SEOs B1 B2 B3 PHH1 W1 W2 M1 M2

⁶⁷ SEOs B1 B2 B3

⁶⁸ Agriculture in Ireland is estimated to have been a significant environmental modifier for about six thousand years. Unmodified post-Glacial habitats existed for about four thousand years prior to that time.

⁶⁹ SEOs B1 B2 B3 B4

⁷⁰ SEO L1

However, it is extremely important to understand, and accept, that these landscapes have been altered and managed by human beings for the majority⁷¹ of their existence since the last Ice Age. Thus the discontinuation of continuation human occupancy and use outside of the Tuam and Environs area - due to restrictive rural planning policies - is a potentially significant negative factor in contributing to the cessation of the management regime that gives rise to and sustains these landscapes.

E. Sustainable Mobility and associated effects

Having regard to the concentrated settlement pattern that are likely to result from this scenario there are likely to be commensurately lower levels of movements of private cars and other transport⁷². This will give rise to reduced volumes of traffic with associated reductions in congestion and economic losses as well as direct reductions in emissions and energy usage⁷³ and avoidance or reduction of indirect effects due to the need for new or improved road capacity - resulting in fewer impacts on ecology, landscape, cultural heritage and infrastructure⁷⁴.

7.5.2.2 Area Effects

A. The Lough Corrib Catchment

Having regard to the high concentrations of designations for scenery, ecology and the extreme vulnerability of surface and ground waters, localised potential for flooding together with the absence of adequate infrastructure and the existing high levels of existing settlements, this area will experience:

- Arising from areas outside of the Tuam and Environs growth centre, an avoidance or reduction of adverse environmental effects as well as an improvement of existing environmental issues⁷⁵.
- Arising from development within the Tuam and Environs growth centre, difficulties in providing waste water services could give rise to conflicts⁷⁶. In order to mitigate these conflicts and prevent the occurrence of exceedances in the assimilative capacities of the River Nanny, River Clare and Lough Corrib, significant investment in waste water treatment infrastructure would be needed.

B. The Conamara Highlands

Due to the concentration of growth within the Tuam and Environs area, the Conamara Highlands would be unlikely to be impacted upon under this scenario⁷⁷.

C. The Coast

Due to the concentration of growth within the Tuam and Environs area, the Coast⁷⁸ would be unlikely to be impacted upon under this scenario.

D. East Galway

Having regard to the deeper soils, less vulnerable aquifers, lower concentrations of ecological designations, lower scenic significance, lower concentration of dwelling and greater frequency of existing settlements with associated infrastructure - this area will experience relatively few additional adverse effects on environmental resources - other than those that already exist. This is notwithstanding the effects which would be likely to occur as a result of new growth within the Tuam and Environs area (these are described under Section 7.5.2 above).

⁷¹ Agriculture in Ireland is estimated to have been a significant environmental modifier for about six thousand years. Unmodified post-Glacial habitats existed for about four thousand years prior to that time.

⁷² SEO C1

⁷³ SEOs C1 HH1

⁷⁴ SEOs B1 B2 B3 CH1 CH2 L1

⁷⁵ SEOs B1 B2 B3 PHH1 S1 W1 W2 M1 M2

⁷⁶ SEOs B1 B2 B3 PHH1 W1 W2 M1 M2

⁷⁷ SEOs B1 B2 B3 HH1 S1 W1 W2 M1 M2 C1 L1

⁷⁸ SEOs B1 B2 B3 HH1 S1 W1 W2 M1 M2 C1 L1

7.5.3 Scenario C

Promoting dispersed development throughout the County

7.5.3.1 General Effects

This Scenario will have different effects in different areas, which are considered on an area-by area basis below. A number of general impacts will affect all areas under the following headings:

A. Greenfield Development and associated effects

By allowing highly dispersed low density greenfield ribbon development and extensive areas of weakly controlled rural housing, this scenario would result in adverse effects associated with such development including those relating to sustainable mobility, water, flood risk, water services, human health soil and the landscape⁷⁹.

B. Water, Water Services, Ecology and Human Health

Having regard to the shallow soils, vulnerable aquifers and poor patterns on adequate installation or operation of effluent treatment systems, it is likely that this scenario will lead to significant further declines in the status of surface and groundwaters⁸⁰, including those used for drinking water, because of the inadequacy of the infrastructure to collect, treat and dispose of effluents arising⁸¹. This, in turn, will have direct, indirect and cumulative positive effects on human health⁸², economic development and on the resources necessary to sustain ecology⁸³.

C. Ecology

Having regard to the significance, sensitivity, extent and integrity of existing designated habitats and species throughout the County - and in particular in the concentrations in the areas mentioned in Section 7.5.3.2 - it is likely that this scenario will give rise to many instances of direct, indirect and cumulative effects on designated sites and species and the resources necessary to sustain them and ecological corridors and stepping stones⁸⁴.

However, it is extremely important to understand, and accept, that these habitats and their associated species are manifestations of a landscape that has been altered and managed by human beings for the majority⁸⁵ of their existence since the last Ice Age. Thus the continuation of human occupancy and use - facilitated by these developments - is a potentially significant positive factor in sustaining the management regime that gives rise to and sustains these habitats and species⁸⁶.

D. Landscape

Having regard to the existence of extensive areas of landscapes that are highly valued at a national level as scenic and tourism resources and to the vulnerability of those resources - due to the open and largely unenclosed nature of the landscape - it is likely that this scenario will give rise to many instances of direct, indirect and cumulative effects on the appearance and character of vulnerable and valued landscapes⁸⁷.

However, it is extremely important to understand, and accept, that these landscapes have been altered and managed by human beings for the majority⁸⁸ of their existence since the last Ice Age. Thus the continuation human occupancy and use - facilitated by these developments - is a potentially

⁷⁹ SEOs B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 L1

⁸⁰ SEOs W1 W2 M2

⁸¹ SEO M1

⁸² SEO PHH1

⁸³ SEOs B1 B2 B3

⁸⁴ SEOs B1 B2 B3

⁸⁵ Agriculture in Ireland is estimated to have been a significant environmental modifier for about six thousand years. Unmodified post-Glacial habitats existed for about four thousand years prior to that time.

⁸⁶ SEOs B1 B2 B3 B4

⁸⁷ SEO L1

⁸⁸ Agriculture in Ireland is estimated to have been a significant environmental modifier for about six thousand years. Unmodified post-Glacial habitats existed for about four thousand years prior to that time.

significant positive factor in sustaining the management regime that gives rise to and sustains these landscapes.

E. Sustainable Mobility and associated effects

Having regard to the highly dispersed settlement pattern that results from this scenario there are likely to be commensurately high levels of movements of private cars and other transport⁸⁹. This will give rise to increased volumes of traffic with associated congestion and economic losses as well as direct emissions and energy usage⁹⁰ and indirect effects due to the need for new or improved road capacity - resulting in impacts on ecology, landscape, cultural heritage and infrastructure⁹¹.

7.5.3.2 Area Effects

A. The Lough Corrib Catchment

Having regard to the high concentrations of designations for scenery, ecology and the extreme vulnerability of surface and ground waters together with the absence of adequate infrastructure and the existing high levels of existing settlements, this area will experience significant additional levels of adverse environmental effects in addition to the existing environmental issues that already occur in this area⁹².

B. The Conamara Highlands

Having regard to the high concentrations of designations for scenery, ecology together with the absence of adequate infrastructure, this area will experience additional levels of adverse environmental effects⁹³.

C. The Coast

Having regard to the high concentrations of designations for scenery, ecology and the vulnerability of waters together with the absence of adequate infrastructure and the existing high levels of settlement, this area will experience significant additional levels of adverse environmental effects in addition to the existing environmental issues that already occur in this area⁹⁴.

D. East Galway

Having regard to the deeper soils, less vulnerable aquifers, lower concentrations of ecological designations, lower scenic significance, lower concentration of dwelling and greater frequency of existing settlements with associated infrastructure - this area will experience relatively few additional adverse effects on environmental resources - other than those that already exist

7.5.4 Scenario D

Developing the Hub town of Tuam, supporting the Gateway and key towns while encouraging the development of other settlement centres and appropriate development in the rural areas

7.5.4.1 General Effects

This Scenario will have different effects in different areas, which are considered on an area-by area basis below. A number of general impacts will affect all areas under the following headings:

A. Greenfield Development and associated effects

By accommodating new populations through the redevelopment of strategic urban areas within the plan area, this approach would reduce the need to accommodate these populations by way of greenfield development and facilitate the development of sustainable communities where population and employment can be developed in union thereby reducing travel to work times and traffic

⁸⁹ SEO C1

⁹⁰ SEOs C1 HH1

⁹¹ SEOs B1 B2 B3 CH1 CH2 L1

⁹² SEOs B1 B2 B3 PHH1 S1 W1 W2 M1 M2

⁹³ SEOs B1 B2 B3 HH1 S1 W1 W2 M1 M2 C1 L1

⁹⁴ SEOs B1 B2 B3 HH1 S1 W1 W2 M1 M2 C1 L1

congestion and encouraging sustainable living patterns⁹⁵. By helping to reduce pressure on greenfield land adverse environmental impacts - including those relating to sustainable mobility, water, flood risk, water services, human health soil and the landscape⁹⁶ - would be reduced.

B. Water, Water Services, Ecology and Human Health

Having regard to the shallow soils, vulnerable aquifers and poor patterns on adequate installation or operation of effluent treatment systems, it is likely that this scenario will help to reduce significant further declines in the status of surface and groundwaters⁹⁷, including those used for drinking water. This is likely to occur because of the provision of additional infrastructure to collect, treat and dispose of effluents arising⁹⁸. This, in turn, will have localised direct, indirect and cumulative positive effects on human health⁹⁹, economic development and on the resources necessary to sustain ecology¹⁰⁰.

B. Ecology

Having regard to the significance, sensitivity, extent and integrity of existing designated habitats and species throughout the County - and in particular in the concentrations in the areas mentioned in Section 7.5.4.2 - it is likely that this scenario will help to reduce direct, indirect and cumulative effects caused by new developments on designated sites, protected species and the resources necessary to sustain them and ecological corridors and stepping stones¹⁰¹.

However, it is extremely important to understand, and accept, that these habitats and their associated species are manifestations of a landscape that has been altered and managed by human beings for the majority¹⁰² of their existence since the last Ice Age. Thus the reduction of human occupancy and use - due to restrictive rural planning policies in some parts of the County - is a potentially negative factor in contributing to the reduction of the management regime that gives rise to and sustains these designated sites¹⁰³.

C. Landscape

Having regard to the existence of extensive areas of landscapes that are highly valued at a national level as scenic and tourism resources and to the vulnerability of those resources - due to the open and largely unenclosed nature of the landscape - it is likely that this scenario will reduce direct, indirect and cumulative effects on the appearance and character of vulnerable and valued landscapes¹⁰⁴.

However, it is extremely important to understand, and accept, that these landscapes have been altered and managed by human beings for the majority¹⁰⁵ of their existence since the last Ice Age. Thus the reduction of continuation human occupancy and use - due to restrictive rural planning policies in parts of the County - is a potentially negative factor in contributing to the reduction of the management regime that gives rise to and sustains these landscapes.

E. Sustainable Mobility and associated effects

Having regard to the more concentrated settlement pattern that are likely to result from this scenario there are likely to be lower levels of movements of private cars and other transport¹⁰⁶. This will give rise to stable volumes of traffic with no increases in congestion and economic losses as well as direct emissions and energy usage¹⁰⁷ and a reduction of indirect effects due to the need for new or

⁹⁵ SEO C1

⁹⁶ SEOs B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 L1

⁹⁷ SEOs W1 W2 M2

⁹⁸ SEO M1

⁹⁹ SEO PHH1

¹⁰⁰ SEOs B1 B2 B3

¹⁰¹ SEOs B1 B2 B3

¹⁰² Agriculture in Ireland is estimated to have been a significant environmental modifier for about six thousand years. Unmodified post-Glacial habitats existed for about four thousand years prior to that time.

¹⁰³ SEOs B1 B2 B3 B4

¹⁰⁴ SEO L1

¹⁰⁵ Agriculture in Ireland is estimated to have been a significant environmental modifier for about six thousand years. Unmodified post-Glacial habitats existed for about four thousand years prior to that time.

¹⁰⁶ SEOs C1

¹⁰⁷ SEOs C1 HH1

improved road capacity – resulting in fewer impacts on ecology, landscape, cultural heritage and infrastructure¹⁰⁸.

7.5.4.2 Area Effects

A. The Lough Corrib Catchment

Having regard to the high concentrations of designations for scenery, ecology and the extreme vulnerability of surface and ground waters, localised potential for flooding together with the absence of adequate infrastructure and the existing high levels of existing settlements this area will experience stabilisation of adverse environmental effects as well as an no further declines of existing environmental conditions in this area¹⁰⁹.

B. The Conamara Highlands

Having regard to the high concentrations of designations for scenery and ecology together with the absence of adequate infrastructure, this area will experience no additional levels of adverse environmental effects¹¹⁰.

C. The Coast

Having regard to the high concentrations of designations for scenery, ecology and the vulnerability of waters together with the absence of adequate infrastructure and the existing high levels of settlement, this area will experience stabilisation of adverse environmental effects because of improved environmental infrastructure that will be more economically feasible for areas with concentrated patterns of development¹¹¹.

D. East Galway

Having regard to the deeper soils, less vulnerable aquifers, lower concentrations of ecological designations, lower scenic significance, lower concentration of dwelling and greater frequency of existing settlements with associated infrastructure, this area will experience relatively few additional adverse effects on environmental resources - other than those that already exist.

¹⁰⁸ SEOs B1 B2 B3 CH1 CH2 L1

¹⁰⁹ SEOs B1 B2 B3 PHH1 S1 W1 W2 M1 M2

¹¹⁰ SEOs B1 B2 B3 HH1 S1 W1 W2 M1 M2 C1 L1

¹¹¹ SEOs B1 B2 B3 HH1 S1 W1 W2 M1 M2 C1 L1

Table 7.4 Evaluation of Alternative Scenarios against SEOs

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs- unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated
Scenario A: Concentrating growth in urban areas and settlements	B1 B2 B3 PHH1 S1 W1 W2 W3 C1 M1 M2 L1 (limits greenfield development and allows densities to be maximised: sustainable mobility, provision of adequate infrastructure and environmental protection)	B4 (restrictive rural planning policies lead to a cessation of management regimes that sustains certain habitats and species)	B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1 (potential conflicts arising between this scenario and various environmental components – all would be mitigated. Note that the greatest number and extents of cultural heritage potential occurs in settled areas)
Scenario B: Focussing growth predominantly into the Hub town of Tuam	B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 L1 C1 (limits development in all areas apart from Tuam)	B4 (restrictive rural planning policies beyond the Tuam and Environs area lead to a cessation of management regimes that sustains certain habitats and species)	S1 W3 M3 C1 CH1 CH2 L1 (potential conflicts arising between this scenario and various environmental components. Note that the greatest number and extents of cultural heritage potential occurs in settled areas.) B1 B2 B3 PHH1 W1 W2 M1 M2 (difficulties in providing waste water services could give rise to conflicts. In order to mitigate these conflicts and prevent the occurrence of exceedances in the assimilative capacities of the River Nanny, River Clare and Lough Corrib, significant investment in waste water treatment infrastructure would be needed.)
Scenario C: Promoting dispersed development throughout the County	B4 (ensures continuation of human occupancy and use and sustenance of management regime for certain habitats and species)	B1 B2 B3 PHH1 S1 W1 W2 W3 C1 M1 M2 L1 (allows highly dispersed low density greenfield ribbon development and extensive areas of weakly controlled rural housing: adverse effects on sustainable mobility, provision of adequate infrastructure and environmental protection)	CH1 CH2 M3 (potential conflicts arising between this scenario and cultural heritage and waste management would be mitigated) Note that the greatest number and extents of cultural heritage potential occurs in settled areas.
Scenario D: Developing the Hub town of Tuam, supporting the Gateway and key towns while encouraging the development of other settlement centres and appropriate development in the rural areas	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 L1 (accommodates populations and development through the redevelopment of strategic urban areas and reduces need to accommodate populations by way of greenfield development: sustainable mobility, provision of adequate infrastructure and environmental protection)		B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1 (potential conflicts arising between this scenario and various environmental components – all would be mitigated. Note that the greatest number and extents of cultural heritage potential occurs in settled areas) B4 (restrictive rural planning policies in some parts of the county have the potential, if unmitigated, to lead to a cessation of management regimes that sustains certain habitats and species)

7.5.5 The Selected Alternative Scenario for the Plan

The Alternative Scenario for the County Development Plan which has emerged from the Plan/SEA/AA preparation process is Scenario D.

Scenario D was developed by the Planning Team, placed on public display by the Elected Members and adopted by the Elected Members having regard to both:

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

In summary the Plan represents a pragmatic recognition and continuation of established patterns and trends of development in County Galway. These have been modified to take account of the significant environmental sensitivities that exist over very large portions of the County with a view to stabilising both environmental conditions and the populations of those communities who continue to sustain these environments.

By complying with appropriate mitigation measures - including those which have been integrated into the Plan - potential adverse environmental effects which could arise as a result of implementing this scenario would be likely to be avoided, reduced or offset. Section 9 of this report details how the Plan was informed by environmental sensitivities.

The Core Strategy Map from the Plan is reproduced on Figure 7.1 overleaf.

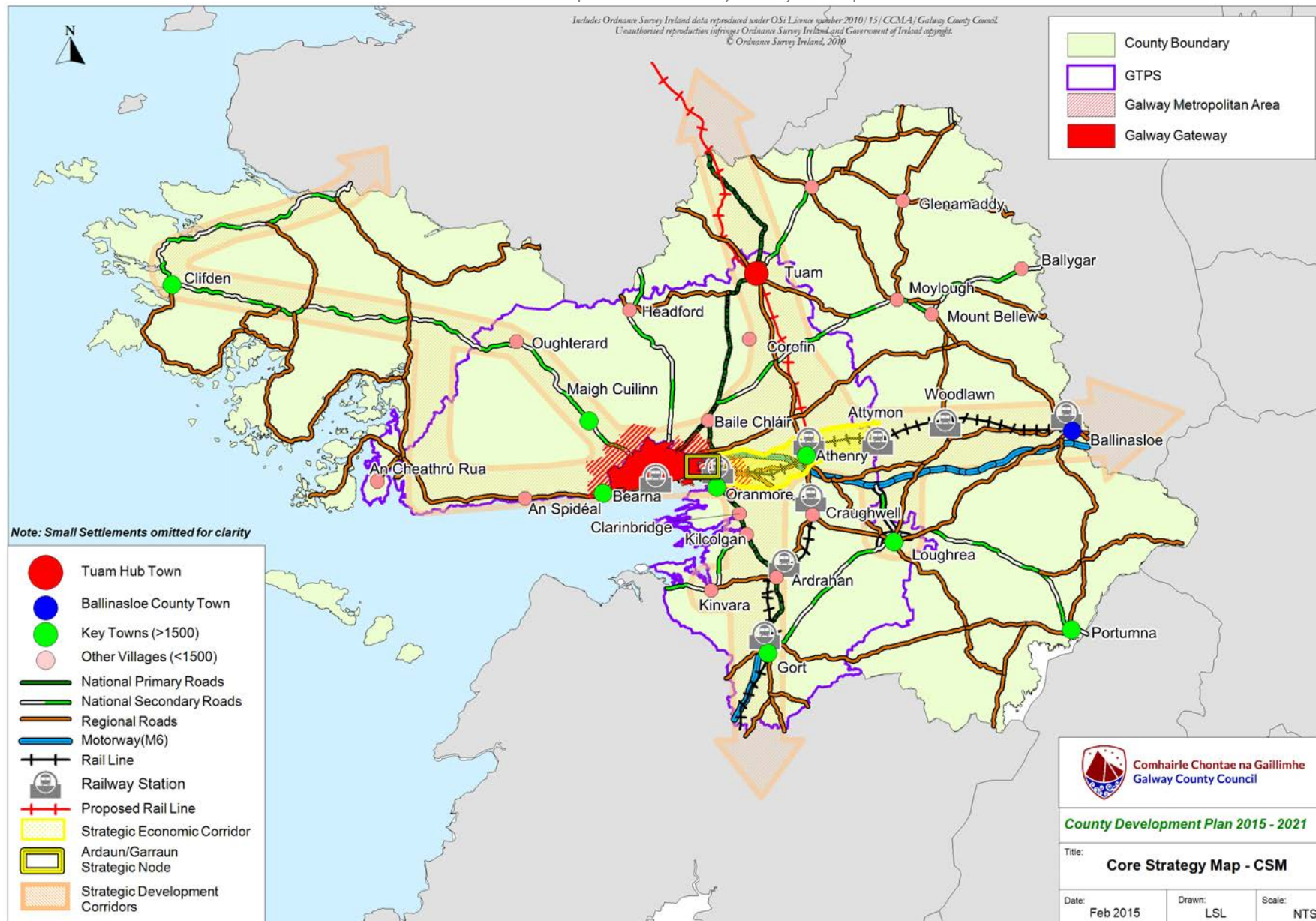


Figure 7.1 Core Strategy Map from the Plan

Source: Galway County Council (2015)

Section 8 Evaluation of Plan Provisions

8.1 Methodology

This section evaluates the provisions of the Plan. The description of the environmental baseline together with the maps provided in Section 4 of this report (including the Environmental Sensitivity Overlay Mapping) is used for this purpose. Strategic Environmental Objectives (SEOs) identified in Section 5 and reproduced overleaf are also used.

The provisions of the Plan are evaluated using compatibility criteria (see Table 8.1 below) in order to determine how they would be likely to affect the status of the SEOs. The SEOs and the provisions of the Plan are arrayed against each other to identify which interactions - if any - would cause effects on specific components of the environment. Where the appraisal identifies a likely conflict with the status of an SEO the relevant SEO code is entered into the conflict column - e.g. B1 which stands for the SEO likely to be affected - in this instance 'to ensure compliance with the Habitats Directive with regard to the protection of Natura 2000 Sites and Annexed habitats and species'¹¹².

The interactions identified are reflective of likely significant environmental effects¹¹³;

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 environmental component to which the SEO relates.
2. Interactions that would probably conflict with the status of an SEO and would be unlikely to be mitigated would be likely to result in a significant negative effect on the environmental component to which the SEO relates.
3. Interactions that would potentially conflict with the status of an SEO and would be likely to be mitigated would be likely to result in potential significant negative effects however these effects would be likely to be mitigated by measures which have been integrated into 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.

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.

Table 8.1 Criteria for appraising the effect of Plan provisions on SEOs

Likely to Improve status of SEOs	Probable Conflict with status of SEOs- unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	No Likely interaction with status of SEOs
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¹¹² 'Annexed habitats and species' refers to those listed under Annex I, II & IV of the EU Habitats Directive and Annex I of the EU Birds Directive.

¹¹³ These effects include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects.

Table 8.2 Strategic Environmental Objectives¹¹⁵

SEO Code	SEO
B1	To ensure compliance with the Habitats and Birds Directives with regard to the protection of Natura 2000 Sites and Annexed habitats and species ¹¹⁴
B2	To ensure compliance with Article 10 of the Habitats Directive with regard to the management of features of the landscape which - by virtue of their linear and continuous structure or their function act as stepping stones - are of significant importance for wild fauna and flora and/or essential for the migration, dispersal and genetic exchange of wild species
B3	To avoid significant impacts on relevant habitats, species, environmental features or other sustaining resources in designated sites including Wildlife Sites and to ensure compliance with the Wildlife Acts 1976-2010 with regard to the protection of species listed on Schedule 5 of the principal Act
B4	To sustain 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
PHH1	To protect populations and human health from exposure to incompatible landuses
S1	To avoid damage to the hydrogeological and ecological function of the soil resource in County Galway
W1	To maintain and improve, where possible, the quality and status of surface waters
W2	To prevent pollution and contamination of ground water
W3	To comply as appropriate with the provisions of the Planning System and Flood Risk Management: Guidelines for Planning Authorities (DEHLG, 2009)
M1	To serve new development with adequate and appropriate waste water treatment
M2	To serve new development with adequate drinking water that is both wholesome and clean
M3	To reduce waste volumes, minimise waste to landfill and increase recycling and reuse.
C1	To reduce travel related emissions to air and to encourage modal change from car to more sustainable forms of transport
CH1	To protect archaeological heritage including entries to the Record of Monuments and Places and/or their context
CH2	To protect architectural heritage including entries to the Record of Protected Structures and Architectural Conservation Areas and their context
L1	To avoid significant adverse impacts on the landscape - especially with regard to the County's landscapes which are most valuable and most sensitive to change and protected focal points and views

8.2 Appropriate Assessment and Strategic Flood Risk Assessment

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

The requirement for AA is provided under the EU Habitats Directive (Directive 1992/43/EEC). The requirement for SFRA is provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (DEHLG, 2009).

¹¹⁴ 'Annexed habitats and species' refer to those listed under Annex I, II & IV of the EU Habitats Directive and Annex I of the EU Birds Directive.

¹¹⁵ See Section 5.1 for a description of Strategic Environmental Objectives.

The AA concluded that the Plan will not affect the integrity of the Natura 2000 network¹¹⁶. All recommendations made by the AA and SFRA were integrated into the Plan.

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.

8.3 Potential Impacts and their Determination

Environmental impacts which occur, if any, will be determined by the nature and extent of multiple or individual projects and site specific environmental factors.

Avoidance of conflict with SEOs and the environment is dependent upon compliance with the mitigation measures which have emerged through the SEA, AA and SFRA processes and which have been integrated into the Plan. The potentially significant adverse environmental effects arising from implementation of the Plan are detailed on Table 8.3 below.

Environmental Component	Potential Effect
Biodiversity and Flora and Fauna	<ul style="list-style-type: none"> o Loss of biodiversity with regard to Natura 2000 Sites and Annexed habitats and species (see baseline Section 4.4) o Loss of biodiversity with regard to ecological connectivity and stepping stones (see baseline Section 4.4) o Loss of biodiversity with regard to designated sites including Wildlife Sites and species listed on Schedule 5 of the Wildlife Act 1976 (see baseline Section 4.4) o Failure to sustain rural management practices (see baseline Section 4.4)
Population and Human Health	<ul style="list-style-type: none"> o Spatially concentrated deterioration in human health (see baseline Section 4.5)
Soil	<ul style="list-style-type: none"> o Damage to the hydrogeological and ecological function of the soil resource (see baseline Section 4.6)
Water	<ul style="list-style-type: none"> o Adverse impacts upon the status and quality of water bodies, including bathing waters (see baseline Sections 4.7.3 and 4.7.4) o Increase in the risk of flooding (see baseline Section 4.7.6)
Material Assets	<ul style="list-style-type: none"> o Failure to provide adequate and appropriate waste water treatment (see baseline Section 4.9.1) o Failure to comply with drinking water regulations and serve new development with adequate drinking water that is both wholesome and clean (see baseline Section 4.9.1) o Increases in waste levels (see baseline Section 4.9.2)
Air and Climatic Factors	<ul style="list-style-type: none"> o Failure to contribute towards sustainable transport and associated impacts (see baseline Section 4.8)
Cultural Heritage	<ul style="list-style-type: none"> o Effects on entries to the Record of Monuments and Places and other archaeological heritage (see baseline Section 4.10.2) o Effects on entries to the Records of Protected Structures and other architectural heritage (see baseline Section 4.10.3)
Landscape	<ul style="list-style-type: none"> o Occurrence of adverse visual impacts (see baseline Section 4.11)

Table 8.3 Potentially Significant Adverse Environmental Effects arising from the Plan

¹¹⁶ Except as provided for in Section 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.

8.4 Interrelationship between Environmental Components

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

Likely significant effects on environmental components which are identified include those which are interrelated; implementation of the Plan 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		No	Yes	Yes	Yes	Yes	No	Yes
Population and human health			Yes	Yes	Yes	Yes	No	No
Soil				Yes	No	Yes	No	No
Water					No	Yes	No	No
Air and Climatic factors						Yes	No	No
Material assets							Yes	Yes
Cultural heritage								Yes
Landscape								

8.5 Cumulative Effects

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

There are 2 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; and,
- Potential *inter-Plan* cumulative effects - these arise when the effects of the implementation of one plan occur in combination with those of other plans or developments.

A variety of potential *intra-Plan* cumulative environmental effects occur when considering the implementation of the Plan. The interrelationships between environmental components that determine these potential effects are identified on Table 8.4 e.g. interrelationships between: human health and water quality; human health and air quality; and human health and flood risk.

With regard to potential *inter-Plan* cumulative environmental effects, these occur as a result of the combination of: potential environmental effects which are identified by the assessment as arising from Plan measures; and the effects arising from other legislation, plans, programmes or developments arising. Other legislation, plans, programmes or developments arising which have been considered by the assessment of environmental effects include, but are not limited to, those which are identified on Table 8.5 (additional detail on a number of these plans etc. is provided under Section 2.6, Section 4 and Section 5 of this report).

The SEA (and AA) undertaken for the County Development Plan have taken account of the Council's obligation to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management.

In considering the relationship with legislation and other plans and programmes it is important to note that the County Development Plan will be implemented within areas that have existing plans and programmes for a range of sectors [e.g. water management, land use, energy] at a range of levels [e.g. national, river basin district, regional, county and local] that are already subject to more specific higher and lower tier SEA and AA.

The assessment of the likely *inter-Plan* cumulative environmental effects requires knowledge of the likely effects of all plans/developments under consideration. The assessment is limited in this instance as there has been limited assessment of the likely types of developments provided for by other policies, plans and programmes that could occur in combination with the implementation of the County Development Plan. Taking into account available information, the key potential *inter-Plan* cumulative environmental effects that are considered in the assessment relate to effects upon the status of surface and ground waters and associated interactions (in combination with Regional Planning Guidelines, Development Plans and River Basin Management Plans), such as those related to ecology and drinking water resources, and potential effects upon the landscape. Other potential *inter-Plan* cumulative environmental effects include those occurring on various environmental components within areas where the Ballinasloe Town Development Plan and Local Area Plans for the following settlements are in force Athenry, Bearna, Baile Chláir, Clarinbridge, Clifden, Craughwell, Gaeltacht, Gort, Headford, Kinvara, Loughrea, Maigh Cuilinn, Oranmore, Oughterard, Portumna and Tuam and the potential cumulative visual impact of development in county boundary areas.

Cumulative effects considered throughout the detailed assessment and mitigated against by the measures included in Section 9 of the Report include:

- Coastal developments e.g. linear coastal developments, ports, marinas, harbours etc;

- The cumulative impact of individual lower tier plans, including with reference to water and wastewater treatment capacity;
- The cumulative impact of providing for development in more rural areas, on efforts to increase sustainable transport levels;
- The cumulative impact of new developments on travel demand and the capacity of surrounding transport; and
- The cumulative effects on flooding of gradually developing greenfield lands.

Effects that may arise as a result of implementing the Plan have been mitigated to the extent that the only residual effects likely to occur as a result of implementation of the Plan are those which are identified under Section 8.6.

Table 8.5 Selection of Relevant Legislation, Plans and Programmes Considered

European and National	
Water Framework Directive, implemented by European Communities (Water Policy) Regulations 2003 (as amended)	
Surface Water Directive, implemented by European Communities Environmental Objectives (Surface Waters) Regulations 2009 (as amended)	
Groundwater Directive, implemented by European Communities Environmental Objectives (Groundwater) Regulations 2010 (as amended)	
Drinking Water Directive, implemented by European Union (Drinking Water) Regulations 2014 (as amended) and European Communities (Water Policy) Regulations 2003	
Bathing Water Directive, implemented by Bathing Water Quality (Amendment) Regulations 2008 (as amended)	
Marine Strategy Framework Directive, implemented by European Communities (Marine Strategy Framework) Regulations 2011	
Urban Waste Water Treatment Directive, implemented by European Communities (Urban Waste Water Treatment) Regulations 2001	
Flood Directive, implemented by European Communities (Assessment and Management of Flood Risks) Regulations and European Union (Environmental Impact Assessment) (Flood Risk) Regulations 2012	
Freshwater Fish Directive, implemented by The Water Pollution Acts, 1977 and 1990	
Shellfish Waters Directive, implemented by: European Communities (Quality of Shellfish Waters) Regulations 2006 (as amended); European Communities (Food and Feed Hygiene) Regulations 2009 (as amended); European Communities (Hygiene of Foodstuffs); and European Union (Microbiological Criteria for Foodstuffs) Regulations 2012 (as amended)	
Habitats Directive, implemented by: European Communities (Birds and Natural Habitats) Regulations 2011; and The Wildlife Act 1976 and the Wildlife (Amendment) Act 2000	
Birds Directive, implemented by European Communities (Birds and Natural Habitats) Regulations 2011	
Nitrates Directive, implemented by European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2009 (as amended)	
Dangerous Substances Directive as amended, implemented by: European Communities Water Quality (Dangerous Substances) Regulations 2001; and European Communities (Water Policy) Regulations 2003	
Environmental Quality Standards Directive as amended, implemented by: European Communities Environmental Objectives (Surface Waters) Regulations 2009; and European Communities (Water Policy) Regulations 2003	
Environmental Liability Directive, implemented by European Communities (Environmental Liability) Regulations, 2008	
SEA Directive, implemented by: European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (as amended); and Planning and Development (SEA) Regulations 2004 (as amended)	
EIA Directive amended, implemented by: European Communities (Environmental Impact Assessment) Regulations 1989 (as amended); and European Union (Environmental Impact Assessment) (Flood Risk) Regulations 2012	
Renewable Energy Directive implemented by European Communities (Renewable Energy) Regulations 2011	
EU 2020 climate and energy package as implemented by European Communities (Renewable Energy) Regulations 2011, as implemented by the Framework for Climate Change Bill; and European Communities (Renewable Energy) Regulations 2011	
A Blueprint to Safeguard Europe's Water Resources	
European Union Biodiversity Strategy to 2020, as implemented by Actions for Biodiversity 2011-2016 Ireland's National Biodiversity Plan, 2011	
National and Regional	
National Spatial Strategy for Ireland 2002-2020	National Seafood Operational Programme 2014-2020
RPGs for the West Region 2010-2022	National Strategic Plan for Aquaculture (Draft)
Western and Shannon International River Basin Districts CFRAM Studies	National Peatlands Strategy (Draft)
Western and Shannon International River Basin Management Plans and associated Programmes of Measures	National Forestry Programme 2014-2020 (Forests, Products and People. Ireland's Forest Policy - A Renewed Vision) (Draft)
Water Quality Management Plans	New Waste Management Plan for Connacht-Ulster
National Renewable Energy Action Plan	National Landscape Strategy 2014 (currently draft)
Offshore Renewable Energy Development Plan	Harvest 2020
Harnessing Our Ocean Wealth	Irish Water's Water Services Strategic Plan (Draft)
Grid25 and associated Implementation Programme (including projects under Grid West)	Forests, Products and People. Ireland's Forest Policy - A Renewed Vision (Draft)
National Climate Change Strategy	National Peatlands Strategy (Draft)
Agri-vision 2015 Action Plan	National Rural Development Programme
Rural Environmental Protection Scheme, Agri-Environmental Options Scheme and Green, Low-Carbon, Agri-environment Scheme	Raised Bog SAC Management Plan and Review of Raised Bog Natural Heritage Areas
Office of Public Works Arterial Drainage Maintenance and High Risk Designation Programme 2011-2015	National Climate Change Adaption Framework – Building Resilience to Climate Change 2012
Sub-Regional	
Development Plans including those for counties Mayo, Roscommon, Offaly, Tipperary and Clare and for Ballinasloe Town	Athenry, Bearna, Clifden, Craughwell, Gaeltacht, Gort, Loughrea, Maigh Cuilinn, Oranmore, Oughterard, Portumna and Tuam
Galway County Biodiversity Action Plan	Shellfish Pollution Reduction Programmes
Galway County Heritage Plan 2010-2016	Freshwater Pearl Mussel Sub-Basin Management Plans
County Landscape Character Assessments	County Renewable Energy, Wind Strategies

8.6 Residual Adverse Effects

Section 9 outlines the measures that will mitigate the potential effects that are detailed under the subsections below. Residual adverse effects likely to occur - considering the extent of detail provided by the Plan and assuming that all mitigation measures are complied with by development - are identified for each of the environmental components on Table 8.6.

Table 8.6 Residual Adverse Effects

Environmental Component	Residual Adverse Effects
Biodiversity and Flora and Fauna	Loss of an extent of non-protected habitats arising from the replacement of semi-natural land covers with artificial surfaces
Population and Human Health	None
Soil	Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces
Water	Flood related risks remain due to uncertainty with regard to extreme weather events
Air and Climatic Factors	None
Material Assets	Residual wastes to be disposed of in line with higher level waste management policies
Architectural Heritage	Potential alteration to the context and setting of architectural heritage (Protected Structures) however these will occur in compliance with legislation
Archaeological Heritage	Potential alteration to the context and setting of archaeological heritage (Recorded Monuments) however this will occur in compliance with legislation Potential loss of unknown archaeology however this loss will be mitigated by measures integrated into the Plan
Landscape Designations ¹¹⁷	None

8.7 Detailed Evaluation of Plan Provisions

8.7.1 Overall Findings

The overall findings (in addition to those detailed in preceding sections) are that:

- The Council have integrated all recommendations arising from the SEA, AA and SFRA into the Plan (see Section 9);
- Some Plan provisions would be likely to result in significant positive effects upon all of the environmental components (see Section 9); and
- Some provisions would have the potential to result in significant negative environmental effects (these are described below) however these effects will be mitigated by the mitigation measures which have been integrated into the Plan (see Section 9).

¹¹⁷ The Plan contributes towards the protection of landscape designations. The county's landscapes will change overtime as a result of natural changes in vegetation cover combined with new developments.

8.7.2 Chapter 1: Introduction

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs - unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	No Likely interaction with status of SEOs
Vision and Strategic Aims				
<p>Vision: Enhance the quality of life of the people of Galway and maintain the County as a uniquely attractive place in which to live, work, invest and visit, harnessing the potential of the county's competitive advantages in a sustainable and environmentally sensitive manner.</p> <p>Strategic Aim 1 – Promote Regional Development: Promote regional development and growth through harnessing the economic and employment potential of the competitive advantages of County Galway such as its strategic location, quality of life, landscape, heritage and natural resources, in a sustainable and environmentally sensitive manner.</p> <p>Strategic Aim 2 – Environmental Protection: Afford suitable protection to the environment and natural resources of the County and ensure the fulfilment of environmental responsibilities.</p> <p>Strategic Aim 3 – Living Landscapes: Recognise the importance of living landscapes where people live, work, visit and enjoy while ensuring they are managed in a sustainable and appropriate manner.</p> <p>Strategic Aim 4 – Balanced Urban and Rural Areas: Prioritise development within the Hub town of Tuam, the Galway Metropolitan Area, Ballinasloe, the key towns and smaller towns, villages and settlements within the County, while supporting the role of the rural areas in sustaining the rural based economy.</p> <p>Strategic Aim 5 – Inclusive Communities: Encourage and support the development of inclusive communities which engage and include all members of society facilitating equal physical, social and cultural access and integration.</p> <p>Strategic Aim 6 – Integrated Development: Ensure a more sustainable and integrated concept of development with regard to land use, transportation, water services, energy supply and waste management over the lifetime of the Plan.</p> <p>Strategic Aim 7 – Sustainable Transportation: Minimise travel demand and promote the increase of sustainable mobility throughout the county.</p> <p>Strategic Aim 8 – An Ghaeltacht: Promote the Gaeltacht as an Irish speaking community, recognising its importance locally, nationally and internationally and endeavour to enhance, sustain and protect the remaining Irish speaking communities of the Gaeltacht, where possible.</p> <p>Strategic Aim 9 – Infrastructural Projects: Facilitate the development of infrastructural projects, which will underpin sustainable development throughout the County and Region during the Plan period.</p> <p>Strategic Aim 10 – Heritage: Enhance and protect the built heritage and natural environment, including buildings, archaeology, landscape and biodiversity, within the County.</p> <p>Strategic Aim 11 – Climate Change Adaptation: Engage in efforts to limit the human induced causes of climate change and take account of climate change in planning and delivering work programmes. Engage in efforts to mitigate and adapt to climate change and integrate climate change considerations in planning and delivering work programmes.</p>	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>		<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	
Commentary:				
<p>The evaluation of the Plan's Vision and Strategic Aims is consistent with the evaluation of chosen strategy for the Plan (Scenario D) as detailed in full in Section 7. It is noted that Strategic Aim No. 10 contributes towards the protection of cultural heritage (CH1 CH2) and Strategic Aim No. 6 contributes towards the integration of development with waste management (M3).</p>				

8.7.3 Chapter 2: Spatial Strategy, Core and Settlement Strategy

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs - unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	No Likely interaction with status of SEOs
Development Strategy Objectives				
<p>Objective DS 1 – Development Strategy: It is the overarching objective of Galway County Council to support and facilitate the sustainable development of County Galway in line with the preferred development strategy option: Option 4 – To Develop the Hub town of Tuam, supporting the Gateway and Key Towns while Encouraging the Development of Other Settlement Centres and Appropriate Development in Rural Areas, which will allow County Galway to develop in a manner that maintains and enhances the quality of life of local communities, promotes opportunities for economic development, sustainable transport options, social integration, and protects the cultural, built, natural heritage and environment while also complying with relevant statutory requirements.</p> <p>Objective DS 2 – Galway Transportation and Planning Study Area (GTPS): a) Continue to recognise the defined Galway Transport and Planning Study Area, the commuter zone of Galway City, which requires careful management of growth and strong policies to shape and influence this growth in a sustainable manner. b) Support a review of the Galway Transportation and Planning Study during the lifetime of the Plan, in co-operation with Galway City Council. Consideration of the inclusion of a Strategic Transport Assessment shall form part of this review.</p> <p>Objective DS 3 – Integrated Land Use and Sustainable Transportation Integrate land use planning and sustainable transportation planning, promote the consolidation of development, encourage sustainable travel patterns by reducing the need to travel particularly by private transport, while prioritising walking, cycling and public transport.</p> <p>Objective DS 4 – Supporting and Securing Investment Galway County Council shall seek to secure investment or support investment, as appropriate, in the necessary infrastructure to pursue the Spatial, Core and Settlement Strategies as set out in this Plan.</p> <p>Objective DS 5 – Protection and Management of the Assets of the County Protect and manage the assets that contribute to the unique visual and environmental character and sense of identity of County Galway, and which underpin tourism, heritage, biodiversity and quality of life.</p> <p>Objective DS 6 – Natura 2000 Network and Habitats Directive Assessment Protect European sites that form part of the Natura 2000 network (Including Special Protection Areas and Special Areas of Conservation) in accordance with the requirements in the EU Habitats Directive (92/43/EEC), EU Birds Directive (2009/147/EC), the Planning and Development (Amendment) Act 2010, the European Communities (Birds and Natural Habitats) Regulations 2011(SI No.477 of 2011) (and any subsequent amendments or updated legislation) and having due regard to the guidance in the Appropriate Assessment Guidelines 2010 (and any updated or subsequent guidance). A plan or project (e.g. proposed development) within the Plan Area will only be authorised after the competent authority (Galway County Council) has ascertained, based on scientific evidence, Screening for Appropriate Assessment, and/or a Habitats Directive Assessment where necessary, that: 1. The Plan or project will not give rise to significant adverse direct, indirect or secondary effects on the integrity of any European site (either individually or in combination with other plans or projects); or 2. The Plan or project will have significant adverse effects on the integrity of any European site (that does not host a priority natural habitat type/and or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or 3. The Plan or project will have a significant adverse effect on the integrity of any European site (that hosts a natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be</p>	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 CH1 CH2 L1</p>		<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	

<p>carried out for imperative reasons for overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.</p> <p>Objective DS 7 – Flood Risk Management and Assessment Ensure that proposals for developments located within identified or potential flood risk areas, or which may exacerbate the risk of flooding elsewhere, are assessed in accordance with the provisions of the Flood Risk Management Guidelines 2009 (or any updated/superseding document) the relevant policies, objectives and guidelines within this Plan and shall also take account of the National CFRAM Programme Flood Hazard Mapping and Flood Risk Management Plans when they become available.</p> <p>Objective DS 8 – Climate Change Galway County Council shall support the <i>National Climate Change Strategy</i> and follow on document <i>National Climate Change Adaptation Framework Building Resilience to Climate Change 2012</i>, on an ongoing basis through implementation of supporting objectives in this Plan, particularly those supporting the use of alternative and renewable energy sources, sustainable transport, air quality, biodiversity, green infrastructure, coastal zone management, flooding and soil erosion.</p> <p>Objective DS 9 Projects/Associated Improvement Works/Infrastructure and Appropriate Assessment Ensure that proposed projects and any associated improvement works or associated infrastructure relating to renewable energy projects; water supply and abstraction; wastewater and discharges; flood alleviation and prevention; roads, power lines and telecommunications; and amenity and recreation provision are subject to Appropriate Assessment where relevant.</p> <p>Objective DS10- Impacts of Developments on Protected Sites Have regard to any impacts of development on or near existing and proposed Natural Heritage Areas, Special Protection Areas and Special Areas of Conservation, Nature Reserves, Ramsar Sites, Wildfowl Sanctuaries, Salmonoid Waters, Refuges for Flora and Fauna, Conamara National Park, shellfish waters, freshwater pearl mussel catchments and any other designated sites including future designations.</p> <p>Objective DS 11 – Strategic Development Corridors Co-ordinate new growth within the key towns, villages and settlements along the strategic development corridors throughout the County in order to create more sustainable development patterns and to optimise public and private investment made within the County and support the appropriate development of the Strategic Economic Corridor.</p> <p>Objective DS12 – Service Led Development Development shall only be permitted where there is satisfactory water and wastewater provision to service same, either existing or to be provided by the applicant in tandem with the development.</p> <p>Objective DS 13 - SEA Monitoring of the Plan Carry out SEA monitoring of the Plan to ensure that any potential significant environmental effects of implementing the plan are identified and can be addressed accordingly.</p>				
<p>Core Strategy Aims and Objectives</p>				
<p>Core Aims of the Core Strategy</p> <ul style="list-style-type: none"> Build on the regional level linkages between County Galway, the Gateway and other parts of the West Region by supporting the implementation of the regional spatial strategy, as set out in the West Regional Planning Guidelines. The regional spatial strategy aims to develop the Galway Gateway, the Tuam Hub and Castlebar-Ballina Linked Hub, supported by the development of the Athlone Gateway and Key Towns, encouraging the development of other settlement centres and appropriate development in the rural areas of the region. Provide for the growth of the County towards a target population of up to 198,000 persons by 2022, as set out in the Regional Planning Guidelines for the West Region 2010-2022 and to distribute that part of the population growth anticipated up to 2021, in line with the Settlement Strategy and Hierarchy set out in this Plan. Focus a greater growth in the Hub town of Tuam, the key towns, lower tier other towns and villages in a sequential manner, recognising the role that new infrastructure and public transport links will play in their future, while maintaining the viability of rural communities in the hinterlands of these towns and villages. Ensure a high level of environmental protection in the implementation of the Core Strategy and strategic aims 	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 L1</p>		<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	

<p>and objectives of the Plan.</p> <p>Objective CS 1 – Provision of a Settlement Hierarchy Galway County Council shall provide a strong and clearly defined hierarchical network of settlements that allow for the sustainable and balanced growth of the County's economy.</p> <p>Objective CS 2 – Development Consistent with the Core Strategy Galway County Council shall ensure that developments permitted within the County are consistent with the County population allocations set out in the Regional Planning Guidelines.</p> <p>Objective CS 3 – Economic and Employment Development Galway County Council shall encourage the development of mixed-use settlement forms, supporting economic and employment development at appropriate locations, ensuring the provision of a satisfactory quantum of zoned land for employment and industry purposes, and ensuring housing, employment uses and community facilities are located in close proximity to each other and to public transport corridors, where possible.</p> <p>Objective CS 4 – Development of Serviced Lands Galway County Council shall ensure that the zoning of lands for residential use is in accordance with the Core Strategy and Settlement Strategy in order to meet the development needs of the County, and ensure that the development of zoned lands is subject to adequate capacity being available in the relevant water and wastewater treatment facilities, prior to or in tandem with the development, in the interest of the protecting water resources in the area.</p> <p>Objective CS 5 – Phasing of Development of Lands The zoning of residential zoned lands within the urban areas shall be based on a phased, sequential approach as set out within the Local Area Plans, with a strong emphasis placed on consolidating existing patterns of development, encouraging infill opportunities and promoting sustainable transport options.</p> <p>Objective CS 6 – Local Area Plans Galway County Council shall seek to prepare Local Area Plans for all settlements which have a population in excess of 1,500 persons either on an individual basis or in an electoral area Local Area Plan, having regard to the <i>Local Area Plans Guidelines for Planning Authorities</i> (2013) and the associated <i>Local Area Plans Manual</i> (2013).</p> <p>Objective CS 7 – Core Strategy and the Countryside/Rural Areas Galway County Council shall recognise the important role of the rural areas within the County and shall protect and support these areas through the careful management of its key assets, including its physical and environmental resources, while supporting appropriate development in a balanced and sustainable manner and in accordance with the relevant policies and objectives set out throughout the Plan.</p> <p>Objective CS 8 – Core Strategy and Demand for Development Galway County Council is committed to ensuring that the overall population growth of the County complies with the level of growth set by the Regional Planning Guidelines and settlement hierarchy as outlined within the Core Strategy.</p>				
Settlement Strategy Objectives				
<p>Objective SS 1 – Galway Gateway and Galway Metropolitan Area Galway County Council shall support the important role of Galway City and the Galway Metropolitan Area (which includes the City area and the Electoral Divisions of Oranmore, Bearna, Galway Rural and Ballintemple which are inextricably linked to and function as part of a greater Galway City), as key drivers of social and economic growth in the County and in the wider Western Region and will support the sustainable growth of the strategic settlements, including the future development of Ardaun and Garraun, within the Galway Metropolitan Area.</p> <p>Objective SS 2 – Ardaun Facilitate and support the development of Ardaun in conjunction with Galway City Council.</p> <p>Objective SS 3 – Hub Town : Tuam Galway County Council shall promote and secure the development of Tuam, to enable it to fulfil its potential as a hub town, so that it obtains the critical mass necessary to sustain strong levels of economic growth and prosperity, while supporting improvements in connectivity between the Gateway and the Hub, enhancing their complementary status.</p> <p>Objective SS 4 – County Town : Ballinasloe Recognise the county town of Ballinasloe as an important driver of growth in the county and support its sustainable development in line with the Core Strategy, in order to sustain its commercial core, retain its population and accommodate additional population and commercial growth.</p>	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 L1</p>		<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	

<p>Objective SS 5 – Development of Key Towns Support the development of the key towns of the County as outlined in the Core Strategy and Settlement Strategy in order to sustain strong, vibrant urban centres which act as important drivers for the local economies, reduces travel demand and supports a large rural hinterland, while providing a complementary role to the hub town of Tuam and the smaller towns and villages in the County.</p> <p>Objective SS 6 – Development of Other Villages Protect and strengthen the economic diversity of the smaller towns, villages and small settlements throughout the County, enabling them to perform important retail, service, amenity, residential and community functions for the local population and rural hinterlands.</p> <p>Objective SS 7 – Development of Small Settlements In the case of smaller settlements for which no specific plans are available, development shall be considered on the basis of its connectivity, capacity (including social, cultural, and economic, infrastructural and environmental capacity) and compliance with the Core Strategy and Settlement Strategy, good design, community gain and proper planning and sustainable development.</p> <p>Objective SS 8 – Development of Rural Communities Galway County Council shall recognise the important role of rural communities to the sustainable development of County Galway and shall ensure the careful management of development in these areas, having due regard to the relevant policies and objectives set out elsewhere in the Plan.</p>				
<p>Commentary: The evaluation of the Plan's Development Strategy, Core Strategy and Settlement Strategy Objectives is consistent with the evaluation of the chosen strategy for the Plan (Scenario D) as detailed in full in Section 7. It is noted that Development Strategy Objective DS1 contributes towards the protection of cultural heritage (CH1 CH2).</p>				

8.7.4 Chapter 3: Urban and Rural Housing

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs - unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	No Likely interaction with status of SEOs
<p>Strategic Aims</p>				
<p>The strategy for achieving quality housing is based on the following strategic aims:</p> <ul style="list-style-type: none"> • Ensure that sufficient land is zoned to meet the projected population in line with the Core Strategy; • Promote mixed housing developments and minimise the extent of further social housing especially where there is a high concentration of social housing in a particular area; • Provide for changing household size and promote an appropriate mix of dwelling types, sizes and tenures to facilitate the creation of balanced communities; • Promote residential densities to ensure the efficient use of land at appropriate locations. The efficient use of lands for residential purposes shall not compromise the need for social inclusion and shall provide for an appropriate mix of housing types; • Support the implementation of the Council's Housing Strategy and Traveller Accommodation Programme; • Provide for changing housing needs and promote the provision of social and specialist housing and housing for groups with particular needs; • Promote the consolidation of existing built-up areas by facilitating good quality appropriate infill development, whilst protecting essential amenities; and • Support and maintain the rural population. 	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 L1</p>		<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	
<p>Commentary: The evaluation of the Housing Strategic Aims is consistent with the evaluation of the chosen strategy for the Plan (Scenario D) as detailed in full in Section 7.</p>				

Urban Housing Policies and Objectives				
<p>Policy UHO 1 - Land Use Availability Ensure that sufficient and suitably located land is zoned for residential development to satisfy development needs within the period of this plan and in accordance with the Core Strategy/Settlement Strategy.</p> <p>Policy UHO 2 - Housing Strategy Ensure, in accordance with Part V of the <i>Planning & Development Act, 2000</i> (as amended) that arrangements for the provision of Housing are made in accordance with the current Housing Strategy 2015-2021. Secure the provision of social and specialist housing accommodation where possible, to meet the needs of all households and the disadvantaged sectors in the County, including older persons, first time buyers, those building their first homes, single person households on modest incomes, people with disabilities, special needs, Travellers etc.</p> <p>Objective UHO 1 - Housing Strategy Secure the implementation of the Housing Strategy 2015-2021, including the implementation of its policies and objectives and requirement to reserve a minimum of 12% of residential development for social and specialist housing.</p> <p>Objective UHO 2 - Social and Specialist Housing Implement Part V provisions as per the Planning and Development Act 2000 (as amended) and any subsequent amendments to the Part V provision to reflect Government policy.</p> <p>Objective UHO 3 - Special Needs Facilitate the provision of suitable accommodation for those with special needs through existing and new Local Authority and voluntary housing as well as the upgrade of existing residences</p> <p>Objective UHO 4 - Homelessness Facilitate the provision of suitable accommodation for the homeless and for those in need of emergency accommodation</p> <p>Objective UHO 5 - Traveller Accommodation Support and implement the <i>Draft Traveller Accommodation Programme 2014-2018 for County Galway</i> (or any updated/superseding document).</p> <p>Objective UHO 6 – Older Persons Accommodation Promote and support the development of housing for older people and those with disabilities, including the concept of independent living and the development of "life cycle housing" i.e. housing that is adaptable for people's needs as they change over their lifetime.</p> <p>Objective UHO 7 - High Quality/Mix and Sensitive Design Ensure that new developments are responsive to their site context and in keeping with the character, amenity, heritage, environment and landscape of the area. New development proposals will be required to complement the existing character of the town centre/area in terms of scale, height, massing, building line, housing mix, urban grain and definition and through high quality design and layout proposals for buildings and structures.</p> <p>Objective UHO 8 – Urban Design Promote the use of sustainable urban design principles and approaches that will help to create high quality built and natural environments appropriate to the context and landscape setting of the specific area, having regard to the guidance contained in the <i>Sustainable Residential Development in Urban Areas Guidelines 2009</i>, the accompanying <i>Urban Design Manual 2009</i> (or any updated version) and the <i>Design Manual for Urban Roads & Streets</i> (2013) (including any superseding document).</p> <p>Objective UHO 9 - Vacant Properties/Unfinished Housing Promoters of significant residential developments in urban areas where there are large numbers of vacant or unfinished houses will be required to substantiate the requirement for same, based on the individual circumstances of the area.</p> <p>Objective UHO 10 – Sequential Development Endeavour to promote the orderly and phased development of residential development in accordance with the principles of the sequential approach and as set out in the <i>Sustainable Residential Development in Urban Areas (Cities, Towns & Villages) Guidelines 2009</i> (or as updated). This shall include a positive presumption in favour of the sequential development of suitably serviced Residential (Phase 1) lands in zoned towns and villages. In un-zoned towns and villages, the presumption shall be in favour of sequential development emanating from the town/village core outwards, subject to compliance with the principles of proper planning and sustainable development and the County Development Plan. This objective will not refer to single house build. Regarding the phasing of undeveloped residential zoned land, development on Residential – Phase 2 lands will normally only be considered where 50% of the lands in Residential</p>	<p>B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 C1 L1</p>		<p>B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	<p>B4</p>

<p>Phase 1 are committed to development.</p> <p>Objective UHO 11 - Development Densities Galway County Council shall ensure that the density of new development is appropriate to the particular land use zone and/or site context, is in keeping with the existing development pattern of the area, does not unduly impact on the amenities of the area and results in a positive relationship between existing development and any adjoining public spaces. The development of higher density development shall be promoted in appropriate locations, such as suitable sites within the town/village centre and adjacent to public transport facilities, where such development is compatible with heritage and urban design objectives, infrastructure capacity and environmental considerations. New development shall also have regard to the 'Sustainable Residential Development in Urban Areas' Guidelines (or any updated/superseding document).</p> <p>Objective UHO 12-Linguistic Impact Statements Galway County Council shall require the submission of a Linguistic Impact Statement for housing proposals for two or more houses in the Gaeltacht area in order to protect and strengthen the Irish language and cultural heritage of the Galway Gaeltacht areas. A Language Enurement Clause of 15 years duration shall apply to approved developments, of two or more units.</p> <p>Objective UHO 13 – Urban Housing in Gaeltacht Settlements Development of multiple residential units (2 or more) in the Gaeltacht settlements shall be subject to Galway County Council's linguistic and occupancy requirements in order to protect the linguistic and cultural heritage of the Gaeltacht including the promotion of Irish as the community language.</p>				
<p>Commentary: The evaluation of the Housing Strategic Aims is consistent with the evaluation of the chosen strategy for the Plan (Scenario D) as detailed in full in Section 7. It is noted that the provision of housing in urban areas would not be likely to improve or conflict with the sustenance of sustainable rural management practices (SEO B4).</p>				
<p>Rural Housing Policies and Objectives</p>				
<p>Policy RHO 1 - Management of New Single Houses in the Countryside It is a policy of the Council to facilitate the management of new single houses in the countryside in accordance with the Rural Housing Zones 1, 2, 3 & 4 and to support the sustainable re-use of existing housing stock within the County.</p>	<p>B4</p>		<p>B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	
<p>Commentary: By facilitating rural housing in the countryside this provision would contribute towards the sustenance of sustainable rural management practices (SEO B4) however the development of rural housing would be likely to conflict with:</p> <ul style="list-style-type: none"> • the protection of biodiversity and flora and fauna (SEOs B1 B2 B3) • the protection of human health (SEO PHH1) • the protection of soil function and the status of water bodies (SEOs S1 W1 W2) • minimising increases in flood risk (SEO W3) • maximising sustainable mobility (SEO C1) • minimising impacts upon archaeological and architectural heritage (SEOs CH1 CH2); • minimising visual impacts (SEO L1) • the provision of adequate and appropriate water services (SEO M1 M2) • minimising waste levels (SEO M3) <p>These conflicts would be mitigated by the measures which have been integrated into the Plan and are identified in Section 9 of this report.</p>				
<p>Policy RHO 2 - Adherence to the Statutory Guidelines & County Development Plan It is a policy of the Council to ensure that future housing in rural areas complies with the Sustainable Rural Housing Guidelines for Planning Authorities 2005(DOHLG), the Core/Settlement Strategies for County Galway, Rural Housing Objectives and the Development Management Standards & Guidelines of this Plan.</p>	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>		<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	
<p>Commentary: The evaluation of Policy RHO 2 is consistent with the evaluation of the cited Strategies and Objectives which are detailed under Section 8.7.3 above. It is noted that the Plan's Development Management Standards and Guidelines contribute towards reductions in waste levels and increases in recycling and reuse (M3).</p>				

<p>Objective RHO 1 - Rural Housing Zone 1 (Rural Area Under Strong Urban Pressure-GTPS) It is an objective of the Council to facilitate Rural Housing in the open countryside subject to the following criteria: 1.(a) Those applicants with Rural Links* to the area through long standing existing and immediate family ties seeking to develop their first home on existing family farm holdings. Documentary evidence shall be submitted to the Planning Authority to justify the proposed development and will be assessed on a case by case basis. OR 1.(b) Those applicants who have no family lands but who wish to build their first home within the community in which they have long standing Rural links* and where they have spent a substantial, continuous part of their lives i.e. have grown up in the area, schooled in the area and have immediate family connections in the area e.g. son or daughter of longstanding residents of the area. Consideration shall be given to special circumstances where a landowner has no immediate family and wishes to accommodate a niece or nephew on family lands. Having established a Substantiated Rural Housing Need*, such persons making an application on a site within a 8km radius of their original family home will be accommodated, subject to normal development management criteria and provided the site does not encroach into the Urban Fringe* of the towns of Gort, Loughrea, Athenry or Tuam. Documentary evidence shall be submitted to the Planning Authority to justify the proposed development and will be assessed on a case by case basis. OR 1.(c) Those applicants who can satisfy to the Planning Authority that they are functionally dependent on the immediate rural areas in which they are seeking to develop a single house as their Principal Family Residence in the countryside. Documentary evidence shall be submitted to the Planning Authority to justify the proposed development and will be assessed on a case by case basis. OR 1(d) Where applicants can supply land registry or folio details that demonstrate that the lands on which they are seeking to build their first home, as their permanent residence, in the area have been in family ownership for a period of 20 years or more, their eligibility will be considered. Where this has been established to the satisfaction of the Planning Authority, additional intrinsic links will not have to be demonstrated OR 1(e) In cases where all sites on the family lands are in a designated area, family members will be considered subject to the requirements of the Habitat's Directive and normal planning considerations 2.(a) Those applicants who lived for substantial periods of their lives in the rural area, then moved away and who now wish to return and build their first house as their permanent residence, in this local area. Special consideration will be given to one member of the immediate family of emigrants returning to this local area to live near their immediate family. Documentary evidence shall be submitted to the Planning Authority to illustrate their links to the area in order to justify the proposed development and it will be assessed on a case by case basis. 2. (b) To recognise that exceptional health circumstances, supported by relevant documentation from a registered medical practitioner and disability organisation, may require a person to live in a particular environment or close to family support. Documentary evidence shall be submitted to the Planning Authority to justify the proposed development and will be assessed on a case by case basis. 3. An Enurement condition shall apply for a period of 7 years, after the date that the house is first occupied by the person or persons to whom the enurement clause applies. *See Definitions in accompanying Plan.</p>	B4		B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
<p>Objective RHO 2 - Rural Housing Zone 2(Structurally Weak Area) It is an objective of the Council to facilitate the development of individual houses in the open countryside in "Structurally Weak Areas" subject to compliance with normal planning and environmental criteria and the Development Management Standards laid down in Chapter 13 and other applicable standards with the exception of those lands contained in Landscape Categories 3, 4 & 5 where objective RHO3 applies.</p>	B4		B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
<p>Objective RHO 3 - Rural Housing Zone 3 (Landscape Category 3, 4 and 5) Those applicants seeking to construct individual houses in the open countryside in areas located in Landscape Categories 3, 4 and 5 are required to demonstrate their <u>Rural Links*</u> to the area and are required to submit a <u>Substantiated Rural Housing Need*</u>. In addition an Applicant maybe required to submit a visual impact assessment of their development, where the proposal is located in an area identified as "Focal Points/Views" in the Landscape Character Assessment of the County or in Class 4 and 5 designated landscape areas. Documentary evidence shall be submitted to the Planning</p>	B4		B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	

Authority to justify the proposed development and will be assessed on a case by case basis. An Enurement condition shall apply for a period of 7 years, after the date that the house is first occupied by the person or persons to whom the enurement clause applies. *See Definitions in accompanying Plan.				
Objective RHO 4 - Rural Housing Zone 4 (An Gaeltacht) It is an objective of the Council to facilitate Rural Housing in the open countryside subject to the following criteria: (a) Those applicants within the Gaeltacht which are located in Zone 1 (Rural Area Under Strong Urban Pressure-GTPS) and Zone 3 (Landscape Category 3, 4 and 5) shall comply with the objectives contained in RHO1 & RHO3 as appropriate. Applicants, whose original family home is located on the coastal strip west of An Spidéal, will be permitted to move closer to the city but not more than 8 km from the original family home. OR (b) It is an objective of the Council that consideration will be given to Irish speakers who can prove their competence to speak Irish in accordance with Galway County Council's requirements and who can demonstrate their ability to be a long term asset to the traditional, cultural and language networks of vibrant Gaeltacht Communities. This consideration will apply to applicants seeking to provide their principal permanent residence, in landscape designations Class 1 & 2 and 3. It will also extend to Class 4 areas that are not in prominent scenic locations. A Language Enurement Clause of 15 years duration will apply to approved developments in this category.	B4		B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
Commentary for Policy RHO 1 applies for Objectives RHO 1 to RHO 4				
Objective RHO -5 Building Conversions in Gaeltacht Areas It is an objective of the Council that building conversions in Gaeltacht areas will be considered for the purposes of advancing Gaeltacht Tourism and Gaeltacht Colleges provided the need is substantiated and the development complies with the requirements of the <i>EPA Code of Practice Manual 2009</i> or any superseding wastewater treatment manual. Documentary evidence shall be submitted to the Planning Authority to justify the proposed development and will be assessed on a case by case basis.	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 CH1 CH2 L1		B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
Objective RHO 6- Replacement Dwelling It is an objective of the Council that the refurbishment of existing habitable dwelling houses would be encouraged, as a more sustainable option than the demolition and construction of a new dwelling house, unless a conclusive case for demolition based on technical evidence is made for the Planning Authority's consideration on a case by case basis. It will be a requirement that any new dwelling house be designed in accordance with <i>Galway County Council's Design Guidelines for Rural Housing</i> in the countryside. Applicants, who require the demolition of an existing dwelling house shall be accommodated without the requirement to establish a Housing Need or proof of residence and will not be subject to an enurement clause.	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 CH1 CH2 L1		B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
Objective RHO 7- Renovation of existing derelict dwelling/semi ruinous dwelling It is an objective of the Council that proposals to renovate, restore or modify existing derelict or semi-derelict dwellings in the County are generally dealt with on their merits on a case by case basis, having regard to the relevant policies and objectives of this plan, the specific location and the condition of the structure and the scale of any works required to upgrade the structure to modern standards. The derelict/semi ruinous dwelling must be structurally sound, have the capacity to be renovated and/or extended and have the majority of its original features/walls in place. A structural report will be required to illustrate that the structure can be brought back into habitable use, without compromising the original character of the dwelling. Where the total demolition of the existing dwelling is proposed an Enurement Clause for seven years duration will apply.	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 CH1 CH2 L1		B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
Commentary: By reducing the need for new greenfield development these provisions would be likely to improve the status of various environmental components. Nonetheless, potential conflicts would still remain and would need to be mitigated by the measures which have been integrated into the Plan (see Section 9 of this report).				
Objective RHO 8 – Substantially Completed Single Dwelling Where planning permission has elapsed on a previously permitted development that has been substantially completed and the dwelling remains unfinished it will not be a requirement to establish a Rural Housing Need if it were not a condition of the previously granted planning permission.				B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 CH1 CH2 L1
Commentary: This provision relates to previously permitted development that has been substantially completed and would not be likely to result in additional significant effects.				

<p>Objective RHO 9- Design Guidelines It is an objective of the Council to have regard to Galway County Councils' Design Guidelines for the Single Rural House with specific reference to the following: (a) It is an objective to encourage new dwelling house design that respects the character, pattern and tradition of existing places, materials and built forms and that fit appropriately into the landscape. (b) It is an objective to promote sustainable approaches to dwelling house design and encouraging proposals to be energy efficient in their design and layout. (c) It is an objective to require the appropriate landscaping and screen planting of proposed developments by using predominately indigenous/local species and groupings</p>	<p>B1 B2 B3 B4 W1 CH1 CH2 L1</p>			<p>PHH1 S1 W2 W3 M1 M2 M3 C1</p>
<p>Commentary: These guidelines would benefit the status of a number of environmental components.</p>				
<p>Objective RHO 10- Vacant/Unfinished Housing Applicants for rural housing on lands other than family lands shall be encouraged to consider the option to avail of existing or permitted housing in areas where there are high levels of such stock available. A statement relating to same should be submitted as part of the application indicating that an examination of such stock was carried out and clear reasons for the unsuitability of any developments considered.</p>	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 CH1 CH2 L1</p>		<p>B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	
<p>Commentary: By reducing the need for new greenfield development this provision would be likely to improve the status of various environmental components. Nonetheless, potential conflicts would still remain and would need to be mitigated by the measures which have been integrated into the Plan (see Section 9 of this report).</p>				
<p>Objective RHO11-Urban/Rural Demarcation It is an objective of the Council to preserve and protect the open character of transitional lands outside of settlements in order to maintain a clear demarcation and distinction between urban areas and the countryside.</p>	<p>B4</p>		<p>B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	
<p>See Commentary under Objectives RHO1/RHO3</p>				
<p>Objective RHO 12-Waste Water Treatment Associated with Development in Un-Serviced Area Permit development in un-serviced areas only where it is demonstrated to the satisfaction of the Planning Authority that the proposed wastewater treatment system is in accordance with the Code of Practice Wastewater Treatment and Disposal Systems Serving Single Houses EPA (2009)/ EPA Wastewater Treatment Manuals – Treatment Systems for Small Communities, Business, Leisure Centres and Hotels (1999) (or any superseding documents) and subject to complying with the provisions and objectives of the EU Water Framework Directive.</p>	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 M1 M2</p>		<p>B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	
<p>Commentary: By facilitating rural housing in the un-serviced areas, this provision would contribute towards the sustenance of sustainable rural management practices (SEO B4) however the development of rural housing would be likely to conflict with various environmental components. These conflicts would be mitigated by the references to wastewater and water requirements in the objective as well as by the measures which have been integrated into the Plan and are identified in Section 9 of this report.</p>				
<p>Objective RHO 13-Lifetime Enurement Clause Lifetime enurement clauses will be considered to have expired after a period of seven years of full time occupancy by the applicant. Actual removal of the enurement clause will have to be established by a planning application.</p>	<p>B4</p>		<p>B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	
<p>Commentary: This objective could potentially contribute towards increased levels of development in the countryside – and associated potential effects - however these conflicts would be mitigated by measures which have been integrated into the Plan and are identified in Section 9 of this report</p>				

8.7.5 Chapter 4: Economic, Tourism and Retail Development

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs - unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	No Likely interaction with status of SEOs
Strategic Aims				
<ul style="list-style-type: none"> To seek to ensure that economic recovery is tangible and that economic growth is experienced in every part of the County and is shared amongst all inhabitants; To safeguard and augment County Galway's extensive economic, tourism and employment base; To facilitate large scale enterprise and development at strategic locations in the County; To facilitate economic growth in the rural economy of the County in the form of appropriate farm diversification, green tourism and sustainable micro rural enterprise; To ensure that the retail needs of the County's population are provided for, insofar as is possible, within County Galway; To support the role of towns as critical drivers of economic growth in County Galway and identify town centres that require assistance and intervention, in order to attempt to address any commercial decline or stagnation and to strive to enable their retail cores to flourish; To ensure that the public realm associated with towns and villages in the County are sufficiently pleasant, safe, accessible and vibrant to entice the public to live, work, shop and socialise there; To be proactive in exploring methods to identify town centre sites including derelict/disused buildings that may be suitable for retail development and business or commercial purposes. 	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 L1		B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
Commentary: The evaluation of these Strategic Aims is consistent with the evaluation of the chosen strategy for the Plan (Scenario D) as detailed in full in Section 7.				
Economic Development & Tourism Policies and Objectives				
Policy EDT 1 – Economic Development Support sustainable economic development and employment creation in the County while simultaneously having regard to relevant planning legislation and guidance in order to ensure protection of the built and natural heritage, landscape/townscape/streetscape character of settlements and the rural countryside and general amenity.	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 L1 CH1 CH2		B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
Policy EDT 2 – Employment, Economy & Enterprise Promotion & Partnership Proactively pursue economic growth, enterprise and employment in the County in conjunction with the relevant state agencies and government departments in a manner that synchronises with the policies and objectives as set out in national, regional and local strategies.	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 L1		B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
Policy EDT 3 – Regional Synergy Forge partnerships with bordering local authorities and other local and regional agencies including the Western Regional Authority to optimise the benefits of combined resources in order to realise the full sustainable economic potential of the County and Western Region.	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 L1		B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
Policy EDT 4 – Third Level/Research Institutions & the Knowledge Economy Garner and develop strategic links with third level institutions and industries/businesses in order to create an enhanced local knowledge based economy and in order to strengthen education, training and skills development in the workforce.	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 L1		B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
Policy EDT 5 – County Tourism Maintain the status of County Galway as a popular tourist destination, by striving to preserve the attributes and assets of the County that make it unique and by endeavouring to enrich the visitor experience by contributing to the fulfilment of appropriate additional tourist resources and facilities, throughout the County within the lifetime of the Plan.	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 L1		B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
Policy EDT 6 – Tourism Product Support the development of an integrated tourism product for the County involving all the relevant stakeholders and the marketing of tourism initiatives at local, regional, national and international level.	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 L1		B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	

Policy EDT 7 – Arts, Culture, Heritage, Food & Crafts Support the development and marketing of the Arts, culture, heritage, foods and crafts of the County through networking and developing trade links with regions, locally, nationally and internationally.	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 L1		B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
Policy EDT 8-Cultural Tourism Support the development of cultural tourism throughout the County and in particular in Irish speaking Gaeltacht areas	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 L1		B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
Policy EDT 9 Barna Golf Course Facilitate the development of an integrated tourism and recreational complex at Bearna Golf and Country Club, including the development of a hotel, leisure centre, conference centre, golf apartments, a part hotel and associated residential units.	B4		B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
Policy EDT 10 Tourism Developments Tourism developments will be subject to appropriate assessment to safeguard the integrity of the Natura 2000 network of sites.	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 L1			C1 CH1 CH2
Objective EDT 1 –Strategic Economic Corridor The objectives for the Strategic Economic Corridor include: <ul style="list-style-type: none"> • To upgrade, improve and maximise the infrastructural facilities available within the corridor. • To seek to reserve lands to support nationally and regionally significant activities and to attract specialist enterprise development that is large scale or high value. • To facilitate opportunities for science and technology based employment. • To ensure development is compatible with the enhancement, preservation and protection of the environment and cultural resources recognised within the corridor. • To identify sites of adequate size and location to accommodate necessary infrastructure or support activities which would not be appropriate in proximity to centres of population or sensitive environments or environmentally sensitive economic activities. • To inform and to aid the preparation of Local Area Plans for strategic areas and those surrounding immediate environs within the corridor. 	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 L1 CH1 CH2		B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
Objective EDT 2 – County Economic Development Strategy Support the preparation of a County Economic Development Strategy and an Economic and Local Community Plan within the lifetime of the Plan.	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 L1		B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
Objective EDT 3 – Research, Innovation, Incubation & Training Support exploratory research, pioneering projects, new start up businesses/industries and retraining programmes in conjunction with the development agencies and educational/research institutions.	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 L1		B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
Objective EDT 4 – Provision of Land & Infrastructure Dedicate a sufficient amount of strategically located and serviced lands for the purposes of targeting economic development and employment creation activities.	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 L1		B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
Objective EDT 5 – Infrastructural Investment Assist in obtaining the maximum efficiency of zoned lands in the County through continued support for the installation, maintenance, upgrade and extension of key water, wastewater, communications, energy and transport infrastructural networks.	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 L1		B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
Objective EDT 6 – Optimise the Benefits of Serviced Lands Safeguard lands that are designated for the creation of employment from inappropriate development that would stifle prospective economic activity.	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 L1		B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	

<p>Objective EDT 7 – Align Enterprise to Serviced Lands Encourage industrial and enterprise development to operate from lands zoned for these purpose within the various Local Area Plans in the County, subject to an adequate consideration of the policies and objectives of this plan and the need to protect the vitality and amenities of the town or settlement.</p>	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 L1</p>		<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	
<p>Objective EDT 8 – Design Standards Encourage the provision of high quality designs (including variations in design and scale), layout, boundary treatment and arrival views of development within Industrial, Business, Enterprise and Commercial/Mixed Use lands, in order to positively contribute to the character and visual amenity of the area.</p>	<p>CH1 CH2 L1</p>			<p>B1 B2 B3 B4 S1 W1 PHH1 W2 W3 M1 M2 M3 C1</p>
<p>Objective EDT 9 – Small Scale Enterprise & Community Services Seek to provide a strategic economic balance countywide by encouraging the establishment of small scale enterprises and community services in the smaller rural villages and settlements of the County.</p>	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 L1</p>		<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	
<p>Objective EDT 10 – Former Galway Airport Site Support the development of the former Galway airport site at An Carn Mór for the purposes of an economic hub/strategic development site or other strategic use.</p>	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 L1</p>		<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	
<p>Objective EDT 11 – Rural Enterprise Consider the establishment of small scale rural orientated enterprises in unserviced rural areas outside of town or village settings which can be accommodated in existing farm buildings or can be established on a brownfield site, subject to satisfying the following criteria: Compatibility and general suitability to an unserviced rural area (primary consideration will be given to agriculture, renewable & marine resources, forestry, tourism, recreation or food production related enterprise activities and services). Scale of development (assimilate appropriately into a rural setting). Nature of development (raw materials sourced locally). Consideration of social and environmental impacts (enterprise must not have a significant adverse impact on the environment or rural amenity). The Enterprise must not constitute a road safety hazard or have a major adverse impact on the road network, road capacity and traffic levels. Residential amenity (enterprise must not have a significant adverse impact on residential amenity).</p>	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>		<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	
<p>Objective EDT 12 – Farm Diversification Consider proposals for the integration of a retail/services use onto a farm where it can be demonstrated that the scale and extent of retailing proposed is ancillary and compatible to the ongoing agricultural use of the farm and will not compromise the vitality and viability of retail facilities in any nearby settlement or detract from the rural setting in which it is to operate.</p>	<p>B4</p>		<p>B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	
<p>Objective EDT 13 – Seveso II Directive Refer planning applications concerning a proposed development within the buffer zone of an existing Seveso II site and any new proposal constituting a Seveso II designation to the Health & Safety Authority.</p>	<p>PHH1</p>			<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>
<p>Objective EDT 14 – Tourism Infrastructure & Services Provide where feasible, and support the provision of tourism infrastructure and services including, greenway amenity and water based tourism infrastructure throughout the County in appropriate locations.</p>	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 L1</p>		<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	
<p>Objective EDT 15 – ‘Conamara Infrastructure & Interpretation Plan’ Support the delivery of the vision as set out in the ‘Conamara Infrastructure and Interpretation Plan 2012’ within the lifetime of the Plan.</p>	<p>B4</p>		<p>B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	
<p>Objective EDT 16 – Teach an Phiarsaigh Collaborate with relevant agencies and committees in the development of Teach an Phiarsaigh project at Rosmuc and assist in the delivery of its tourist potential as a historical and cultural centre within the lifetime of the Plan.</p>	<p>B4</p>		<p>B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	

<p>Objective EDT 17 Outdoor Pursuits Support the provision of, sporting, sailing, boating, kayaking and angling facilities, pier and marina development, pony trekking routes, golf courses, adventure and interpretative centres and associated ancillary uses throughout the County in appropriate locations including former Quarry sites.</p>	B4		B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
<p>Objective EDT 18 Holiday Accommodation in Serviced Settlements Encourage the proportionate development of new stand alone holiday homes/independent guest accommodation and short-stay accommodation within existing adequately serviced town and village settlements.</p>	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 L1		B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
<p>Objective EDT 19 – Holiday Accommodation in Open Countryside (a) Consider the reuse of existing buildings for holiday homes/guest accommodation outside of settlements where it can be demonstrated that there is a justifiable tourist product/demand. Any renovation work shall be similar in scale and design to the existing building(s). In such cases, documentary evidence shall be submitted to substantiate the proposed development and each individual application will be assessed on its merits. (b) Consider the provision of short-stay accommodation (glamping/camping etc) outside of settlements where it can be demonstrated that there is a justifiable tourist product/demand. The need to develop in a particular area must be balanced against environmental, social and cultural impacts of the development and benefits to the local community. In such cases, documentary evidence shall be submitted to substantiate the proposed development and each individual application will be assessed on its merits.</p>	B4		B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
<p>Objective EDT 20-Rural Business Bone fide applicants who are not considered eligible under the Rural Housing Categories in Chapter 3 may be considered as qualifying to build a permanent home in the rural areas, which are not subject to strong urban influence, subject to being able to satisfy the Planning Authority that they operate an existing established full time business which they now propose to operate from their proposed home in a rural area, as part of their planning application, in order, for example, to discourage commuting to towns or cities. Applicants must be able to submit evidence that:</p> <ul style="list-style-type: none"> • Their business will contribute to and enhance the rural community in which they seek to live and • They can satisfy the Planning Authority that the nature of their employment or business is compatible with those specified in the local needs criteria for rural areas ie. That they are serving a predominantly local rural business need. 	B4		B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
<p>Objective EDT 21 – Off Shore Island Tourism Facilitate the development of sustainable and green tourism which draws on the cultural, linguistic, archaeological, marine/coastal and ecological wealth of the off shore islands of County Galway while simultaneously safeguarding their integrity.</p>	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1		B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
<p>Objective EDT 22 – Gaeltacht Tourism Facilitate the sustainable development of the Gaeltacht areas of County Galway as cultural and linguistic tourist destinations while simultaneously safeguarding their integrity.</p>	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1		B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
<p>Objective EDT 23 - East Galway, Lough Derg and The Burren a) Facilitate the sustainable development of East Galway, Lough Derg and the Burren as cultural and tourist destinations while simultaneously safeguarding their integrity; b) Galway County Council to explore with Clare County Council, the proposal to add Burren Lowlands areas to the Burren and Cliffs of Moher Geopark; c) Promote active collaboration between all stakeholders both in Co.Galway and adjoining counties and region.</p>	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1		B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
<p>Objective EDT 24 – Arts, Culture, Heritage, Food and Crafts Support and facilitate the development of the Food and Craft sector including the formation of regularised farmers markets and support the development of the Arts, culture, and heritage festivals at appropriate locations throughout the County.</p>	B4		B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	
<p>Objective EDT 25 – Wild Atlantic Way Support and facilitate the Wild Atlantic Way project in conjunction with the relevant stakeholders and Galway County Council will actively encourage the creation of spurs to link in with the Wild Atlantic Way as was intended, taking into account environmental sensitivities.</p>	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1		B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1	

Commentary:

Policy EDT 1 to EDT 8, Objectives EDT 1 to EDT 7, EDT 9, EDT 10, EDT 14 and EDT 18: all of these provisions either directly or indirectly facilitate new development. The effects associated with this development would be consistent with those of the chosen strategy for the Plan (Scenario D) as detailed in full in Section 7. It is noted that Policy EDT 1 and Objective EDT 1 contribute towards the protection of cultural heritage (**CH1 CH2**).

Policy EDT 10 would benefit the protection of the Natura 2000 network of designated sites as well as contributing indirectly to the protection of other environmental components.

Objective EDT 8: These design standards would improve the status of cultural heritage and landscape SEOs (**CH1 CH2 L1**).

Objective EDT 13: This objective would benefit the protection of human health (**PHH1**)

Objective EDT 11 and EDT 21 to EDT 23: Development provided for by each of these objectives could potentially with the environment however these provisions provide for 'sustainable development' or preclude environmental impacts arising from new development or safeguard the integrity of the environment.

Objectives EDT 12, EDT 15 to EDT 17, EDT 19, EDT 20 and EDT 24 and Policy EDT 9: These objectives would potentially conflict with various environmental components (**SEOs B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1**) and would be likely to contribute either directly or indirectly towards the sustenance of rural populations and associated rural management practices (**SEO B4**).

Objective EDT 25: The Wild Atlantic Way has the potential to result in environmental effects, if unmitigated, however a range of environmental assessments are informing the initiative and this objective requires environmental sensitivities to be taken into account.

Retailing Policies and Objectives**Policy R 1 – Retail Provision**

Support & facilitate existing retail and promote and facilitate appropriate new retailing in the significant role that it plays in providing local employment, sustaining local economies and enhancing the attractiveness of the County for residential, business and additional complementary services.

Policy R2-Retail Vacancy

It is the policy of the Council to have regard to the vacancy rate of similar units when considering the provision of new retail facilities.

Policy R3 – Large Scale Retail Proposals & National Roads/Interchanges

There shall be a general presumption against large scale retail proposals adjacent to existing, new or planned national roads and interchanges in accordance with the provisions of the DoECLG *Retail Planning Guidelines for Planning Authorities*, (2012) (and any updated/superseding document).

Objective R 1 – Retail Planning Guidelines & the Sequential Approach

Support and promote the retail sector in the County and to ensure compliance with the Retail Planning Guidelines for Planning Authorities DoECLG (April 2012, including any updated/superseding document), including the need for a sequential approach to retail development, the policies and objectives of any future Retail Strategy for Galway and the guidance set out in the Retail Design Manual DoECLG (April 2012).

Objective R 2 – Retail Hierarchy

Actively promote a hierarchy of retail functions in the County that complements the Settlement Hierarchy of this Plan:

- To retain and further develop the higher order shopping functions in Tuam, Ballinasloe and Loughrea as the main retailing centres in the County.
- To encourage appropriate retail provision in the other Key Towns of the County as per the settlement hierarchy in order for them to realise their potential.
- To retain and further develop local shopping facilities in other towns, and villages and settlements in the County and encourage appropriate new retail development in centrally located sites.

Objective R 3 – Retail Survey & Strategy

- To Engage with Galway City Council to produce a Retail Strategy within 3 years of the adoption of the Development Plan.
- To commence and complete retail surveys of all major towns listed in the Core Strategy Settlement Table which will inform the retail strategy.

Objective R 4 – Retail Site Assembly

To facilitate site assembly in the Tuam hub, the County town of Ballinasloe and all key town centres of the County (having regard to existing historical plot and street patterns) to address issues such as vacancy, dereliction/decay and

**B1 B2 B3 B4
PHH1 S1 W1 W2
W3 M1 M2 M3 C1
L1**

**B1 B2 B3 B4
PHH1 S1 W1 W2
W3 M1 M2 M3 C1
CH1 CH2 L1**

<p>urban sprawl.</p> <p>Objective R 5 – Living over the Shop Preserve and promote the tradition of living over the shop in all town and village settlements throughout the County.</p> <p>Objective R 6 – Retail Diversity Ensure that in the interests of vitality and viability, development proposals result in a balance of services and outlets thus avoiding an over-concentration of uses.</p> <p>Objective R 7 – Local Shops & Services Facilitate the development of small shops and services at peripheral locations within town settlements only where it can be demonstrated that they are of a scale to serve only localised demand and will not impact negatively on the vitality and viability of the existing town centre.</p> <p>Objective R 8 – Late Night & Evening Uses Support proposals for development involving off-peak evening and late night commercial, retail or leisure uses within or immediately adjacent to town centres, where it can be demonstrated that the development will enhance the character and function of the area and not detract from the residential and general amenity of the area.</p> <p>Objective R 9 – Regulation of Late Night & Evening Uses Seek to uphold environmental quality standards through the application of good practice principles in the management of late night uses, in the form of stipulating litter prevention measures and regulating hours of operation.</p> <p>Objective R 10 – Retailing Associated with Petrol Stations Consider development proposals for shop facilities accompanying petrol stations on their individual merits, having regard to the Retail Planning Guidelines for Planning Authorities (2012) and subject to traffic implications.</p> <p>Objective R 11 – Strategic Town Centre Development Be supportive of existing marts and co-ops in the County which seek to relocate from prime town centre locations to edge of town locations subject to adherence to normal planning requirements and development control standards, thus allowing for the expansion of a town centre/core area for retail and commercial purposes.</p> <p>Objective R 12 – High Quality Retail Environment Support the development of appropriate types, scales and patterns of retail development in suitable locations within the settlements of the County and with high quality design that:</p> <ul style="list-style-type: none"> • Support the vitality and viability of the existing settlement centre and associated main streets and/or do not undermine their vibrancy. • Protect investment in strategic roads and infrastructure and provide ease of accessibility to retail areas, particularly in terms of public transport. • Contribute to the creation of a high quality retail environment. 				
<p>Commentary: The evaluation of the Plan's Retail provisions is consistent with the evaluation of chosen strategy for the Plan (Scenario D) as detailed in full in Section 7.</p>				

8.7.6 Chapter 5: Roads and Transportation

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs - unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	No Likely interaction with status of SEOs
<p>Strategic Aims</p>				
<ul style="list-style-type: none"> • To provide a safe and efficient network of transport to serve the needs of the people and the movement of goods and services to and within County Galway; • To provide access for all in an integrated manner with an enhanced choice of transport options including the Rural Transport Programme; • To promote and encourage the use of alternative sustainable modes of transport and to promote the use of transport energy from renewable resources; • Promote development on serviced land in towns and villages, particularly those located along public transport corridors in accordance with the Sustainable Residential Development in Urban Areas Guidelines, having regard to existing 	<p>B4 PHH1 C1</p>		<p>B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	

<p>settlement patterns;</p> <ul style="list-style-type: none"> • To safeguard the strategic transport function and carrying capacity of the motorway and national road network and associated junctions in order to provide for the safe and efficient movement of interurban and inter-regional traffic; • To support the opening of the Western Rail Corridor route from Athenry, Tuam Hub Town, Claremorris to Collooney (4 sections) as an option for passenger train and cargo transportation; • To support the upgrade of air transportation infrastructure within the County including improved access and air services in order to enhance air connectivity to domestic and foreign markets; • Promote and enhance access (including ferry/cargo services) in a sustainable manner to and between the existing network of ports, harbours, piers and slipways within the County and offshore islands in support of tourism and the local economy. 				
<p>Commentary: These Strategic Aims would contribute towards: maximising sustainable mobility (SEO C1), protecting human health (SEO PHH1) and sustaining rural populations (SEO B4).</p> <p>Arising both directly from the development and operation of infrastructure and indirectly from facilitating non-transport development the Strategic Aims would potentially conflict with:</p> <ul style="list-style-type: none"> • protecting biodiversity and flora and fauna (SEOs B1 B2 B3) • protecting human health (SEO PHH1) • protecting soil function and the status of water bodies (SEOs S1 W1 W2) • minimising increases in flood risk (SEO W3) • maximising sustainable mobility (SEO C1) • minimising impacts upon archaeological and architectural heritage, including context (SEOs CH1 CH2); • minimising visual impacts (SEO L1) • the provision of adequate and appropriate water services (SEO M1 M2) • minimising waste levels (SEO M3) <p>The upgrade of air transportation infrastructure may have to be accompanied by significant amounts of public and private transport infrastructure and services and water services (M1 M2). Development of greenfield lands to support this upgrade would have the potential to significantly affect water, soil, ecology and landscape resources. An increase in flights could generate additional amounts of greenhouse gas emissions and noise emissions which could interact with human health. The assessments of lower tier projects would have to give consideration to flight paths utilised by flights to and from other existing airports.</p> <p>Potential conflicts would be mitigated by the measures which have been integrated into the Plan and are identified in Section 9 of this report.</p>				
<p>Land Use Integration & Sustainable Transportation Strategy Policies and Objectives</p>				
<p>Policy TI 1 – Transportation Strategy and Compliance with Legislation It is the overarching policy of Galway County Council to comply with all relevant Irish and European planning and environmental legislation in implementing its Transportation Strategy.</p> <p>Policy TI 2 – Development of an Integrated & Sustainable Transport System It is the policy of the Council to promote the development of an integrated and sustainable high quality transport system that shall:</p> <p>a) Promote closer co-ordination between land use and sustainable transportation;</p> <p>b) Continue the provision of a range of transport options within the County in collaboration with other statutory agencies and transport providers, including a safe road network, a range of bus and rail services, adequate facilities for walking and cycling and opportunities for air and water-based travel.</p> <p>Policy TI 3 – Sustainable Travel Measures Support the Government's commitment under the EU Renewable Energy Directive (2009/28/EC) to achieve agreed national targets in relation to sustainable transport to include those for electric vehicles to constitute 10% of the Irish transport fleet by 2020 and a bio-fuel obligation, which will incrementally increase on a sustainable basis to 2020, to meet the renewable energy target of 10% in 2020.</p> <p>Policy TI 4 – Land Use Integration and Transportation Ensure that land use planning is integrated with transportation planning and reduces the need to travel, particularly by private transport, by:</p> <p>1. Promoting the consolidation of development through the implementation of the Core Strategy/Settlement Strategy as outlined within this Plan;</p>	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>		<p>B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	

<p>2. Encouraging intensification and mixed use development at public transport hubs and nodes identified within the County;</p> <p>3. Prioritise walking, cycling and public transport alternatives within, and providing access to, new development proposals, as appropriate.</p> <p>Objective TI 1 – Sustainable Transportation Support and facilitate any ‘Smarter Travel’ initiatives that will improve sustainable transportation within the County including public transport, electric and hybrid vehicles, car clubs, public bike schemes, park and ride/park and stride facilities, improved pedestrian and cycling facilities, as appropriate.</p> <p>Objective TI 2– Sustainable Travel Measures In order to help meet the agreed national targets set for the Transport sector under the EU Renewable Energy Directive (2009/28/EC), Galway County Council shall:</p> <ol style="list-style-type: none"> 1. Facilitate improvements to existing public transport infrastructure and services through the pursuit of a variety of mode options including new/additional Quality Bus Corridors, commuter rail and park and ride facilities; 2. Collaborate with service providers in the improvement of fuel efficiency of motorized transport; 3. Encourage the use of electric vehicles and bicycles, in line with Council and National Policy; 4. The Council shall continue to promote/implement the cycle to work scheme for all employees; 5. Support the provision of suitable infrastructure to encourage an increase in the use of electric vehicles including the piloting of charging points on-street at key areas subject to the availability of resources and the provision of charging spaces in non-residential developments; <p>Objective TI 3 - Mobility Management Plans Require Mobility Management Plans for all large scale residential, commercial, mixed use, business/enterprise or industrial developments, as appropriate.</p> <p>Objective TI 4 - Transportation Hub Development Investigate the potential for the development of integrated transportation hubs at Tuam, Ballinasloe, Athenry, Gort, Clifden, Loughrea and at Garraun within the lifetime of this Plan and as resources permit. Seek to maximise the strategic integration of transport and rational land uses within the emerging transportation and economic corridors. Over the lifetime of this Plan, emphasis will be placed on the provision of bus facilities adjacent to rail stations, where appropriate.</p>				
<p>Commentary: These objectives would both:</p> <ul style="list-style-type: none"> • Contribute towards: maximising sustainable mobility (SEO C1), protecting human health (SEO PHH1) and sustaining rural populations (SEO B4); and • Arising both directly from the development and operation of infrastructure and indirectly from facilitating non-transport development, potentially conflict with various environmental components. <p>Potential conflicts would be mitigated by the measures which have been integrated into the Plan and are identified in Section 9 of this report.</p> <p>The commitment to comply with environmental legislation means that the status of various SEOs would be improved.</p>				
<p>Road and Transportation Policies and Objectives</p>				
<p>Policy TI 5 – Roads, Streets and Parking It is the policy of Galway County Council in conjunction with all relevant statutory agencies and infrastructure providers to provide road and street networks that are safe and convenient, that have adequate capacity to accommodate motorised traffic and non-motorised movements, that have a high environmental quality with appropriate adjacent development and built form, particularly in the case of urban streets and streetscapes, and that adequate parking facilities are provided to serve the needs of towns and villages within the County. In this regard, the principles, approaches, and standards set out in the <i>Design Manual for Urban Roads & Streets</i> (2013) (including any superseding document) shall be applied to new development as appropriate.</p> <p>Policy TI 6 – Protection of Strategic Transportation Infrastructure Seek to protect and safeguard the significant investment made in strategic transportation infrastructure, in particular the network of national roads, the existing rail lines and the Western Rail Corridor.</p> <p>Policy TI 7– Protection of National Road Network Protect the motorway and national road network and national road junctions in line with Government policies. Safeguard the carrying capacity, operational efficiency, safety and significant investment made in motorway, national road network within the County including the M6 Dublin to Galway Motorway, the M18 Gort to Crusheen Motorway and the M17/M18</p>	<p>B4 PHH1 C1 L1 CH1 CH2</p>		<p>B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	

<p>Galway to Tuam when completed.</p> <p>Policy TI8 –Transportation Infrastructure Requirements for the Gateway and West of the County It is the policy of Galway County Council to work with Galway City Council and all relevant statutory bodies to develop an appropriate infrastructural response to the transportation needs of the Galway Gateway, its environs and the west of the county, with a view to relieving congestion, improving travel times, increased safety of all road users and enhancing connectivity and access within the region and enhanced accessibility of the Western region in a national and international context. Any such solution shall have due regard to the necessity to protect the environment and will comply fully with the requirements of the Habitats Directive.</p> <p>Policy TI 9 –Road Network Improvements & Western Rail Corridor/Greenway It shall be the policy of Galway County Council to ensure that any works to be carried out by Galway County Council or other statutory authority to any part of the road network which may affect the delivery of either the Western Rail corridor or any Greenway proposal shall be carried out in such a way so as not to compromise the longer term delivery of such alternative transportation proposals or any interim objectives to use the railway as a greenway.</p> <p>Policy TI 10-Reclassification of Restricted Routes It is a policy of Galway County Council to liaise with the National Roads Authority on the reclassification of Restricted Routes as a result of the construction of motorways</p> <p>Policy TI11-Signage It is a policy of Galway County Council to liaise with the National roads Authority in relation to increased signage for rural towns adjacent to motorways in order to promote service availability.</p> <p>Objective TI 5 – Road and Transportation Network Improvements Facilitate the progression of and implement improvements to the existing National Road and Regional/Local Road networks including the priority transportation schemes, listed in Table 5.1: Priority Transportation Infrastructure Projects for Co. Galway 2015-2021 and those listed within Table 5.2: Regional/Local Projects Proposed 2015-2021 subject to relevant Irish planning and European environmental legislation including Article 6 of the Habitats Directive and/or other environmental assessment, where appropriate.</p> <p>Objective TI 6 – Protection of National Routes & Strategically Important Regional Road Networks It is an objective of the Council to protect the capacity and safety of the National Road Network and Strategically Important Regional Road network (listed in DM Standard 19) in the County and ensure compliance with the Spatial Planning and National Roads Planning Guidelines (2012). Galway County Council will not normally permit development proposals for future development that include direct access or intensification of traffic from existing accesses onto any national primary or secondary road outside of the 50-60 kph speed limit zone for towns and villages.</p> <p>Objective TI 7 – Service/Rest Areas & Scenic Viewpoints A) Support the National Roads Authority in the provision of service and rest area facilities that may be proposed by the NRA and have regard to the provisions of Section 2.8 of the DoECLG Spatial Planning and National Roads Guidelines and the NRA Service Policy (August 2014) with regard to any other proposals for roadside service facilities or off-line service facilities along National Roads and junctions that may be promoted by private developers B) Support the development of scenic viewpoints on existing road infrastructure where appropriate, minimizing environmental impact and having full regard to the DoECLG guidance documents on development along national roads.</p> <p>Objective TI 8 – Traffic Management Plans Consider the review of Traffic Management Plans in Ballinasloe, Portumna, Gort, Athenry, Oranmore, Loughrea, Cill Rónain, Oughterard, Tuam and Cleggan. Carry out Traffic Management Plans for Craughwell, Headford, Kinvara, Bearna, Baile Chláir, Maigh Cuilinn, Leenane and Dunmore.</p> <p>Objective T 9 – Car Parking Provide/improve parking facilities in towns and villages as development and traffic demand. The requirements for car parking shall be in accordance with the standards and guidelines as set out within Chapter 13 Development Management Standards and Guidelines of this Plan under Guidelines for Transportation, Roads, Parking, Loading and Storage.</p> <p>Objective TI 10 - Traffic and Transport Assessment (TTA) and Road Safety Audits (RSA) Require all proposed new significant development proposals to be accompanied by a TTA and RSA, carried out by suitably competent consultants, which are assessed in association with their cumulative impact with neighbouring developments on the road network, in accordance with the requirements contained within the NRA's Traffic and Transport Assessment Guidelines, having regard and with respect to <i>RSA in NRA DMRB HD19/12 Road Safety Audit</i></p>				
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<p>(including any updated superseding document).</p> <p>Objective TI 11 – Urban Street Network and the Design Manual for Urban Roads & Streets Support the treatment of the route network within the built areas of towns as urban streets that prioritise the needs of pedestrians, that facilitate cyclists wherever possible and that support public and private transport movements, stopping and parking, as appropriate. In this regard, the principles, approaches, and standards set out in the Design Manual for Urban Roads and Streets 2013 (including any updated/superseding document) shall be applied to new development as appropriate.</p> <p>Objective TI 12 – Noise Require all new proposed development, which is considered to be noise sensitive within 300m of existing, new or planned national roads, or roadways with traffic volumes greater than 8,200AADT, to include a noise assessment and mitigation measures if necessary with their planning application documentation. The cost of mitigation measures shall be borne by the developer. Mitigation measures in order to protect the noise environment of existing residential development will be facilitated or enforced as necessary.</p> <p>Objective TI 13 – Signage on or Visible from all Roads Avoid the proliferation of non-road traffic signage on and adjacent to all roads in the interest of traffic safety and visual amenity, in accordance with the Spatial Planning and National Roads Guidelines for Planning Authorities 2012. The NRA document Policy and Provision of Tourist and Leisure Signage on National Road March 2011 (including any updated/superseding document) shall also be considered in the assessment of relevant developments.</p> <p>Objective TI 14 – Road Safety Schemes Provide a safe road system throughout the County through Road Safety Schemes, which will include the continuation of the low cost safety measure programme, signage and delineation, traffic calming, and liaison with the school authorities to ensure that the schools provide safety features as required.</p> <p>Objective TI 15-Transportation Infrastructure Requirements for the Gateway and West of the County It is an objective of Galway County Council to work with all other relevant bodies to deliver the necessary improvements to transportation infrastructure, including new infrastructure if necessary, to help secure the medium and long term economic and social development of Galway Gateway and the west of the County. Any such investment or project shall be carried out with due regard to the necessity to protect the environment and in full compliance with the provision of relevant legislation, including the Habitats Directive.</p>				
<p>Commentary: These objectives would both:</p> <ul style="list-style-type: none"> Contribute towards: maximising sustainable mobility (SEO C1), protecting human health (SEO PHH1), sustaining rural populations (SEO B4), protecting visual amenity (SEO L1) and protecting the context of cultural heritage (SEOs CH1 CH2); and Arising both directly from the development and operation of infrastructure and indirectly from facilitating non-transport development, potentially conflict with various environmental components. <p>Potential conflicts would be mitigated by the measures which have been integrated into the Plan and are identified in Section 9 of this report.</p>				
<p>Public Transport Objectives</p>				
<p>Objective TI 16 – The Sustainable Development of the Western Rail Corridor Maintain the Western Rail Corridor as an option for passenger train and cargo transportation and support the opening of the remainder of the Western Rail Corridor route from Athenry to Collooney.</p> <p>Objective TI 17 – Bus Services and the Rural Transport Programme (RTP) a) Support the provision of public and private bus services and ancillary infrastructure including bus shelters, park and ride facilities at appropriate locations; b) Support and help implement the Rural Transport Initiative including any revisions to same. Work with the HSE/local communities including the Galway Transport Co-ordination Unit (TCU) in order to encourage and promote a sustainable community-based public transport scheme; c) Ensure that all bus services and ancillary infrastructure including bus shelters, park and ride facilities at appropriate locations have appropriate regard to the needs of the disabled in line with regulatory requirements. Galway County Council supports shall be subject to there being prior compliance before being provided.</p> <p>Objective TI 18 – Public Transport Plan The Council shall prepare a Public Transport Plan in consultation and co-operation with the National Transport Authority, the Galway Transportation Co-ordination Unit (TCU) and other relevant agencies.</p>	<p>B4 PHH1 C1</p>		<p>B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH CH2 L1</p>	

<p>Objective TI 19 – Galway County Walking and Cycling Strategy Implement the recommendations and proposals within the <i>The National Cycle Network Scoping Study (2010)</i> and the Galway County Walking and Cycling Strategy 2013 as outlined within Table 5.1: Priority Transportation Infrastructure Projects for Co. Galway 2015-2021.</p> <p>Objective TI20-Dualing of Rail Tracks Support the proposal for the dualing of the rail line from Galway-Athenry-Ballinasloe, subject to relevant Irish planning and European environmental legislation including Article 6 of the habitats Directive and/or other environmental assessment.</p>				
<p>Commentary: These objectives would contribute towards: maximising sustainable mobility (SEO C1), protecting human health (SEO PHH1) and sustaining rural populations (SEO B4).</p> <p>Arising both directly from the development infrastructure and indirectly from facilitating non-transport development the objectives would potentially conflict with:</p> <ul style="list-style-type: none"> protecting biodiversity and flora and fauna (SEOs B1 B2 B3) protecting human health (SEO PHH1) protecting soil function and the status of water bodies (SEOs S1 W1 W2) minimising increases in flood risk (SEO W3) minimising impacts upon archaeological and architectural heritage, including context (SEOs CH1 CH2); minimising visual impacts (SEO L1) the provision of adequate and appropriate water services (SEO M1 M2) minimising waste levels (SEO M3) <p>Potential conflicts would be mitigated by the measures which have been integrated into the Plan and are identified in Section 9 of this report.</p>				
<p>Air Transport, Ports, Harbours, Piers & Slipways Objectives</p>				
<p>Objective TI 21 – Local Airstrips The Council shall safeguard the current and future operational, safety, technical and development requirements of local airstrips within its functional area by having regard to the advice of the Irish Aviation Authority with regard to the effects of any development proposals in the vicinity of local air strips.</p> <p>Objective TI 22 – Helipad Facilities The Council shall facilitate the provision of helipad facilities in industrial/commercial areas, strategic development sites or in areas in close proximity to hospitals, medical services facilities or emergency facilities where feasible and appropriate.</p> <p>Objective TI 23 - Sustainable Development of Ros an Mhíl Sea Port & Galway Harbour Galway County Council shall continue to recognise the strategic importance of Ros an Mhíl and Galway Harbour and shall promote and facilitate their continued sustainable development including the following: a) The Council shall undertake improvement works to the existing road infrastructure servicing Ros an Mhíl as resources permit; b) Collaborate with Galway City Council and with the Galway Harbour Company in the promotion of interconnectivity between Galway Harbour and Ros an Mhíl.</p> <p>Objective TI 24 - Sustainable Development of Ports, Harbours, Piers and Slipways The Council shall – 1) Support the development of Ros an Mhíl Harbour as a deep water port and support and facilitate improvements the and maintenance to other harbours including Inis Oírr and Inis Meáin, piers and slipways and consider any new marine infrastructure where appropriate; 2) Facilitate the safe and convenient access to the water for the purpose of public transport, industry, commerce, sea rescue, tourism, aquaculture and recreation where appropriate and as resources allow.</p> <p>Objective TI 25 – Harbour Bye-Laws Facilitate the implementation of harbour bye – laws for the regulation and control of harbour activities.</p> <p>Objective TI 26 – Water-Borne Transport Support and facilitate the operation of ferry/cargo services between the mainland and the offshore islands within County Galway and those serving Galway Gateway and County Clare. Facilitate the sustainable expansion of such services/facilities over the lifetime of the Plan in collaboration with service providers and other local authorities as</p>	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>		<p>B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	

appropriate, minimising environmental impact. Land use proposals that would prejudice the sustainable operation of these services will not normally be permitted.				
Commentary:				
See comments under Strategic Aims. Also, commitments for sustainable development means that the status of various SEOs would be improved.				

8.7.7 Chapter 6: Water and Wastewater, Waste Management and Extractive Industry

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs - unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	No Likely interaction with status of SEOs
Strategic Aims				
<ul style="list-style-type: none"> To protect, preserve and conserve the County's water resources and comply with the standards of the Western River Basin Management Plan and the Shannon International River Basin Management Plan. To facilitate in a sustainable manner the provision of necessary water and waste water infrastructure. To minimise the amount of waste creation within the County and promote a practice of reduce, reuse and recycle where possible. To safeguard the environment of the County by seeking to ensure that residual waste is disposed of in an appropriate and environmentally friendly fashion. To ensure that aggregate material is appropriately managed and sustainably developed in the County. 	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2		B1 B2 B3 PHH1 S1 W1 W2 W3 M2 M3 CH1 CH2 L1	C1
Commentary:				
Protection of the County's water resources would beneficially affect the protection of water resources, human health, ecology and soil (SEOs W1 W2 PHH1 B1 B2 B3 S1 M2).				
The provision of waste water infrastructure (SEO M1) would also benefit the aforementioned environmental components and support rural populations (SEO B4) as well as providing outflow that would potentially conflict with various components (SEOs W1 W2 PHH1 B1 B2 B3 S1 M2). The provision of drinking water infrastructure (SEO M2) would support rural populations (SEO B4) as well as abstracting water in that would potentially conflict with various components (SEOs W1 W2 PHH1 B1 B2 B3 S1). Construction works arising from the provision of waste and drinking water infrastructure would potentially impact upon various environmental components including cultural heritage (SEO CH1 CH2) and landscape (SEO L1). Flood risk issues (SEO W3) would have to be addressed. Potential conflicts would be mitigated by measures contained in the Plan (see Section 9 of this report) while some would be mitigated by measures arising out of separate consent procedures.				
Waste management practices (SEOs M3) would have the potential to impact upon various environmental components (SEOs B1 B2 B3 PHH1 S1 W1 W2 W3 M2 CH1 CH2 L1) however such impacts would be mitigated.				
Extractive industries would also have the potential to impact upon various environmental components (SEOs B1 B2 B3 PHH1 S1 W1 W2 W3 M2 CH1 CH2 L1).				
Water Policies and Objectives				
<p>Policy WS 1– Irish Water Galway County Council will work in close co-operation with Irish Water in its new role as the lead authority for water services.</p> <p>Policy WS 2 – Irish Water and Rural Towns and Villages Galway County Council will work with Irish Water to provide Water and Waste water facilities in rural towns and villages.</p> <p>Policy WS 3- Irish Water's Proposed Capital Investment Plan Support Irish Water in the implementation of their Proposed Capital Investment Plan 2014-2016 and any subsequent Investment Programmes.</p> <p>Policy WS 4- Water Conservation Continue the commitment to water conservation and leakage reduction within the County and promote water conservation campaigns.</p>	B1 B2 B3 B4 PHH1 S1 W1 W2 M1 M2		B1 B2 B3 PHH1 S1 W1 W2 W3 M2 M3 CH1 CH2 L1	C1

<p>Policy WS 5 - Water Quality Promote public awareness of water quality issues and the measures required to protect all waters including all surface water and groundwater bodies.</p> <p>Policy WS 6 - Water Supply on the Islands That Galway County Council work with Irish Water to address the existing inadequacy of water supply on Oileáin Árann.</p> <p>Objective WS 1 – Protection of Ground Waters Support the protection of groundwater resources and dependent wildlife/habitats in accordance with the Groundwater Directive 2006/118/EC, the European Communities Environmental Objectives (groundwater) Regulations, 2010 (S.I. No. 9 of 2010) or any updated legislation and the Groundwater Protection Scheme and source protection plans for water supplies.</p> <p>Objective WS 2 – EU Policies and Directives Protect, conserve and enhance all existing and potential water resources of the County, in accordance with the EU Water Framework Directive, the River Basin Management Plans, the European Communities Environmental Objectives (Surface Waters) Regulations 2009 (SI No. 272 of 2009), the EU Bathing Water Directive (Directive 2006/7/EC) implemented by the Bathing Water Quality Regulations 2008 (S.I. No. 79) of 2008 and implement the European Communities (Drinking Water) Regulations (No. 2) 2007 and ensure that water supplies comply with the parameters in these regulations.</p> <p>Objective WS 3 – Irish Water Liaise with and advise Irish Water in identifying, prioritising and progressing the implementation of water projects throughout County Galway over the lifetime of the Plan.</p> <p>Objective WS 4 - Provision of water services in unserved towns & villages Support the provision of water services infrastructure in unserved towns and villages to assist in the proper planning and sustainable development of the County.</p> <p>Objective WS 5 – Water Safety Plan Support the preparation of water safety plans for the protection of the major public water supply schemes in County Galway within the lifetime of the Plan.</p> <p>Objective WS 6 – Regional Water Supply Networks Develop in conjunction with Irish Water the supply of water through the Regional Water Supply Networks including the interlinking of networks to ensure continuity and security of supply throughout the expanded network.</p> <p>Objective WS 7 – Source Management & Protection Zones Liaise with Irish Water and seek to establish source management and protection zones around drinking water supply (ground and surface) sources and develop appropriate management and maintenance for same.</p> <p>Objective WS 8 – Water Conservation Support efficiency in the operation and demand management of the water supply infrastructure, promote water conservation and reduce the overall level of water loss in the public water supply.</p> <p>Objective WS 9 –River Basin Management Plans 2009 - 2015 Support the implementation of the relevant recommendations and measures as outlined in the Shannon International & Western River Basin Management Plans 2009 – 2015, and associated Programmes of Measures, or any such plans that may supersede same during the lifetime of this County Development Plan. Development shall only be permitted where it can be clearly demonstrated that the proposal would not have an unacceptable impact on the water environment, including surface waters, groundwater quality and quantity, river corridors and associated wetlands, estuarine waters and coastal waters. Cognisance shall be taken where relevant of the EU's Common Implementation Strategy Guidance Document No. 20 which provides guidance on exemptions to the environmental objectives of the Water Framework Directive.</p> <p>Objective WS 10 – Investment in Water Services Infrastructure Support the extension or upgrading of existing water infrastructure facilities in the County through the implementation of the Irish Water's Proposed Capital Investment Plan 2014-2016 and any subsequent Investment Programmes.</p> <p>Objective WS 11 – Regionally & Locally Important Aquifers Protect the regionally and locally important aquifers within the County from risk of pollution and ensure the satisfactory implementation of the groundwater protection schemes and groundwater source protection zones, where data has been made available by the Geological Survey of Ireland.</p>				
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<p>Objective WS 12 – Adequate Provision & Supply of Drinking Water 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 waste water) infrastructure required.</p> <p>Objective WS 13 – Private Water Supply It is an objective of the Council that where there is no public water supply the existing supply does not have sufficient capacity, or where the property owner wishes not to consume the water from the public supply, then the provision of a private water supply will be permitted, only 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 <i>Article 6 of the EU Habitats Directive</i>, 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>Objective WS 14 – Provision & Quality of Drinking Water Have regard to the EPA (2013) publication The Provision and Quality of Drinking Water in Ireland – A Report for the year 2012 (and any subsequent update) in the establishment and maintenance of water sources in the County.</p> <p>Objective WS 15 – Water Services Plan Support the preparation and implementation of a Water Services Plan in accordance with Section 36 of the Water Service Act 2007.</p>				
<p>Commentary: Protection of the County's water resources would beneficially affect the protection of water resources, human health, ecology and soil (SEOs W1 W2 PHH1 B1 B2 B3 S1 M2).</p> <p>The provision of waste water infrastructure (SEO M1) would also benefit the aforementioned environmental components and support rural populations (SEO B4) as well as providing outflow that would potentially conflict with various components (SEOs W1 W2 PHH1 B1 B2 B3 S1 M2). The provision of drinking water infrastructure (SEO M2) would support rural populations (SEO B4) as well as abstracting water in that would potentially conflict with various components (SEOs W1 W2 PHH1 B1 B2 B3 S1). Construction works arising from the provision of waste and drinking water infrastructure would potentially impact upon various environmental components including cultural heritage (SEO CH1 CH2) and landscape (SEO L1). Flood risk issues (SEO W3) would have to be addressed. Potential conflicts would be mitigated by measures contained in the Plan (see Section 9 of this report) while some would be mitigated by measures arising out of separate consent procedures.</p>				
<p>Wastewater Policies and Objectives</p>				
<p>Policy WW 1 – Collaborative Provision of Wastewater Collection & Treatment Systems Co-operate with Irish Water in the delivery of the Proposed Capital Investment Plan 2014-2016 (or updated plan) and to increase capacity to service settlements, to jointly investigate proposals for future upgrades of treatment plants; and participate in the provision of a long term solution for wastewater treatment in the West Region.</p> <p>Objective WW 1 - EU Policies and Directives Ensure that all wastewater generated is collected, treated and discharged after treatment in a safe and sustainable manner, having regard to the standards and requirements set out in EU and national legislation and guidance and subject to compliance with the provisions and objectives of the EU Water Framework Directive, relevant River Basin Management Plans, Urban Waste Water Directive and the EU Habitats Directive.</p> <p>Objective WW 2 - Provision of Wastewater Collection & Treatment Systems Support, in conjunction with Irish Water, during the lifetime of the Plan the provision, extension and upgrading of wastewater collection and treatment systems in all towns and villages of the County to serve existing and planned future populations, including Clarinbridge, Corofin & Lackagh.</p> <p>Objective WW 3 – East Galway Main Drainage Scheme Seek to accelerate progress on delivery of the East Galway Main Drainage Scheme, in particular Phase 3 as a key piece of strategic infrastructure, in conjunction with the Department of the Environment, Community & Local Government, Irish Water and Galway City Council.</p> <p>Objective WW 4 – Sludge Management Plan Implement the objectives as outlined in the Galway City Council & County Council Operational Sludge Management Plan (January 2011) throughout the lifetime of the Plan.</p> <p>Objective WW 5 – Waste Water Treatment Associated with Development in Un-Serviced Areas Permit development in un-serviced areas only where it is demonstrated to the satisfaction of the Planning Authority that the proposed wastewater treatment system is in accordance with the Code of Practice Treatment and Disposal systems serving Single House EPA (2009)/ EPA Wastewater Treatment Manuals – Treatment Systems for Small Communities, Business, Leisure Centres and Hotels (1999) (or any superseding documents) and subject to complying with the</p>	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 M1 M2</p>		<p>B1 B2 B3 PHH1 S1 W1 W2 W3 M2 M3 CH1 CH2 L1</p>	<p>C1</p>

<p>provisions and objectives of the EU Water Framework Directive.</p> <p>Objective WW 6 – Adherence to Environmental Standards Promote the provision of safe and secure wastewater infrastructure to ensure that the public is protected and that permitted development, is within the environmental carrying capacity and does not negatively impact on habitat quality or species diversity.</p> <p>Objective WW 7 – Surface Water Drainage & Sustainable Drainage Systems (SuDS) Maintain and enhance, as appropriate, existing surface water drainage systems 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.</p> <p>Objective WW 8 – Substandard Wastewater Treatment Plants Support and facilitate as appropriate the upgrading of substandard public wastewater treatment plants in order to comply with the provisions of the Urban Waste Water Treatment Regulations 2001 and 2004, the Waste Water Discharge (Authorisation) Regulations 2007 and implement the relevant recommendations set out in the EPA document <i>Focus on Urban Waste Water Discharges in Ireland</i> (and any subsequent update).</p> <p>Objective WW9 – Integrated Constructed Wetlands Galway County Council shall support the use of Integrated Constructed Wetlands (ICW) as a low cost and environmentally sustainable alternative having regard to the “Integrated Constructed Wetlands-Guidance Document for Farmyard Soiled Water and Domestic Wastewater Applications” as appropriate.</p> <p>Objective WW10 - Connection to Public Wastewater Services Where public waste water services are available new developments shall be required to connect to same.</p>				
<p>Commentary:</p> <p>The provision of waste water infrastructure (SEO M1) would benefit the protection of water resources, human health, ecology and soil (SEOs W1 W2 PHH1 B1 B2 B3 S1) and support rural populations (SEO B4) as well as providing outflow that would potentially conflict with various components (SEOs W1 W2 PHH1 B1 B2 B3 S1 M2). Construction works arising from the provision of waste water infrastructure would potentially impact upon various environmental components including cultural heritage (SEO CH1 CH2) and landscape (SEO L1). Flood risk issues (SEO W3) would have to be addressed. Potential conflicts would be mitigated by measures contained in the Plan (see Section 9 of this report) while some would be mitigated by measures arising out of separate consent procedures.</p> <p>Undertaking such developments in compliance with the Water Framework Directive and Habitats Directive etc. would beneficially affect the protection of water resources, human health, ecology and soil (SEOs W1 W2 PHH1 B1 B2 B3 S1 M2).</p>				
<p>Waste Management Policies and Objectives</p>				
<p>Policy WM 1 – Waste Prevention & Reduction Promote campaigns to meet the long-term challenge of waste prevention and minimisation at household and business level.</p> <p>Policy WM 2 – Polluter Pays Principle Implement the application of the polluter pays principle to the provision of all waste management services.</p> <p>Objective WM 1 – Replacement Connacht Waste Management Plan 2006 – 2011 Implement the Replacement Connacht Waste Management Plan 2006 – 2011 or any updated version of this document within the lifetime of the Plan.</p> <p>Objective WM 2 - National Hazardous Waste Management Plan 2008 – 2012 Implement the provisions of the National Hazardous Waste Management Plan 2008 – 2012 or any updated version of this document within the lifetime of the Plan.</p> <p>Objective WM 3 – Provision of Recycling Centres Strive to provide and maintain an equitable distribution of recycling centres throughout the County and support the provision of additional recycling centres in the south Conamara and south Galway areas of the County.</p> <p>Objective WM 4 – User friendly Waste Management Services Seek to provide a high standard of customer service provision in regard to waste management and maintain user friendly opening hours at recycling centres throughout the County.</p> <p>Objective WM 5 – Bring Bank facilities Support the provision of additional bring bank facilities at appropriate and strategic locations throughout the County in an effort to reach the overall regional ratio per head of population target for such infrastructure as set out in the Evaluation Report 2012 of the Replacement Connacht Waste Management Plan for the Connacht Region 2006 – 2011.</p>	<p>M3 B4 C1 PHH1</p>		<p>B1 B2 B3 PHH1 S1 W1 W2 W3 M2 CH1 CH2 L1</p>	<p>M1</p>

<p>Objective WM 6 – Provision of Voluntary Waste Management Infrastructure Encourage and support community and voluntary groups in the establishment of waste services and facilities on the off shore islands and in sparsely populated areas of the County.</p> <p>Objective WM7 – On Site Provision for Waste Storage & Segregation Seek to ensure on-site provision for waste storage and segregation (bio-waste/dry recyclables/residual waste) pending collection at all new domestic and non-domestic premises, in order to comply with the Replacement Waste Management Plan for the Connacht Region (or updated document).</p>				
<p>Commentary:</p> <p>The implementation of the Replacement Connacht Waste Management Plan 2006 – 2011 and the National Hazardous Waste Management Plan 2008 – 2012, including the construction and operation of waste management infrastructure, would facilitate the reduction of waste levels (SEO M3) at the same time as presenting potential conflicts with various environmental components (SEOs B1 B2 B3 PHH1 S1 W1 W2 W3 M2 CH1 CH2 L1). These conflicts would be mitigated by, inter alia, measures which have been integrated into the Plan and the aforementioned documents.</p> <p>The provision of waste management facilities (SEO M3) in certain locations would support rural populations (SEOs B4) and could reduce transport related emissions (SEOs C1 PHH1).</p>				
<p>Mineral Extraction and Quarry Policies and Objectives</p>				
<p>Policy EQ 1 – Environmental Management Practice Have regard to evolving best environmental management practice as set out in Environmental Protection Agency (EPA) Guidelines 'Environmental Management in the Extractive Industry: Non Scheduled Minerals' and to the recommendations of the EU guidance document <i>Undertaking Non-Energy Extractive Activities in Accordance with Natura 2000 Requirements</i>..</p> <p>Policy EQ 2 – Adequate Supply of Aggregate Resources Ensure adequate supplies of aggregate resources to meet future growth needs within County Galway, facilitate the exploitation of such resources where there is a proven need and market opportunity for such minerals or aggregates, and ensure that this exploitation of resources does not adversely affect the environment or adjoining existing land uses.</p> <p>Objective EQ1 – Protection of Natural Assets Protect areas of geo-morphological interest, groundwater and important aquifers, important archaeological features, Natural Heritage Areas and European Sites from inappropriate development.</p> <p>Objective EQ 2 – Management of Aggregate Extraction The Council shall require the following in relation to the management of authorised aggregate extraction -</p> <ol style="list-style-type: none"> 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 37 of this Development Plan; 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; Have regard to the Landscape Character Assessment of the County and its recommendations including the provision of special recognition to the esker areas as referenced in GCC Galway's Living Landscapes – Part 1:Eschers; Ensure that any quarry activity has minimal adverse impact on the road network; Ensure that the extraction of minerals or aggregates does not adversely impact on residential or environmental amenity; Protect all known un-worked deposits from development that might limit their scope for extraction. <p>Objective EQ 3 – Sustainable Reuse of Quarries Encourage the use of quarries and pits for sustainable management of post recovery stage construction & demolition waste, as an alternative to using agricultural land, subject to normal planning and environmental considerations.</p> <p>Objective EQ 4 – Compliance with Article 6(3) of the EU Habitats Directive Ensure that projects associated with the mineral extractive industry carry out screening for Appropriate Assessment in accordance with Article 6(3) of the Habitats Directive, where required.</p>	<p>B4 B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 CH1 CH2 L1</p>		<p>B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 CH1 CH2 L1</p>	<p>M3 C1</p>

Commentary:

While facilitating economic development and potentially supporting rural populations (**SEO B3**), extractive industries have the potential to impact upon various environmental components including biodiversity (**SEOs B1 B2 B3**), human health (**SEO PHH1**), water resources (**SEOs W1 W2**), soil functions (**SEO S1**), the landscape (**SEO L1**) and cultural heritage (**SEOs CH1 CH2**). Impacts upon flood risk and water services would also have to be considered (**SEOs W3 M1 M2**). Complying with the Habitats Directive, the Planning and Development Act and various Guidelines and Standards would contribute towards environmental protection.

8.7.8 Chapter 7: Energy/Renewable Energies & Communications Technology

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs - unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	No Likely interaction with status of SEOs
Strategic Aims				
<ul style="list-style-type: none"> To reduce County Galway's dependency on imported fossil fuels and to provide alternative energy sources by harnessing the County's potential for renewable energy sources; To ensure security of energy supply throughout the County and to collaborate with relevant sectors in strengthening the grid transmission networks for the provision of the energy sector including renewable energy; To reduce the County's CO2 emissions by achieving national, regional and any potential County targets for achieving a low carbon economy by 2020 and increase energy efficiency in local authority activities and through its development management functions; and To promote and facilitate the provision and continued development of broadband and ICT infrastructure within the County in order to further enhance economic/social development, particularly in the more peripheral and coastal areas of the County. 	B4		B1 B2 B3 PHH1 S1 W1 W2 W3 M2 M1 M3 CH1 CH2 L1	C1
<p>Commentary:</p> <p>In addition to contribute towards achieving various government objectives relating to the amount of energy to be consumed from renewable sources and reducing greenhouse gas emissions, the development of renewable and non-renewable energy sources, electricity transmission infrastructure, associated infrastructure and broadband and ICT infrastructure, could contribute towards the sustenance of rural populations (SEO B4). Such development has, however, the potential to impact upon various environmental components. Further general commentary on the types of potential effects arising from different renewable energies is provided below. All potential effects would be mitigated by measures which have been integrated into the Plan.</p> <p>Wind 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 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 bog bursts and landslides Potential impact upon designated and non-designated biodiversity and flora and fauna including birdlife 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 <p>Hydropower</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"> 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 and biodiversity 				

- Potential interactions leading to change in structure of soil and geology
- Operation could impact upon flood risk elsewhere
- Potential impacts upon archaeological heritage or nearby architectural heritage, including context
- Changes to the character of locations would be likely to occur however visual impacts would depend upon, inter alia, the size of the installation and the perception of the relevant area

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

Solar Energy and Solar Thermal Energy

Positive Effects: Contribution towards renewable energy 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

Geothermal Energy

Positive Effects: Contribution towards renewable energy targets

Potential Negative Effects, if unmitigated:

- 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 installations
- Large scale installations may have visual impacts - these would depend on perception of the relevant area

Energy and Renewable Energy Policies

Policy ER 1 – Sustainable Energy Policy and Targets

Promote the implementation of the Government’s White Paper ‘Delivering a Sustainable Energy Future for Ireland, Energy Policy Framework 2007-2020’ (or any updated or superseding document) over the lifetime of the Galway County Development Plan 2015-2021 to assist in ensuring that the energy efficiency target is realised by 2020 from renewable sources.

B4		B1 B2 B3 PHH1 S1 W1 W2 W3 M2 M1 M3 CH1 CH2 L1	C1
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Commentary:

See comments under Strategic Aims.

Policy ER 2 – Development of Renewable Energy

The Council shall support proposals for renewable energy developments at appropriate scale (including ocean energy/wave and tidal technologies and ancillary facilities including associated grid connection) at appropriate locations within the County having regard to residential amenities, biodiversity and landscape sensitivities, where such proposals are in compliance with the County Development Plan 2015- 2021 and the principles of proper planning and sustainable development. Where possible the Council will develop its own micro generation projects to facilitate its own energy

B4 B1 B2 B3 PHH1 S1 W1 W2 W3 M2 M1 M3 CH1 CH2 L1		B1 B2 B3 PHH1 S1 W1 W2 W3 M2 M1 M3 CH1 CH2 L1	C1
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requirements.				
Commentary: See comments under Strategic Aims. Also, regard to residential amenities, biodiversity and landscape sensitivities and reference to the County Development Plan 2015-2021 and the principles of proper planning and sustainable development this objective would be likely to contribute towards the protection of various environmental components.				
Policy ER 3 – Security of Supply Facilitate the strategic goal of effective balanced regional development through the implementation of policies that will deliver reliable and effective energy networks and electricity grid for the West Region including County Galway, minimising environmental impact by: a) Promoting and supporting the provision of secure and efficient energy supply and storage including electricity, gas, and renewable energy including wind, wave/tidal, solar, bio-energy and heat energy distribution; b) Supporting infrastructural renewal, strengthening and development of strategic electricity networks within the County, as provided for under EirGrid's Grid25 Strategy, including EirGrid's Grid West Project.; c) Facilitating the extension of a natural gas distribution network to serve both the County and West Region	B4		B1 B2 B3 PHH1 S1 W1 W2 W3 M2 M1 M3 CH1 CH2 L1	C1
Commentary: See comments under Strategic Aims.				
Policy ER 4 - Sustainable Development and Energy Efficiency Promote more sustainable development through energy end use efficiency, increasing the use of renewable energy and improved energy performance of all new building developments throughout the County.	B4		B1 B2 B3 PHH1 S1 W1 W2 W3 M2 M1 M3 CH1 CH2 L1	C1
Commentary: See comments under Strategic Aims.				
Objective ER 1 – Electricity and Renewable Energy Infrastructure Support the development and expansion of infrastructure for the generation, storage, transmission and distribution of electricity, renewable energy and other renewable energy proposals in suitable locations in County Galway.	B4		B1 B2 B3 PHH1 S1 W1 W2 W3 M2 M1 M3 CH1 CH2 L1	C1
Commentary: See comments under Strategic Aims.				
Objective ER 2 – Priority Transmission Infrastructure Projects Facilitate the progression of and implement improvements to the existing electricity networks and facilitate the development of new transmission infrastructure projects in accordance with EirGrid's Grid25 Strategy that might be brought forward during the lifetime of this Plan subject to relevant Irish planning and European environmental legislation including Article 6 of the Habitats Directive and/or other environmental assessment. Map ER1 outlines existing and proposed energy transmission infrastructure corridors.	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M2 M3 CH1 CH2 L1		B1 B2 B3 PHH1 S1 W1 W2 W3 M2 M1 M3 CH1 CH2 L1	C1
Commentary: See comments under Strategic Aims. In addition, by referencing the need for improvements to the networks to comply with Irish planning and European environmental legislation including Article 6 of the Habitats Directive and/or other environmental assessment this objective would also be likely to contribute towards the protection of various policies and objectives.				
Objective ER 3 – Low Carbon County Promote County Galway as a low carbon County by 2020 having regard to the Climate Action and Low Carbon Development Bill (2013) when adopted. Encourage and favourably consider proposals for renewable energy developments and ancillary facilities in order to meet national, regional, county energy targets and to facilitate a reduction in CO2 emissions.	B4 B1 B2 B3 PHH1 S1 W1 W2 W3 M2 M1 M3 CH1 CH2 L1		B1 B2 B3 PHH1 S1 W1 W2 W3 M2 M1 M3 CH1 CH2 L1	C1
Commentary: See comments under Strategic Aims. In addition, by referencing the principles of proper planning and sustainable development this objective would also be likely to contribute towards the protection of various policies and objectives.				
Objective ER 4 – Renewable Energy 1. Support and facilitate the sustainable development and use of appropriate renewable energy resources and associated infrastructure within the County, including • Wind Energy; • Wave/Tidal Energy; • Hydro-Power; • Solar Energy;	B4 B1 B2 B3 PHH1 S1 W1 W2 W3 M2 M1 M3 CH1 CH2 L1		B1 B2 B3 PHH1 S1 W1 W2 W3 M2 M1 M3 CH1 CH2 L1	C1

<ul style="list-style-type: none"> • Bio-Energy, • Geo-Thermal • Combined Heat Power (CHP): • Heat Energy Distribution (such as District Heating/Cooling Systems); and • Other renewable energy sources, as appropriate and in line with national guidelines for sustainable development. <p>2. The Council shall commence a County Renewable Energy Strategy within the lifetime of the plan as resources permit. This document will also take micro-generations options into account and will recognise that Renewable Energy Projects are not just limited to large scale infrastructural projects</p>				
<p>Commentary: See comments under Strategic Aims. Also the implementation of a County Renewable Energy Strategy could further contribute towards environmental protection and management.</p>				
<p>Objective ER 5 - Wind Energy Developments Promote and facilitate wind farm developments in suitable locations, having regard to areas of the County designated for this purpose in the <i>County Galway Wind Energy Strategy</i>. The Planning Authority will assess any planning application proposals for wind energy production in accordance with the <i>County Galway Wind Energy Strategy, the DoEHLG Guidelines for Planning Authorities on Wind Energy Development, 2006</i> (or any updated/superseded documents), having due regard to the Habitats Directive and to the detailed policies, objectives and Development Standards set out in the Wind Energy Strategy</p> <p>Objective ER 6 – Wind Energy Strategy The policies, objectives and development management guidelines/standards set out in the <i>County Galway Wind Energy Strategy</i> shall be deemed to be the policies, objectives and development management guidelines/standards for the purpose of the Galway County Development Plan 2015-2021.</p>	<p>B4 B1 B2 B3 PHH1 S1 W1 W2 W3 M2 M1 M3 CH1 CH2 L1</p>		<p>B1 B2 B3 PHH1 S1 W1 W2 W3 M2 M1 M3 CH1 CH2 L1</p>	<p>C1</p>
<p>Commentary: In addition to contribute towards achieving various government objectives relating to the amount of energy to be consumed from renewable sources and reducing greenhouse gas emissions, the development of wind energy, could contribute towards the sustenance of rural populations (SEO B4). Such development has, however, the potential to impact upon various environmental components. Further general commentary on the types of potential effects arising from different renewable energies is provided under the commentary above at the Strategic Aims. It is noted that environmental considerations have already been fully integrated into the County Galway Wind Energy Strategy¹¹⁸.</p>				
<p>Objective ER 7 – Energy Efficiency Technology in Buildings The Planning Authority will have regard to the DoEHLG Guidelines on Sustainable Residential Developments in Urban Areas: Guidelines for Planning Authorities, 2009 and the accompanying guidance document Urban Design Manual in the assessment of any proposals for residential development, including inter alia those in respect of energy efficiency, passive solar design and renewable energy sources.</p> <p>The Council shall:</p> <ol style="list-style-type: none"> a) Encourage and actively promote innovative housing design, energy efficient technologies and layout solutions that address concerns of environmental sustainability with regard to matters such as energy efficiency and the use of materials; b) Actively encourage the integration of micro renewable energy sources into the design and construction of single and multiple housing developments throughout the County. c) The Council shall work with local and relevant departments to identify where there is poor energy infrastructure and low penetration of renewable energy. The Council shall promote the use of district heating/cooling and combined heat and power in new single and multiple housing developments, within schools, commercial and public buildings throughout the County. d) Galway County Council shall require the provision of energy efficient street lighting in all private developments. 	<p>B4</p>		<p>B1 B2 B3 PHH1 S1 W1 W2 W3 M2 M1 M3 CH1 CH2 L1</p>	<p>C1</p>
<p>Commentary: See comments under Strategic Aims.</p>				

¹¹⁸ The WES (originally adopted as a Variation to the 2009 County Development Plan in 2011) supports a plan and environment led approach to wind energy development in County Galway and sets out a) Strategic Areas, b) Acceptable in Principle Areas, and c) Areas Open for Consideration. The entire WES was subjected to SEA and AA (available at <http://www.galway.ie/en/Services/Planning/DevelopmentPlans/GalwayCountyDevelopmentPlan2009-2015/VariationtotheCountyDevelopmentPlan2009-2015/>) and environmental considerations were fully integrated into the WES through the recommendations which were made by both the SEA and AA. The provisions of the WES, including the recommendations which have been integrated into it, have been appended to the Plan (into which further environmental protection measures have been integrated – see Section 9 of this report). Note that a number minor changes which would not be likely to have significant environmental effects have been made to the document e.g. the reduction of cross repetition between the Plan and the Strategy and the changing of text that does not constitute or affect Plan provisions.

<p>Objective ER 8 – Promoting Energy Hubs Galway County Council shall promote Tuam Hub Town, Athenry and Gort and their environs as energy hubs, to take account of opportunities to develop suitable sustainable enterprises due to their proximity to electricity and gas transmission networks and minimising environmental impact.</p>	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>		<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	
<p>Commentary: New development would potentially impact upon all environmental components however measures have been integrated into the Plan which will provide mitigation. This objective mentions minimising environmental impact which improves the status of various SEOs.</p>				
<p>Objective ER 9 – Oileáin Árann an Energy Transition Community The Council shall continue to support Comharchumann Fuinnimh Oileáin Árann (Aran Islands Energy Cooperative), SEAI and Údarás na Gaeltachta in their objective to develop the Islands as being energy independent by 2022 and becoming Ireland's first energy transition community.</p>	<p>B4</p>		<p>B1 B2 B3 PHH1 S1 W1 W2 W3 M2 M1 M3 CH1 CH2 L1</p>	<p>C1</p>
<p>Commentary: See comments under Strategic Aims.</p>				
<p>Information & Communications Technology Policies</p>				
<p>Policy ICT 1 – Information & Communications Technology Infrastructure It is a policy of the Council to achieve a balance between facilitating the provision of telecommunications infrastructure, in the interests of social and economic progress, and sustaining residential amenity and the protection of the built and natural environment.</p> <p>Policy ICT 2 – Installation of Information & Communications Technology Infrastructure in High Amenity Areas It is a policy of the Council that where feasible proposed developments pertaining to the installation of potentially obtrusive information and communications technology infrastructure shall be located in landscape categories 1-3. Where they must be located on sensitive landscapes (those being a Class 4 (Special) or 5 (Unique) landscape category areas or in proximity to a National Monument, Protected Structure/Architectural Conservation Areas or within a focal point/view) shall be accompanied by visual impact assessments as part of the planning application process.</p> <p>Policy ICT 3-Broadband Infrastructure Galway County Council will regularly audit existing broadband infrastructure in Galway County and will highlight areas which are structurally weak in the availability of the infrastructure. Galway County Council in recognition of ICT infrastructure as being socially and economically vital will endeavour to promote the use of existing infrastructure that is underutilized and make the promotion of ICT related activity in the County a priority for all Council development related forums.</p> <p>Objective ICT 1 – Facilitate the Delivery of Telecommunications, Broadband and Digital Infrastructure Support and facilitate the delivery of high capacity ICT infrastructure, Broadband Networks and Digital Broadcasting in the County having regard to the Government Guidelines Telecommunications Antennae and Support Structures-Guidelines for Planning Authorities 1996 (DoEHLG) and Circular Letter PL 07/12 (including any updated/superseding documents) and where it can be demonstrated that the development will not have significant adverse effects on the environment including the integrity of the Natura 2000 network.</p> <p>Objective ICT 2 – Assimilation of Telecommunications Infrastructure into the Landscape Seek to locate telecommunication masts in non scenic amenity areas, having regard to the Landscape Sensitivity Rating Assessment of the County. In instances where their location is essential in a Class 4 (Special) or 5 (Unique) landscape category areas or in proximity to a National Monument, Protected Structure/Architectural Conservation Area or within a focal point/view, it shall be necessary to minimise their obtrusiveness in as far as is practically possible.</p> <p>Objective ICT 3 – Co-Location of Telecommunications Infrastructure Avoid a proliferation of communications masts and antennae in the open countryside and facilitate the potential for future mast sharing and co-location.</p> <p>Objective ICT 4 – Open Access Fibre Ducting Support and promote the installation of connections for high speed technologies, where practicable, in accordance with the Department of Communications, Energy and Natural Resources documents including 'Recommendations for Open Access Fibre Ducting and Interior Cabling for New Residential Buildings 'Making Homes Fibre Ready', 2011, the National Broadband Plan for Ireland 2012, 'Delivering a Connected Society' and the National Digital Strategy for Ireland 2013, 'Doing more with Digital – Phase 1 Digital Engagement'</p>	<p>B4 B1 B2 B3 PHH1 S1 W1 W2 M2 CH1 CH2 L1</p>		<p>B1 B2 B3 PHH1 S1 W1 W2 W3 M2 M1 M3 CH1 CH2 L1</p>	<p>C1</p>

Commentary:

The development of broadband and ICT infrastructure, could contribute towards the sustenance of rural populations (**SEO B4**). Such development has, however, the potential to impact upon various environmental components. References to the protection of the built and natural environment improves the status of various SEOs.

8.7.9 Chapter 8: Climate Change & Flooding

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs - unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	No Likely interaction with status of SEOs
Strategic Aims				
<ul style="list-style-type: none"> To increase awareness of the potential impacts of climate change to enable people to adapt and manage future extreme weather events such as flooding within the county and region; To promote the sustainable development of the County by ensuring that future development is considered and managed against the risk of flooding; To support an iterative process to flood risk management as data and analysis become available; To minimise the level of flood risk to people, businesses, infrastructure and the environment. Ensure major emergency planning takes account of climate change adaptation; Increase resilience of buildings and infrastructure networks to extreme weather events; To support and manage a healthy and diverse natural environment with capacity to adapt within the county and region; To apply an ecosystem-based approach to adaptation including the promotion of green infrastructure within county and region. 	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 CH1 CH2 L1		B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 CH1 CH2 L1	C1
Commentary: The Strategic Aims provide for sustainable development and would be likely to <ul style="list-style-type: none"> Minimise increases in flood risk (SEO W3) and protect human health (SEO HH1); Contribute towards the provision of various services and the sustainable management of water (SEO M1 M2 M3); Protect and manage biodiversity and water quality (SEOs B1 B2 B3 W1 W2); Protect cultural heritage and landscape sensitivities; and Allow for synergies with rural populations (SEO B4). <p>Certain actions, including those taken in relation to green infrastructure would have the potential to impact upon all environmental components however these conflicts would be likely to be mitigated by the measures which have been integrated into the Plan, including those which have emerged from the SEA process.</p>				
Climate Change Policies and Objectives				
Policy CC 1 – Climate Change Policy It is Council policy to have regard to EU and national Legislation and Strategies on climate change in its decision making process, in order to contribute to a reduction and avoidance of human induced climate change, in accordance with national targets under the Kyoto Protocol and the EU Roadmap.	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 CH1 CH2 L1 C1		B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 CH1 CH2 L1	
Policy CC 2 - Climate Change Adaptation Plans Support the National Climate Change Adaptation Framework 2012 by implementing relevant measures in any forthcoming adaptation plans. Such plans shall be in accordance with national guidance issued by the DoECLG and EPA and undertaken in collaboration with the West Regional Authority, Galway City Council, Mayo County Council and Roscommon County Council.				
Policy CC 3 – Increase Awareness of Climate Change The Council shall work collaboratively with regional/local authorities and other agencies to adapt to climate change and to increase the awareness of the impacts of climate change to enable people to understand and respond to the challenges that they face as a result of current and future climate change.				
Policy CC 4 – Mainstreaming Climate Change Adaptation				

<p>Galway County Council shall mainstream climate change adaptation into land use planning, building layouts, energy, transport, natural resource management, forestry, agriculture and marine waters.</p> <p>Policy CC 5 – Climate Change and the Natural Environment The Council shall support a healthy and diverse natural environment with capacity to adapt by promoting the role of green networks in helping the county/region to mitigate and adapt to climate change by strengthening habitat networks, reducing habitat fragmentation and providing opportunities for species to migrate.</p> <p>Policy CC 6 – Adapting Infrastructure to Climate Change The Council shall be guided by the EU document Adapting Infrastructure to Climate Change (SWD /2013/ 137) which sets out how climate change will affect energy, water supply, transport, communications infrastructure and buildings. All critical infrastructure proposals shall be 'Climate proofed' which shall not only consider the resilience to the adverse impacts of climate change but shall also minimise the emission of greenhouse gases over the lifespan of the physical asset in question.</p> <p>Policy CC 7 – Local Authority Action Regarding Climate Change It is a policy of the Council to be a leader in the action against climate change. The Council will strive to reduce energy consumption and increase the use of renewable energy in line with international, national and any forthcoming regional targets.</p> <p>Policy CC 8 – Human Health The Council shall continue to collaborate with the HSE and other relevant agencies in relation to the potential spread of water, food or vector borne pathogens.</p> <p>Objective CC 1 – Climate Change Adaptation Plan Galway County Council shall collaborate with the West Regional Authority and other local authorities in the preparation of a climate change adaptation plan, subject to guidance from the DoECLG and the EPA.</p> <p>Objective CC 2 – Greenhouse Gas Emissions Galway County Council shall implement measures which seek to establish a low carbon economy and society by 2050 and which seek to reduce greenhouse gas emissions including the adoption of sustainable planning strategies through integrating land use and transportation.</p> <p>Objective CC 3 – 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>Objective CC 4 – Climate Proofing Critical Infrastructure Galway County Council shall have regard to climate change in assessing all critical transport and energy infrastructure developments, so as to ensure the viability of such developments into the future.</p> <p>Objective CC 5 - An Ecosystems Approach and Land Use Galway County Council shall implement an ecosystems approach (holistic approach) to land use and land use change and ensure that climate change adaptation measures are taken into account in planning decisions. The Council shall also</p> <ol style="list-style-type: none"> Have regard to any recommendations and forthcoming recommendations as outlined in the proposed National Raised Bog SAC Management Plan and the National Biodiversity Plan; Integrate climate risk into the review of the Biodiversity Action Plan for County Galway 2008 - 2013; Seek to control the spread of non-native and alien invasive species on land and water using new regulatory powers. 				
<p>Commentary: These measures would be likely to</p> <ul style="list-style-type: none"> Contribute towards increases in sustainable mobility and reductions in greenhouse gas emissions (SEO C1); Minimise increases in flood risk (SEO W3) and protect human health (SEO HH1); Contribute towards the provision of various services and the sustainable management of water (SEO M1 M2 M3); Protect and manage biodiversity and water quality (SEOs B1 B2 B3 W1 W2); Protect cultural heritage and landscape sensitivities; and Allow for synergies with rural populations (SEO B4). <p>Certain actions, including those taken in relation to climate adaptation would have the potential to impact upon all environmental components however these conflicts would be likely to be mitigated by the</p>				

measures which have been integrated into the Plan, including those which have emerged from the SEA process.				
Air Quality Objectives				
<p>Objective CC 6 – Air Quality Galway County Council shall promote the preservation of best ambient air quality compatible with sustainable development in accordance with the EU Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive (2008/50/EC) and by ensuring that all air emissions associated with new developments are within Environmental Quality Standards as out in the Air Quality Standards Regulations 2011 (SI No. 180 of 2011) (or any updated/superseding documents).</p> <p>Objective CC 7– Air Purification The 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>	PHH1 B2			B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 CH1 CH2 L1
<p>Commentary: These objectives would be likely to contribute towards the protection of human health and ecology.</p>				
Radon Objective				
<p>Objective CC8 – Radon The 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>	PHH1 B2			B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 CH1 CH2 L1
<p>Commentary: This objective would be likely to contribute towards the protection of human health.</p>				
Flood Risk Management Policies and Objectives				
<p>Policy FL 1 - Flood Risk Management Guidelines It is the policy 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 <i>The Planning System and Flood Risk Management Guidelines (2009)</i> (and any updated/superseding legislation or policy guidance). Galway County Council will also take account of the Shannon International and Western Catchment Flood Risk Assessment and Management Studies.</p> <p>Policy FL 2 – Catchment Planning The Council will actively work with the CFRAM Programme and catchment based Flood Planning Groups, especially in the east of the County 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>Policy FL 3 – Improvement and/or Restoration of Natural Flood Risk Management Functions Where resources are available and subject to compliance with the Habitats and Birds Directives, the Council will contribute towards the improvement and/or restoration of the natural flood risk management functions of flood plains.</p> <p>Policy FL 4 – Principles of the Flood Risk Management Guidelines The Council shall implement the key principles of flood risk management set out in the Flood Risk Management Guidelines as follow: 1) Avoid development that will be at risk of flooding or that will increase the flooding risk elsewhere, where possible; 2) Substitute less vulnerable uses, where avoidance is not possible; and 3) Mitigate and manage the risk, where avoidance and substitution are not possible. 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. 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>Policy FL 5 – SFRA of Lower Tier Plans Lower tier plans shall undertake SFRA (Strategic Flood Risk Assessment) in compliance with the Flood Risk Management Guidelines and in consultation with the OPW.</p>	B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3			C1 CH1 CH2 L1

<p>Flood Risk Management Objectives</p> <p>Objective FL 1 - 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> <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).</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>Objective FL 2 – 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 runoff 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>Objective FL 3 - 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>Objective FL 4 – Flood Risk Assessment for Planning Applications & CFRAMS Site-specific Flood Risk Assessment (FRA) is required for all planning applications in areas at 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 Council shall have regard to the results of any CFRAM Studies in the assessment of planning applications.</p> <p>Objective FL 5 – SFRA/FRA & 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>Objective FL 6 – FRA & 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 EIS. FRA should therefore be an integral part of any EIA undertaken for projects within the County.</p>				
<p>These Policies and Objectives would be likely to minimise increases in flood risk and by doing this would be likely to contribute towards the:</p> <ul style="list-style-type: none"> • Protection of human health (SEO HH1); • The provision of various services and the sustainable management of water (SEO M1 M2 M3); • Protection and management of biodiversity and water quality (SEOs B1 B2 B3 W1 W2); • Protection of cultural heritage and landscape sensitivities; and • The sustenance of rural populations (SEO B4). 				

8.7.10 Chapter 9: Heritage, Landscape and Environmental Management

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs - unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	No Likely interaction with status of SEOs
Strategic Aims				
<ul style="list-style-type: none"> To promote appropriate enhancement of the built and natural environment as an integral part of any development; To promote a reasonable balance between conservation measures and development needs in the interests of promoting orderly and sustainable development. To protect the landscape categories within the county and avoid negative impacts upon the natural environment; To promote appropriate enhancement of the natural environment as an integral part of any development. 	B1 B2 B3 B4 PHH1 S1 W1 W2 M1 M2 CH1 CH2 L1		B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 CH1 CH2 L1 C1	
These provisions would contribute towards environmental protection and sustainable development. Any potential conflicts would be mitigated by the measures contained in the Plan (see Section 9 of this report).				
General Heritage Policies				
<p>Policy GH 1 - Conserve, protect and enhance the special character of the County as defined by its natural heritage and biodiversity, its built environment, landscape and cultural, social and sporting heritage.</p> <p>Policy GH 2 - Ensure that heritage protection is an integral part of coherent policies on economic and social development and of urban and rural planning.</p> <p>Policy GH 3 – Implement the legislative provisions of the Planning and Development Act 2000 (as amended), which offers protection to the architectural, archaeological and natural heritage.</p> <p>Policy GH 4 – Engage with all relevant stakeholders (and in particular local communities) in matters relating to the protection of natural, built and cultural heritage.</p>	B1 B2 B3 B4 PHH1 S1 W1 W2 M1 M2 CH1 CH2 L1			M3 W3 C1
Commentary:				
The provisions in this section would contribute towards environmental protection and sustainable development.				
Architectural Heritage Policies and Objectives				
<p>Policy AH 1 – Architectural Heritage Protect the Architectural Heritage of County Galway which is a unique and special resource.</p> <p>Policy AH 2 – Traditional Skills Maintain a database of traditional building skills, and promote training and awareness of the use of appropriate materials and skills within the local authority, community groups and owners and occupiers of traditionally built structures.</p> <p>Objective AH 1 – Legislative Context Ensure the protection of the Architectural Heritage of County Galway which is a unique and special resource, in particular by implementing the legislative provisions of the Planning and Development Act 2000 (as amended) in relation to architectural heritage and the policy guidance contained in the Architectural Heritage Protection Guidelines 2011 (and any updated/superseding document).</p> <p>Objective AH 2 – Protected Structures (Refer to Appendix V) Ensure the protection and sympathetic enhancement of structures 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.</p> <p>Objective AH 3 - Architectural Conservation Area Protect, conserve and enhance the essential character of any Architectural Conservation Area (ACA) through the appropriate management and control of the design, location and layout of new development, 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. The identification of Architectural Conservation Areas may be considered during the lifetime of the Plan in either urban or rural settings.</p> <p>Objective AH 4 – Works relating to Protected Structures and Architectural Conservation Areas 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</p>	CH1 CH2 L1		B4	B1 B2 B3 PHH1 S1 W1 W2 M1 M2 C1 M3 W3

<p>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. This will include the following:</p> <p>a) Works materially affecting the character of a Protected Structure or the exterior of a building/ structure within an ACA will require planning permission.</p> <p>b) 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.</p> <p>Works within the ACA shall ensure the conservation of traditional features and building elements that contribute to the character of the area. New proposals shall have appropriate regard to scale, plot, form, mass, design, materials, colours and function.</p> <p>Objective AH 5 – Demolition Prohibit development proposals, either in whole or in part, for the demolition of Protected Structures, save in exceptional circumstances, or the demolition of a structure within an Architectural Conservation Area that contributes to the special character of the area.</p> <p>Objective 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 use of the vernacular built heritage, including structures that contribute to landscape and streetscape character and resist the demolition of these structures.</p> <p>Objective 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>Objective AH 8 – Energy Efficiency and Traditionally Built Structures Ensure that measures to up grade the energy efficiency of Protected Structures and traditionally built historic structures are sensitive to traditional construction methods and use appropriate materials and do not have a detrimental impact on the material, aesthetic or visual character of the building.</p> <p>Objective 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>Objective AH 10– Designed Landscapes Identify and evaluate the surviving historic designed landscapes in the County and promote the conservation of their essential character, both built and natural.</p> <p>Objective 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>Commentary:</p>				
<p>1 potential conflict due to a level of restriction on development in sensitive areas.</p>				
<p>Archaeological Heritage Policies and Objectives</p>				
<p>Policy ARC 1 – Legislative Context It is the policy of Galway County Council to support and promote the conservation and appropriate management and enhancement of the county's archaeological heritage within the Plan area. Galway County Council will ensure the implementation of the legislative, statutory and policy provisions relevant to the conservation of the archaeological heritage.</p> <p>Policy ARC 2 – Archaeological Sites Seek to promote awareness of and access to archaeological sites in the county where appropriate.</p> <p>Policy ARC 3 – Consultation Consult with the National Monuments Service of the Department of Arts Heritage and the Gaeltacht in relation to proposed developments adjoining archaeological sites.</p> <p>Policy ARC 4 – Management of Archaeological Sites and Monuments Support the preservation, conservation and management of archaeological sites and monuments, together with the settings of these monuments.</p>	<p>CH1 CH2 L1 B2</p>		<p>B4</p>	<p>B1 B3 PHH1 S1 W1 W2 M1 M2 C1 M3 W3</p>

<p>Policy ARC 5 – Archaeological Heritage Ensure the protection and sympathetic enhancement of Archaeological Heritage in the Plan Area, in particular by implementing the relevant provisions of the Planning and Development Act 2000 (as amended), The National Monuments Act, 1930 (as amended), and The National Policy on Town Defences 2008 (Department of the Environment, Heritage and Local Government).</p> <p>Policy ARC 6-Archaeological Landscapes To facilitate where possible the identification of important Archaeological Landscapes in the county.</p> <p>Objective ARC 1 – Protection of Archaeological Sites Protect archaeological sites and monuments, their settings and visual amenity, archaeological objects and underwater archaeological sites that are listed in the Record of Monuments and Places, in the ownership/guardianship of the State, or that are subject of Preservation Orders or have been registered in the Register of Historic Monuments and seek to protect important archaeological landscapes.</p> <p>Objective ARC 2 – Development Management 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 (Ardrahan, Athenry, Dunmore, Eyrecourt, Loughrea and Tuam) will take account of the archaeological heritage of the area and the need for archaeological mitigation.</p> <p>Objective ARC 3 – Protection of new Archaeological Sites Protect and preserve archaeological sites, which have been identified subsequent to the publication of the Record of Monuments and Places.</p> <p>Objective ARC 4 – Burial Grounds Protect the burial grounds, identified in the Record of Monuments and Places, in co-operation with the National Monument Service of the Department of Arts, Heritage and the Gaeltacht. Encourage the local community to manage burial grounds in accordance with best conservation and heritage principles.</p> <p>Objective ARC 5 – Battlefield Sites Protect the Battle of Aughrim site and other battlefield sites and their settings. Refer all planning applications within the battlefield sites and their environs to the Monument Service of The Department of Arts, Heritage and the Gaeltacht for their consideration.</p> <p>Objective ARC 6 – Underwater Archaeological Sites To protect and preserve the underwater archaeological sites in rivers, lakes, intertidal and sub-tidal locations.</p> <p>Objective ARC 7 – 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>Commentary: 1 potential conflict due to a level of restriction on development in sensitive areas.</p>				
<p>Natural Heritage and Biodiversity Policies</p>				
<p>Policy NHB 1 – Natural Heritage and Biodiversity It is the policy of Galway County Council to 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 Conamara National Park (and other designated sites including any future designations) and the promotion of the development of a green/ecological network within the Plan Area, in order to support ecological functioning and connectivity, create opportunities in suitable locations for active and passive recreation and to structure and provide visual relief from the built environment.</p> <p>Policy NHB 2 – Non-Designated Sites Recognise that nature conservation is not just confined to designated sites and acknowledge the need to protect non-designated habitats and landscapes and to conserve the biological diversity in the county.</p> <p>Policy NHB 3 – Green Infrastructure Protect existing green infrastructure and provide additional green infrastructure where possible such as green roof technology and energy efficiency pumps.</p>	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 CH1 CH2 L1 C1</p>		<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 CH1 CH2 L1</p>	<p>M3</p>

<p>Policy NHB 4– Water Resources Protect, conserve and enhance the water resources of the county, 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 and seek to protect and conserve the quality, character and features of inland waterways by controlling developments close to navigable and non-navigable waterways.</p> <p>Policy NHB 5 – Geological and Geo-Morphological Systems Protect, conserve and enhance important geological and geo-morphological systems in the county and seek to promote access to such sites where possible.</p> <p>Policy NHB 6 – National Biodiversity Plan, Galway County Heritage Plan and Galway County Biodiversity Plan It is the policy of the Council to support the implementation of the <i>National Biodiversity Plan</i> and <i>Galway County Biodiversity Plan</i> and <i>Galway County Heritage Plan</i> in partnership with relevant stakeholders subject to available resources.</p> <p>Policy NHB 7 - Invasive Species It is a policy of the Council to support measures for the prevention and eradication of invasive species. This will include the dissemination of information to raise public awareness, the adoption of codes of practices/standard biosecurity measures in normal Local Authority activities consultation with relevant stakeholders, the promotion of the use of native species in amenity planting and landscaping and the recording of invasive/native species as the need arises and resources permit.</p> <p>Policy NHB 8 – National Parks and Wildlife Service (NPWS) Management Plans It shall be the policy of the Council to ensure that development takes into account relevant Management Plans prepared by NPWS for SACs and SPAs.</p> <p>Objective NHB 1 – Protected Habitats and Species Support the protection of habitats and species listed in the Annexes to and/or covered by the EU Habitats Directive (92/43/EEC) (as amended) and Birds Directive (2009/147/EC), and regularly occurring-migratory birds and their habitats, and species protected under the Wildlife Acts 1976-2000 and the Flora Protection Order.</p> <p>Objective NHB 2– Biodiversity and Ecological Networks Support the protection and enhancement of biodiversity and ecological connectivity within the Plan Area, including woodlands, trees, hedgerows, semi-natural grasslands, rivers, streams, natural springs, wetlands, stonewalls, geological and geo-morphological systems, other landscape features and associated wildlife where these form part of the ecological network and/or may be considered as ecological corridors or stepping stones in the context of Article 10 of the Habitats Directive.</p> <p>Objective NHB 3 – 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 <i>Water Framework Directive 2000 (2000/60/EC)</i>, the <i>European Union (Water Policy) Regulations 2003</i> (as amended), the <i>Western River Basin District Management Plan 2009- 2015</i>, <i>Shannon International River Basin Management Plan 2009-2015</i> 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>Objective NHB 4 – Geological and Geo-Morphological Systems Protect and conserve geological and geo-morphological systems, 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>Objective NHB 5 – Control of Invasive and Alien Invasive Species Where the potential for spread of invasive species are identified as part of a development proposal the developer will be required to submit an invasive species management plan. A landscaping plan will be required for developments near water bodies and ensure that such plans do not include alien invasive species.</p> <p>Objective NHB 6 – Protection of Bats and Bats Habitats Seek to protect bats and their roosts, their feeding areas, flight paths and commuting routes. Ensure that development</p>				
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<p>proposals in areas which are potentially important for bats, including areas of woodland, linear features such as hedgerows, stone walls, 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. Any assessment 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.</p> <p>Objective NHB 7 – Eskers Assess applications for quarrying and other proposed developments that are in close proximity to eskers that have the potential to impact on their landscape, scientific or amenity value.</p> <p>Objective NHB 8 – Coastal Zone It is an objective to protect the coastal zone through the following measures: 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; b) Seek to prevent the unauthorised removal of sand and related beach material; 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; 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; e) 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>Objective NHB 9 – Inland Waterways Protect the amenity and recreational value of navigable and non-navigable waterways.</p> <p>Objective NHB 10 – Protection of the Coastal Zone 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. Conserve the character, quality and distinctiveness of seascapes.</p> <p>Objective NHB 11 – Trees, Parkland/Woodland, Stone Walls and Hedgerows a) Protect important trees, tree clusters and hedgerows within the county and ensure that development proposals take cognisance of significant trees/tree stands. Ensure that all planting schemes use suitable native variety of trees, of Irish provenance. b) Seek to retain natural boundaries, including stone walls, hedgerows and tree boundaries, wherever possible and replace with a boundary type similar to the existing boundary where removal is unavoidable. Discourage the felling of mature trees to facilitate development and encourage tree surgery rather than felling where possible. All works to be carried out in accordance with the provisions of the Forestry Act, 1946.</p> <p>Objective NHB12 - Soil/Ground Water Protection 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>Objective NHB 13 – NPWS & Integrated Management Plans Galway County Council shall seek to engage with and support the National Parks & Wildlife Service to ensure Integrated Management Plans are prepared for all Natura 2000 sites and ensure that that such plans are fully integrated with all land use and water management plans in the county, with the intention that such plans are practical, achievable and sustainable and have regard to all relevant ecological, cultural, social and economic considerations and with special regard to local communities.</p> <p>Objective NHB 14 – Protection of Riparian Zones 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.</p>				
<p>Commentary: Potential conflicts due to, inter alia, the development of green infrastructure which has the potential to impact upon environmental components.</p>				

Landscape Conservation & Management Policies and Objectives				
<p>Policy 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>Objective LCM 1 - Landscape Sensitivity Classification 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, and having regard to the zoning objectives of serviced Development Land within the Galway Metropolitan Areas.</p> <p>Objective LCM 2 – 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>Objective LCM 3 – 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>Objective LCM4–Review of the Landscape Character Assessment On adoption of the National Landscape Strategy for Ireland 2015-2025, the Planning Authority shall facilitate the development of the National Landscape Character Assessment prior to reviewing the county Landscape Character Assessment.</p> <p>Focal Point and Views Objective Objective FPV 1 – Development Management Preserve the focal points and views as listed in Map FPV1 from development that in the view of the Planning Authority would negatively impact on said focal points and views. This shall be balanced against the need to develop key infrastructure to meet the strategic aims of the plan, and have regard to the zoning objectives of serviced Development land within the Galway Metropolitan Area.</p> <p>Objective WH 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, Ireland 2010 and engage with other national and international initiatives which promote the special built, natural and cultural heritage of places in the county.</p>	<p>B1 B2 B3 B4 W1 W2 CH1 CH2 L1</p>		<p>B4</p>	<p>M3 C1 PHH1 S1 W3 M1 M2</p>
<p>Commentary: 1 potential conflict due to a level of restriction on development in sensitive areas.</p>				

8.7.11 Chapter 10: Cultural, Social and Community Development

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs - unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	No Likely interaction with status of SEOs
Strategic Aims				
<ul style="list-style-type: none"> To promote and facilitate the development of the Gaeltacht & Island communities in County Galway; To promote and facilitate sustainable communities through land use planning, by providing for land uses capable of accommodating community, leisure, recreational, amenity and cultural facilities; To ensure that the needs of all individuals and local community groups are delivered in tandem with the residential and physical infrastructure, in order to create a quality, built environment in which to live. 	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>		<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	

Commentary: The evaluation of the strategic aims is consistent with the evaluation of the chosen strategy for the Plan (Scenario D) as detailed in full in Section 7. It is noted that the aims contributes towards the protection of cultural heritage (CH1 CH2).				
Gaeltacht Policies and Objectives				
<p>Policy G 1 – Preserving and Promoting the Gaeltacht in the Planning Process The Council through the Gaeltacht Local Area Plan 2008-2018 has outlined Policies and Objectives to protect and encourage the social, cultural and linguistic heritage of the Gaeltacht, whilst seeking to realise the economic and development potential of the Gaeltacht in a balanced and sustainable manner over the lifetime of the Plan.</p> <p>Policy G 2 – Economic Development in the Gaeltacht Galway County Council, through its Economic Development role, is committed to working closely with all the statutory development agencies, especially Údarás na Gaeltachta, to achieve sustainable development in the Galway Gaeltacht while protecting and promoting the Irish language as the first community language of the area.</p> <p>Policy G 3 – The Irish Language as an asset Recognise the economic, social and cultural importance of Irish in the Gaeltacht and throughout the county.</p> <p>Policy G 4 – Official Languages Act 2003 Support and implement the recommendations of the Official Languages Act 2003 (or any superseding or updated version of same).</p> <p>Objective G 1 – Linguistic and Cultural Heritage of the Gaeltacht It shall be an objective of the Council to protect the linguistic and cultural heritage of the Gaeltacht and to promote Irish as the community language</p>	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 CH1 CH2 L1</p>		<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	
Commentary: The development of the Gaeltacht is consistent with related parts of the evaluation of the chosen strategy for the Plan (Scenario D) as detailed in full in Section 7. It is noted that Gaeltacht Local Area Plan contributes towards the protection of cultural heritage (CH1 CH2).				
Islands Policies and Objectives				
<p>Policy IS 1 – Supporting the Islands Support the inhabited islands in County Galway and to recognise the special planning and development needs of islands and islands communities, particularly access, infrastructure and services.</p> <p>Objective IS 1 – Economic and Tourism Development on the Islands Support the economic and tourism development of the islands for the benefit of island communities generally and to encourage the development of speciality or niche economic sectors that might be appropriate to different islands.</p> <p>Objective IS 2 – Development Proposals on the Islands (a) Support sustainable development proposals that contribute to the long term economic and social development of the islands (b) Priority shall be given to development that contributes to retention of the year-round population on the islands, has a clear and identifiable economic and social benefit and that is compatible with the capacity of the local community to accommodate it. (c) Ensure that new development of any kind is sympathetic to the individual form and character of the islands landscapes and traditional building patterns.</p> <p>Objective IS 3 – Framework Plan for the Islands As resources permit, support the island communities in the preparation of a framework plan for the islands.</p>	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 CH1 CH2 L1</p>		<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	
Commentary: The development of the islands is consistent with related parts of the evaluation of the chosen strategy for the Plan (Scenario D) as detailed in full in Section 7. It is noted that Objective IS 2 contributes towards the protection of cultural heritage (CH1 CH2).				
Community Facilities and Services Policies and Objectives				
<p>Policy CF 1 – Community Facilities Assist where possible the development of community facilities and services within the county. Encourage and facilitate, where feasible the provision and extension of integrated community facilities to serve the needs of communities in the County.</p> <p>Policy CF 2 – Community & Voluntary Sector Support the strengthening of the Community and Voluntary sector throughout the County.</p>	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 CH1 L1</p>		<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	

<p>Policy CF 3 – Education & Childcare Facilities Promote the provision of education opportunities for all groups in the County and the provision of day care and childcare facilities by both the public and private sectors in settlements and communities throughout the County</p> <p>Policy CF 4 – Library Services Continue to promote the use of the library service and further develop each library as a community gathering place and learning hub.</p> <p>Policy CF 5 – Community & Cultural Needs Recognise the community and cultural needs of new communities in the county and promote the sharing of facilities in our towns and villages.</p> <p>Policy CF 6 – Burial Grounds Implement the ongoing programme for the provision and extension of burial grounds within available resources. The planning authority will seek to acquire lands where the extension of public burial grounds in the ownership or charge of the Council which is necessary or likely to be necessary during the Plan period. Archaeologically significant medieval burial grounds will not be considered for extension if such an extension would constitute a proven risk to the archaeological heritage.</p> <p>Policy CF 7 – Art, Sports & Social Inclusion Support the implementation of the Council's Art's, Sports, Social Inclusion, the 'Integration and Diversity Strategy 2013-2015', 'Galway Age Friendly Strategy 2014-2019', and a Youth Support Programme and other appropriate plans and programmes that may be developed during the lifetime of this Plan.</p> <p>Policy CF 8 – Cultural Development in the County Actively encourage and support Arts organisations to achieve their full potential, while enhancing the artistic life of County Galway. The Council supports and develops organisations and individuals working in the Cultural and Creative Services.</p> <p>Objective CF 1 - Universal Accessibility, Universal Design and Social Inclusion Promote and support where possible the concept of universal accessibility, universal design and facilitate social inclusion through high standards of design in projects and plans.</p> <p>Objective CF 2 - Education Provision & Facilities Work closely with the Department of Education and Skills and the Office of Public Works to identify and protect suitable sites for new educational facilities. Site reservations for primary and post primary schools shall be considered when developing Local Area Plans and this may include campus arrangements.</p> <p>Objective CF 3 - Crèche Facilities Require the provision of crèche facilities in mixed use/residential developments in accordance with the ministerial guidelines for Planning Authorities on Childcare Facilities published in 2001. The Planning Authority shall encourage the development of a broad range of childcare facilities, i.e. part-time, full day-care, after-school care, etc., including those based in residential areas, in employment areas and in areas close to where users of such facilities live. In general, childcare facilities outside of established settlements shall only be permitted adjacent to or in close proximity to existing educational or social facilities (national schools, rural shops/post offices, etc).</p> <p>Objective CF 4 - Sport, Amenity and Recreation Support and facilitate local communities, sporting organisations in the development of sport and recreational facilities. Support the modest expansion of existing and authorised sporting facilities throughout the County. Seek to develop open spaces throughout the county which will support a range of recreational and amenity activities that provides for active and passive needs.</p> <p>Objective CF 5 - Play Facilities Support the development of Play facilities at suitable locations in the county in accordance with the National Play Strategy 'Ready Steady Play!'.</p> <p>Objective CF 6 – Burial Grounds Acquire lands where the extension of public burial grounds in the ownership or charge of the Council which is necessary or likely to be necessary during the Plan period. Archaeologically significant medieval burial grounds will not be considered for extension if such an extension would constitute a proven risk to the archaeological heritage.</p> <p>Objective CF 7 – Older Persons Services Consider favourably projects throughout the County that deliver services for the older persons or that integrate services</p>				
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<p>for older persons and children.</p> <p>Objective CF 8 – Health Services Promote the continued improvement and expansion of health and medical care facilities within the county in a planned and co-ordinated way, by accommodating projects that assist in providing such medical care facilities, including mental health services together with their necessary support services and developments, as well as their infrastructural requirements.</p> <p>Objective CF 9 – Support the development of the unique culture of the County Facilitate the development of cultural infrastructure within communities throughout the County that will further enhance the cultural vibrancy of the County.</p> <p>Objective CF 10 – Fire Service in the Conamara Area Support the development of Fire Service(s) in the Conamara Area</p>				
<p>Commentary: The development of these provisions is consistent with related parts of the evaluation of the chosen strategy for the Plan (Scenario D) as detailed in full in Section 7. It is noted that Policy CF 6 and Objective CF 6 both contribute towards the protection of cultural heritage (CH1).</p>				
<p>Recreation and Amenity and Public Rights of Way Policies and Objectives</p>				
<p>Policy RA 1 – Promotion of Recreation & Amenity Co-operate with various stakeholders in promoting and developing the recreational and amenity potential of the County and carry out appropriate development as and when resources permit.</p> <p>Policy RA 2 – Protection of sensitive areas Protect the amenity of scenic and environmentally sensitive areas and promote the knowledge and appreciation of the natural amenities of the County.</p> <p>Policy RA 3 – Walking and Cycle Routes Support cycling and walking and other such recreational groups and organisations in promoting their disciplines and developing routes and facilities.</p> <p>Policy RA 4 – Sports, Recreation, Amenity and Play Policy Develop and implement a Sports, Recreation, Amenity and Play Policy for the County within the lifetime of the Plan based on the recommendations of the Recreational Needs Study being undertaken by Galway County Council.</p> <p>Policy RA 5-Bridleways Galway County Council will support and promote programmes and initiatives that will help to develop Bridleways in County Galway.</p> <p>Objective RA 1 – Swimming Facilities It is an objective of the Council to enhance the provision of swimming facilities throughout the county ensure the quality of bathing water is maintained and to contribute towards the achievement of the requirements of the EU Bathing Water Directive and to transposing Bathing Water Quality Regulations (SI No. 79 of 2008) and EU Mandatory Values, as a minimum, and EU Guide Values, where possible.</p> <p>Objective RA 2 – Recreation Outlets It is an objective of the Council to support the provision of age friendly recreation outlets, including public parks, play areas, community allotments and walkways.</p> <p>Objective RA 3 – Recreation Facilities It is an objective of the Council to develop sport, recreation and amenity facilities in appropriate locations consistent with proper planning and sustainable development in the County and in partnership with local community and sports groups and/or private parties. The modest expansion of existing and authorised sporting facilities throughout the County will be supported.</p> <p>Objective RA 4 – Allotments It is an objective of the Council to consider positively the provision of, or permission for, the development of allotments within rural and agricultural areas where they are accessible from the built-up area of the County, to be available to the community.</p> <p>Objective RA 5 – Clifden Greenway It is an objective of the Council to protect the alignment of the Clifden Railway Line as a Greenway and to support its completion.</p>	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 L1</p>		<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	

<p>Objective RA 6 – Walking Routes/Rights of ways Prohibit the intrusion of development along public walking routes and public rights of way, particularly those in scenic areas, the sea coast and along inland waterways.</p> <p>Objective RA 7 – Walking and Cycle Routes Support and promote programmes to develop walking and cycle routes including the Irish Trails Strategy, the <i>Galway County Council Walking and Cycling Strategy (2013)</i> and <i>The National Cycle Network Scoping Study (2010)</i>.</p> <p>Policy PRW 1 – Preservation of Public Rights of Way It is the Policy of the Council to preserve and protect verified public rights of way which give access to seashore, mountain, lakeshore, riverbank or other place of natural beauty or recreational utility.</p> <p>Objective PRW 1 – Identification of existing Public Rights of Way Seek to identify, map and protect verified existing public rights of way that give access to seashore, mountain, lakeshore, riverbank or other place of natural beauty or recreational utility as they become available to the Planning Authority over the lifetime of the Plan.</p>				
<p>Commentary: The development of recreation and amenity facilities would facilitate the chosen strategy for the Plan (Scenario D), the evaluation of which is detailed in full in Section 7.</p>				
<p>Social Inclusion and Universal Access Policies and Objectives</p>				
<p>Policy SI 1 - Social Inclusion and Universal Access Support the principles of social inclusion and universal access and ensure that all individuals have access to goods, services, facilities and buildings and in light of these principles recognise the social and economic disadvantages in areas of East Galway and Conamara and assist individuals to participate in and contribute to social and cultural life within County Galway as a whole.</p> <p>Policy SI 2 – Social Inclusion Programmes/Interventions Support the implementation of the requirements and provisions as set out in the Disability Act 2005, the National Action Plan for Social Inclusion 2007-2016 (including any updated or superseding document), including RAPID and CLAR which support locally-based social inclusion interventions with emphasis on supporting people and communities suffering disadvantage and exclusion through a wide spectrum of locally –promoted actions.</p> <p>Policy SI 3 - Implementation of Policy Implement the provisions of the County Galway Local Authorities Disability Action Plan 2007-2015 and the Social Inclusion Strategy (including any updated/superseding documents), Galway Age Friendly Strategy 2014-2019, Integration and Diversity Strategy 2013-2015, Galway Traveller Interagency Strategy, Galway LGBT Diversity Strategy ; Irish National Positive Ageing Strategy.</p> <p>Policy SI 4 – Lifelong Learning Galway County Council shall support the concept of lifelong learning.</p> <p>Policy SI 5 – Ageing & the Family Work with NUI Galway and other partners to make County Galway a flagship for the integration of research and practice in the areas of ageing and family needs.</p> <p>Objective SI 1 – Recognised Special Needs Consideration shall be given to individuals with recognised special needs in the location layout and design of housing developments, communal facilities, public spaces and transport services.</p> <p>Objective SI 2 – Housing for the Older Person and People with Other Special Needs Ensure that appropriate units are developed in the housing market for the older person, people with disabilities and other special needs households.</p> <p>Objective SI 3 – Proofing of Traffic Management Infrastructure Ensure that traffic management infrastructure is developed in accordance with road design manuals and in accordance with the DM Standards and Guidelines of this Plan to cater for all needs.</p> <p>Objective SI 4 – Services and Rural Transport Networks The Council will support the development of new rural transport networks where gaps in services are identified.</p> <p>Objective SI 5 – Priorities for Traffic Management Policies in Urban Areas Progress traffic management policies that facilitates pedestrians and cycle users in conjunction with vehicular movement in urban centres and towns and villages.</p>	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 L1</p>		<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	

<p>Objective SI 6 – Integrated Transport Strategy and Older Residents Develop a transport policy and integrated transport strategy to address the transport concerns of all residents and the broader community.</p> <p>Objective SI 7 – Community Safety and Infrastructure Promote and support the development of infrastructure that improves community safety.</p> <p>Objective SI 8 – World Health Organisation and Age Friendly Cities Consider the World Health Organisation (WHO) Checklist of Essential Features of Age Friendly Cities when implementing the County Development Plan.</p> <p>Objective SI 9 – Life Long Communities Facilitate all members of the community living at home in their own homes and communities for as long as possible.</p>				
<p>Commentary: Physical development that would be provided for and supported by these provisions would facilitate the chosen strategy for the Plan (Scenario D), the evaluation of which is detailed in full in Section 7.</p>				

8.7.12 Chapter 11: Agriculture, Fishing Marine Resources and Forestry

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs - unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	No Likely interaction with status of SEOs
<p>Strategic Aims</p>				
<ul style="list-style-type: none"> • To maintain and support into the future the County's rural/coastal communities including the traditional family farm; • To harness a pride of place and to assist rural communities to promote their natural resources including the sustainable stewardship and management of natural ecosystems within land and sea; • To support existing local rural economies, promote diversification, improve conditions of local farms and rural enterprises and to help develop local markets within the County; • To help foster 'green growth/ management practices'(including food security, quality and diversity) in primary food production methods within the agri- food, fisheries and forestry sectors within the County; • To pursue climate change mitigation and adaptation actions thus enabling agriculture to respond to climate change particularly to the effects of extreme weather fluctuations. <p>Agriculture, Fishing/Marine Resources and Forestry Policies</p> <p>Policy AFF 1 –Agri-Food Sector, Fisheries/Marine Resources and Forestry The Council shall recognise innovative strategies in the the agri-food sector, fisheries/marine resources and forestry within the County</p> <p>Policy AFF 2 – Sustainable Management of Natural Resources Support the Department of Agriculture, Fisheries and Food Report titled 'Food Harvest: A Vision for Agri - Food and Fisheries 2020'.</p>	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 C1 CH1 CH2 L1</p>		<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	
<p>Agriculture Policies and Objectives</p>				
<p>Policy AFF 3 – Sustainable Development of the Countryside Facilitate the sustainable development of the countryside. The Council recognises that the diversification of appropriate uses on rural landholdings may be necessary in order to ensure the continued viability of agriculture.</p> <p>Policy AFF 4 – Organic Farming and Rural Tourism The Council shall promote and support the organic farm sector (including the development of niche markets) and rural tourism initiatives including appropriate infrastructure to support such initiatives.</p> <p>Objective AFF1 – Sustainable Agriculture The Council shall support the sustainable development of agriculture, with an emphasis on a high quality, traceable primary production methods, the promotion of local food supply and agriculture diversification</p> <p>Objective AFF 2 – Rural Diversification Galway County Council shall support those who live and work in agriculture and /or related activities in rural areas and who wish to remain on their land holding. Accordingly the Council will favourably consider rural diversification intended</p>	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>		<p>B1 B2 B3 W1 W2 PHH1 M1 M2 M3 CH1 CH2 L1 C1</p>	

<p>to supplement farm income where the activity remains ancillary and compatible to the ongoing agricultural use of the farm and does not have an adverse impact on residential amenity:</p> <p>a) Specialist farming practices e.g. specialised animal breeding, equine facilities, poultry, mushroom growing, vegetable and fruit growing;</p> <p>b) Farm enterprises such as processing, animal pet farms/horse riding schools with an element of retail activity;</p> <p>c) The production of organic and speciality foods to meet the increase in demand for such products;</p> <p>d) The conversion of disused buildings/existing farm buildings for appropriate owner run, rural orientated enterprises, as a way of supporting a viable rural community, subject to proper planning and sustainable development of the area;</p> <p>Support the development of appropriate agri-tourism activities and eco-tourism development proposals and promote the County as a green tourist destination.</p> <p>Objective AFF 3 – Farmer’s Markets Support the establishment or facilitation of regularised local farmers markets within the towns and villages as outlined in the Core/Settlement Strategy in accordance with best practice and in a manner that is complementary to the existing market and retail activities of those towns and villages.</p> <p>Objective AFF 4 – Intensive Agriculture Developments Have regard to S256 of the Planning and Development Act 2000 (as amended) which amends the EPA Act 1992 regarding the control of emissions when assessing intensive agricultural developments.</p> <p>Objective AFF 5 - Compliance with the EU Habitats Directive New agricultural projects that may potentially affect Natura 2000 Sites, individually or in combination with other plans and projects shall be subject to Appropriate Assessment to ensure that there are no likely significant effects on the integrity of any Natura 2000 Sites in the County.</p> <p>Objective AFF 6 - Drainage or Reclamation of Wetlands The Council will implement the relevant parts of the Planning and Development (Amendment) (No. 2) Regulations 2011 and the European Communities (Amendment to Planning and Development) Regulations 2011 which require planning permission to be applied for where the area impacted by works relating to the drainage or reclamation of a wetland exceeds 0.1 hectares or where such works may have a significant effect on the environment. Such planning applications would need to be supported by an Appropriate Assessment where necessary.</p>				
<p>Commentary:</p> <p>Agriculture is essential to the sustenance of rural populations and associated existing sustainable rural management practices (SEO B4). The development of agriculture has the potential to adversely affect various environmental components including biodiversity and flora and fauna (SEOs B1 B2 B3), water and human health (SEOs W1 W2 PHH1) and the provision of appropriate water services (SEOs M1 M2). Associated developments could interact with cultural heritage, the landscape, waste management and sustainable mobility patterns (SEOs CH1 CH2 L1 M3 C1).</p> <p>In addition to providing for agricultural development, these policies and objectives provide for the ‘sustainable development of the countryside’, ‘sustainable agriculture’ and the specific protection of Natura 2000 sites. These aspects of the policies and objectives would be likely to benefit environmental protection and sustainable development relating to all of the environmental components (SEOs B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1).</p>				
<p>Fishing and Marine Resource Policies and Objectives</p>				
<p>Policy AFF 5 – Implementation of the Shellfish Waters Directive Galway County Council will 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>Policy AFF 6 –Sustainable Growth within Fishing and Marine Resource Sectors The Council shall support the sustainable development of fishing, marine resource enterprises and marine/eco tourism that is consistent with other policies of this Plan, so as to maximise their contribution to jobs and growth within the coastal and rural communities of the County and to the growth of the National economy.</p> <p>Policy AFF 7 – Integrated Approach The Council shall promote County Galway as a coastal County and shall seek to increase our awareness of the value, opportunities and social benefits of the sea. Galway County Council shall also support an integrated or ecosystem approach as outlined within the document ‘An Integrated Marine Plan for Ireland Harnessing our Ocean’s Wealth 2012 regarding future maritime development proposals in ensuring that ecological limits are respected and that development will not have significant adverse effects on the environment both on land and sea.</p>	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>		<p>B1 B2 B3 W1 W2 PHH1 M1 M2 M3 CH1 CH2 L1 C1</p>	

<p>Policy AFF 8 – Marine Research Promote and collaborate with NUIG and with the Galway Marine Institute in their Research and Development initiatives in harnessing employment opportunities in the marine sector (e.g. SmartBay Project).</p> <p>Objective AFF7 – Commercial Sea Fishing Galway County Council shall encourage and facilitate the sustainable development and expansion of the fishing industry while providing for the management and conservation of coastal habitats and ecosystems.</p> <p>Objective AFF 8 – Aquaculture The Council shall support and promote the sustainable development of the aquaculture sector in order to maximize its contribution to employment creation and growth in coastal communities whilst balancing environmental considerations. Special consideration should be made to gradually enforce a policy that would encourage onshore fish farming practices and special consideration would be given when granting planning for on shore farms to areas that are already involved in the fish farming industry.</p> <p>Objective AFF9 – Inland Fishery Resources The Council shall support the County's valuable inland fishery resource and support its sustainable development and expansion through the protection of water and habitat quality and facilitation of ancillary infrastructure and improvements at appropriate locations.</p> <p>Objective AFF10 – Marine Research Continue to support the further development of the existing NUIG marine research station at Mainis having regard to its long established land use on the site and its importance to the aquaculture industry to the local community and to the development of scientific knowledge.</p> <p>Objective AFF 11 – Development of Offshore Resources Galway County Council shall promote and support the development of sustainable off-shore resources such as offshore energy generating sites subject to the provisions of EU Directives including the Habitats Directive and Shellfish Directive.</p> <p>Objective AFF12 – Marina Developments The Council shall support proposals for sustainable marina developments and associated amenities that are located at both existing marinas and at other appropriate and fully justified locations</p> <p>Objective AFF13 – Water Borne Transport Support the continued operation of ferry services between the islands and mainland in order to support coastal communities and to increase access for the tourism sector.</p> <p>Objective AFF 14 – Provision of Infrastructure Facilitate the provision of infrastructure, which is necessary for the development of the fishing, seaweed and Mari-culture industry. The provision of infrastructure, which is necessary for the development of the fishing and Mari-culture industry, should be located in proximity to established landing facilities.</p> <p>Objective AFF 15 – Aquaculture, Marine Enterprise and Biotechnology The Council shall encourage and support an integrated approach to marine enterprise as set out within the national Integrated Marine Plan titled 'Harnessing Our Ocean Wealth 2012'. The Council shall consider appropriately located marine resourced enterprises within the County subject to proper planning and in compliance with environmental legislation. Ros An Mhíl shall be promoted as a location for a 'maritime/marine cluster'</p> <p>Objective AFF 16 – Marine Tourism The Council will support, subject to meeting the requirements of relevant Irish planning and European environmental legislation including the Habitats Directive, the sustainable development of the necessary infrastructure and amenities to support marine tourism such as deep sea angling, sailing, canoeing, surfing, island exploration and cruise ship passengers.</p>				
<p>Commentary: Fishing and the marine resource are essential to the sustenance of many coastal and rural populations (SEO B4). These policies and objectives provide for the policies that provide for the protection of and sustainable development of the marine environment, including the Shellfish Waters Directive, the Integrated Marine Plan for Ireland and the Habitats Directive (SEOs B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1). Coastal, transitional and river water bodies and their adjacent areas are often very sensitive to developments. Offshore developemnts, marina developments, water borne transport development and all associated infrastructure, for example, has the potential to adversely affect various environmental components including biodiversity and flora and fauna (SEOs B1 B2 B3), water and human health (SEOs W1 W2 PHH1), the provision of appropriate services (SEOs M1 M2 M3), cultural heritage and the landscape (SEOs CH1 CH2 L1)and sustainable mobility patterns (SEO C1). Marine resourced enterprises could impact upon the environment however measures have been integrated into the Plan which will provide mitigation. This objective mentions compliance with environmental legislation which</p>				

improves the status of various SEOs.			
Forestry Policies and Objectives			
<p>Policy AFF 9 – Forestry Recreation Co-operate with Coillte Teoranta, the Forest Service and private landowners in promoting greater public access and recreational use in the County. Support and promote the Forest Service ‘Neighbourwood Scheme’ which seeks to provide public access, recreation and enjoyment on such land in or near villages, towns within the country.</p> <p>Policy AFF 10 – Forestry and Climate Change In accordance with the National Climate Change Strategy 2007-2012 (including any updated/superseding Strategy) Galway County Council shall promote sustainable forestry development of appropriate scale within the County in order to address climate change directly through sequestration and indirectly through the displacement of fossil fuel.</p> <p>Objective AFF 17 – Sustainable Management Encourage sustainable forestry, development and related management activities, including the promotion of mixed species forestry particularly deciduous forestry as an alternative agriculture use. Encourage phased and selective rather than clear felling and the promotion of green infrastructure networks.</p> <p>Objective AFF18 – Sustainable Afforestation Facilitate afforestation in appropriate locations, in co-operation with Coillte and the Forest Service and in line with EU environmental and national legislation and policy.</p> <p>Objective AFF 19 – Afforestation and Landscape Consider the likely impact of forestry on landscape quality and visual amenity in any afforestation proposals brought before the Local Authority for comment. Refer to the Landscape Character Assessment and to the DM Standards and Guidelines of this Plan when considering such proposals.</p> <p>Objective AFF 20 – Bio-Energy Support the development of the bio-energy sector as an alternative agricultural use and have regard to the Bio-Energy Action Plan for Ireland 2007 (including any updated or superseding document), to the Department of Agriculture and Food Best Practice Manuals and Guidelines and to the Landscape Character Assessment when considering significant planting of bio-energy crops.</p>	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M2 L1</p>		<p>B1 B2 B3 W1 W2 M2 PHH1 L1</p> <p>M1 M3 C1 CH1 CH2</p>
<p>Commentary: Forestry is essential to the sustenance of certain rural populations (SEO B4) and can improve the biodiversity value of the countryside (B2). 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, (SEOs B1 B2 B3 W1 W2 M2 PHH1 L1). These policies and objectives provide for sustainable management of forestry, sustainable afforestation and the taking into account of landscape quality and visual impact. These aspects of the policies and objectives would be likely to benefit environmental protection and sustainable development relating to many of the environmental components (SEOs B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M2 L1).</p>			

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, AA and SFRA processes. By integrating all related recommendations into the Plan, the Council have ensured that both the beneficial environmental effects of implementing the Plan have been and will be maximised and that potential adverse effects have been and will be avoided, reduced or offset.

9.2 Integration of Environmental Considerations

All recommendations made by the SEA, AA and SFRA processes were integrated into the Plan.

Table 9.1 links key mitigation measure(s) - which have been integrated into the Plan - to the likely significant effects of implementing the Plan, if unmitigated. The integration of these measures into the Plan occurred over a number of iterations and was informed by, inter alia, various communications through the SEA, AA and SFRA processes.

The measures generally benefit multiple environmental components i.e. a measure providing for the protection of biodiversity, flora and fauna could beneficially impact upon the minimisation of flood risk and the protection of human health, for example.

The reference codes are those which accompany the relevant measures in Section 8 of this report and in the Plan.

Table 9.1 Integration of Environmental Considerations

Likely Significant Effect, if unmitigated	Mitigation Measures from the Plan, including:
Loss of biodiversity with regard to Natura 2000 Sites and Annexed habitats and species & Loss of biodiversity with regard to designated sites including Wildlife Sites and species listed on Schedule 5 of the Wildlife Act 1976	<ul style="list-style-type: none"> • Policies NHB 1, NHB 5, NHB 6, NHB 7 and NHB 8 • Objectives DS 6, DS 9, EQ1, EQ 4, ICT 1, NHB 1, NHB 4, NHB 5, NHB 6, NHB 7, NHB 13, AFF 6 and DS10
Loss of biodiversity with regard to ecological connectivity and stepping stones	<ul style="list-style-type: none"> • Policies NHB 2 and NHB 3 • Objectives NHB 2, NHB 8, NHB 10 and NHB 11
Loss of population of the county involved in land management	<ul style="list-style-type: none"> • Policy NHB 8 and Objective NHB 13 • Also see various measures providing for populations in rural and supporting areas.
Spatially concentrated deterioration in human health	<ul style="list-style-type: none"> • Policy CC 8 • Objectives TI 13 and EQ 2 • Also see measures related to soil, water quality, flooding, waste water treatment and drinking water supply and quality.
Damage to the hydrogeological and ecological function of the soil resource	<ul style="list-style-type: none"> • Objective NHB12 • Also see measures related to water quality and waste water treatment.
Adverse impacts upon the status and quality of water bodies, including bathing waters	<ul style="list-style-type: none"> • Policies NHB 4 and AFF 5 • Objectives NHB 3, NHB 8, NHB 10, NHB12, EQ1, AFF 5, AFF 6, AFF9, CS 4, WS 1, WS 2, WS 7, WS 9, WS 11, WW 1, FL 2, FL 3 and RA 1
Increase in the risk of flooding	<ul style="list-style-type: none"> • Policies FL 1, FL 2, FL 3, FL 4 and FL 5 • Objectives FL 1, FL 2, FL 3, FL 4, FL 5, FL 6, DS 7, DS 8 and DS 9
Failure to provide adequate and appropriate waste water treatment & Failure to comply with drinking water regulations and serve new development with adequate drinking water that is both wholesome and clean	<ul style="list-style-type: none"> • Policies WS 1 WS 2 WS 3 WS 4 WS 5 WS 6 WW 1 • Objectives WS 1, WS 2, WS 3, WS 4, WS 5, WS 6, WS 7, WS 8, WS 9, WS 10, WS 11, WS 12, WS 13, WS 14, WS 15, WW 1, WW 2, WW 3, WW 4, WW 5, WW 6, WW 7, WW 8, WW 10, CS 4, RHO -5 and EDT 5
Failure to contribute towards sustainable transport and associated impacts (including emissions)	<ul style="list-style-type: none"> • Strategic Aims 6 and 7 • Policies CC 1, CC 7, TI 1, TI 2, TI 3 and TI 4 • Objectives DS 1, DS 2, DS 3, CS 3, CS 5, TI 1, TI 2, TI 3, TI 4, TI 16, TI 17, TI 18, TI 19, DS 8, CC 2 and CC 4
Increases in waste levels	<ul style="list-style-type: none"> • Policies WM 1 and WM 2 • Objectives WM 1, WM 2, WM 3, WM 4, WM 5 and WM 6
Effects on entries to the Record of Monuments and Places and other archaeological heritage	<ul style="list-style-type: none"> • Policies ARC 1, ARC 2, ARC 3, ARC 4 and ARC 5 • Objectives ARC 1, ARC 2, ARC 3, ARC 4, ARC 5, ARC 6 and ARC 7
Effects on entries to the Records of Protected Structures, Architectural Conservation Areas and other architectural heritage	<ul style="list-style-type: none"> • Policies AH 1 and AH 2 • Objectives AH 1, AH 2, AH 3, AH 4, AH 5, AH 6, AH 7, AH 8, AH 9, AH 10 and AH 11
Occurrence of adverse visual impacts	<ul style="list-style-type: none"> • Policy LCM 1 • Objectives LCM 1, LCM 2, LCM 3, FPV 1 and WH 1
Other – Climate Adaptation	<ul style="list-style-type: none"> • Strategic Aim 11 • Policies CC 2, CC 3, CC 4, CC 5 and CC 6 • Objectives CC 1, CC 3, CC 5.

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 enable, at an early stage, the identification of unforeseen adverse effects and the undertaking of appropriate remedial action.

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.

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.

The Monitoring Programme may be updated to deal with specific environmental issues - including unforeseen effects - as they arise. Such issues may be identified by the Council or identified to the Council by other agencies.

10.3 Sources

Measurements for indicators generally come from existing monitoring sources. Existing monitoring sources include those maintained by the Council and the relevant authorities e.g. the Environmental Protection Agency, the National Parks and Wildlife Service and the Central Statistics Office. Internal monitoring of the likely significant environmental effects of Council grants of permission will provide monitoring of various indicators and targets on a *grant of permission by grant of permission*¹¹⁹

¹¹⁹ The likely significant effects of development proposals on environmental sensitivities are further

basis. Where significant adverse effects - including positive, negative, cumulative and indirect - have the potential to occur upon, for example, entries to the RMP, entries to the RPS or ecological networks as a result of the undertaking of individual projects or multiple individual projects such instances should be identified and recorded and should feed into the monitoring evaluation.

10.4 Reporting

A stand-alone Monitoring Report on the significant environmental effects of implementing the Plan will be prepared before in advance of the beginning of the review of the Plan. This report should address the indicators set out below. 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 corrective action.

10.5 Thresholds

Thresholds at which corrective action will be considered include:

- The occurrence of flood events;
- Court cases taken by the Department of Arts, Heritage and the Gaeltacht regarding impacts upon archaeological heritage including entries to the RMP;
- Complaints received from statutory consultees regarding avoidable environmental impacts resulting from development which is granted permission under the Plan;
- Boil notices on drinking water; and
- Fish kills.

determined during the development management process. By documenting this determination (e.g. whether a proposed development will impact upon a Protected Structure or whether a proposed development can be adequately served with water services) while granting permissions, or at a later date, the requirement to monitor the effects of implementing the Plan can be achieved. The assumption is that requirements contained within the grants of permissions are complied with.

Table 10.1 Selected Indicators, Targets and Monitoring Sources

Environmental Component	Selected Indicator(s)	Selected Target(s)	Source (Frequency)
Biodiversity, Flora and Fauna	B1: Conservation status of habitats and species as assessed under Article 17 of the Habitats Directive	B1: Maintenance of favourable conservation status for all habitats and species protected under national and international legislation to be unaffected by implementation of the Plan ¹²⁰	<ul style="list-style-type: none"> Internal monitoring of environmental likely significant effects of grants of permission (grant by grant). Department of Arts, Heritage and the Gaeltacht report of the implementation of the measures contained in the Habitats Directive - as required by Article 17 of the Directive (every 6 years). National Monitoring Report under Article 12 of the Birds Directive. Consultations with the NPWS (at monitoring evaluation - see Section 10.4).
	B2: Percentage loss of functional connectivity without remediation resulting from development provided for by the Plan	B2: No significant ecological networks or parts thereof which provide functional connectivity to be lost without remediation resulting from development provided for in the Plan	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). CORINE mapping resurvey (every c. 5 years).
	B3i: Number of significant impacts on relevant habitats, species, environmental features or other sustaining resources in designated sites including Wildlife Sites resulting from development provided for by the Plan	B3i: Avoid significant impacts on relevant habitats, species, environmental features or other sustaining resources in designated sites including Wildlife Sites resulting from development provided for by the Plan	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). Consultations with the NPWS (at monitoring evaluation - see Section 10.4).
	B3ii: Number of significant impacts on the protection of species listed on Schedule 5 of the Wildlife Act 1976.	B3ii: No significant impacts on the protection of species listed on Schedule 5 of the Wildlife Act 1976	
	B4: Population of the county involved in land management	B4: Sustain the population of the county involved in land management	<ul style="list-style-type: none"> CSO Population Data (every c. 5 years).
Population and Human Health	PHH1: Occurrence (any) of a spatially concentrated deterioration in human health arising from environmental factors resulting from development provided for by the Plan, as identified by the Health Service Executive and Environmental Protection Agency	PHH1: 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 EPA and Health Service Executive (at monitoring evaluation - see Section 10.4).
Soil	S1: Soil extent and hydraulic connectivity	S1: To minimise reductions in soil extent and hydraulic connectivity	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant).

¹²⁰ Except as provided for in Section 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.

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Environmental Component	Selected Indicator(s)	Selected Target(s)	Source (Frequency)
Water	W1i: Classification of Overall Status (comprised of ecological and chemical status) under the European Communities Environmental Objectives (Surface Waters) Regulations 2009 (SI No. 272 of 2009) W1ii: Mandatory and Guide values as set by the EU Bathing Water Directive and transposing Bathing Water Quality Regulations (SI No. 79 of 2008)	W1i: Not to cause deterioration in the status of any surface water or affect the ability of any surface water to achieve 'good status' ¹²¹ by 2015 W1ii: To achieve - as a minimum - Mandatory values and, where possible, to achieve Guide values as set by the EU Bathing Water Directive and transposing Bathing Water Quality Regulations (SI No. 79 of 2008)	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). Data issued under the Water Framework Directive Monitoring Programme for Ireland. EPA The Quality of Bathing Water in Ireland reports.
	W2: Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC	W2: Not to affect the ability of groundwaters to comply with Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). Data issued under the Water Framework Directive Monitoring Programme for Ireland (multi-annual).
	W3: Number of incompatible developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk	W3: Minimise developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk in compliance with <i>The Planning System and Flood Risk Management Guidelines for Planning Authorities</i>	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant).
Material Assets	M1: Number of new developments granted permission which can be adequately and appropriately served with waste water treatment over the lifetime of the Plan	M1: All new developments granted permission to be connected to and adequately and appropriately served by waste water treatment over the lifetime of the Plan	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant).
	M2: Number of non-compliances with the 48 parameters identified in the European Communities (Drinking Water) Regulations (No. 2) 2007 which present a potential danger to human health as a result of implementing the Plan	M2: No non-compliances with the 48 parameters identified in the European Communities (Drinking Water) Regulations (No. 2) 2007 which present a potential danger to human health as a result of implementing the Plan	<ul style="list-style-type: none"> EPA The Provision and Quality of Drinking Water in Ireland reports (multi-annual). EPA Remedial Action List (every quarter).
	M3i: Total collected and brought household waste M3ii: Packaging recovered (t) by self-complying packagers	M3i: Minimise increases in and, where possible, reduce household waste generation M3ii: Maximise increases in packaging recovered (t) by self-complying packagers	<ul style="list-style-type: none"> EPA National Waste Reports EPA Ireland's Environment Reports
Air and Climatic Factors	C1: Percentage of population travelling to work, school or college by public transport or non-mechanical means	C1: An increase in the percentage of the population travelling to work, school or college by public transport or non-mechanical means	<ul style="list-style-type: none"> CSO Population Data (every c. 5 years).

¹²¹ Good status as defined by the WFD equates to approximately the following in the current national schemes of classification as set out by the EPA:

- Q4 in the biological classification of *rivers*;
- *Mesotrophic* in the classification of *lakes*; and
- *Unpolluted status* in the Assessment of Trophic Status of Estuaries and Bays in Ireland (ATSEBI).

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Environmental Component	Selected Indicator(s)	Selected Target(s)	Source (Frequency)
Cultural Heritage	CH1: Percentage of entries to the Record of Monuments and Places - including Zones of Archaeological Potential (and the context of the above within the surrounding landscape where relevant) – protected from adverse effects resulting from development which is granted permission under the Plan	CH1: Protect entries to the Record of Monuments and Places - including Zones of Archaeological Potential (and their context of the above 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 (grant by grant). • Consultation with Department of Arts, Heritage and the Gaeltacht (at monitoring evaluation - see Section 10.4).
	CH2: Percentage of entries to the Record of Protected Structures and Architectural Conservation Areas and their context protected from adverse effects resulting from development which is granted permission under the Plan	CH2: Protect entries to the Record of Protected Structures and Architectural Conservation Areas and their context 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 (grant by grant). • Consultation with Department of Arts, Heritage and the Gaeltacht (at monitoring evaluation - see Section 10.4).
Landscape	L1: Number of complaints received from statutory consultees regarding avoidable impacts on the landscape - especially with regard to the County's landscapes which are most valuable and most sensitive to change and protected focal points and views - resulting from development which is granted permission under the Plan	L1: No developments permitted which result in avoidable impacts on the landscape - especially with regard to the County's landscapes which are most valuable and most sensitive to change and protected focal points and views - resulting from development which is granted permission under the Plan	<ul style="list-style-type: none"> • Internal monitoring of likely significant environmental effects of grants of permission (grant by grant).

Section 11 SEA Summary Table

Below is a summary table outlining how likely significant effects (if unmitigated) are linked to relevant mitigation measure(s) - which have been integrated into the Plan - and indicator(s) which will be used for monitoring.

Table 11.1 SEA Summary Table: Likely Significant Effects, Mitigation Measures and Indicators for Monitoring

Likely Significant Effect, if unmitigated	Mitigation Measure Reference(s) from the Plan	Primary Indicator(s) for Monitoring
Loss of biodiversity with regard to Natura 2000 Sites and Annexed habitats and species & Loss of biodiversity with regard to designated sites including Wildlife Sites and species listed on Schedule 5 of the Wildlife Act 1976	<ul style="list-style-type: none"> • Policies NHB 1, NHB 5, NHB 6, NHB 7 and NHB 8 • Objectives DS 6, DS 9, EQ1, EQ 4, ICT 1, NHB 1, NHB 4, NHB 5, NHB 6, NHB 7, NHB 13, AFF 6 and DS10 	<p>B1: Conservation status of habitats and species as assessed under Article 17 of the Habitats Directive</p> <p>B3i: Number of significant impacts on relevant habitats, species, environmental features or other sustaining resources in designated sites including Wildlife Sites resulting from development provided for by the Plan</p> <p>B3ii: Number of significant impacts on the protection of species listed on Schedule 5 of the Wildlife Act 1976.</p>
Loss of biodiversity with regard to ecological connectivity and stepping stones	<ul style="list-style-type: none"> • Policies NHB 2 and NHB 3 • Objectives NHB 2, NHB 8, NHB 10 and NHB 11 	B2: Percentage loss of functional connectivity without remediation resulting from development provided for by the Plan
Loss of population of the county involved in land management	<ul style="list-style-type: none"> • Policy NHB 8 • Objective NHB 13 • Also see various measures providing for populations in rural and supporting areas. 	B4: Population of the county involved in land management
Spatially concentrated deterioration in human health	<ul style="list-style-type: none"> • Objectives TI 13 and EQ 2 • Policy CC 8 • Also see measures related to soil, water quality, flooding, waste water treatment and drinking water supply and quality. 	PHH1: Occurrence (any) of a spatially concentrated deterioration in human health arising from environmental factors resulting from development provided for by the Plan, as identified by the Health Service Executive and Environmental Protection Agency
Damage to the hydrogeological and ecological function of the soil resource	<ul style="list-style-type: none"> • Objective NHB12 • Also see measures related to water quality and waste water treatment. 	S1: Soil extent and hydraulic connectivity

Likely Significant Effect, if unmitigated	Mitigation Measure Reference(s) from the Plan	Primary Indicator(s) for Monitoring
Adverse impacts upon the status and quality of water bodies, including bathing waters	<ul style="list-style-type: none"> • Policies NHB 4 and AFF 5 • Objectives NHB 3, NHB 8, NHB 10, NHB12, EQ1, AFF 5, AFF 6, AFF9, CS 4, WS 1, WS 2, WS 7, WS 9, WS 11, WW 1, FL 2, FL 3 and RA 1 	<p>W1i: Classification of Overall Status (comprised of ecological and chemical status) under the European Communities Environmental Objectives (Surface Waters) Regulations 2009 (SI No. 272 of 2009)</p> <p>W1ii: Mandatory and Guide values as set by the EU Bathing Water Directive and transposing Bathing Water Quality Regulations (SI No. 79 of 2008)</p> <p>W2: Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC</p>
Increase in the risk of flooding	<ul style="list-style-type: none"> • Objectives FL 1, FL 2, FL 3, FL 4, FL 5, FL 6, DS 7, DS 8 and DS 9 • Policies FL 1, FL 2, FL 3, FL 4 and FL 5 	<p>W3: Number of incompatible developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk</p>
Failure to provide adequate and appropriate waste water treatment & Failure to comply with drinking water regulations and serve new development with adequate drinking water that is both wholesome and clean	<ul style="list-style-type: none"> • Policies WS 1 WS 2 WS 3 WS 4 WS 5 WS 6 WW 1 • Objectives WS 1, WS 2, WS 3, WS 4, WS 5, WS 6, WS 7, WS 8, WS 9, WS 10, WS 11, WS 12, WS 13, WS 14, WS 15, WW 1, WW 2, WW 3, WW 4, WW 5, WW 6, WW 7, WW 8, WW 10, CS 4, RHO -5 and EDT 5 	<p>M1: Number of new developments granted permission which can be adequately and appropriately served with waste water treatment over the lifetime of the Plan</p> <p>M2: Number of non-compliances with the 48 parameters identified in the European Communities (Drinking Water) Regulations (No. 2) 2007 which present a potential danger to human health as a result of implementing the Plan</p>
Failure to contribute towards sustainable transport and associated impacts	<ul style="list-style-type: none"> • Strategic Aims 6 and 7 • Policies CC 1, CC 7, TI 1, TI 2, TI 3 and TI 4 • Objectives DS 1, DS 2, DS 3, CS 3, CS 5, TI 1, TI 2, TI 3, TI 4, TI 16, TI 17, TI 18, TI 19, DS 8, CC 2 and CC 4 	<p>C1: Percentage of population travelling to work, school or college by public transport or non-mechanical means</p>
Increases in waste levels	<ul style="list-style-type: none"> • Policies WM 1 and WM 2 • Objectives WM 1, WM 2, WM 3, WM 4, WM 5 and WM 6 	<p>M3i: Total collected and brought household waste</p> <p>M3ii: Packaging recovered (t) by self-complying packagers</p>
Effects on entries to the Record of Monuments and Places and other archaeological heritage	<ul style="list-style-type: none"> • Policies ARC 1, ARC 2, ARC 3, ARC 4 and ARC 5 • Objectives ARC 1, ARC 2, ARC 3, ARC 4, ARC 5, ARC 6 and ARC 7 	<p>CH1: Percentage of entries to the Record of Monuments and Places - including Zones of Archaeological Potential (and the context of the above within the surrounding landscape where relevant) – protected from adverse effects resulting from development which is granted permission under the Plan</p>

Likely Significant Effect, if unmitigated	Mitigation Measure Reference(s) from the Plan	Primary Indicator(s) for Monitoring
Effects on entries to the Records of Protected Structures, Architectural Conservation Areas and other architectural heritage	<ul style="list-style-type: none"> • Policies AH 1 and AH 2 • Objectives AH 1, AH 2, AH 3, AH 4, AH 5, AH 6, AH 7, AH 8, AH 9, AH 10 and AH 11 	CH2: Percentage of entries to the Record of Protected Structures and Architectural Conservation Areas and their context protected from adverse effects resulting from development which is granted permission under the Plan
Occurrence of adverse visual impacts	<ul style="list-style-type: none"> • Policy LCM 1 • Objectives LCM 1, LCM 2, LCM 3, FPV 1 and WH 1 	L1: Number of complaints received from statutory consultees regarding avoidable impacts on the landscape - especially with regard to the County's landscapes which are most valuable and most sensitive to change and protected focal points and views - resulting from development which is granted permission under the Plan