

# STRATEGIC ENVIRONMENTAL ASSESSMENT ENVIRONMENTAL REPORT

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FOR THE

## TUAM LOCAL AREA PLAN 2018-2024

(AS AMENDED ON 31<sup>ST</sup> JANUARY 2019)

**for: Galway County Council**

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## List of Abbreviations

<b>AA</b>	Appropriate Assessment
<b>ACA</b>	Architectural Conservation Area
<b>CFRAM</b>	Catchment Flood Risk Assessment and Management
<b>CSO</b>	Central Statistics Office
<b>DEHLG</b>	Department of the Environment, Heritage and Local Government
<b>EIA</b>	Environmental Impact Assessment
<b>EPA</b>	Environmental Protection Agency
<b>EU</b>	European Union
<b>GSI</b>	Geological Survey of Ireland
<b>NHA</b>	Natural Heritage Area
<b>NIAH</b>	National Inventory of Architectural Heritage
<b>OPW</b>	Office of Public Works
<b>RAL</b>	Remedial Action List
<b>RBD</b>	River Basin District
<b>RMP</b>	Record of Monuments and Places
<b>RPA</b>	Register of Protected Areas
<b>RPS</b>	Record of Protected Structures
<b>RPGs</b>	Regional Planning Guidelines
<b>RBMP</b>	River Basin Management Plan
<b>SAC</b>	Special Area of Conservation
<b>SEA</b>	Strategic Environmental Assessment
<b>SEO</b>	Strategic Environmental Objective
<b>SI No.</b>	Statutory Instrument Number
<b>SPA</b>	Special Protection Area
<b>WFD</b>	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 (such as a plan or programme) or project, alone and in combination with other strategic actions and projects, on the integrity of a European Site in view of its conservation objectives.

## Biodiversity and Flora and Fauna

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

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

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

## Environmental Problems

Annex I of Directive 2001/42/EC of the European Parliament and of the Council of Ministers, of 27<sup>th</sup> 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 local 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 local authority that the part of the structure to be altered is not protected.

## **Recorded Monument**

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

## **Scoping**

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

## **Strategic Environmental Assessment (SEA)**

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

## **Strategic Environmental Objective (SEO)**

Strategic Environmental Objectives (SEOs) are methodological measures developed from policies which generally govern environmental protection objectives established at international, Community or Member State level and are used as standards against which the provisions of the Plan and the alternatives 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 Tuam Local Area Plan 2018-2024. 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 preparation of the Plan under Section 20 of the Planning and Development Act 2000 (as Amended). The SEA is carried out in order to contribute Planning and Development (Strategic Environmental Assessment) Regulations 2004 (Statutory Instrument Number (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

27<sup>th</sup> 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 tourism.

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 21<sup>st</sup> 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 Plan

This report has been updated in order to take account of recommendations contained in submissions and in order to take account of Material Alterations, further modifications that were made on foot of submissions and a January 2019 Ministerial Direction. Galway County Council has taken into account the findings of this report and other related SEA output during their preparation of the Plan. An SEA Statement has also been prepared which summarises, inter alia, how environmental considerations have been integrated into the Plan.

## Section 2 Description of the Plan

### 2.1 Introduction

The Tuam Local Area Plan is a land use plan that provides the overall strategy for the development of Tuam over the period 2018-2024. The Plan seeks to have a positive impact on Tuam ensuring that it develops in a sustainable manner and complements the implementation of the current Galway County Development Plan 2015-2021 (as varied).

### 2.2 Strategic Vision of the Plan

The Strategic Vision of the Plan is:

*'To promote Tuam as a thriving vibrant market town, providing a focus for future residential, economic & social development in a sustainable manner, encouraging new development and capitalising on the town's unique historic identity and character, as well as its accessibility, thereby realising Tuam's potential as well as supporting the surrounding rural hinterland.'*

This Strategic Vision is informed by the following guiding principles that will enable the overall vision to be achieved:

- Realising the town's potential as the 'Hub Town' as set out in the Galway County Development Plan and attracting the population target established in the Core Strategy up to 2021 and beyond.
- The growth of Tuam for the life of the plan should focus on establishing new sustainable communities adopting a sequential approach to the zoning of residential lands extending outwards from the centre of the Town in line with the Guidelines for Planning Authorities - Sustainable Residential Development in Urban Areas (Cities, Towns & Villages) (2009).
- Ensuring that there are a range of facilities, amenities and supporting services including educational, recreational, religious, social, community and civic requirements for children, youths, adults and the elderly, to serve a growing

community, which promote an inclusive and cohesive local community.

- Maintaining a strong and vibrant town centre which attracts new businesses and provides appropriate retailing and service functions to serve the needs of the Town and its surrounding hinterland, in addition to offering a pleasant and attractive environment for shopping, business, recreation and living.
- Capitalising on the compact urban form of Tuam town centre by encouraging greater connectivity for new development which promotes and encourages walking and cycling ensuring that principles of sustainable transportation along with practical design measures become central to the development of new neighbourhoods.
- Promoting sustainable development which minimises negative impacts on the environment and helps to mitigate against the likely effects of Climate Change on present and future generations. Including the promotion of low-carbon technologies, building and water efficiency as well as the use of renewable technologies and sustainable forms of water and wastewater drainage.
- Integration of high quality design into all future development within the Tuam LAP area, promoting innovative, green technologies throughout the plan area which make a positive contribution to the environment.
- Ensuring all new development within the Architectural Conservation Area, reinforces local distinctiveness and creates a sense of place while protecting, conserving and enhancing the historic character of Tuam.
- Encouraging development which is sensitively integrated into the existing landscape which demonstrates an understanding of the intrinsic qualities of the landscape setting and, where possible, promote opportunities to protect and enhance landscape characteristics, features and biodiversity.

## 2.3 Structure of the Plan

The Plan is structured as follows:

- Section 1 'Introduction';
- Section 2 'Strategic Vision and Development Strategy';
- Section 3 'Development Policies, Objectives and Guidelines'; and
- Section 4 'Local Area Plan Maps'.

## 2.4 Material Alterations, Modifications and Ministerial Direction

27 Material Alterations were proposed after public display of the Plan. Proposed Material Alterations No. 1-16 were determined as requiring full SEA as they would be likely to result in significant adverse environmental effects, if unmitigated<sup>1</sup>. Full SEA (and Stage 2 AA) was undertaken on these Material Alterations and the findings of the SEA were placed on public display alongside the Material Alterations. The Elected Members were also informed of the findings.

In adopting the Plan, the Elected Members decided to adopt the following with regard to Proposed Material Alterations<sup>2</sup>:

- Zoning as proposed by the Draft Plan for MA2, MA3, MA10 and MA16;
- Zoning as proposed by Material Alterations for MA4-MA9 and MA12-MA15); and
- Zoning as proposed by Material Alteration with modification for MA1 and MA11.

Following adoption, in January 2019 the Minister for Housing and Urban Development, directed the Council to amend the adopted "Land Use Zoning Objectives Map" by:

<sup>1</sup> Note that a recommendation regarding MA18 (changing of zoning from *Residential Phase 2* to *Residential Phase 1*) was raised in a submission during the Plan preparation process. SEA was not required for this alteration as environmental effects arising from changes to the likelihood in the timing of development at this site, which is adjacent to other Residential lands, would be mitigated by the various environmental protection and management measures that have already been integrated into the Plan to the extent that any residual effects arising would not be significant.

<sup>2</sup> Proposed Material Alterations likely to result in significant adverse effects upon flood risk and/or European Sites were either not adopted by the Elected Members (MA2 and MA3) or they were modified to avoid conflicts (MA1 and MA11).

- Reverting back the lands identified as MA4, MA5, MA6 and MA11 as per the proposed Material Alterations (April 2018) to the provisions of the Draft Plan (January 2018), where the subject lands were not included in the Draft Plan and subsequently not zoned; and
- Removing these additional zonings from the Tuam Land Use Zoning Map and reverting the LAP boundary to reflect the Draft Plan boundary as published January 2018.

Notwithstanding this, Material Alterations MA1 (as modified), MA7, MA8, MA9, MA12, MA13, MA14 and MA15 are part of the Plan and would be likely to result in environmental conflicts and associated adverse effects (these were identified in previous SEA documentation that was placed on public display and provided to Elected Members).

Taking into account the considerable extent of lands involved, cumulative adverse effects would be likely to arise on all environmental components as a result of the provision of unnecessary zoning (for which there is no established planning need). Residual adverse effects arising from Material Alterations MA1 (as modified), MA7, MA8, MA9, MA12, MA13, MA14 and MA15 would include:

- Loss of an extent of non-protected habitats and species arising from the replacement of semi-natural land covers with artificial surfaces;
- Losses or damage to ecology;
- Potential interactions with residual effects on environmental vectors. This has been mitigated by provisions that have been integrated into the Plan, including those relating to sustainable mobility and infrastructural provision;
- Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces;
- Increased loadings as a result of development;
- Flood related risks remain due to uncertainty with regard to extreme weather events;
- Residual wastes to be disposed of in line with higher level waste management policies;
- An extent of travel related greenhouse gas and other emissions to air;
- Potential alteration to the context and setting of architectural heritage however these will occur in compliance with legislation;
- Potential alteration to the context and setting of archaeological heritage 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; and
- Landscapes will change overtime as a result of natural changes in vegetation cover combined with new developments.

As there is no established planning need for the zoning of these lands, no positive effects arising from reducing the need to develop more sensitive, less well serviced areas beyond the Plan boundary are present under Material Alterations MA1 (as modified), MA7, MA8, MA9, MA12, MA13, MA14 and MA15.

## **2.5 Relationship with other relevant Plans and Programs**

The Plan sits within a hierarchy of strategic actions such as plans and programmes and is subject to a number of high level environmental protection policies and objectives with which it must comply (including those detailed in Appendix I, Section 4, Section 5 and Section 9 of this report).

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.

## Section 3 SEA Methodology

### 3.1 Introduction to the Iterative Approach

Figure 3.1 provides an overview of the integrated Plan preparation, SEA, Appropriate Assessment (AA) and Strategic Flood Risk Assessment

(SFRA) processes. The preparation of the Plan, SEA and AA have taken place concurrently and the findings of the SEA, AA and SFRA have informed the Plan.

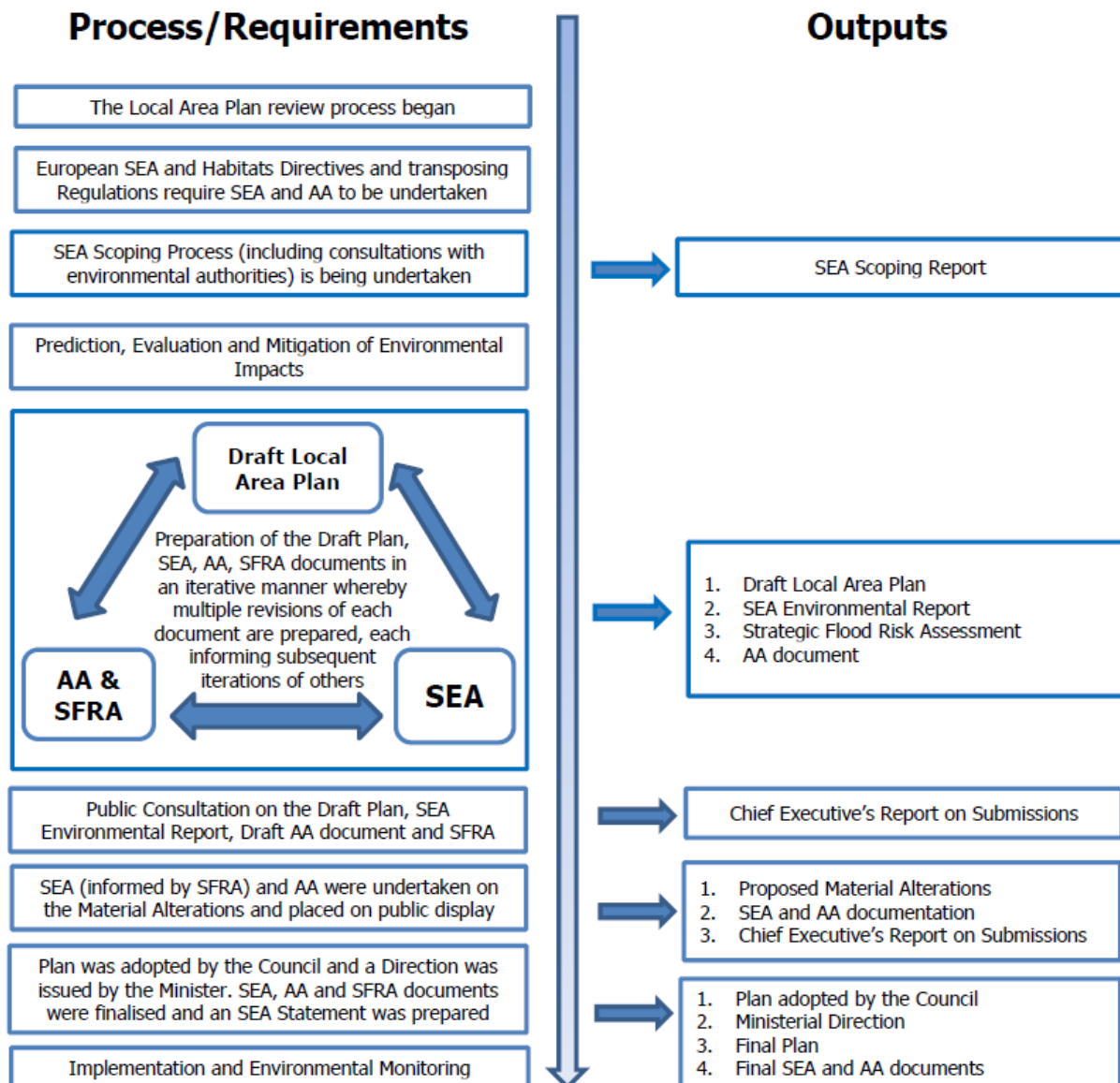


Figure 3.1 Overview of the Plan SEA/AA/SFRA Process and Outputs

## 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 preparation of the Plan.

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

The AA concludes that the Plan will not give rise to adverse effects on the ecological integrity of any European site, alone or in combination with other plans or projects<sup>3</sup>.

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.

### 3.2.2 Integrated Biodiversity Impact Assessment

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

#### Scoping

- Biodiversity-relevant issues were identified for consideration at scoping stage and these are now detailed in Section 4.3.
- Reference to a zone of influence is provided, including at Section 4.3.

#### Current State of the Environment

- Biodiversity data sources relevant for this national level assessment have been identified.
- Designated sites and other habitats and species of ecological value are identified.
- AA information has been incorporated into the SEA.

#### Alternatives

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

#### Impact assessment

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

#### Mitigation and monitoring

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

#### Reporting

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

#### Communication and consultation

- Submissions from various environmental authorities 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 Plan. The requirement for SFRA is provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (DEHLG and OPW, 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. The SFRA has facilitated the integration of flood risk management considerations into the Plan. The Plan complies with the requirements of the Guidelines.

## 3.4 Scoping

### 3.4.1 Introduction

The scope of environmental issues to be dealt with by the SEA together with the level of detail to which they are addressed was decided upon taking into account the level of

<sup>3</sup> 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.

detail included in the Plan and submissions received from environmental authorities. Scoping allowed the SEA to become focused upon key issues relevant to the environmental components which are specified under the SEA Directive<sup>4</sup>.

### 3.4.2 Scoping Notices and Submissions

As part of the scoping process, environmental authorities<sup>5</sup> were notified that a submission or observation 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.

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

## 3.5 Environmental Report

The SEA Environmental Report predicts and evaluates the likely environmental effects of the Plan and relevant alternatives. The Environmental Report provides the Council, stakeholders and the public with a clear understanding of the likely environmental consequences of the Plan.

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

An earlier version of this report has been updated in order to take account of recommendations contained in submissions and in order to take account of changes which

were made to the original, Draft Plan that was placed on public display.

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

No significant difficulties were encountered during the undertaking of the assessment.

## 3.6 Submissions, Material Alterations and Modifications

Submissions made on the Draft Plan and associated documents, including SEA, AA and SFRA documents, were responded to and updates made to the documents where relevant.

27 Material Alterations were proposed after public display of the Plan. Proposed Material Alterations No. 1-16 were determined as requiring full SEA as they would be likely to result in significant adverse environmental effects, if unmitigated. Full SEA (and Stage 2 AA) was undertaken on these Material Alterations and the findings of the SEA were placed on public display alongside the Material Alterations.

Submissions made on the Proposed Material Alterations and associated documents were responded to. Certain Material Alterations and associated modifications were adopted and in January 2019 a Ministerial Direction was received (see also Section 2.4).

## 3.7 SEA Statement

An SEA Statement has been prepared that will include information on:

- How environmental considerations have been integrated into the Plan, highlighting the 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 and

<sup>4</sup> 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.

<sup>5</sup> The following authorities were notified: Environmental Protection Agency, Department of Communications, Climate Action and Environment, Department of Agriculture, Food and the Marine, Department of Housing, Planning and Local Government, Department of Culture, Heritage and the Gaeltacht, Galway City Council, Mayo County Council, Roscommon County Council, Offaly County Council, Tipperary County Council and Clare County Council.

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 the Plan.



**Table 3.1 Checklist of Information included in this Environmental Report**

<b>Information Required to be included in the Environmental Report</b>	<b>Corresponding Section(s) of this Report</b>
(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 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
(K) Interrelationships between each environmental topic	Addressed as it arises within each Section

## Section 4 Relevant aspects of the current state of the Environment

### 4.1 Introduction

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

This identification includes information that is relevant to lower tier environmental assessments and decision making (note that Article 5 of the SEA Directive, in accordance with the established European principle of subsidiarity, requires that the Environmental Report includes the information that may reasonably be required taking into account, *inter alia*, the extent to which certain matters are more appropriately assessed at different levels in that process in order to avoid duplication of the assessment).

Tuam town is located on an expanse of flat, low-lying land north-east of Galway City. It is surrounded by agricultural land and drained by the River Nanny, a tributary of the Clare River which flows south-westwards into Lough Corrib.

### 4.2 Likely Evolution of the Environment in the Absence of the Plan

The Plan has been prepared to further contribute towards the framework for proper planning and sustainable development that is already provided for by the Galway County Development Plan 2015-2021 as amended.

The current Tuam Plan that was adopted in 2011 was due to expire in 2018. This Plan contains provisions that contribute towards environmental protection and sustainable development within Tuam.

If the 2011 Plan was allowed to expire and not be replaced by the new 2018 Plan, this would result in a deterioration of the town's planning and environmental protection framework. Although higher-level environmental protection objectives – such as those of the 2015-2021 County Development Plan and 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 would have the potential to result in an increase in the occurrence of adverse effects on all environmental components, especially those arising cumulatively. Cumulative effects occur as a result of the addition of many small impacts to create one larger, more significant, impact.

Such adverse effects could include:

- Arising from both construction and operation of development and associated infrastructure:
  - Loss of/damage to biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance to biodiversity and flora and fauna;
  - Habitat loss, fragmentation and deterioration, including patch size and edge effects; and
  - Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species.
- Potential interactions if effects upon environmental vectors such as water and air are not mitigated.
- Damage to the hydrogeological and ecological function of the soil resource.
- Adverse impacts upon the status of water bodies arising from changes in quality, flow and/or morphology.
- Increase in the risk of flooding.
- Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity is needed to ensure the mitigation of potential conflicts).
- Failure to comply with drinking water regulations and serve new development with adequate drinking water that is both wholesome and clean (water services infrastructure and capacity is needed to ensure the mitigation of potential conflicts).
- Increases in waste levels.
- Emissions to air including greenhouse gas emissions and other emissions.
- Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities.

- Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape, especially with regard to landscapes that are most valuable and most sensitive to change and protected focal points and views.

## 4.3 Biodiversity and Flora and Fauna

### 4.3.1 Overview

There are various highly sensitive and designated areas within and close to the Tuam Plan area on account of the species and habitats which they contain. The closest European Sites is the Lough Corrib SAC (Site code: 000297) which is adjacent to the Plan area.

### 4.3.2 Relevant aspects

Information on biodiversity and flora and fauna which is relevant to the Plan and decision making includes available information on designated ecological sites and protected species, ecological connectivity (including stepping stones and corridors) and non-designated habitats.

Ecological designations include:

- Candidate Special Areas of Conservation<sup>6</sup> (cSACs) and Special Protection Areas<sup>7</sup> (SPAs);
- Freshwater Pearl Mussel catchments<sup>8</sup>;

<sup>6</sup> 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 Department of Culture, Heritage and the Gaeltacht 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. The Habitats Directive seeks to establish Natura 2000, a network of protected areas throughout the EU. It is the responsibility of each member state to designate SACs to protect habitats and species, which, together with the SPAs designated under the 1979 Birds Directive, form Natura 2000.

<sup>7</sup> SPAs have been selected for protection under the 1979 European Council Directive on the Conservation of Wild Birds (79/409/EEC) - referred to as the Birds Directive - by the Department of Culture, Heritage and the Gaeltacht due to their conservation value for birds of importance in the European Union.

<sup>8</sup> 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. The Republic of Ireland currently has 19 SACs designated for the pearl

- Flora Protection Order<sup>9</sup> sites;
- Wildlife Sites (including Nature Reserves<sup>10</sup>);
- Certain entries to the Water Framework Directive Register of Protected Areas<sup>11</sup>, including Nutrient Sensitive Rivers, Salmonid Rivers and Drinking Water Rivers; and
- Natural Heritage Areas (NHAs) and proposed Natural Heritage Areas (pNHAs)<sup>12</sup>.

Protected Species include:

- Annex IV (Habitats Directive) species of flora and fauna, and their key habitats (i.e. breeding sites and resting places), which are strictly protected wherever they occur, whether inside or outside the above sites, e.g. Otter and bats;
- Other species of flora and fauna and their key habitats which are protected under the Wildlife Acts, 1976-2000, wherever they occur; and
- 'Protected species and natural habitats' as defined in the European Liability Directive (2004/35/EC) and European Communities (Environmental Liability) Regulations, 2008, including: Birds Directive – Annex I species and other regularly occurring migratory species, and their habitats (wherever they occur) and

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mussel covering 27 sub-basins. One of these sub-basins is the Munster Blackwater catchment that holds populations of freshwater pearl mussel, *Margaritifera margaritifera*.

<sup>9</sup> The current list of plant species protected by Section 21 of the Wildlife Act, 1976 is set out in the Flora (Protection) Order, 1999.

<sup>10</sup> 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.

<sup>11</sup> In response to the requirements of the Water Framework Directive a number of water bodies or parts of water bodies which must have extra controls on their quality by virtue of how their waters are used by wildlife have been listed on Registers of Protected Areas (RPAs). RPAs include those for Protected Habitats or Species, Shellfish, Salmonid, Nutrient Sensitive Areas, Recreational Waters and Drinking Water.

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

Habitats Directive – Annex I habitats, Annex II species and their habitats, and Annex IV species and their breeding sites and resting places (wherever they occur).

Specific habitats and species in specific locations are given consideration through project level planning and associated assessments.

The following information is relevant to ecological networks and connectivity and non-designated habitats:

- CORINE land cover mapping (including areas likely to contain a habitat listed in annex 1 of the Habitats Directive)<sup>13</sup>;
- Watercourses, wetlands and peatlands;
- The EPA's Framework National Ecological Network for Ireland<sup>14</sup>;
- Other sites of high biodiversity value or ecological importance, e.g. Bird Watch Ireland's 'Important Bird Areas' (Crowe et al., 2009); and
- Native Trees.

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 urban areas.

<sup>13</sup> The CORINE land cover mapping classifies land cover under various headings. This dataset allows for the identification of lands that are likely to be most valuable to biodiversity including those which are likely to contain a habitat listed in Annex 1 of the Habitats Directive e.g. natural grasslands, peat bogs. 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 constructions which cover the earth's surface.

<sup>14</sup> The EPA's Framework National Ecological Network provides a classification of the relative importance of areas by virtue of the biodiversity and flora that they contain and the connectivity they provide. Many of the areas identified are corridors.

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 Natura 2000 network of designated ecological sites are maintained.

Ecological islands or areas of habitat that are not connected to surrounding ecologically valuable habitats can also be important.

### 4.3.3 Further Detail

#### 4.3.3.1 European Sites

Figure 4.1 maps European Sites and Water Management Units within 15 km buffer of the Tuam Plan area.

The Zone of Influence of the Plan with respect to potential impacts upon ecology can be estimated to be ecology within the Plan area, waters upstream and downstream coastal waterbodies.

There are a number of European Sites within 15 km of the Tuam Plan area: Lough Corrib SAC (Site code: 000297), Levally Lough SAC (Site code: 000295), Derrinlough (Cloonkeenanode) Bog SAC (Site code: 002197), Shrulle Turlough SAC (Site code: 000525), Lough Corrib SPA (Site code: 004042) and Greaghans Turlough SAC (Site code: 000503).

Lough Corrib is one the best examples of a large lacustrine catchment system in Ireland, with a range of habitats and species still well represented. These include 15 habitats which are listed on Annex I of the E.U. Habitats Directive, six of which are priority habitats, and nine species which are listed on Annex II. The lake is rated as an internationally important site for waterfowl. A population of Freshwater Pearl Mussel (*Margaritifera margaritifera*), a species listed on Annex II of the E.U. Habitats Directive, occurs within the site. The shallow, lime-rich waters of the southern basin of Lough Corrib support one of the most extensive beds of stoneworts (Charophytes) in Ireland. This large site contains four discrete raised bog areas and is selected for active raised bog, degraded raised bog, Rhynchosporion and bog woodland. A number of rivers are included within the SAC as they are important for Atlantic Salmon.

For more detail please refer to the AA Natura Impact Report, which accompanies the Plan and this Environmental Report.

#### 4.3.3.2 Natural Heritage Areas and Areas likely to contain Annex I Habitats

Natural Heritage Areas, Proposed Natural Heritage areas and Water Management Units within 15 km buffer of the Tuam Plan area are mapped and listed on Figure 4.1.

There are no Natural Heritage Areas (NHAs) or Proposed Natural Heritage Areas (pNHA) located within the Tuam Plan area, however there are a number of NHAs and pNHAs near the Plan area (as listed below and indicated on Figure 4.1):

- Slieve Bog NHA (Site code: 000247)
- Derrinlough Bog NHA (Site code: 001254)
- Derrinlough Bog and Esker NHA (Site code: 001255)
- Killaclogher Bog NHA (Site code: 001280)
- Rathbaun Turlough pNHA (Site code: 000215)
- Altore Lake pNHA (Site code: 000224)
- Belclare Turlough pNHA (Site code: 000234)
- Drumbulcaun Bog pNHA (Site code: 000263)
- Killower Turlough pNHA (Site code: 000282)
- Knockavanny Turlough pNHA (Site code: 000289)
- Levally Lough pNHA (Site code: 000295)
- Lough Corrib (Site code: 000297)
- Richmond Esker Nature Reserve (Site code: 000323)
- Turlough O'Gall (Site code: 000331)
- Greaghans Turlough (Site code: 000503)
- Shrulle Turlough (Site code: 000525)
- Knockmaa Hill (Site code: 001288)
- Lough Hackett (Site code: 001294)
- Summerville Lough (Site code: 001319)
- Turlough Monaghan (Site code: 001322)
- Turloughcor (Site code: 001788)
- Castle Hackett Souterrain (Site code: 001788)

#### 4.3.3.3 Land Cover Mapping

Land cover categories which indicate lands that are likely to be most valuable to

biodiversity include broad-leaved forests, natural grassland, moors and heathlands, transitional woodland scrub, peat bogs, stream courses and water bodies.

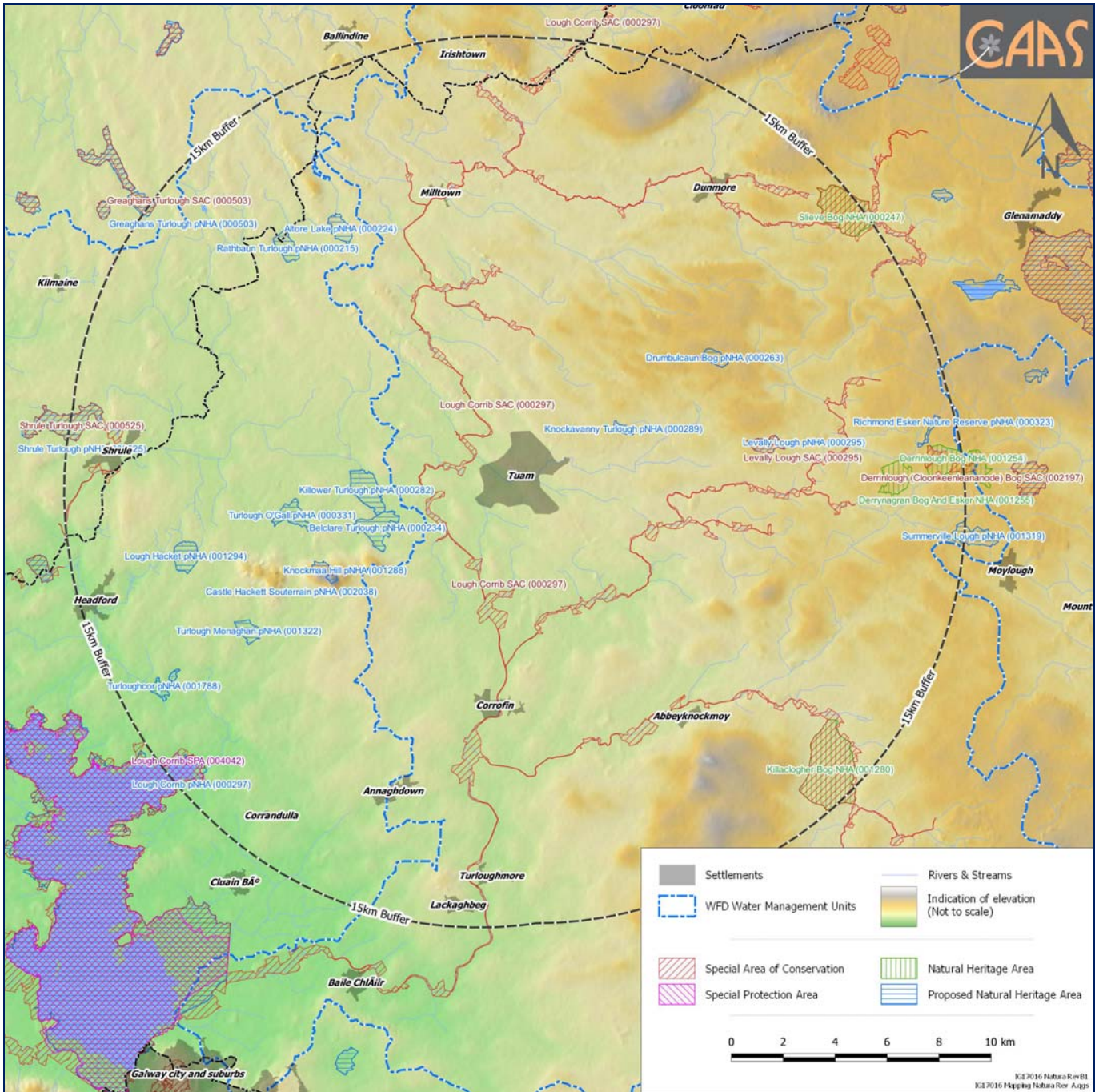
The CORINE (Co-ordinated Information on the Environment) land cover (CLC) data series was devised as a means of compiling geo-spatial environmental information in a standardised and comparable manner. CORINE has become a key data source for informing environmental and planning policy on a national and European level. The main land cover type in Ireland is agricultural land including forestry, which accounts for two-thirds of the national landmass. Most of this is permanent grassland pastures. Peatlands and wetlands are the second most widespread land cover type, covering almost one-fifth of the country. While forested areas cover about one-tenth of the country. Despite rapid development in the past two decades, Ireland's landscape is predominantly rural and agricultural.

CORINE Land Cover Mapping for 2012 (see Figure 4.2) indicates peat bogs to the south-west of the town, and good quality agricultural land to the east and north of the town.

#### 4.3.4 Existing Problems

Previous changes in land uses arising from human development have resulted in a loss of biodiversity and flora and fauna however legislative objectives governing biodiversity and fauna were not identified as being conflicted with.

The Department of Culture, Heritage and the Gaeltacht Affairs Article 17 report on the Status of EU Protected Habitats and Species in Ireland (2013) identifies many Irish habitats to be of unfavourable status and many to be still declining, although it also identifies that a range of positive actions are underway. The report identifies that the majority of EU-protected species are, however, in "Favourable" status in Ireland, and stable, although a small number are considered to be in "Bad" status and continue to require concerted efforts to protect them.



**Figure 4.1 European Sites, Natural Heritage Areas, Proposed Natural Heritage Areas and Water Management Units within 15 km buffer of Tuam**

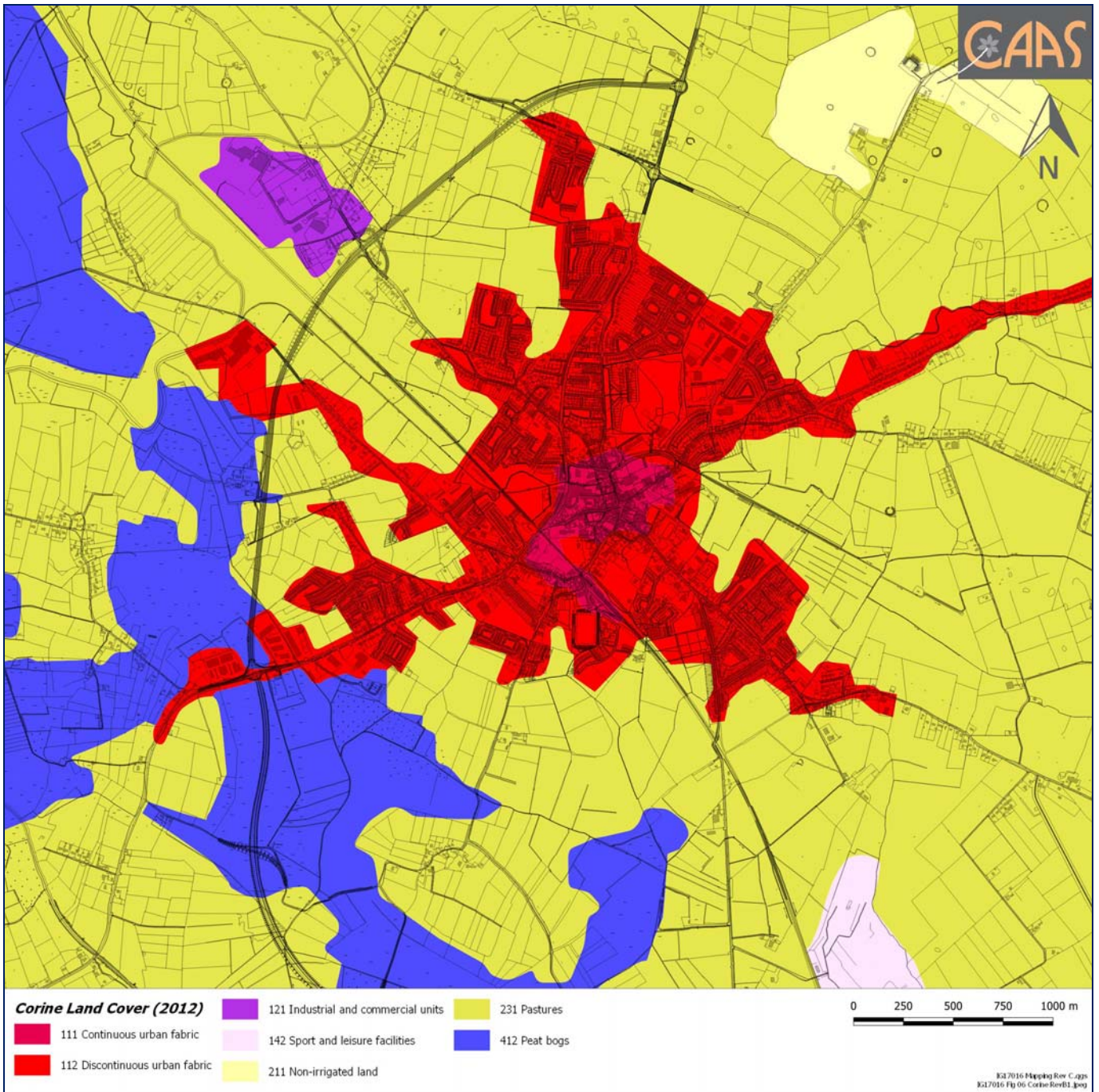


Figure 4.2 CORINE Land Cover Mapping 2012

## 4.4 Population and Human Health

### 4.4.1 Introduction

Tuam has emerged as an important regional centre offering a range of educational services and employment functions.

The population of Tuam has risen steadily in recent years. According to the 2016 Census, the population of the town and its environs was approximately 8,767 persons, an increase of 525 persons from the 2011 Census figure.

The current LAP provides for a population allocation of 2,080 persons for Tuam over the Plan period, which equates to approximately 866 new houses. This population allocation aligns with the Settlement and Core Strategies for County Galway, as set out in the Galway County Development Plan, 2015-2021, and will remain unchanged in the new Plan.

Tuam has been identified as the County's only Hub Town in the Core Strategy of the County Development Plan, having a role to interact & complement the gateway of Galway City and drive development in rural north-east Galway.

### 4.4.2 Interactions

The impact of implementing the Plan on population and human health is influenced 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. Population and human health has the potential to interact with issues including the following:

- Developmental and recreational pressure on habitats and landscapes;
- Increase in demand for waste water treatment at the municipal level (see Section 4.8.1.2);
- Increase in demand for water supply (see Section 4.8.1.3);
- Water quality (see Section 4.6); and
- Flood risk (see Section 4.6.6).

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 plan or programme 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.

## 4.5 Soil

### 4.5.1 Soil Type

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.

Peat soils are often indicative of areas that are the most sensitive to development due to ecological sensitivities and impeded drainage issues. Parts of the southwest of Tuam is underlain by peat soils, while parts of the north and northeast of the Town has better quality agricultural land due to well drained fertile brown earths and alluvial soils located within the area (as shown on Figure 4.3).

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.



### 4.5.2 Radon

The greatest health risk from radiation in Ireland is caused by radon. The presence of radon gas, a naturally occurring radioactive gas that originates from the decay of uranium in rocks and soils, occurs across the country. It accounts for more than half of the total radiation dose received by the Irish population. As a known carcinogen, in the same category as tobacco smoke and asbestos it is a cause of lung cancer. Exposure to radon for long periods or at high concentrations can lead to lung cancer.

A High Radon Area is any area where it is predicted that 10 per cent or more of homes will exceed the Reference Level of 200 Becquerel per cubic metre (Bq/m<sup>3</sup>). The Government's Building Regulations require that all new homes in High Radon Areas are installed with a radon barrier. A high radon level can be found in any home in any part of the country, but these homes are more likely to be located in High Radon Areas.

It is estimated that up to 20% of homes in the Plan area are above the Reference Level. These levels are relatively normal in comparison to those experienced elsewhere within the country (mapping available at <http://www.epa.ie/radiation/radonmap>).

Objective CC8 from the existing County Plan requires the Council to have regard to the specific guidance on radon prevention measures for new homes as contained within the Building Regulations.

### 4.5.3 Potentially Contaminated Lands

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

No contaminated lands within Tuam have been identified however, as is the case with other urban and semi-urban areas across the country, there is potential for contamination at sites within Tuam, especially where land uses occurred in the past in the absence of environmental protection legislation.

Opportunity Site 1 is a former hospital located on Vicar Street and Opportunity Site 5 is a former industrial site located on the corner of

Barracks Street and Liam Mellows Street. As with other previously developed sites, proposed developments will be required to comply with County Development Plan 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."*

### 4.5.4 Existing Problems

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

Please also refer to Sections 4.5.2 and 4.5.3 above.

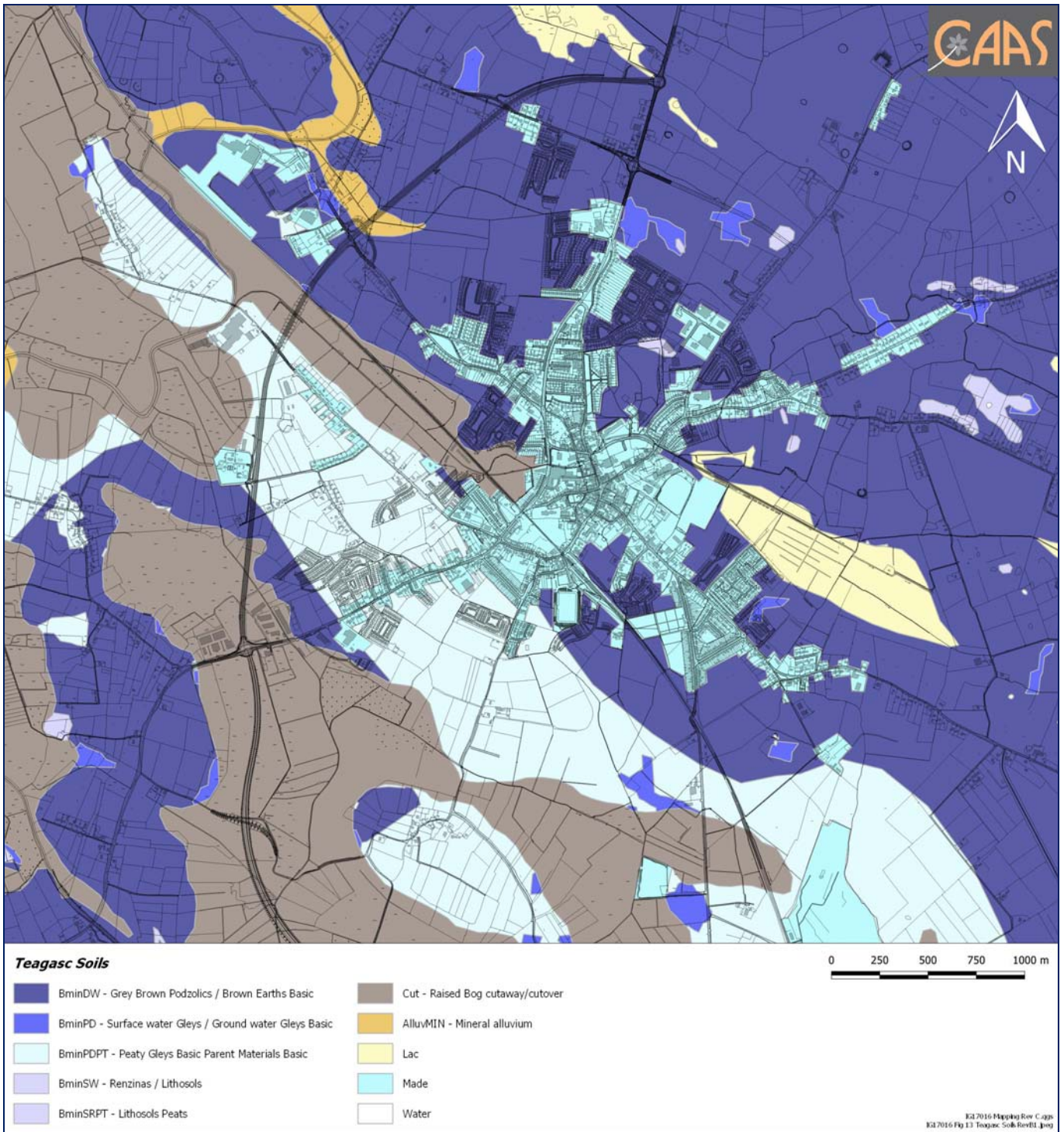


Figure 4.3 Soils

## 4.6 Water

### 4.6.1 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.

### 4.6.2 Water Framework Directive

#### 4.6.2.1 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*. 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.

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

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.

#### 4.6.2.2 River Basin Districts and Water Bodies

The Water Framework Directive is implemented at River Basin Districts (RBD) level. An RBD is an area of land that is drained by a large river or number of rivers and the adjacent estuarine/coastal areas. For the first cycle of River Basin Management Plans (these are prepared for each RBD and provide specific policies for individual river basins in order to implement the requirements of the WFD) there were eight RBDs on the island of Ireland.

Within each RBD - 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. River basin districts are also divided into multiple sub-basins. Sub-basins are areas smaller than the districts that comprise the land from which all surface run-off flows through as series of streams, rivers and possibly, lakes to a particular point in a water course. Sub-basins

do not necessarily include coastal or estuarine waters.

Tuam Plan area is located in the Western River Basin District (WRBD), which includes parts of Clare, Galway, Galway City, Leitrim, Mayo, Roscommon and Sligo.

#### 4.6.2.3 River Basin Management Plan

Following a review of the first cycle of RBMPs, the Department of Communications, Climate Action and Environment has determined that, in the interest of efficiency, there will be a single national approach to the development of RBMPs for the second cycle and that the Eastern, South Eastern, South Western, Western and Shannon River Basin Districts will be merged to form one national River Basin District. In relation to the North Western and Neagh Bann International River Basin Districts, a single administrative area will be established in the South for the purpose of coordinating water management with authorities in Northern Ireland.

WFD Monitoring Programmes are undertaken in Ireland by the EPA. Overviews of the status for monitored waterbodies are published on an ongoing basis and are made available online. Up-to-date, detailed information with respect to relevant water bodies will, as is normal practice, inform lower tier project assessments and design.

### 4.6.3 Surface Water

#### 4.6.3.1 Introduction

The Zone of Influence of the Plan beyond the Tuam Plan area with respect to impacts upon waters can be estimated to be all bodies of groundwater and all surface waters downstream areas of catchments<sup>15</sup> which drain the Plan area.

#### 4.6.3.2 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.

Surface water at and around Tuam is channelled by a number of rivers and streams. The River Clare flows south westwards from the Ballygaddy Bridge to the Corrib and is located to the north west of the Plan boundary. The River Nanny and the Grange River are both tributaries of the River Clare. The River Nanny flows through the town and joins the Clare River to the North West of the Plan Boundary.

The River Clare has been assigned good status and the River Nanny moderate status. Local water quality status for the Plan area is shown on Figure 4.4.

### 4.6.4 Ground Water

#### 4.6.4.1 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.

#### 4.6.4.2 WFD Groundwater Status

For groundwater bodies, the approach to classification is different from that for surface

<sup>15</sup> A catchment is an area of land contributing to a waterbody, with all the water ultimately running off to a single outlet. The WFD requires water quality management to be based on natural river catchments i.e. by reference to the natural, environmental unit rather than by reference to administrative or legal boundaries, which often fragment river catchments.

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

The WFD status (2010-2015) of all groundwater underlying the Tuam Plan area and is identified as being of *good status*, meeting the objectives of the WFD.

#### 4.6.4.3 Aquifer Vulnerability and Productivity

The Geological Survey of Ireland (GSI) rates the rocks, or aquifers, that contain groundwater according to both their vulnerability to pollution and their productivity.

Aquifer vulnerability is a term used to represent the intrinsic geological and hydrogeological characteristics that determine the ease with which groundwater may be contaminated by human activities. Aquifer vulnerability is based on the type and thicknesses of subsoils (sands, gravels, glacial tills (or boulder clays), peat, lake and alluvial silts and clays), and the presence of karst features. Groundwater is most at risk where the subsoils are absent or thin and, in areas of karstic limestone, where surface streams sink underground at swallow holes<sup>16</sup>.

An aquifer of regional importance lies under the area bounded by the Tuam Plan area. The vulnerability of this aquifer ranges from medium in the town centre to high and extreme in the north east. Areas to the northwest, south and south east of the River Nanny range from medium to low vulnerability (see Figure 4.5).

The GSI rates aquifers based on aquifer productivity - hydrogeological characteristics and the value of the groundwater resource. Ireland's entire land surface is divided into nine aquifer productivity classifications that encompass various types of regionally, locally important and poor aquifers. The aquifer underlying Tuam is classified as regionally important aquifer (karstified bedrock). Regionally important aquifers are capable of supplying regionally important abstractions (e.g. large public water supplies), or excellent yields (>400 m<sup>3</sup>/d). Bedrock aquifer units

generally have a continuous area of >25 km<sup>2</sup> and groundwater predominantly flows through fractures, fissures, joints or conduits. Regionally important sand/gravel aquifers are >10 km<sup>2</sup>, and groundwater flows between the sand and gravel grains.

#### 4.6.4.4 Source Protections Areas

Source Protection Area delineation provides an assessment of the land area that contributes groundwater to a borehole or spring. Source reports have been undertaken by the GSI on behalf of Local Authorities since the mid-1990s. Since then, more than 120 have been completed. There is no Source Protection Area located within or in vicinity of the Plan area.

#### 4.6.5 WFD Registers of Protected Areas

The WFD requires that Registers of Protected Areas (RPAs) are compiled for a number of water bodies or part of water bodies which must have extra controls on their quality by virtue of how their waters are used by people and by wildlife. The WFD requires that these RPAs contain: areas from which waters are taken for public or private water supply schemes; designated shellfish production areas; bathing waters; areas which are affected by high levels of substances most commonly found in fertilizers, animal and human wastes - these areas are considered nutrient sensitive; areas designated for the protection of habitats or species e.g. Salmonid areas; Special Areas of Conservation (SACs); and, Special Protection Areas (SPAs).

Entries to the RPAs relevant to Tuam include:

- The water bodies within and surrounding the Plan area supporting Special Areas of Conservation (SACs); and
- Groundwater for drinking water underlying the Tuam Plan area.

#### 4.6.6 Flooding

The most significant source of flood risk within the Plan area is from fluvial (from rivers/streams) however there are other sources of flooding present including those from pluvial (from rainwater) and surface drainage systems.

Flooding is an environmental phenomenon which, as well have causing economic and

<sup>16</sup> Source: Geological Survey of Ireland (2014) Metadata

social impacts, could in certain circumstances pose a risk to human health. The existence of flood risk within Tuam has been detailed in the Strategic Flood Risk Assessment (SFRA) that has been undertaken alongside and informed the Plan. The SFRA has facilitated the integration of flood risk management considerations into both the land use zoning and written provisions contained within the Plan.

Zones of elevated fluvial flood risk that were identified by the SFRA are shown on Figure 4.6. There are three types or levels of flood zones defined for the purposes of the Flood Guidelines (there is no coastal risk at Tuam):

- Flood Zone A – where the probability of flooding from rivers is highest (greater than 1% or 1 in 100 for river flooding);
- Flood Zone B – where the probability of flooding from rivers is moderate (between 0.1% or 1 in 1000 and 1% or 1 in 100 for river flooding); and
- Flood Zone C – where the probability of flooding from rivers is low (less than 0.1% or 1 in 1000 for river flooding). Flood Zone C covers all other areas that are not in zones A or B.

#### **4.6.7 Existing Problems**

Zones of elevated fluvial flood risk have been identified within the Plan area and the moderate status of some of the surface water bodies within and adjacent to the Plan area is less than that required by the Water Framework Directive.

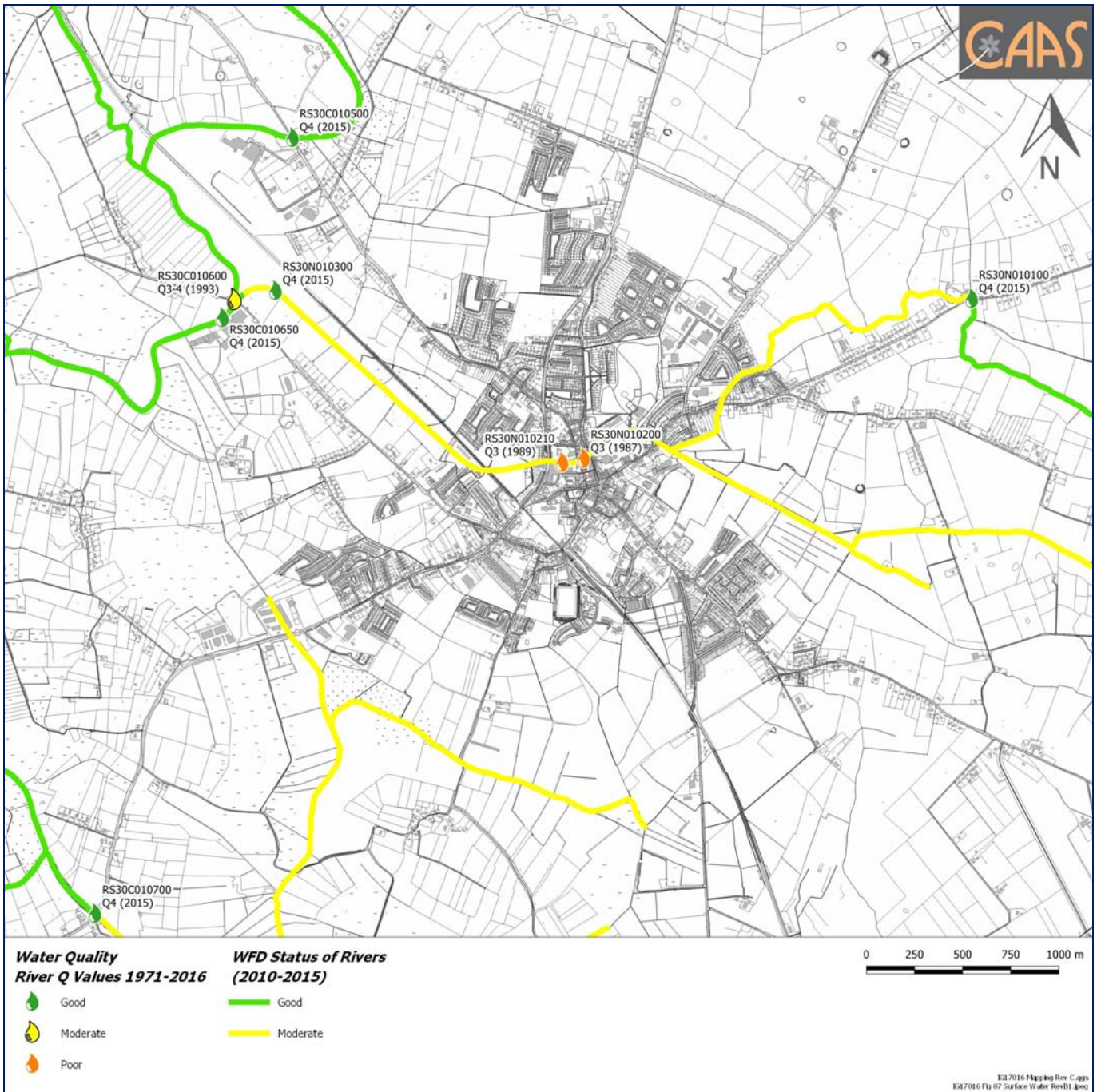


Figure 4.4 Available information on Water Quality Status (2010-2015) for Surface Water Bodies

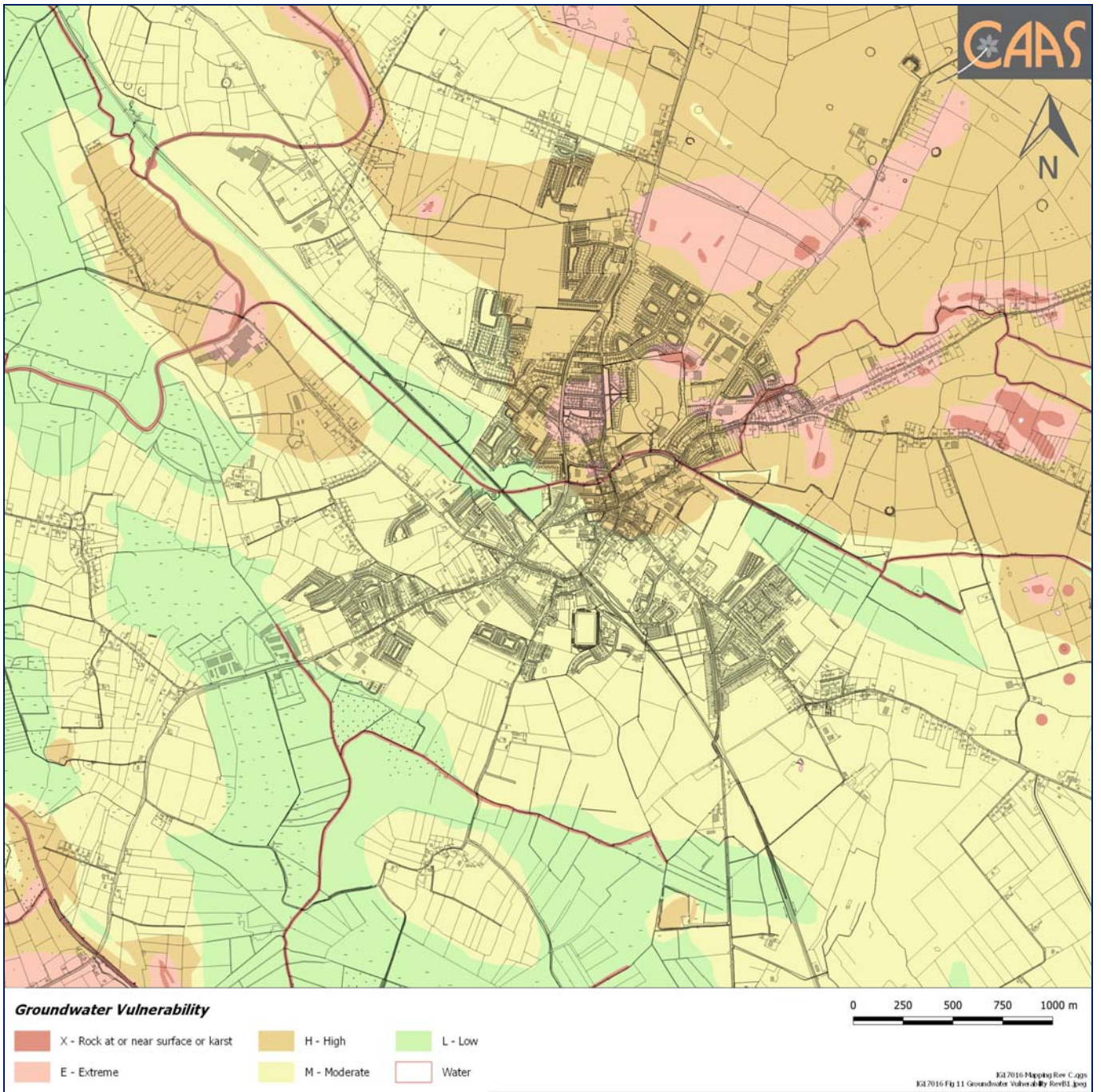


Figure 4.5 Groundwater Vulnerability



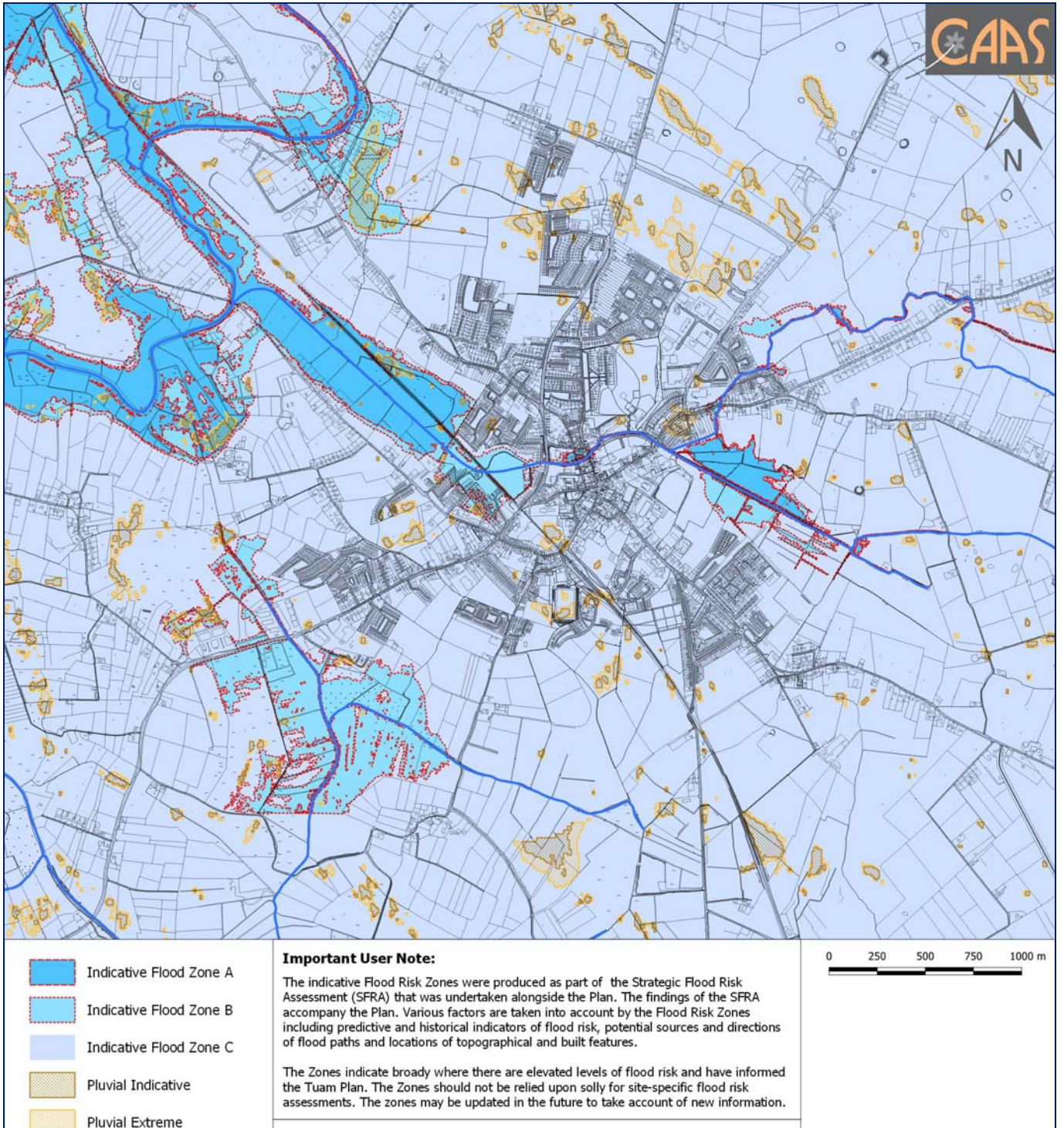


Figure 4.6 Flood Zones Map

## 4.7 Air and Climatic Factors

### 4.7.1 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. Interactions are also present with flooding (see Section 4.6.6) and these are covered in greater detail in the Strategic Flood Risk Assessment that also accompanies the Plan.

The Plan contributes towards improvements in sustainable mobility, thereby facilitating reductions in and limiting increases of greenhouse gas emissions. Such emissions would occur otherwise with higher levels of motorised transport and associated traffic. This is particularly relevant through the accommodation of new development, including consolidation, within the Plan. 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.

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 (42.2% of Total Final Energy Consumption in Ireland in 2015 was taken up by transport, the largest take up of any sector)<sup>17</sup>.

For 2015, total national greenhouse gas emissions are estimated to be 3.7% higher than emissions in 2014. This follows the 0.3% decrease in emissions reported for 2014, most likely attributable to a mild winter in that year. Emission reductions have been recorded in 8 of the last 10 years, however this has largely

been as a result of reduced economic activity. There is now strong evidence that emissions are once again increasing in line with economic and employment growth, particularly in the Transport sector. Greenhouse gas emissions from the Transport sector increased by 4.2% in 2015. This is the third successive year of increases in transport emission. Greenhouse gas emissions in 1990 and 2015 by sector show a more than doubling of the proportion of emissions from the Transport sector, from 9.2% in 1990 to 19.8% in 2015<sup>18</sup>.

The EPA 2017 publication *Ireland's Greenhouse Gas Emission Projections 2016-2035* provides an assessment of Ireland's progress towards achieving its emission reduction targets set down under the EU Effort Sharing Decision (Decision No 406/2009/EC) for the years 2013-2020 and a longer term assessment based on current projections. Ireland's 2020 target is to achieve a 20% reduction of non-Emission Trading Scheme (non-ETS) sector emissions (i.e. agriculture, transport, the built environment, waste and non-energy intensive industry) on 2005 levels with annual limits set for each year over the period 2013-2020. The EPA has produced two scenarios in preparing greenhouse gas emission projections; a "With Existing Measures" scenario and a "With Additional Measures" scenario. For 2017 projections, the With Additional Measures scenario takes into account an expected shortfall in achieving full energy efficiency targets and renewable targets for electricity, transport and heat as set out in the National Energy Efficiency Action Plan and National Renewable Energy Action Plan. To assess progress towards achieving reduction targets out to 2020 the EPA is using legislative limits (for the period 2013-2016) and estimated annual limits (for the period 2017-2020) which will possibly be included in a European Commission proposal that takes into account methodological changes underpinning greenhouse gas emission inventories. The 2017 publication identifies that:

- For 2020 it is estimated that non-ETS sector emissions are projected to be 4% - 6% below 2005 levels by 2020. This compares to the target of 20% below 2005 levels by 2020.
- To determine compliance under the Effort Sharing Decision, any overachievement of the binding

<sup>17</sup> Sustainable Energy Ireland (2016) *Energy in Ireland 1990 – 2015*

<sup>18</sup> EPA (2017) *Ireland's Greenhouse Gas Emissions in 2015*

emission limit in a particular year (in the period 2013 to 2020) can be banked and used towards compliance in a future year. Under both scenarios Ireland is expected to exceed the annual limit in 2016.

- Under the With Existing Measures scenario, Ireland is projected to cumulatively exceed its obligations by 13.7 Mt of CO<sub>2eq</sub> over the period 2013-2020. Under the With Additional Measures scenario, Ireland is projected to cumulatively exceed its obligations by 11.5 Mt of CO<sub>2eq</sub> over the period 2013-2020. This takes into account the overachievement of the annual limits in the period 2013-2015 which is banked and used in the years 2016-2020. Using this mechanism Ireland is projected to cumulatively exceed its obligations in 2019.
- Agriculture and transport dominate non-ETS sector emissions; emission trends from these sectors will be key determinants in terms of meeting targets with both projected to increase in the period to 2020.

There will be new obligations (as yet undefined) for the years 2021-2030. Based on current emission projections, it is estimated that by 2030 total non-ETS emissions will be 1%-3% below 2005 levels. The estimates of greenhouse gas emissions to 2035 assume a continuation of the effect of policies and measures that are in place in 2020.

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

It is also noted that there are emerging updated objectives relating to climate adaptation that will replace those provided for in the 2012 National Climate Change Adaptation Framework. The upcoming framework will outline the national strategy to reduce the vulnerability of the country to the

negative effects of climate change and to avail of positive impacts.

#### 4.7.2 Ambient Air Quality

In order to protect human health, vegetation and ecosystems, EU Directives set down air quality standards in Ireland and the other Member States for a wide variety of pollutants. These pollutants are generated through fuel combustion, in space heating, traffic, electricity generation and industry and, in sufficient amounts, could affect the well-being of the areas inhabitants. The EU Directives include details regarding how ambient air quality should be monitored, assessed and managed.

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

The CAFE Directive:

- Sets new air quality objectives for PM<sub>2.5</sub> (fine particles) including the limit value and exposure related objectives;
- Accounts for the possibility to discount natural sources of pollution when assessing compliance against limit values; and
- Allows the possibility for time extensions of three years (PM<sub>10</sub>) or up to five years (NO<sub>2</sub>, benzene) for complying with limit values, based on conditions and the assessment by the European Commission.

The fourth Daughter Directive lists pollutants, target values and monitoring requirements for the following: arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air.

The CAFE Directive was transposed into Irish legislation by the Air Quality Standards Regulations 2011 (S.I. No. 180 of 2011). It replaces the Air Quality Standards Regulations 2002 (S.I. No. 271 of 2002), the Ozone in Ambient Air Regulations 2004 (S.I. No. 53 of 2004) and S.I. No. 33 of 1999.

The fourth Daughter Directive was transposed into Irish legislation by the Arsenic, Cadmium,

Mercury, Nickel and Polycyclic Aromatic Hydrocarbons in Ambient Air Regulations 2009 (S.I. No. 58 of 2009).

In order to apply with European Directives relating to air quality, the EPA manages the National Ambient Air Quality Network and measures the levels of a number of atmospheric pollutants at locations across the country. 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: Other cities and large towns including Limerick, Galway, Waterford, Drogheda, Dundalk, Bray, Navan, Ennis, Tralee, Kilkenny, Carlow, Naas, Sligo, Newbridge, Mullingar, Wexford, Letterkenny, Athlone, Celbridge, Clonmel, Balbriggan, Greystones, Leixlip and Portlaoise.
- Zone D: Rural Ireland, i.e. the remainder of the State – small towns and rural areas of the country – excluding Zones A, B and C.

The current air quality at monitoring sites within County Galway is identified by the EPA as being *good*<sup>19</sup>.

The EPA's (2017) *Air Quality in Ireland 2016* identifies that:

- No levels above the EU limit value were recorded at any of the ambient air quality network monitoring sites in Ireland in 2016;
- WHO guideline values were exceeded at a number of monitoring sites for particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), ozone, SO<sub>2</sub> and NO<sub>2</sub>; and
- 2016 dioxin survey shows that concentrations of dioxins and similar pollutants remain at a consistently low level in the Irish environment.

With regard to challenges, the report identifies that maintaining our standard of air quality in Ireland is a growing challenge. Overcoming this challenge is taking on an increased importance with the further understanding of the links between poor air quality and human health. The European Environment Agency

(EEA) have estimated a figure of 1,510 premature deaths in Ireland in 2014 (EEA 2017) directly attributable to air quality, with the predominant culprit being fine particulate matter (PM<sub>2.5</sub>) from the use of solid fuels such as wood, coal and peat for home heating. It is becoming increasingly apparent that there is no safe level of air pollution, a position that is held by the WHO and is reflected in their much stricter (than EU limit values) air quality guideline values. The clear benefits in terms of health improvements of reducing the people's exposure to poor air quality is also supported by significant economic savings in doing so. This is highlighted by the Organisation for Economic Co-operation and Development's (OECD) report on the economic cost of air pollution (OECD 2016).

With regards to solutions, the report identifies the following that the implementation of the new Ambient Air Quality Monitoring Programme (AAMP) by the EPA will be key to tackling the issues surrounding air quality in Ireland. The two key sectors that predominantly impact negatively on air quality are residential heating and transport. The AAMP seeks to address these key issues by firstly informing the public on the status of air quality in Ireland. This will be achieved through an expansion of the monitoring network with a greater emphasis on provision of real-time particulate matter levels. In conjunction with this network expansion, the AAMP will implement a programme of citizen engagement which will be used to highlight the links between air quality, health and the actions or clean air choices that can be taken by citizens to directly impact and improve their local air quality. Namely these are:

- Any shift from the burning of solid fuel to cleaner, more energy efficient methods of home heating which will result in cleaner air quality for the consumer, their family and neighbours with a resultant improvement in their health.
- A transition in our modes of transport away from the use of the private diesel and petrol powered motor cars to alternative modes of transport such as walking, cycling and forms of transport that are environmentally friendly and sustainable such as electric motor powered vehicles. This is especially important in our at-risk urban environments.

<sup>19</sup> 10/01/2018 (<http://www.epa.ie/air/quality/>)

To incentivise and compliment these behavioural changes in the public, the report identifies that it is imperative that Ireland adopts policy solutions that can marry the twin issues of ambient air quality and climate change mitigation. The government's 'Clean Air Strategy' which is due for publication should point the way forward in terms of policy solutions for Ireland in this regard.

### 4.7.3 Existing Problems

Legislative objectives governing air and climatic factors were not identified as being conflicted within Tuam however there are national targets regarding greenhouse gas emissions and air quality that are in danger of not being met.

## 4.8 Material Assets

### 4.8.1 Water Services

#### 4.8.1.1 Irish Water

Since January 2014, Irish Water is the State body responsible for the delivery, integration and implementation of strategic water and waste water projects and infrastructural improvements. Galway County Council no longer has a direct role in this area, however the Council works with Irish Water to help to ensure that the land use plans and water services investment plans align.

The function and role of Irish Water includes:

- Abstracting and treating water;
- Delivering water and waste water services to homes and businesses;
- Installing water meters and billing domestic and business customers;
- Raising finance to fund improvements and repairs in the water system; and
- Maintaining and operating the water system.

The upgrading of infrastructure will contribute towards compliance with the Water Framework Directive, EU Urban Waste Water Treatment Directive and Drinking Water Regulations and will help to protect human health and maintain the quality of surface and ground waters.

### 4.8.1.2 Waste Water Services Demand and Capacity Information

The EPA's 2018 report '*Urban Waste Water Treatment in 2017*' identified that:

- Waste water treatment at 28 of Ireland's 185 large urban areas did not meet relevant standards and improvements are needed at 132 urban areas;
- Raw sewage is released into the environment from 38 urban areas; and
- Significant capital investment to upgrade deficient waste water treatment systems is required to comply with EU standards, improve water quality, and prevent pollution of rivers, lakes and bathing water and to protect shellfish and pearl mussel habitats.

Based on the EPA's assessment of monitoring information provided by Irish Water and the enforcement activities carried out by the EPA, this report identifies urban areas with the most important environmental issues that must be addressed. There are 10 urban areas in County Galway listed currently as priority areas, where improvements are required to resolve urgent environmental issues. Tuam is not one of these areas.

Tuam benefits from a public wastewater treatment system, which was designed to cater for a population equivalent (p.e) of 24,834. Based on current loading it is estimated there is approx. 4000 p.e. capacity remaining in the plant which means there is sufficient treatment capacity to accommodate the projected increase in population for Tuam. Treatment stages comprise preliminary (screening and grit removal) followed by secondary (activated sludge process) and tertiary (sand filtration and nutrient removal). The final treated effluent to the Clare River, which in turn discharges to Lough Corrib, approximately 40 Km downstream. The wastewater network in Tuam was upgraded under the Tuam Town Main Drainage Contract, completed in 2012. Future connections to this network from development on zoned and infill lands will be assessed through Irish Water's Connection and Developer Services process.

The existing Waste Water Treatment Plant (WWTP) is not listed in the current EPA *Urban*

*Waste Water Treatment in 2017 Report*<sup>20</sup> and has adequate capacity. Works are currently being planned under Capital Programmes to provide additional treatment capacity<sup>21</sup> at WWTP in Tuam.

#### 4.8.1.3 Drinking Water

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 (EPA) 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 current RAL (Q3 of 2018) lists one water supply scheme in County Galway (Ballinasloe).

Tuam receives its water supply from the Tuam Regional Water Supply Scheme which is abstracted from Lough Corrib at Luimnagh. The drinking water facility for Tuam is not listed on the current RAL (Q3 of 2018) and has adequate capacity.<sup>22</sup>

### 4.8.2 Waste Management

For the purposes of waste management planning, Ireland is now divided into three regions: Southern, Eastern-Midlands and Connacht-Ulster. Waste management

plans for the three regions came into force in 2015. Galway is subject to the Connacht Ulster Waste Management Plan 2015-2021.

The EPA publishes data on waste generation and management in the National Waste Report and bulletins. The most recent National Waste Report was published in August 2014, reporting waste information for 2012, identified that in 2012, Ireland achieved all its EU obligations across a broad range of waste legislation.

#### 4.8.3 Existing Problems

Continued development within Tuam will need to continue to be accompanied by appropriate levels of waste water and drinking water services.

## 4.9 Cultural Heritage

### 4.9.1 Archaeological Heritage

#### 4.9.1.1 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.

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

<sup>20</sup> EPA, 2018; this report provides a summary of urban waste water treatment in 2017 and identifies the most important environmental issues that must be addressed.

<sup>21</sup> Indicative Infrastructure Capacity for Core Strategy Settlements, Feb. 2017, Galway County Council

<sup>22</sup> Indicative Infrastructure Capacity for Core Strategy Settlements, Feb. 2017, Galway County Council

#### 4.9.1.2 Record of Monuments and Places

The National Monuments Acts 1930-2004 are the primary legislative framework for the protection of archaeological heritage in Ireland. Through the definition of monuments, historic monuments, and national monuments a wide range of structures and features fall under the remit of these Acts.

The Record of Monuments and Places (RMP) was established under Section 12 of the National Monuments (Amendment) Act 1994 and structures, features, objects or sites listed in this Record are known as Recorded Monuments. The term Monument refers to any artificial or partly artificial building or structure, that has been carved, sculptured or worked upon or which appears to have been purposely put or arranged in position. It also includes any, or part of any prehistoric or ancient tomb, grave or burial deposit, or ritual, industrial or habitation site. Monuments that predate 1700 AD are automatically accorded the title Historic Monument. A 'National Monument' is defined in the National Monuments Acts (1930-2004) as a monument or the remains of a monument, the preservation of which is of national importance by reason of the historical, archaeological, traditional, artistic or architectural interest.

As well as extending protection to all known sites, now identified as Recorded Monuments, the National Monuments Acts 1930 – 2004 extends protection to all previously unknown archaeological items and sites that are uncovered through ground disturbance or the accidental discovery of sites located underwater. Where necessary, the Minister with responsibility for Heritage will issue preservation orders to ensure protection is afforded to sites believed to be under threat.

Monuments within and surrounding Tuam and associated zones of notification, where available, are identified on Figure 4.9.

Tuam is classified as a monastic town and is a recorded monument. The town has developed a special historical archaeological interest especially with regard to its medieval importance and the fact that it was a strategically important ecclesiastical centre. There are 55 various entries RMP within and around Tuam providing evidence of early settlement including High Cross (National Monument in State Care). There are also 21 sites and monuments within the Zone of

Archaeological Potential (as shown on Figure 4.9).

### 4.9.2 Architectural Heritage

#### 4.9.2.1 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.

#### 4.9.2.2 Protected Structures

Part IV of the Planning and Development Act requires every development plan to include a Record of Protected Structures (RPS). A 'protected structure' is a structure or a specific feature of the structure as may be specified that a Planning Authority considers to be of special interest from an architectural, historical, archaeological, artistic, cultural, scientific, social or technical point of view.

The placing of a structure on the RPS seeks to ensure that the character and interest of the structure is maintained and any changes or alterations to it are carried out in such a way as to retain and enhance that character and interest. The inclusion of a structure in the RPS confers certain responsibilities upon the owner of the structure and requires that planning permission be sought for any changes or alterations to the structure. The definition of a 'structure' or 'a specified part of a structure' for the purpose of the RPS includes "the interior of the structure; the land lying within the curtilage of the structure; any other structures lying within the curtilage of that structure and their interiors; and all fixtures and features which form part of the interior or exterior of the structure". From the date of notification of an intention to include a structure in the RPS, the owner has a duty to protect that structure from endangerment. The Council may, on receipt of a written request from the owner or occupier of a protected structure, issue a declaration under Section 57 of the Planning and Development Act 2000 (as amended), outlining certain works it considers would not materially affect the character and interest of the protected structure and which are, therefore, exempted from the requirement for planning permission.

Any works that would materially affect the character and interest of a structure require planning permission. In general works to a protected structure should comply with the guidelines as set out in the Architectural Heritage Protection Guidelines from the Department.

Tuam is significant as an historic town on account of its ancient origins, with a number of archaeological sites within and around the town. The majority of buildings span the late 18<sup>th</sup> to late 19<sup>th</sup> centuries and share many characteristics.

There are 50 RPS entries within and around Tuam (see Figure 4.7 and Figure 4.8).

#### **4.9.2.3 Architectural Conservation Areas**

In accordance with Section 81 of the Planning and Development Act, Development Plans are required to include an objective to preserve the character of a place, area, group of structures or townscape, taking account of building lines and heights, that:

- a) is of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest or value, or
- b) contributes to the appreciation of protected structures,

if the Planning Authority is of the opinion that its inclusion is necessary for the preservation of the character of the place, area, group of structures or townscape concerned and any such place, area, group of structures or townscape shall be known as an "Architectural Conservation Area" (ACA).

An ACA may or may not include Protected Structures. In an ACA, protection is placed on the external appearance of such areas or structures.

There is currently one ACA within Tuam: Tuam Town Centre ACA (see Figure 4.7 and Figure 4.8).

The principal significance of the ACA lies in the town's ancient origins and historic settlement patterns. The majority of its buildings span the late 18<sup>th</sup> to late 19<sup>th</sup> centuries and share many characteristics. Surviving traditional shop fronts are important features. Within the

centre the majority of uses are commercial in nature at ground floor with upper stories in a variety of different uses from residential, storage and offices. Apart from the Cathedrals, ecclesiastical, public and educational buildings, there is a well-defined consistency of buildings lining principal streets.

#### **4.9.3 Existing Problems**

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



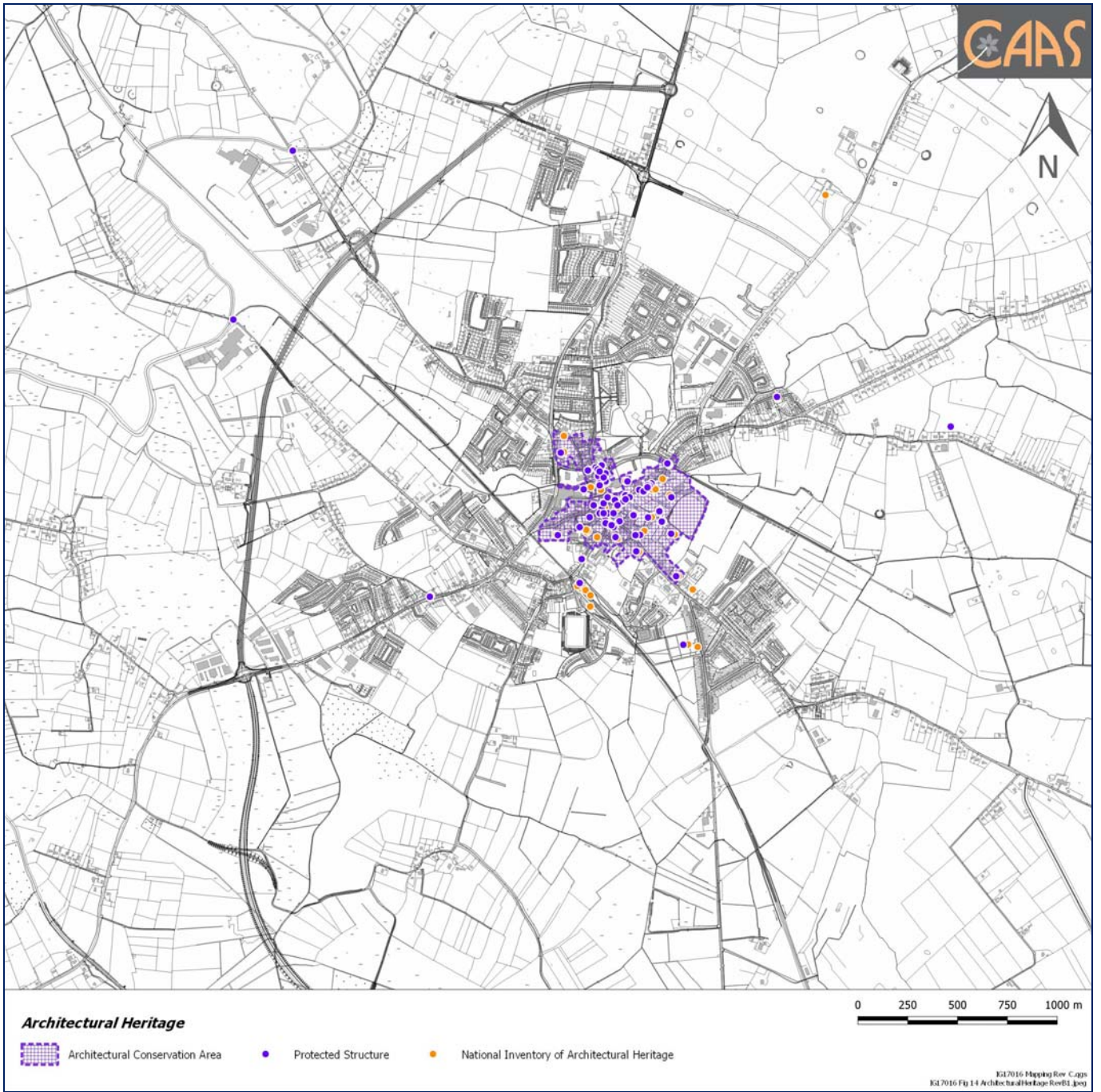


Figure 4.7 Architectural Designations in the Plan area

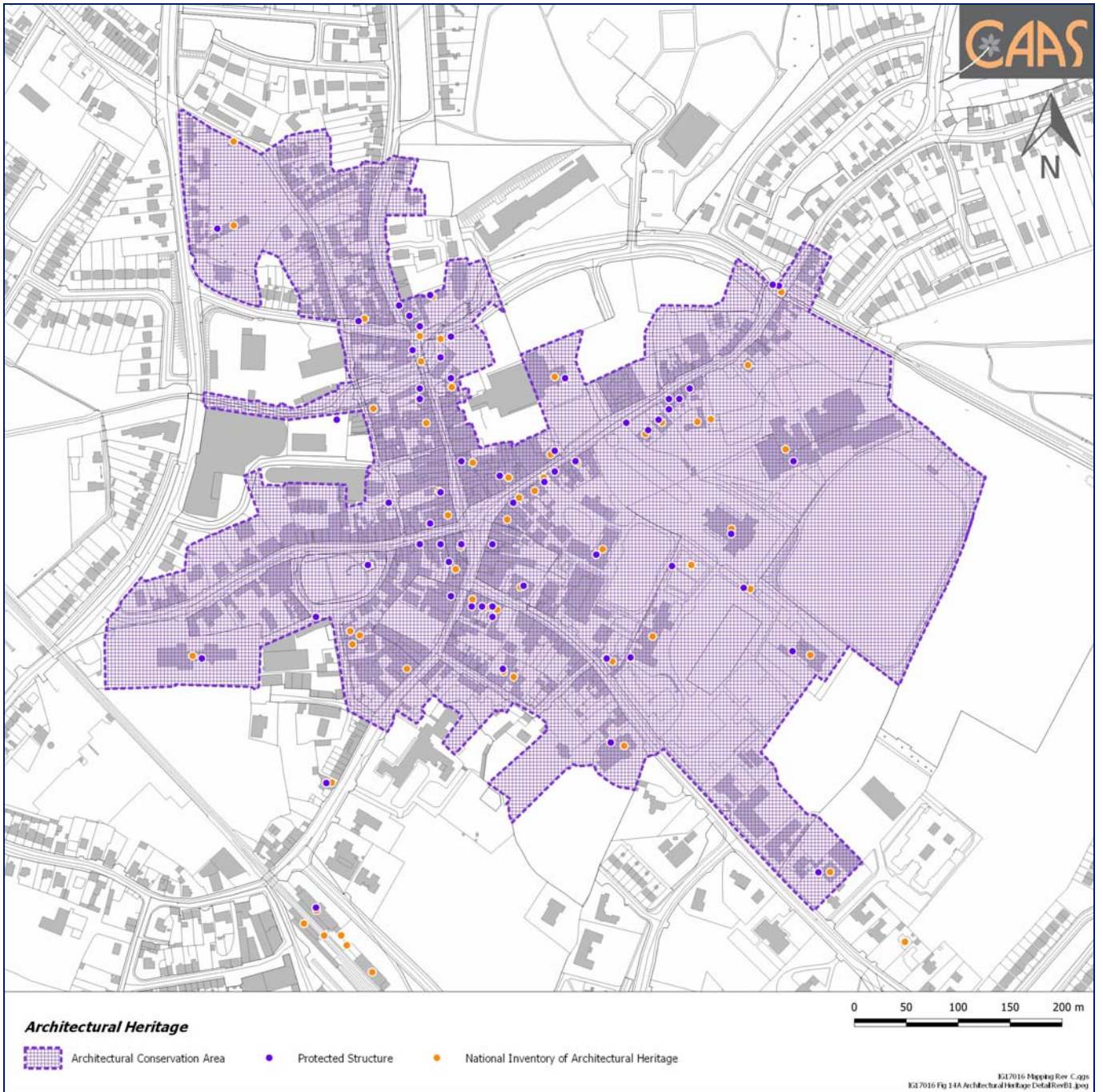


Figure 4.8 Architectural Designations in the town centre

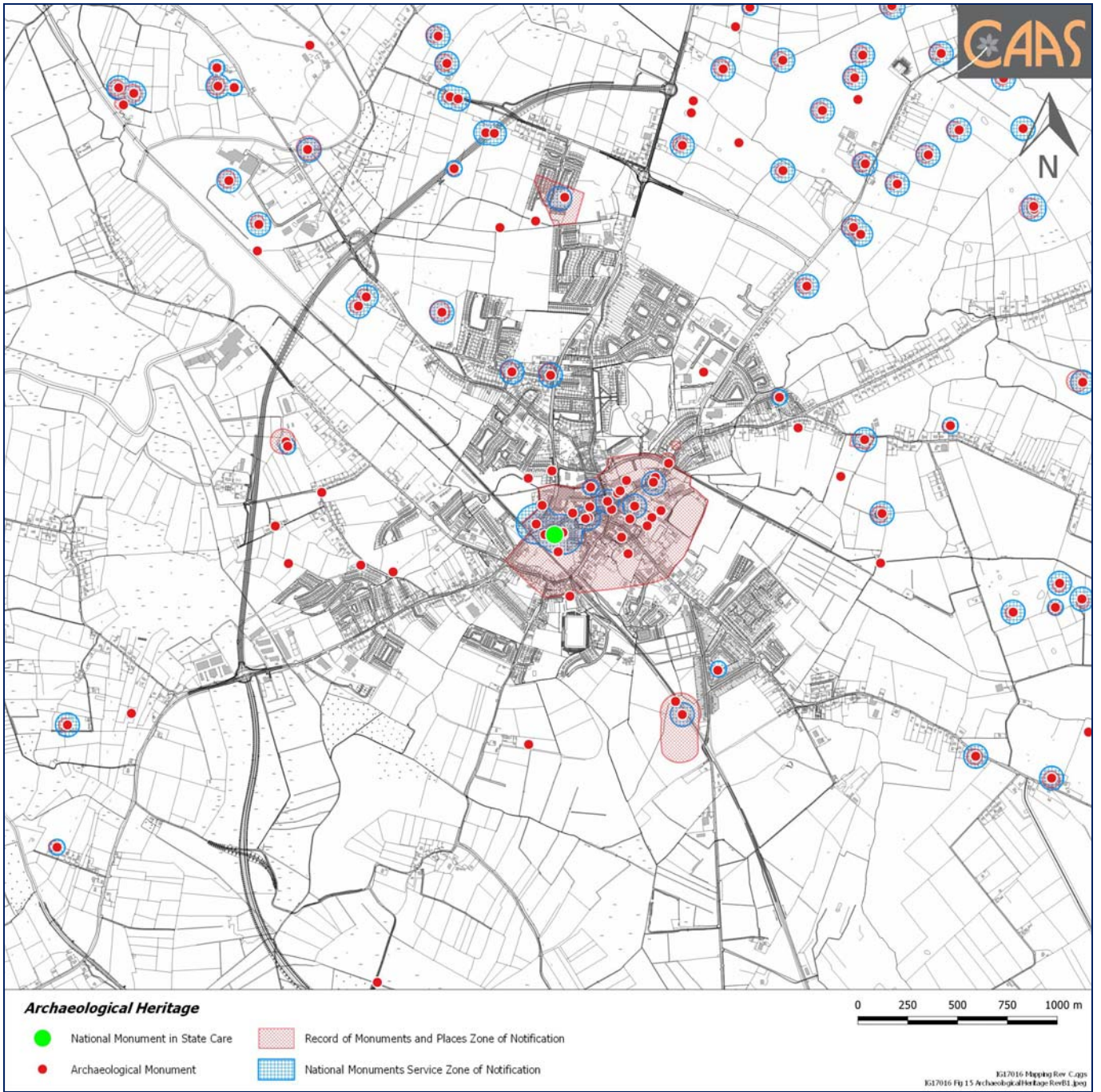


Figure 4.9 Archaeological Designations

## 4.10 Landscape

### 4.10.1 Introduction

Landscapes 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.

### 4.10.2 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.

### 4.10.3 Landscape Sensitivities

The Landscape Character Assessment for County Galway (2003) identifies Landscape Character Areas, classifies landscapes in Galway according to their sensitivity (their ability to accommodate change or intervention without suffering unacceptable effects to character and values) and values and identifies focal points/views.

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 sensitivity of a landscape to development and therefore to change will vary according to its character and to the importance which is attached to any combination of landscape values.

Tuam and its environs are located predominately within Landscape Sensitivity Class One – Low Sensitivity. There is, however, still a need to protect the visual and natural amenity of Tuam, its setting, townscape and its historic context and traditions. The amenities of the town consist of the built environment including ecclesiastical buildings, cathedrals and historical ruins, the riverside character, the Palace Grounds Town Park, the sports arenas, parklands and the rich agricultural environs.

There are two views afforded protection by the County Development Plan, Protected View No. 25 - Tuam - High Cross and Protected View No. 26 - Knockmoy Abbey southeast of Tuam.

### 4.10.4 Existing Problems

Primary and subsequent ecological succession and new developments have resulted in changes to the visual appearance of landscapes within County Galway overtime however legislative objectives governing landscape and visual appearance were not identified as being conflicted with.

## Section 5 Strategic Environmental Objectives

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.

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.

All SEOs, indicators and targets are provided on Table 5.1 overleaf while background to these measures is provided in the subsections below.

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

**Table 5.1 Strategic Environmental Objectives, Indicators and Targets**

Environmental Component	Strategic Environmental Objective(s)	Selected Indicator(s)	Selected Target(s)
<b>Biodiversity, Flora and Fauna</b>	B1: To ensure compliance with the Habitats and Birds Directives with regard to the protection of European Sites and Annexed habitats and species <sup>23</sup>	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 <sup>24</sup>
	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	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
	B3: To avoid significant impacts on relevant habitats, species, environmental features or other sustaining resources in designated sites including Wildlife Sites <sup>25</sup> 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	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 B3ii: Number of significant impacts on the protection of species listed on Schedule 5 of the Wildlife Act 1976	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 B3ii: No significant impacts on the protection of species listed on Schedule 5 of the Wildlife Act 1976
	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	B4: Population involved in land management	B4: Sustain the population involved in land management
<b>Population and Human Health</b>	PHH1: To protect populations and human health from exposure to incompatible landuses	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
<b>Soil</b>	S1: To avoid damage to the hydrogeological and ecological function of the soil resource	S1: Soil extent and hydraulic connectivity	S1: To minimise reductions in soil extent and hydraulic connectivity

<sup>23</sup> '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.

<sup>24</sup> 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.

<sup>25</sup> The Planning and Development Act 2000 as amended defines a 'wildlife site'.

Environmental Component	Strategic Environmental Objective(s)	Selected Indicator(s)	Selected Target(s)
Water	W1: To maintain and improve, where possible, the quality and status of surface waters	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 <i>good status</i> <sup>26</sup> 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)
	W2: To prevent pollution and contamination of ground water	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
	W3: To comply as appropriate with the provisions of the Planning System and Flood Risk Management: Guidelines for Planning Authorities (DEHLG and OPW, 2009)	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>
Material Assets	M1: To serve new development with adequate and appropriate waste water treatment	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
	M2: To serve new development with adequate drinking water that is both wholesome and clean	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
	M3: To reduce waste volumes, minimise waste to landfill and increase recycling and reuse.	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
Air and Climatic Factors	C1: To reduce travel related emissions to air and to encourage modal change from car to more sustainable forms of transport	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

<sup>26</sup> 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).

<b>Environmental Component</b>	<b>Strategic Environmental Objective(s)</b>	<b>Selected Indicator(s)</b>	<b>Selected Target(s)</b>
<b>Cultural Heritage</b>	CH1: To protect archaeological heritage including entries to the Record of Monuments and Places and/or their context	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
	CH2: To protect architectural heritage including entries to the Record of Protected Structures and Architectural Conservation Areas and their context	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
<b>Landscape</b>	L1: To avoid significant adverse impacts on the landscape - especially with regard to landscapes that are most valuable and most sensitive to change and protected focal points and views.	L1: Number of complaints received from statutory consultees regarding avoidable impacts on the landscape - especially with regard to landscapes that 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 landscapes that are most valuable and most sensitive to change and protected focal points and views - resulting from development which is granted permission under the Plan



## Section 6 Description of Alternatives

### 6.1 Introduction

As per the requirements of the SEA Directive, the SEA considered reasonable alternatives, which are capable of being implemented for both the Plan taking into account the objectives and the geographical scope of the Plan. Alternatives are assessed in Section 7.

In addition to assessing the alternatives for the development of the town of Tuam under the overall Local Area Plan, consideration was given to alternatives relating to zoning for smaller areas under Proposed Material Alterations MA1 to MA16. Information on these alternatives is also provided below and in Section 7.

### 6.2 Alternatives considered for the Overall Local Area Plan

Galway County Council in preparing a Draft Plan for public display developed three alternatives for Tuam.

#### Alternative 1: Even Development<sup>27</sup>

- Tuam to reach population allocation, resulting in balanced orderly development and implementation of the core strategy as contained in Chapter 2 of the Galway County Development Plan 2015-2021.
- The infrastructure required to be in place to achieve the growth targets is already in place or planned.
- Residential Development to take place on R1 lands in the lifetime of the Plan, unless a comprehensive justification is provided for alternative residential lands.
- Community development facilities to be developed in tandem with economic and residential growth.
- Town Centre developments would be developed in a planned and coordinated manner focused within the town centre.
- Industry would occur in the periphery close to existing infrastructure.
- Opportunity sites identified with clear design and proposed uses identified.
- Open Space and Recreational Lands would be preserved.

#### Alternative 2: Sporadic Development<sup>28</sup>

- Tuam to reach population allocation, resulting in balanced orderly development and implementation of the core strategy as contained in Chapter 2 of the Galway County Development Plan 2015-2021.
- Additional infrastructure would be required to accommodate sporadic development, more than would be required for Alternative 1 'Even Development'.
- Residential Development to take place on R1 and R2 lands in the lifetime of the Plan, unless an evidence based justification is provided for alternative residential lands.
- Industry would occur at locations including those close to residential development.
- Creation of neighbourhood centres throughout the Plan area and associated dispersal of Town Centre, commercial development and local services.
- Town centre development would be sporadic and uncoordinated around the Town centre zonings.
- Opportunity sites are identified but no clear guidance on the design parameters or uses identified.

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<sup>27</sup> See Figure 6.1

<sup>28</sup> See Figure 6.2

**Alternative 3: Haphazard Development<sup>29</sup>**

- Tuam to reach population allocation, resulting in balanced orderly development and implementation of the core strategy as contained in Chapter 2 of the Galway County Development Plan 2015-2021.
- Additional infrastructure would be required to accommodate sporadic development, more than would be required for Alternative 1 'Even Development' or Alternative 2 'Sporadic Development', development would have to be serviced by private waste water treatment systems which would have to be properly maintained.
- Residential development would occur on a piecemeal and haphazard basis.
- Town centre development would be permitted on a number of different zonings and not concentrated in the Town centre.
- No opportunity sites identified-laissez faire attitude in relation to development.
- Each application would be considered on its own merits and no land use zoning is provided for.

**6.3 Alternatives considered for Proposed Material Alterations MA1 to MA16**

As per the requirements of the SEA Directive, this SEA considers reasonable alternatives, which are capable of being implemented for Proposed Material Alterations MA1 to MA16, taking into account the objectives and the geographical scope of the Plan and the Alterations.

27 Material Alterations were proposed after public display of the Draft Plan. Proposed Material Alterations No. 1 to 16 were determined as requiring SEA. Proposed Material Alterations MA1 to MA16 proposed various changes in land use zoning. There is no established planning need to zone these lands for Proposed Material Alteration uses. The alternative for each of these Alterations was to retain the zoning, as it was included within the Draft Plan.

The alternatives for Proposed Material Alterations MA1 to MA16 are arrayed on the table below.

**Table 6.1 Alternatives considered for Proposed Material Alterations MA1 to MA16**

<b>Proposed Material Alteration No.</b>	<b>Alternative A: Zoning as proposed by the Draft Plan</b>	<b>Alternative B: Zoning as proposed by the Material Alterations</b>
MA1	These lands are located outside of the Draft Plan boundary.	Industrial
MA2	Open Space/ Recreation and Amenity	Residential Phase 1
MA3	Existing Residential	Residential Phase 2
MA4	These lands are located outside of the Draft Plan boundary.	Residential Phase 1
MA5	These lands are located outside of the Draft Plan boundary.	Residential Phase 1 Existing Residential
MA6	These lands are located outside of the Draft Plan boundary.	Residential Phase 1 Existing Residential
MA7	Residential Phase 2	Residential Phase 1
MA8	Residential Phase 2	Residential Phase 1
MA9	Agricultural	Residential Phase 1
MA10	Business and Enterprise	Residential Phase 1
MA11	These lands are located outside of the Draft Plan boundary.	Residential Phase 1
MA12	Community Facilities	Residential Phase 1
MA13	Agricultural	Residential Phase 2
MA14	Residential Phase 1	Commercial/Mixed Use
MA15	Agricultural	Industrial zoning, with 20 metre Agricultural buffer to adjacent existing residential site
MA16	Business and Enterprise	Commercial/Mixed Use
MA1 to MA16	All above, as per Draft Plan	All above, as per Proposed Material Alterations

<sup>29</sup> Each application would be considered on its own merits and no land use zoning is provided for. This policy is applied to all lands within the Plan area – therefore there is no map for this alternative.

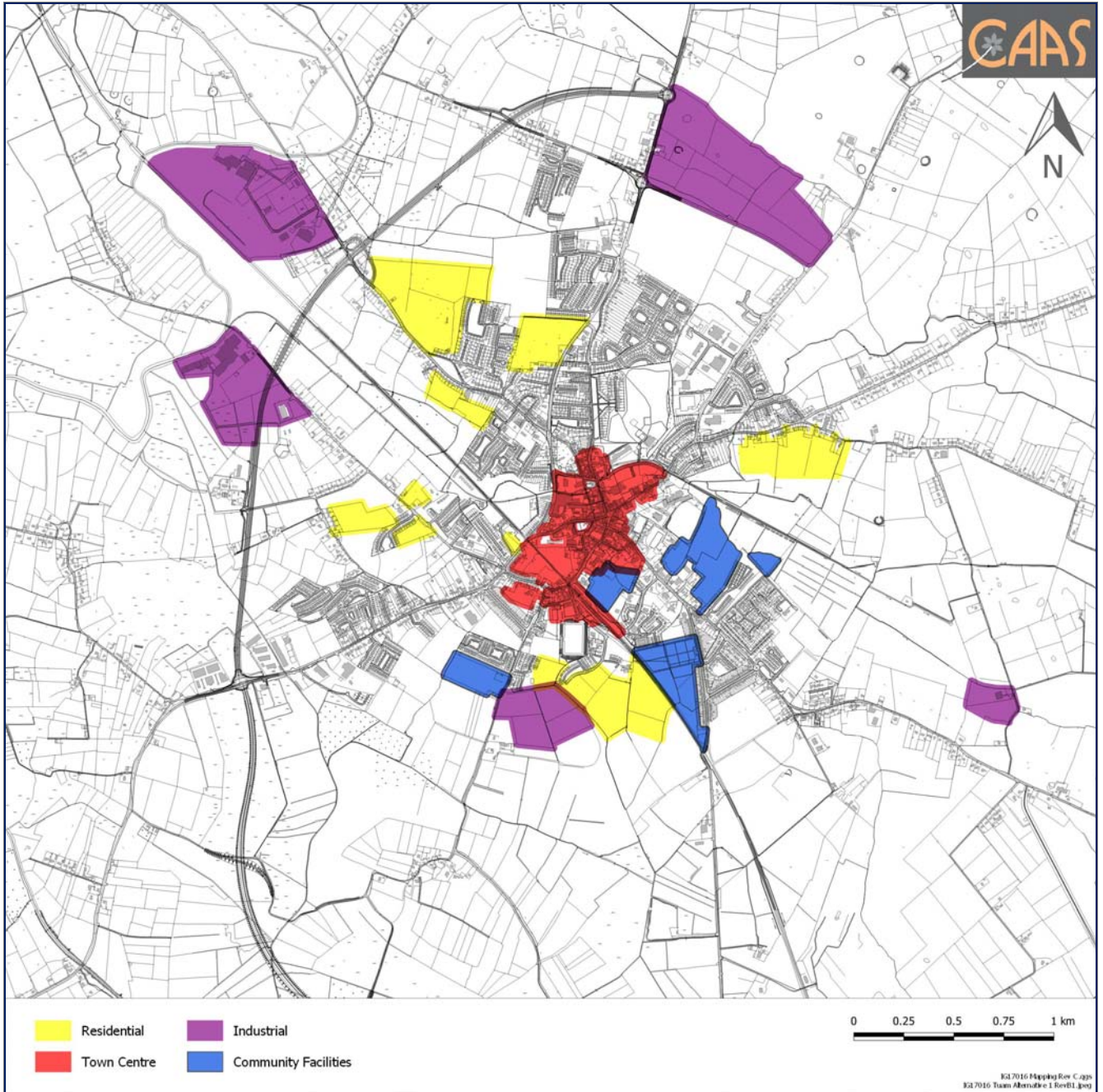


Figure 6.1 Tuam Alternative 1: Even Development

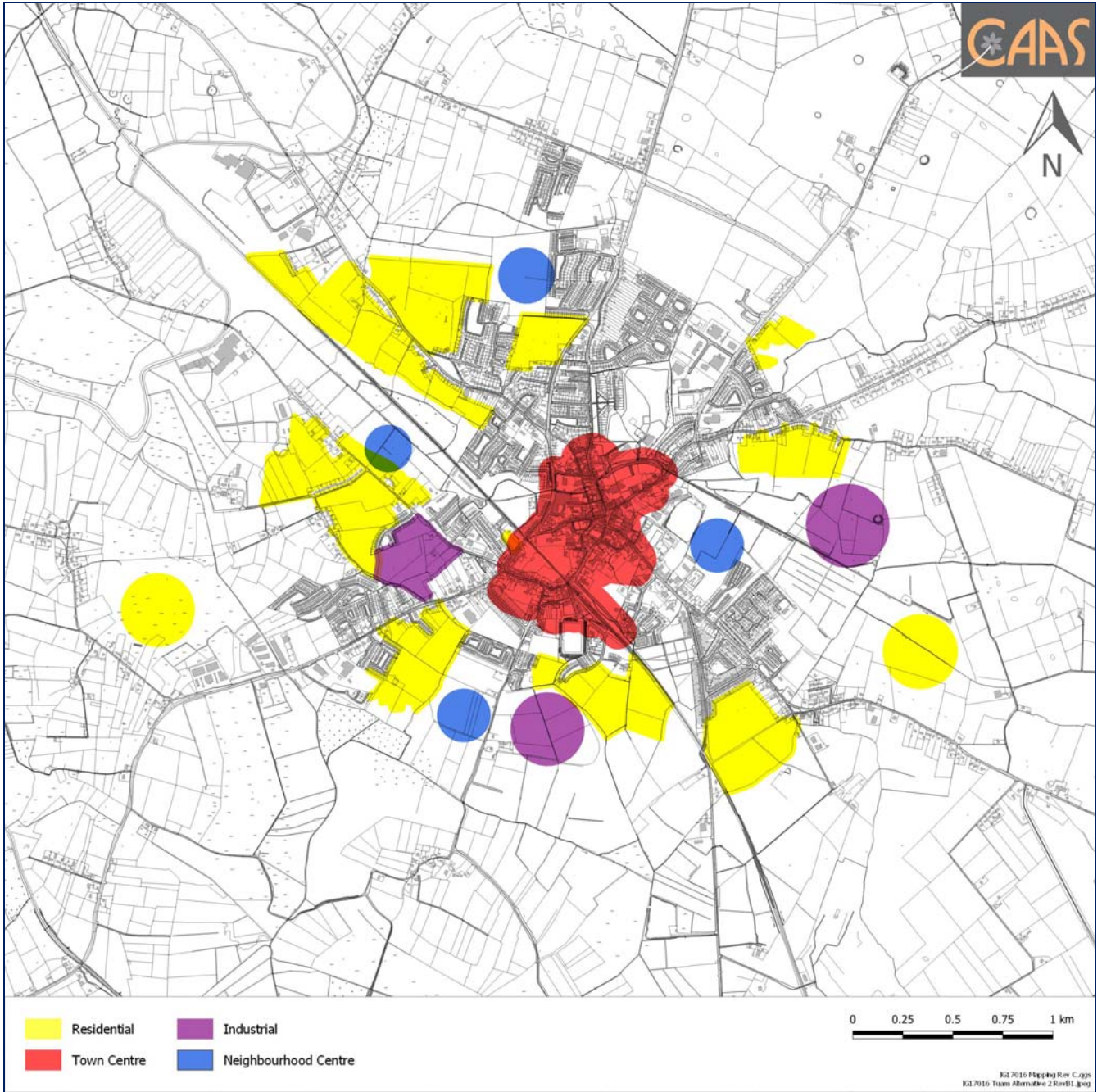


Figure 6.2 Tuam Alternative 2: Sporadic Development

## Section 7 Evaluation of Alternatives

### 7.1 Introduction

This section provides an evaluation of the environmental effects of implementing the alternatives including the taking into account of cumulative effects.

### 7.2 Methodology

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

The alternatives are evaluated using compatibility criteria (see Table 7.2 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 and Birds Directives with regard to the protection of European Sites and Annexed habitats and species'<sup>30</sup>.

The interactions identified are reflective of likely significant environmental effects<sup>31</sup>.

The degree to which effects can be determined is limited as the Plan will be implemented through the lower tier environmental assessments and/or decision making of the Council. Nonetheless a comparative evaluation of the various alternatives can be provided.

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<sup>30</sup> '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.

<sup>31</sup> These effects include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects.

**Table 7.1 Strategic Environmental Objectives**

Environmental Component	SEO Code	SEO
<b>Biodiversity, Flora and Fauna</b>	<b>B1</b>	To ensure compliance with the Habitats and Birds Directives with regard to the protection of European Sites and Annexed habitats and species <sup>32</sup>
	<b>B2</b>	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
	<b>B3</b>	To avoid significant impacts on relevant habitats, species, environmental features or other sustaining resources in designated sites including Wildlife Sites <sup>33</sup> 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
	<b>B4</b>	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
<b>Population and Human Health</b>	<b>PHH1</b>	To protect populations and human health from exposure to incompatible landuses
<b>Soil</b>	<b>S1</b>	To avoid damage to the hydrogeological and ecological function of the soil resource
<b>Water</b>	<b>W1</b>	To maintain and improve, where possible, the quality and status of surface waters
	<b>W2</b>	To prevent pollution and contamination of ground water
	<b>W3</b>	To comply as appropriate with the provisions of the Planning System and Flood Risk Management: Guidelines for Planning Authorities (DEHLG and OPW, 2009)
<b>Material Assets</b>	<b>M1</b>	To serve new development with adequate and appropriate waste water treatment
	<b>M2</b>	To serve new development with adequate drinking water that is both wholesome and clean
	<b>M3</b>	To reduce waste volumes, minimise waste to landfill and increase recycling and reuse.
<b>Air and Climatic Factors</b>	<b>C1</b>	To reduce travel related emissions to air and to encourage modal change from car to more sustainable forms of transport
<b>Cultural Heritage</b>	<b>CH1</b>	To protect archaeological heritage including entries to the Record of Monuments and Places and/or their context
	<b>CH2</b>	To protect architectural heritage including entries to the Record of Protected Structures and Architectural Conservation Areas and their context
<b>Landscape</b>	<b>L1</b>	To avoid significant adverse impacts on the landscape - especially with regard to landscapes that are most valuable and most sensitive to change and protected focal points and views.

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

Likely to <b>Improve</b> status of SEOs			<b>Potential Conflict</b> with status of SEOs - likely to be mitigated			Probable <b>Conflict</b> with status of SEOs- unlikely to be fully mitigated
to the <b>Greatest</b> degree	to a <b>Moderate</b> degree	to a <b>Lesser</b> degree	to a <b>Lesser</b> degree	to a <b>Moderate</b> degree	to a <b>Greater</b> degree	

<sup>32</sup> '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.

<sup>33</sup> The Planning and Development Act 2000 as amended defines a 'wildlife site'.

## 7.3 Cumulative Effects

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

There are 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, programme, etc. Where there are elevated levels of environmental sensitivities, future development could result in environmental conflicts and lead to a deterioration in environmental integrity. The interrelationships between environmental components that help determine these potential effects are identified on Table 8.3 in Section 8 e.g. interrelationships between: human health and water quality; human health and air quality; human health and flood risk; and ecology and water quality.
- Potential *inter-Plan* cumulative effects - these arise when the effects of the implementation of one plan occur in combination with those of other plans, programmes, developments, etc.

Effects that may arise as a result of implementing the Plan will be mitigated (by both provisions integrated into the Plan and existing provisions already in force through the County Development Plan – see Section 9) to the extent that the only residual adverse effects likely to occur as a result of implementation of the Plan are those which are identified at Table 8.2.

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; and the effects arising from other legislation, plans, programmes or developments.

In considering the relationship with legislation and other plans and programmes it is important to note that the Plan will be implemented within areas that have existing plans and programmes (see Sections 4 and 5 and Appendix I) for a range of sectors 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 Plan. Where they exist, the SEA recognises the existence of other environmental assessments with a view to avoid duplication of assessment, in compliance with the SEA Directive.

The SEA undertaken for the Plan has 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 and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

Cumulative effects that have been considered include those resulting from the Plan and:

- Other land use Plans;
- Water services, transport and energy infrastructure plans (e.g. Irish Water's Water Services Strategic Plan and associated Capital Investment Plan and Grid25 and associated Implementation Programme); and
- Environmental protection and management plans.

Such potential cumulative effects include the following (note that potential adverse cumulative effects will be mitigated by both provisions integrated into the Plan and existing provisions already in force through the County Development Plan – see Section 9):

- Contributions towards reductions in travel related greenhouse gas and other emissions to air (in combination with plans and programmes from all sectors, including transport and land use planning) as a result of facilitating sustainable mobility/a shift from motorised transport modes to more sustainable and non-motorised transport modes.
- Contributions towards travel related greenhouse gas and other emissions to air (in combination with plans and programmes from all sectors, including transport and land use planning) as a result of facilitating development which must be accompanied by road capacity.
- Facilitation of new development which is accompanied by appropriate levels of water services thereby contributing towards environmental protection.
- Need for and use of water and waste water treatment capacity arising from new developments and associated potential adverse effects.
- Potential cumulative effects upon surface and ground water status as a result of housing, employment, agriculture and forestry – loadings and abstractions;
- Potential cumulative effects (habitat damage, enhancing ecological connectivity, contributing towards sustainable mobility) arising from linear developments, such as those relating to green infrastructure;
- Potential cumulative effects on flood risk by, for example, development of greenfield lands or obstruction of flood paths;
- In combination with plans and programmes from all sectors potential adverse effects on all environmental components arising from all development in greenfield and brownfield areas (e.g. infrastructural, residential, economic, agricultural etc.). The type of these effects are consistent with those described on Table 7.4. These plans and programmes from other sectors undergo SEA and comply with environmental legislation while projects are subject to EIA and AA, as relevant.



## 7.4 Assessment of Alternatives considered for the Overall Local Area Plan

### 7.4.1 Significant Positive Effects Common to all Alternatives

By providing for development within the existing development boundary and facilitating the use of existing utilities and brownfield sites, all alternatives would be likely to contribute towards a reduced need to develop more sensitive, undeveloped areas elsewhere in the wider Tuam area that are further from the town and less well serviced. This would be likely to result in significant positive environmental effects on environmental components as indicated on Table 7.3.

**Table 7.3 Significant Positive Effects common to all Alternatives**

Environmental Component	Significant Positive Effect, likely to occur
Biodiversity and Flora and Fauna	<ul style="list-style-type: none"> <li>• Contributes towards protection of ecology (including designated sites, ecological connectivity, habitats) – due to increased utilisation of lands within the existing development boundary and use of existing utilities and brownfield sites.</li> <li>• Contributes towards protection of ecology with respect to the provision of water services.</li> <li>• Contributes towards protection of ecology as a result of contributing towards the protection of environmental vectors, including air and water.</li> <li>• Sustains existing sustainable rural management practices - and the communities who support them - to ensure the continuation of long established managed landscapes and the flora and fauna that they contain</li> </ul>
Population and Human Health	<ul style="list-style-type: none"> <li>• Contributes towards protection of human health with respect to the provision of water services and the provision of transport infrastructure integrated with land use planning – and associated interactions with sustainable mobility, emissions and energy usage.</li> <li>• Contributes towards protection of human health as a result of contributing towards the protection of environmental vectors, including air and water.</li> </ul>
Soil	<ul style="list-style-type: none"> <li>• Contributes towards protection of soil – due to increased utilisation of lands within the existing development boundary and use of existing utilities and brownfield sites.</li> <li>• Contributes towards protection of soil with respect to the provision of water services.</li> </ul>
Water	<ul style="list-style-type: none"> <li>• Contributes towards protection and management of ground and surface waters due to facilitating development within an established and serviced settlement centre.</li> </ul>
Material Assets	<ul style="list-style-type: none"> <li>• Allows for use of planned infrastructure including water services infrastructure and transport infrastructure.</li> <li>• Makes use of existing water services and drainage infrastructure.</li> </ul>
Air and Climatic Factors	<ul style="list-style-type: none"> <li>• Facilitates contribution towards a shift from car to more sustainable and non-motorised transport modes.</li> <li>• Facilitates contribution towards reducing congestion and associated adverse effects on air quality.</li> <li>• Facilitates contribution towards reductions in travel related greenhouse gas and other emissions to air.</li> </ul>
Cultural Heritage	<ul style="list-style-type: none"> <li>• Contributes towards protection of cultural heritage in wider region by facilitating development within an existing settlement.</li> </ul>
Landscape	<ul style="list-style-type: none"> <li>• Contributes towards protection of wider landscape by facilitating development within an existing settlement.</li> </ul>

Although significant positive environmental effects would occur under each of the alternatives, the extent to which they would occur varies across each of the alternatives and this is addressed under the evaluation of each of the alternatives below.

### 7.4.2 Potentially Significant Adverse Effects Common to all Alternatives

All of the alternatives provide for development of Tuam. Such development would have the potential to conflict with environmental components – to different degrees. Potentially significant adverse environmental effects arising from this conflict are common to all alternatives and are described on Table 7.4. For the Plan, these effects will be mitigated by both provisions integrated into the Plan and existing provisions already in force through the County Development Plan – see Section 9.

Although potentially significant adverse environmental effects would occur under each of the alternatives, the extent to which they would occur varies across each of the alternatives and this is addressed under the evaluation of each of the alternatives below.

**Table 7.4 Potentially Significant Adverse Environmental Effects, if unmitigated, common to all alternatives**

Environmental Component	Potentially Significant Adverse Environmental Effects, if unmitigated
Biodiversity and Flora and Fauna	<ul style="list-style-type: none"> <li>○ Arising from both construction and operation of development and associated infrastructure: <ul style="list-style-type: none"> <li>○ Loss of/damage to biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance to biodiversity and flora and fauna;</li> <li>○ Habitat loss, fragmentation and deterioration, including patch size and edge effects; and</li> <li>○ Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species.</li> </ul> </li> </ul>
Population and Human Health	<ul style="list-style-type: none"> <li>○ Potential interactions if effects upon environmental vectors such as water and air are not mitigated.</li> </ul>
Soil	<ul style="list-style-type: none"> <li>○ Damage to the hydrogeological and ecological function of the soil resource.</li> </ul>
Water	<ul style="list-style-type: none"> <li>○ Adverse impacts upon the status of water bodies arising from changes in quality, flow and/or morphology.</li> <li>○ Increase in the risk of flooding.</li> </ul>
Material Assets	<ul style="list-style-type: none"> <li>○ Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity is needed to ensure the mitigation of potential conflicts).</li> <li>○ Failure to comply with drinking water regulations and serve new development with adequate drinking water that is both wholesome and clean (water services infrastructure and capacity is needed to ensure the mitigation of potential conflicts).</li> <li>○ Increases in waste levels.</li> </ul>
Air and Climatic Factors	<ul style="list-style-type: none"> <li>○ Emissions to air including greenhouse gas emissions and other emissions.</li> </ul>
Cultural Heritage	<ul style="list-style-type: none"> <li>○ Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities.</li> </ul>
Landscape	<ul style="list-style-type: none"> <li>○ Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape, especially with regard to landscapes that are most valuable and most sensitive to change and protected focal points and views.</li> </ul>

### 7.4.3 Assessment of Individual Alternatives

**By:**

- Concentrating Residential development across a sufficient number of sites, close to the Town Centre;
- Providing for Town Centre developments in a planned and coordinated manner, focused within the town centre;
- Using existing or planned infrastructure;
- Providing for Industrial development in the periphery, close to existing infrastructure;
- Identifying opportunity sites with clear design and proposed uses identified; and
- Preserving Open Space and Recreational Lands

**Alternative 1 'Even Development'** would result in the greatest degree of significant positive effects (see Section 7.4.1) and least degree of potential conflicts (see Section 7.4.2).

**By:**

- Concentrating Residential development across a larger number of sites than in comparison to Alternative 1, including some sites that are further away from the existing Town Centre;
- Creating neighbourhood centres throughout the Plan area and associated dispersal of Town Centre, commercial development and local services;
- Providing for Town Centre developments in a sporadic and uncoordinated manner around town centre/Neighbourhood Centre zonings;
- Using existing, planned and additional infrastructure;
- Providing for Industrial development at locations including close to Residential lands; and

- Identifying opportunity sites but with no clear guidance on the design parameters or uses identified

**Alternative 2 'Sporadic Development'** would result in a relatively moderate degree of significant positive effects (see Section 7.4.1) and a relatively moderate degree of potential conflicts (see Section 7.4.2). In comparison to Alternative 1, development would be spread out over a greater number of sites, some not currently serviced and some Residential sites further from the settlement centre.

Additional infrastructure would be required to accommodate sporadic development, more than would be required for Alternative 1 'Even Development' and there would be higher conflicts between existing and proposed uses.

**By:**

- Not identifying opportunity sites;
- Following a 'laissez faire' approach in relation to development, with each application considered on its own merits and no land use zoning would be provided for;
- Necessitating development to be serviced by private waste water treatment systems which would have to be properly maintained.

**Alternative 3 'Haphazard Development'** would result in the least degree of significant positive effects (see Section 7.4.1) and greatest degree of potential conflicts (see Section 7.4.2). Development would be spread out over the entire area associated with the settlement. Although requirements – including those relating to environmental protection/management and sustainable development – would have to be complied with, the potential for cumulative adverse effects would be significantly higher with this alternative.

All of the alternatives would help 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.

Table 7.5 provides an assessment of alternatives against Strategic Environmental Objectives identified previously in Section 5 and Table 7.5.

**Table 7.5 Assessment of Alternatives against Strategic Environmental Objectives**

Alternative	Likely to <b>Improve</b> status of SEOs			<b>Potential Conflict</b> with status of SEOs - likely to be mitigated			Probable <b>Conflict</b> with status of SEOs- unlikely to be fully mitigated
	to the <b>Greatest</b> degree	to a <b>Moderate</b> degree	to a <b>Lesser</b> degree	to a <b>Lesser</b> degree	to a <b>Moderate</b> degree	to a <b>Greater</b> degree	
Alternative 1: Even Development	<b>B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</b>	<b>B4</b>		<b>B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</b>	<b>B4</b>		
Alternative 2: Sporadic Development		<b>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</b>			<b>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</b>		
Alternative 3: Haphazard Development		<b>B4</b>	<b>B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</b>		<b>B4</b>	<b>B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</b>	

#### 7.4.4 The Selected Alternative for the Overall Local Area Plan

The Selected Alternative that emerged from the planning/SEA process was Alternative 1: Even Development.

This alternative was selected and developed by the Planning Team and placed on public display and adopted by the Council having regard to both:

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

The text based and mapped provisions of the Plan (see accompanying Plan documents) facilitate the achievement of Alternative 1 'Even Development'.

## 7.5 Assessment of Alternatives considered for Proposed Material Alterations MA1 to MA16

### 7.5.1 Introduction

In addition to assessing the alternatives for the development of the town of Tuam under the overall Local Area Plan (see assessment under Section 7.4), the SEA gave consideration to alternatives relating to zoning for smaller areas under Proposed Material Alterations MA1 to MA16. Information on these alternatives is therefore also provided.

### 7.5.2 Assessment

#### Alternative A for Individual Proposed Material Alterations

Alternatives that provide for Zoning as provided by the Plan (these alternatives are referred to as **Alternative A**, see Table 6.1) would contribute towards flood risk management in compliance with the Flood Risk Management Guidelines and as a result would contribute towards the protection of human health. As these alternatives provide for various types of built development they would have the potential to conflict with all environmental components. Potentially significant adverse environmental effects arising from this conflict are described on Table 7.6.

**Table 7.6 Potentially Significant Adverse Environmental Effects, if unmitigated, common to all alternatives**

Environmental Component	Potentially Significant Adverse Environmental Effects, if unmitigated
Biodiversity and Flora and Fauna	<ul style="list-style-type: none"> <li>o Arising from both construction and operation of development and associated infrastructure: <ul style="list-style-type: none"> <li>o Loss of/damage to biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance to biodiversity and flora and fauna;</li> <li>o Habitat loss, fragmentation and deterioration, including patch size and edge effects; and</li> <li>o Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species.</li> </ul> </li> </ul>
Population and Human Health	<ul style="list-style-type: none"> <li>o Potential interactions if effects upon environmental vectors such as water and air are not mitigated.</li> </ul>
Soil	<ul style="list-style-type: none"> <li>o Damage to the hydrogeological and ecological function of the soil resource.</li> </ul>
Water	<ul style="list-style-type: none"> <li>o Adverse impacts upon the status of water bodies arising from changes in quality, flow and/or morphology.</li> <li>o Increase in the risk of flooding.</li> </ul>
Material Assets	<ul style="list-style-type: none"> <li>o Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity is needed to ensure the mitigation of potential conflicts).</li> <li>o Failure to comply with drinking water regulations and serve new development with adequate drinking water that is both wholesome and clean (water services infrastructure and capacity is needed to ensure the mitigation of potential conflicts).</li> <li>o Increases in waste levels.</li> </ul>
Air and Climatic Factors	<ul style="list-style-type: none"> <li>o Emissions to air including greenhouse gas emissions and other emissions.</li> </ul>
Cultural Heritage	<ul style="list-style-type: none"> <li>o Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities.</li> </ul>
Landscape	<ul style="list-style-type: none"> <li>o Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape, especially with regard to landscapes that are most valuable and most sensitive to change and protected focal points and views.</li> </ul>

For interactions under Alternative A, these effects would be mitigated by both provisions integrated into the Plan and existing provisions already in force through the County Development Plan.

## Alternative B for Individual Proposed Material Alterations

As a result of providing for various types of built development, alternatives that provide for zoning as proposed by the Material Alterations (these alternatives are referred to as **Alternative B**, see Table 6.1) would have the potential to result in adverse effects on all environmental components within the Plan area and beyond. Potentially significant adverse environmental effects arising from this conflict are described on Table 7.6.

Alternatives B for Proposed Material Alterations MA 1, MA 2 and MA 3, in particular, propose the provision of a range of incompatible uses within areas that are at elevated risk of flooding. The areas that are at elevated risk of flooding have been identified by the SFRA. Submissions have been made with respect to land use zoning flood risk at these lands however no evidence is provided in the submissions showing that the sites are not at elevated levels of flood risk.

Providing incompatible uses in these areas is contrary to proper and sustainable flood risk management and contrary to *The Planning System and Flood Risk Management Guidelines for Planning Authorities* (2009) and *Circular PL2/14*. Any Justification Test for these Proposed Material Alterations would fail. This is because there are various lands available for such uses in Tuam. As Justification Tests would not be passed consideration could not be given to the mitigation and management of risk.

If the lands subject to MA 1, MA 2 and MA 3 were developed, there would be a heightened risk of flooding and associated adverse effects on people and their assets and the wider environment. Such effects are identified on Table 7.7 and range from loss of life, to damage to property, to loss of income.

**Table 7.7 Selection of Adverse Effects (on People and Property) that occur as a result of Flooding**

Tangible Effects	Intangible Human and Other Effects
Damage to buildings (houses)	Loss of life
Damage to contents of buildings	Physical injury
Damage to new infrastructure e.g. roads	Increased stress
Loss of income	Physical and psychological trauma
Disruption of flow of employees to work causing knock on effects	Increase in flood related suicide
Enhanced rate of property deterioration and decay	Increase in ill health
Long term rot and damp	Homelessness
	Loss of uninsured possessions

In addition to these effects on people and property, there would be elevated potential for water quality to be adversely affected (as a result of flooding of water treatment systems and collection networks and flooding of unknown substances stored onsite). Polluted or contaminated waters would have the potential to adversely affect human health and biodiversity and flora and fauna (including designated European Sites).

Furthermore, Proposed Material Alterations MA 1 and MA 11 propose zoning within the designated Lough Corrib Special Area of Conservation. Development of MA 1 and MA 11 lands that are subject to the SAC designation would lead to a heightened risk of adverse effects upon the qualifying interests of this site.

## Alternative A for Combined Proposed Material Alterations

Alternatives that provide for zoning as proposed by Plan (these alternatives are referred to as **Alternative A**, see Table 6.1) would be likely to cumulatively contribute towards flood risk management in compliance with the Flood Risk Management Guidelines and as a result would contribute towards the protection of human health.

As these alternatives provide for various types of built development, they would have the potential to cumulatively conflict with all environmental components. Potentially significant adverse environmental effects arising from this conflict are described on Table 7.6.

The extent of potentially significant adverse environmental effects arising under Alternative A would be of a lesser degree than the extent of potentially significant adverse environmental effects arising under Alternative B.

### **Alternative B for Combined Proposed Material Alterations**

Alternatives that provide for zoning as proposed by the Material Alterations (these alternatives are referred to as **Alternative B**, see Table 6.1) provide a range of incompatible uses within areas that are at elevated risk of flooding. These alternatives would have the potential to cumulatively, adversely and significantly affect human health, new and existing property, the status of waters and ecology.

Furthermore, Alternative B proposes zoning within the designated Lough Corrib Special Area of Conservation. Development of MA 1 and MA 11 lands that are subject to the SAC designation would lead to a heightened risk of adverse effects upon the qualifying interests of this site.

Taking into account the considerable extent of lands involved, cumulative adverse effects would be likely to arise on all environmental components as a result of the provision of unnecessary zoning (for which there is no established planning need) at Proposed Material Alterations No. 1 to 16 lands. The extent of potentially significant adverse environmental effects arising under Alternative B would be of a greater degree than the extent of potentially significant adverse environmental effects arising under Alternative A.

### **7.5.3 The Selected Alternatives for the Proposed Material Alterations**

Elected Members decided to adopt a mix of alternatives for the Material Alterations as part of the Plan<sup>34</sup>:

- Zoning as proposed by both the Plan (Alternative A) for MA2, MA3, MA10 and MA16;
- Zoning as proposed by Material Alterations (Alternative B) for MA4-MA9 and MA12-MA15); and
- Zoning as proposed by Material Alteration with modification for MA1 and MA11.

Following adoption, in January 2019 the Minister for Housing and Urban Development, directed the Council to amend the adopted "Land Use Zoning Objectives Map" by:

- Reverting back the lands identified as MA4, MA5, MA6 and MA11 as per the proposed Material Alterations (April 2018) to the provisions of the Draft Plan (January 2018), where the subject lands were not included in the Draft Plan and subsequently not zoned; and
- Removing these additional zonings from the Tuam Land Use Zoning Map and reverting the LAP boundary to reflect the Draft Plan boundary as published January 2018.

Various provisions have been integrated into the planning framework for the town (including the Local Area Plan and the County Development Plan) that proposed developments must comply with. This includes policies and objectives that will ensure the cautious consideration of all developments within the Plan area with regard to flood risk management, not just those within the indicative flood zones that are identified by the SFRA. Issues covered by these provisions include the need to undertake site-specific FRA outside of the indicative flood zones that are identified by the SFRA (such FRAs would be required to consider access issues) and consideration of effects on flooding elsewhere.

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<sup>34</sup> Proposed Material Alterations likely to result in significant adverse effects upon flood risk and/or European Sites were either not adopted (MA2 and MA3) or they were modified to avoid conflicts (MA1 and MA11).

## Section 8 Assessment of Plan Provisions

### 8.1 Introduction

This section provides an assessment of environmental effects from implementation of the Plan. 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 and Birds Directives with regard to the protection of European Sites and Annexed habitats and species'<sup>35</sup>.

The interactions identified are reflective of likely significant environmental effects<sup>36</sup>;

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 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 existing County Development Plan.
3. 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.

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 <b>Improve</b> status of SEOs	<b>Potential Conflict</b> with status of SEOs - likely to be mitigated	Probable <b>Conflict</b> with status of SEOs- unlikely to be fully mitigated	<b>No Likely</b> interaction with status of SEOs
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<sup>35</sup> '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.

<sup>36</sup> These effects include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects.



## 8.2 Overall Evaluation

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

By providing for development within the existing development boundary and facilitating the use of existing utilities and brownfield sites, the Plan would be likely to contribute towards a reduced need to develop more sensitive, undeveloped areas elsewhere in the Tuam area that are further from the town and less well serviced.

Table 8.2 provides a detailed overall evaluation of the environmental effects arising from the Plan. The effects encompass all in-combination/cumulative effects arising from implementation of the Plan. The potentially significant adverse environmental effects (if unmitigated) arising from implementation of the Plan are detailed as are residual effects, taking into account mitigation through both provisions integrated into the Plan and existing provisions already in force through the County Development Plan – see Section 9.

Environmental impacts which occur will be determined by the nature and extent of multiple or individual projects and site specific environmental factors. Strategic Environmental Objective (SEO) codes taken from Table 7.1.

**Table 8.2 Overall Evaluation – Effects arising from the Tuam Local Area Plan**

<b>Environmental Component</b>	<b>Significant Positive Effect, likely to occur</b>	<b>Potentially Significant Adverse Environmental Effects, if unmitigated</b>	<b>Residual Adverse Effects</b>	<b>Relevant SEO Codes</b>
Biodiversity and Flora and Fauna	<ul style="list-style-type: none"> <li>• Contributes towards protection of ecology (including designated sites, ecological connectivity, habitats) – due to increased utilisation of lands within the existing development boundary and use of existing utilities and brownfield sites.</li> <li>• Contributes towards protection of ecology with respect to the provision of water services.</li> <li>• Contributes towards protection of ecology as a result of contributing towards the protection of environmental vectors, including air and water.</li> <li>• Sustains existing sustainable rural management practices - and the communities who support them - to ensure the continuation of long established managed landscapes and the flora and fauna that they contain.</li> </ul>	<p>Arising from both construction and operation of development and associated infrastructure:</p> <ul style="list-style-type: none"> <li>• Loss of/damage to biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance to biodiversity and flora and fauna;</li> <li>• Habitat loss, fragmentation and deterioration, including patch size and edge effects; and</li> <li>• Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species.</li> </ul>	<ul style="list-style-type: none"> <li>• Loss of an extent of non-protected habitats and species arising from the replacement of semi-natural land covers with artificial surfaces.</li> <li>• Losses or damage to ecology (these would be in compliance with relevant legislation).</li> </ul>	<b>B1 B2 B3 B4</b>
Population and Human Health	<ul style="list-style-type: none"> <li>• Contributes towards protection of human health with respect to the provision of water services and the provision of transport infrastructure integrated with land use planning – and associated interactions with sustainable mobility, emissions and energy usage.</li> <li>• Contributes towards protection of human health as a result of contributing towards the protection of environmental vectors, including air and water.</li> </ul>	<ul style="list-style-type: none"> <li>• Potential interactions if effects upon environmental vectors such as water and air are not mitigated.</li> </ul>	<ul style="list-style-type: none"> <li>• Potential interactions with residual effects on environmental vectors. This has been mitigated by provisions which have been integrated into the Plan, including those relating to sustainable mobility and infrastructural provision.</li> </ul>	<b>PHH1</b>
Soil	<ul style="list-style-type: none"> <li>• Contributes towards protection of soil – due to increased utilisation of lands within the existing development boundary and use of existing utilities and brownfield sites.</li> <li>• Contributes towards protection of soil with respect to the provision of water services.</li> </ul>	<ul style="list-style-type: none"> <li>• Damage to the hydrogeological and ecological function of the soil resource.</li> </ul>	<ul style="list-style-type: none"> <li>• Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces.</li> </ul>	<b>S1</b>
Water	<ul style="list-style-type: none"> <li>• Contributes towards protection and management of ground and surface waters due to facilitating development within an established and serviced settlement centre.</li> </ul>	<ul style="list-style-type: none"> <li>• Adverse impacts upon the status of water bodies arising from changes in quality, flow and/or morphology.</li> <li>• Increase in the risk of flooding.</li> </ul>	<ul style="list-style-type: none"> <li>• Increased loadings as a result of development to be in compliance with River Basin Management Plan.</li> <li>• Flood related risks remain due to uncertainty with regard to extreme weather events.</li> </ul>	<b>W1 W2 W3</b>

Environmental Component	Significant Positive Effect, likely to occur	Potential Effect, if unmitigated	Residual Adverse Effects	Relevant SEO Codes
Material Assets	<ul style="list-style-type: none"> <li>Allows for use of planned infrastructure including water services infrastructure and transport infrastructure.</li> <li>Makes use of existing water services and drainage infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity is needed to ensure the mitigation of potential conflicts).</li> <li>Failure to comply with drinking water regulations and serve new development with adequate drinking water that is both wholesome and clean (water services infrastructure and capacity is needed to ensure the mitigation of potential conflicts).</li> <li>Increases in waste levels.</li> </ul>	<ul style="list-style-type: none"> <li>Residual wastes to be disposed of in line with higher level waste management policies.</li> </ul>	<b>M1 M2</b>
Air and Climatic Factors	<ul style="list-style-type: none"> <li>Facilitates contribution towards a shift from car to more sustainable and non-motorised transport modes.</li> <li>Facilitates contribution towards reducing congestion and associated adverse effects on air quality.</li> <li>Facilitates contribution towards reductions in travel related greenhouse gas and other emissions to air.</li> </ul>	<ul style="list-style-type: none"> <li>Emissions to air including greenhouse gas emissions and other emissions.</li> <li>Climate adaptation interactions.</li> </ul>	<ul style="list-style-type: none"> <li>An extent of travel related greenhouse gas and other emissions to air. This has been mitigated by provisions which have been integrated into the Plan, including those relating to sustainable mobility.</li> </ul>	<b>C1</b>
Cultural Heritage	<ul style="list-style-type: none"> <li>Contributes towards protection of cultural heritage in wider region by facilitating development within an existing settlement.</li> </ul>	<ul style="list-style-type: none"> <li>Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities.</li> </ul>	<ul style="list-style-type: none"> <li>Potential alteration to the context and setting of architectural heritage however these will occur in compliance with legislation.</li> <li>Potential alteration to the context and setting of archaeological heritage however this will occur in compliance with legislation.</li> <li>Potential loss of unknown archaeology however this loss will be mitigated by measures integrated into the Plan.</li> </ul>	<b>CH1 CH2</b>
Landscape	<ul style="list-style-type: none"> <li>Contributes towards protection of wider landscape by facilitating development within an existing settlement.</li> </ul>	<ul style="list-style-type: none"> <li>Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape, especially with regard to landscapes that are most valuable and most sensitive to change and protected focal points and views.</li> </ul>	<ul style="list-style-type: none"> <li>The Plan contributes towards the protection of landscape designations. Landscapes will change overtime as a result of natural changes in vegetation cover combined with new developments.</li> </ul>	<b>L1</b>

### 8.3 Assessment of Material Alterations and Modifications

27 Material Alterations were proposed after public display of the Plan. Proposed Material Alterations No. 1-16 were determined as requiring full SEA as they would be likely to result in significant adverse environmental effects, if unmitigated. Full SEA (and Stage 2 AA) was undertaken on these Material Alterations and the findings of the SEA were placed on public display alongside the Material Alterations. The Elected Members were also informed of the findings.

In adopting the Plan, the Elected Members decided to adopt the following with regard to Proposed Material Alterations<sup>37</sup>:

- Zoning as proposed by the Draft Plan for MA2, MA3, MA10 and MA16;
- Zoning as proposed by Material Alterations for MA4-MA9 and MA12-MA15); and
- Zoning as proposed by Material Alteration with modification for MA1 and MA11.

Following adoption, in January 2019 the Minister for Housing and Urban Development, directed the Council to amend the adopted "Land Use Zoning Objectives Map" by:

- Reverting back the lands identified as MA4, MA5, MA6 and MA11 as per the proposed Material Alterations (April 2018) to the provisions of the Draft Plan (January 2018), where the subject lands were not included in the Draft Plan and subsequently not zoned; and
- Removing these additional zonings from the Tuam Land Use Zoning Map and reverting the LAP boundary to reflect the Draft Plan boundary as published January 2018.

Notwithstanding this, Material Alterations MA1 (as modified), MA7, MA8, MA9, MA12, MA13, MA14 and MA15 are part of the Plan and would be likely to result in environmental conflicts and associated adverse effects (these were identified in previous SEA documentation that was placed on public display and provided to Elected Members).

Taking into account the considerable extent of lands involved, cumulative adverse effects would be likely to arise on all environmental components as a result of the provision of unnecessary zoning (for which there is no established planning need). Residual adverse effects arising from Material Alterations MA1 (as modified), MA7, MA8, MA9, MA12, MA13, MA14 and MA15 would include:

- Loss of an extent of non-protected habitats and species arising from the replacement of semi-natural land covers with artificial surfaces;
- Losses or damage to ecology;
- Potential interactions with residual effects on environmental vectors. This has been mitigated by provisions that have been integrated into the Plan, including those relating to sustainable mobility and infrastructural provision;
- Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces;
- Increased loadings as a result of development;
- Flood related risks remain due to uncertainty with regard to extreme weather events;
- Residual wastes to be disposed of in line with higher level waste management policies;
- An extent of travel related greenhouse gas and other emissions to air;
- Potential alteration to the context and setting of architectural heritage however these will occur in compliance with legislation;
- Potential alteration to the context and setting of archaeological heritage 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; and
- Landscapes will change overtime as a result of natural changes in vegetation cover combined with new developments.

As there is no established planning need for the zoning of these lands, no positive effects arising from reducing the need to develop more sensitive, less well serviced areas beyond the Plan boundary are present under Material Alterations No. 1 to 16 and relevant modifications

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<sup>37</sup> Proposed Material Alterations likely to result in significant adverse effects upon flood risk and/or European Sites were either not adopted by the Elected Members (MA2 and MA3) or they were modified to avoid conflicts (MA1 and MA11).

## **8.4 Appropriate Assessment**

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

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

The AA concludes that the Plan will not give rise to adverse effects on the ecological integrity of any European site, alone or in combination with other plans or projects<sup>38</sup>.

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.

## **8.5 Strategic Flood Risk Assessment**

A Strategic Flood Risk Assessment (SFRA) has been undertaken alongside the preparation of the Plan. The requirement for SFRA is provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (DEHLG and OPW, 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. The SFRA has facilitated the integration of flood risk management considerations into the Plan. The Plan complies with the requirements of the Guidelines.

## **8.6 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 that 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 8.3.

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<sup>38</sup> 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.

Table 8.3 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								

## 8.7 Strategic Vision

Plan text	Likely to Improve status of SEOs	Potential Conflict with status of SEOs - likely to be mitigated	Probable Conflict with status of SEOs - unlikely to be fully mitigated	No Likely interaction with status of SEOs
To promote Tuam as a thriving vibrant market town, providing a focus for future residential, economic & social development in a sustainable manner, encouraging new development and capitalising on the town's unique historic identity and character, as well as its accessibility, thereby realising Tuam's potential as well as supporting the surrounding rural hinterland.	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><b>Assessment Commentary:</b></p> <p>The evaluation against Strategic Environmental Objectives (SEOs) provided for the Plan high-level Vision is consistent with that provided for the selected alternative development strategy in Section 7. The interactions with SEOs reflect the effects detailed on Table 8.2.</p> <p>The vision would contribute towards the development of the town in a sustainable manner, thereby contributing towards environmental protection and management.</p>				

## 8.8 Development Strategy

Plan text	Likely to Improve status of SEOs	Potential Conflict with status of SEOs - likely to be mitigated	Probable Conflict with status of SEOs - unlikely to be fully mitigated	No Likely interaction with status of SEOs
<p><b>Development Strategy Policy</b>  <b>Policy DS 1 – Development Strategy</b>  It is the overarching policy of Galway County Council to support and facilitate the sustainable development of the plan area in line with the preferred development strategy option, <i>Alternative 1 - Even Development</i> with a Refined Plan Boundary, which allows Tuam to develop in a manner that maintains and enhances the quality of life of the local community, promotes opportunities for economic development, sustainable transport options, connectivity and social integration, protects the cultural, built, natural heritage and environment and complies with relevant statutory requirements.</p> <p><b>Development Strategy Objectives</b>  <b>Objective DS1 - Orderly and Sequential Development</b>  Support the orderly and sequential development of the plan area, focussing on consolidation of development, continued vitality and viability of the Town centre and the protection and enhancement of the existing landscape setting, character and unique identity of the town.</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><b>Objective DS 2 - Compliance with National Planning Framework &amp; Regional Spatial &amp; Economic Strategy</b> Policies and Objectives contained within the Tuam LAP 2018-2024 (including future reviews/variations) will be updated if required to ensure compliance with Objectives progressed under the NPF and/or future RSES (as proposed/updated).</p> <p><b>Objective DS 3 - Consistency with the Core Strategy</b> Galway County Council will ensure that developments permitted within the plan area are consistent with the zoned land allocations in the Core Strategy and associated provisions in the Galway County Development Plan.</p> <p><b>Objective DS 4 - European Sites Network and Habitats Directive Assessment</b> Protect European sites that form part of the European Sites 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/superseding 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 and a Habitats Directive Assessment where necessary, that:</p> <ul style="list-style-type: none"> <li>• The plan or project will not give rise to significant adverse direct, indirect or secondary impacts on the integrity of any European Sites (either individually or in combination with other plans or projects); or</li> <li>• The plan or project will adversely affect the integrity of any European Sites (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 European Sites; or</li> <li>• The plan or project will adversely affect the integrity of any European Sites (that hosts 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, 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 European Sites.</li> </ul> <p><b>Objective DS 5 – Development Management Standards and Guidelines</b> The general development management standards and guidelines set out under the current Galway County Development Plan, or any subsequent variation/review, shall apply as appropriate in the plan area. In addition, any specific development management guidelines set out in Section 3 of this plan shall also be applied, as appropriate, to development proposals in the plan area.</p> <p><b>Objective DS 6 – Service Led Development</b> Development under the plan shall be preceded by sufficient capacity in the public waste water infrastructure and potable water infrastructure.</p> <p><b>Objective DS 7 – Residential Development Phasing</b> Direct residential development into appropriately zoned and serviced areas in accordance with the phased development framework set out in Sections 3.1 and 3.2 and on Map 1- Land Use Zoning.</p> <p><b>Objective DS 8 – Flood Risk Management and Assessment</b> Ensure that proposals for new 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 Planning System and Flood Risk Management Guidelines for Planning Authorities (2009) (or as updated) &amp; Departmental Circular PL2/2014 and the relevant policies and objectives of this plan.</p> <p><b>Objective DS 9 – Climate Change &amp; Adaptation</b> Galway County Council shall support the National Climate Change Strategy and follow on document National Climate Change Adaptation Framework Building Resilience to Climate Change 2012 (or any updated/superseding document) including the transition to a low carbon future, taking account of flood risk, soil erosion, the promotion of sustainable transport, improved air quality, the importance of green infrastructure, the use of renewable resources and the reuse of existing resources.</p>				
<p><b>Assessment Commentary:</b></p> <p>The evaluation against Strategic Environmental Objectives (SEOs) provided for the Development Strategy Policy and Objectives is consistent with that provided for the selected alternative development strategy in Section 7. The interactions with SEOs reflect the effects detailed on Table 8.2.</p>				



There are various aspects to these provisions that will contribute towards sustainable development and environmental protection and management:

- Policy DS 1 – Development Strategy: “It is the overarching policy of Galway County Council to support and facilitate the sustainable development of the plan area in line with the preferred development strategy option, Alternative 1 - Even Development with a Refined Plan Boundary, which allows Tuam to develop in a manner that maintains and enhances the quality of life of the local community, promotes opportunities for economic development, sustainable transport options, connectivity and social integration, protects the cultural, built, natural heritage and environment and complies with relevant statutory requirements.”
- Objective DS 1 – Orderly and Sequential Development: “...orderly and sequential development...and the protection and enhancement of the existing landscape setting, character and unique identity of the town...”
- Objective DS 4 – European Sites Network and Habitats Directive Assessment: “Protect European sites....”
- Objective DS 5 – Development Management Standards and Guidelines: “The general development management standards and guidelines set out under the current Galway County Development Plan, or any subsequent variation/review, shall apply as appropriate in the plan area...”
- Objective DS 7 – Residential Development Phasing: “...phased development framework...”
- Objective DS 8 – Flood Risk Management and Assessment: “...assessed in accordance with the provisions of The Planning System and Flood Risk Management Guidelines for Planning Authorities...”
- Objective DS 9 – Climate Change & Adaptation: “...support the National Climate Change Strategy...”

## 8.9 Land Use Management

Plan text	Likely to <b>Improve</b> status of SEOs	<b>Potential Conflict</b> with status of SEOs - likely to be mitigated	<b>Probable Conflict</b> with status of SEOs - unlikely to be fully mitigated	<b>No Likely</b> interaction with status of SEOs
<p><b>Land Use Management Policies</b>  <b>Policy LU 1 – Land Use Management</b>                      It is the policy of Galway County Council to provide a land use zoning framework for the plan area, to direct the type, density and location of development, in a manner that contributes to the consolidation of the town centre, and is in compliance with the statutory requirements of the Planning and Development Act, 2000 (as amended). The land use zoning framework is supported by a residential phasing scheme to ensure compliance with the Core Strategy and to promote orderly and sequential development of the Town.</p> <p><b>Land Use Management Objectives</b>  <b>Objective LU 1 – Town Centre/Commercial (C1)</b>                      Promote the development of the Town Centre as an intensive, well connected, high quality, well-landscaped, human-scaled and accessible environment, with an appropriate mix of uses, including residential, commercial, service, tourism, enterprise, public and community uses as appropriate, that provide a range of retail, services, facilities and amenities to the local community and visitors. The town centre and associated main streets shall remain the primary focus for retail and service activity within Tuam.</p> <p><b>Objective LU 2 – Commercial/Mixed Use (C2)</b>                      Promote the sustainable development of commercial and complementary mixed uses, on suitable lands that can provide focal points for the provision of services to surrounding neighbourhoods/areas and opportunities for commercial enterprises, retail developments and employment creation and which do not undermine the vitality and viability of the town centre.</p> <p><b>Objective LU 3 – Residential (R)</b>                      Promote a phased, sequential approach on Residential zoned lands, with a strong emphasis on consolidating existing patterns of development, encouraging infill opportunities and promoting sustainable transport options.                      It is an objective to:                      a) Promote the development of appropriate and serviced lands to provide for high quality, well connected and well laid out and landscaped sustainable residential communities with an appropriate mix of housing types and densities, together with complementary land uses such as community facilities, local services and public transport facilities, to serve the population of the area.                      b) Protect existing residential amenities and facilitate compatible and appropriately designed new infill development, in accordance with the proper planning and sustainable development of the area.</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>A phasing scheme shall apply to residential uses on Residential (R) zoned lands, as set out under Objective RD1 in Section 3.2.2.</p> <p><b>Objective LU 4 – Industrial (I)</b> Promote the sustainable development of industrial and industrial related uses, including manufacturing, processing of materials, warehousing and distribution on suitable lands, with adequate services and facilities and a high level of access to the major road networks and public transport facilities. Adequate perimeter treatment and/or screening will be required to ensure high quality interfaces with public spaces and any adjoining residential areas or other sensitive land uses, as appropriate.</p> <p><b>Objective LU5—Business &amp; Technology</b> Promote &amp; support the sustainable development of the business and technology zoning within the Tuam LAP and ensure the land is delivered with appropriate supporting infrastructure, landscaping providing a high quality business environment.</p> <p><b>Objective LU 6 – Business &amp; Enterprise (BE)</b> Promote the development of business and enterprise uses, light industry/warehousing and the facilitation of enterprise park/office park type uses to include incubation/start-up units and Small Medium Enterprises, on suitable lands with adequate services and facilities and with a high level of access to the major road network and to public transport facilities.</p> <p><b>Objective LU 7– Community Facilities (CF)</b> Promote the development of community facilities on suitable lands, with a high level of access to the local community, including educational, community, civic, public, institutional, recreational, cultural and other complementary uses, as appropriate.</p> <p><b>Objective LU 8 – Open Spaces/Recreation &amp; Amenity (OS)</b> Promote the sustainable management, use and/or development, as appropriate, of the OS lands. This will include the: a) Development of open spaces, sport and recreational activities, in accordance with best practice and on appropriate lands with suitable levels of access to the local community. b) Existing open space, sport and recreational facilities, should be retained unless it can be clearly demonstrated to the satisfaction of Galway County Council that these uses are surplus to requirements of the local community or are to be replaced by an equivalent or better provision ; c) Appropriate management and use of any flood risk areas within the OS zone to avoid, reduce and/or mitigate, as appropriate, the risk and potential impact of flooding; d) Appropriate management and use of any areas of high biodiversity value.</p> <p><b>Objective LU 9 – Public Utilities (PU)</b> Facilitate the provision and maintenance of essential public utility infrastructure, together with the necessary ancillary facilities and uses, as appropriate.</p> <p><b>Objective LU 10 – Transport Infrastructure (TI)</b> Facilitate the provision and maintenance of essential transportation infrastructure. This shall include the reservation of lands to facilitate public roads, footpaths, cycle ways, bus stops and landscaping together with any necessary associated works, as appropriate.</p> <p><b>Objective LU 11 – Constrained Land Use Zone (CL)</b> To facilitate the appropriate management and sustainable use of flood risk areas. This zoning limits new development, while recognising that existing development uses within these zones may require small scale development, as outlined below, over the life of the Local Area Plan, which would contribute towards the compact and sustainable urban development of the town. The underlying zoning or the existing permitted uses are deemed to be acceptable in principle for minor developments to existing buildings (such as small extensions to houses, most changes of use of existing buildings), which are unlikely to raise significant flooding issues, provided they do not obstruct important flow paths, introduce a significant additional number of people into flood risk areas or entail the storage of hazardous substances. Development proposals within this zone shall be accompanied by a detailed Flood Risk Assessment, carried out in accordance with The Planning System and Flood Risk Assessment Guidelines &amp; Circular PL 2/2014 (or as updated), which shall assess the risks of flooding associated with the proposed development. Proposals shall only be considered where it is demonstrated to the satisfaction of the Planning Authority that they would not have adverse impacts or impede access to a watercourse, floodplain or flood protection and management facilities, or increase the risk of flooding to other locations. The nature and design of structural and non-structural flood risk management measures required for development in such areas will also be required to be demonstrated, so as to ensure that flood hazard and risk will not be increased. Measures proposed shall follow best practice in the management of health and safety for users and residents of the development. Specifications for developments in flood vulnerable areas set out in this plan shall be complied with as appropriate. (Please also refer to Objective FL3 &amp; DM Guideline FL 2).</p>				
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<p><b>Objective LU 12 - Galway County Development Plan 2009-2015 (as varied)</b>                  The provisions of the Galway County Development Plan 2009-2015 (as varied), including the measures contributing towards environmental protection and sustainability (some of these measures are repeated in Section 9 of the SEA Environmental Report that accompanies this Plan) shall be complied with by any future development.</p> <p><b>Objective LU 13 – Flood Risk Areas and Land Use Zones</b>                  Ensure that any proposed development that may be compatible with the land use zoning objectives/matrix but which includes a use that is not appropriate to the Flood Zone (as indicated on Map 5 – Flood Risk Management) and/or that may be vulnerable to flooding is subject to flood risk assessment, in accordance with The Planning System and Flood Risk Management Guidelines for Planning Authorities 2009 and the Departmental Circular PI 2/2014 (or as updated within the lifetime of this plan) and the policies and objectives of this plan.</p> <p><b>Objective LU 14 – Land Use Zoning Matrix</b>                  Direct different land uses into the appropriate land use zone(s) in accordance with the land use zoning objectives and the land use zoning matrix set out under DM Guideline LU2. Ensure that proposed land uses are compatible with existing land uses and in keeping with the character of the area.</p> <p><b>Objective LU 15– Opportunity Sites</b>                  To encourage and support the appropriate and sustainable development of lands identified on Zoning Map 2, to positively contribute to the vitality and character of Tuam town centre.</p> <p><b>Land Use Density Objectives</b></p> <p><b>Objective LUD 1 – Development Densities</b>                  Ensure that the density of new development is appropriate to the land use zone and site context, is in keeping with the development pattern of the area, does not unduly impact on the amenities of the area and that it results in a positive relationship between existing developments and any adjoining public spaces. The development of higher density development shall be promoted in appropriate locations, such as suitable sites within the Town centre and adjacent to public transport facilities, where such development is compatible with the built &amp; natural heritage, urban design objectives, infrastructure capacity and environmental considerations. The density of developments will generally be in accordance with the guidance set out under DM Guideline LU1, although the Planning Authority may consider higher density developments where this is deemed appropriate to secure the urban design or other objectives of the plan.</p> <p><b>Objective LUD 2 – Residential Densities</b>                  Promote a range of residential densities within the plan area appropriate to the prevailing development pattern, supporting infrastructure, urban character and heritage resources in accordance with the guidance in ‘Sustainable Residential Development in Urban Areas Guidelines 2009’ (or as updated within the lifetime of this plan). Higher residential densities should be encouraged at locations where it is appropriate to the existing context and density of the plan area, for example around the town centre and within convenient walking distance of public transport facilities, and where it will not unduly impact on built or natural heritage or impact adversely on the integrity of European Sites. The density of residential developments will generally be in accordance with the guidance set out under DM Guideline LU1, although the Planning Authority may consider higher residential densities where this is considered appropriate to the context and necessary to secure the urban design or other objectives of the plan. Development will only be permitted where there is capacity and/or adequate services can be made available.</p> <p><b>Development Management Guidelines</b></p> <p><b>DM Guideline LU 1 – Development Densities</b>                  The development density guidance in the tables below indicate the range of densities generally considered appropriate in the various land use zones and in different residential locations within the plan area. (Please refer to the Plan for more details.)</p> <p><b>DM Guideline LU2 – Land Use Zoning Matrix</b>                  The land use zoning matrix indicates the types of land uses that are Permitted in Principle (P), Open for Consideration (O) and Not Normally Permitted (N), for the land use zones designated in Section 3.1.1 above. Whilst the matrix does not provide an exhaustive list of potential uses, the uses listed in the matrix should be considered by applicants to provide a clear indication of the overall acceptability of a particular land use within a specific zoning category. Where a use is proposed that is not listed in the matrix, development proposals will be assessed on their individual merits in accordance with the general guidance provided by the matrix and having regard to the nature of existing and proposed uses, to the general policies and zoning objective(s) for the area in the Local Area Plan and to the principles of proper planning and sustainable development. Where there is no perceived conflict between existing and proposed uses, favourable consideration will be given to the proposed development, subject to all other normal requirements and to the principles of the proper planning and sustainable development of the area. The land Use Zoning Matrix is intended as a guide to assist users of the Local Area Plan in relation to the types of uses that may be considered under each of the land use zonings. The matrix in isolation will not prevent an appropriate development of single or multi-use and each application will be considered on its merits and in accordance with proper planning and sustainable development. (Please refer to the Plan for more details).                  (Please also refer to Map 1, 2 – Land Use Zoning &amp; Map 5 – Flood Risk Management)</p>				
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**Assessment Commentary:**

The evaluation against Strategic Environmental Objectives (SEOs) provided for the **Land Use Management Policy and Objectives** is consistent with that provided for the selected alternative development strategy in Section 7. The interactions with SEOs reflect the effects detailed on Table 8.2. The application of the zoning would ensure that development is served by infrastructure, including infrastructure and services, some of which is already in place. The approach followed also ensures that open space and recreation lands are preserved and that flood zones are avoided for incompatible land use zonings.

The approach provided by the Land Use Management Policy and Objectives and assessed above is supported by two Development Management Guidelines as follows:

- DM Guideline LU 1 – Development Densities that details development density guidance indicating the range of densities generally considered appropriate in the various land use zones and in different residential locations within the Plan area.
- DM Guideline LU2 – Land Use Zoning Matrix that indicates the types of land uses that are Permitted in Principle (P), Open for Consideration (O) and Not Normally Permitted (N), for the land use zones identified above.

## 8.10 Residential Development

Plan text	Likely to Improve status of SEOs	Potential Conflict with status of SEOs - likely to be mitigated	Probable Conflict with status of SEOs - unlikely to be fully mitigated	No Likely interaction with status of SEOs
<p><b>Residential Development Policies</b>  <b>Policy RD 1 – Residential Development</b>                      It is the policy of Galway County Council to support the creation of sustainable communities and high quality, well connected and accessible residential areas at appropriate locations, with a range of housing options and adequate support services, facilities and amenities, having regard to the guidance contained in the following policy/guidance documents or any updated/amended versions:</p> <ul style="list-style-type: none"> <li>• Galway County Council's Housing Strategy</li> <li>• Sustainable Residential Developments in Urban Areas: Guidelines for Planning Authorities, 2009.</li> <li>• Urban Design Manual: A Best Practice Guide – A Companion Document to the Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas, 2009.</li> <li>• Design Manual for Urban Roads &amp; Streets (DMURS) 2013</li> <li>• Galway County Council's Traveller Accommodation Programme.</li> <li>• Smarter Travel-A Sustainable Transport Future - A New Transport Policy for Ireland 2009-2020 including the National Cycle Policy Framework 2009-2022 and any other related national documents.</li> <li>• Water Framework Directive and The Planning System and Flood Risk Management, Guidelines for Planning Authorities 2009.</li> </ul> <p><b>Policy RD 2 – Phased Development on Residential Zoned Lands</b>                      It is the policy of Galway County Council to encourage orderly, sequential and phased residential development in accordance with the Preferred Development Strategy and the land use management and zoning provisions set out in this Local Area Plan. This shall include a positive presumption in favour of the sequential development of suitably serviced R - Residential (Phase 1) lands in order to align the Local Area Plan with the Core Strategy/Settlement Strategy in the current Galway County Development Plan, subject to compliance with the policies and objectives in this Local Area Plan and the principles of proper planning and sustainable development. There will be a general presumption against residential development on lands zoned R - Residential (Phase 2) within the lifetime of the Local Area Plan, subject to the exceptions provided for under the Residential Development Objective RD1.</p> <p><b>Residential Development Objectives</b>  <b>Objective RD1 – Phased Residential Development</b>                      Support the development of lands designated as Residential (Phase 1) within the lifetime of the Plan, subject to normal planning, access and servicing</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>requirements, and reserve the lands designated as Residential (Phase 2) for the longer term growth needs of the town. Residential (Phase 2) lands are generally not developable for housing within the lifetime of this Plan, with the exception of the following developments, which may be considered by the Planning Authority, subject to a suitable evidence based case being made for the proposal:</p> <ul style="list-style-type: none"> <li>• Single house developments for local family members on family owned land</li> <li>• Non-residential developments that are appropriate to the site context, residential amenities, the existing pattern of development in the area and the policies and objectives in the Plan.</li> <li>• Where it is apparent that Residential (Phase 1) lands cannot or will not be developed for residential purposes within the plan period, residential development may be considered in limited cases in a phased manner on suitable Residential (Phase 2) lands, in exceptional circumstances:</li> <li>• Development on Residential (Phase 2) lands will normally only be considered where 50% of the lands in Residential (Phase 1) are committed to development.</li> </ul> <p>Residential developments on Residential (Phase 2) lands will be subject to compliance with the Core Strategy in the Galway County Development Plan, the principles of proper planning and sustainable development, connectivity, sequential approach, avoidance of leap-frog developments, and subject to meeting normal planning, environmental, access and servicing requirements. Developments will only be permitted where a substantiated evidence based case has been made to the satisfaction of the Planning Authority and the development will not prejudice the future use of the lands for the longer term growth needs of Tuam.</p> <p><b>Objective RD 2 – Sequential Development</b>  Endeavour to promote the orderly and phased development of residential development in accordance with the principles of the sequential approach as set out in the Sustainable Residential Development in Urban Areas (Cities, Towns and Villages) Guidelines 2009 (or as updated). This shall include a positive presumption in favour of the sequential development of suitably serviced R- Residential (Phase 1) lands emanating outwards from the town core and/or sequential extensions to the existing residential fabric of suitably serviced R- Residential (Phase 1) lands within the LAP boundary, subject to the principles of proper planning and sustainable development and the current County Development Plan. This objective shall not refer to single house build.</p> <p><b>Objective RD 3– Quality Housing Environments</b>  Encourage the development of sustainable residential communities through the promotion of innovative, high quality building design and appropriate layouts, that prioritise walking, cycling and public transport options and provide for a high level of permeability, accessibility and connectivity to the existing built environment, services and facilities. In this regard, future residential development proposals will be in accordance with the principles set out in the DoEHLG documents ‘Quality Housing for Sustainable Communities 2007’, the ‘Sustainable Residential Development in Urban Areas 2009’ and its companion document ‘Urban Design Manual: A Best Practice Guide for Planning Authorities 2009’, or any updated version of these documents published during the lifetime of this Plan and shall also have regard to the design principles as set out in the Design Manual for Urban Roads &amp; Streets (2013) (or as updated).</p> <p><b>Objective RD 4 – Housing Options</b>  Require that a suitable variety and mix of dwelling types, tenures and sizes are provided in developments to meet different needs, having regard to demographics and social changes, social inclusion, life time changes, smaller household sizes, lower formation age, immigration, etc. The type, mix and tenure of new housing permitted shall be informed by a Housing Need Demand Assessment as carried out by the Local Authority (as updated/amended) in accordance with the NPF, new housing provision will include the provision of housing for older people, for people with disabilities and other special need households.</p> <p><b>Objective RD 5– Apartment Development</b>  Facilitate the development of apartments at appropriate locations, such as in the town centre, and have regard to the Draft Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities 2018 (or as updated), the Sustainable Residential Developments in Urban Areas: Guidelines for Planning Authorities (2009) and Urban Design Manual: A Best Practice Guide – A Companion Document to the Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (2009) in the assessment of this type of development.</p> <p><b>Objective RD 6 – Open Space in Residential Areas</b>  Ensure the provision of adequate areas of high quality, safe and overlooked open space within residential developments and support the provision of play and recreational areas in all new large residential developments.</p> <p><b>Objective RD 7 – Social and Specialist Housing</b>  Require that a minimum of 10% of all new eligible residential sites are set aside for the development of new social and specialist housing units, unless addressed through suitable alternative arrangements by agreement with the Planning Authority, in accordance with County Galway Housing Strategy and Part V of the Planning and Development Act 2000 (as amended) and any subsequent amendments to the Part V provision to reflect Government policy.</p>				
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<p><b>Objective RD 8 – Traveller Accommodation</b> Support the provision of adequate accommodation facilities for the traveller community in accordance with the finalised Galway County Council's Traveller Accommodation Programme 2014-2018, or any updated version of this document.</p> <p><b>Objective RD 9 – Compatible Development</b> Facilitate the development of appropriate, compatible uses within residential areas, subject to ensuring that an adequate amount of residential zoned lands are retained and can be developed for residential uses to meet the growth needs of the town within the plan period. Non-compatible uses include those uses that may generate large amounts of traffic, emissions, pollution, noise, odour, etc., or uses that can impact negatively on residential amenity.</p> <p><b>Objective RD 10 – Other Residential Development</b> There shall be a general presumption in favour of the development of nursing homes and retirement accommodation/facilities and community/day care centres on residential zoned lands, community facility zoned lands or adjacent to the established town centre or as suitable re-use for protected structures or other buildings (e.g. institutional or educational buildings) that would have limited re-development potential given their size and architectural character, subject to normal planning, environmental, access and servicing requirements.</p> <p><b>Objective RD 11 – Connectivity Between Phased Residential Lands</b> Ensure that development proposals for the R-Residential (Phase 1) lands consider and provide for both vehicular, pedestrian and cycle access, as appropriate to adjoining R-Residential (Phase 2) lands. Provision should also be made in development proposals for green space linkages between both the R-Residential (Phase 1) lands and the R-Residential (Phase 2) lands in these areas, as appropriate</p> <p><b>Objective RD 12 – Reservation of Access Points to Residential &amp; Other Lands</b> Reserve access points that may be identified for reservation by the Planning Authority during the Plan period, to ensure adequate vehicular, pedestrian and cycle access to back lands and to ensure connectivity and accessibility to lands with limited road frontage.</p> <p><b>Objective RD 13 – Natural Features</b> As part of their landscaping proposals, developers should define the character of a site in the context of its surrounding environment (including mature trees, topography, aspect, habitats, flora, fauna, foliage, geological features, stone walls) and integrate these features into development proposals.</p> <p><b>Objective RD 14 – Agricultural Zoned Lands</b> There will be a general presumption against residential development on Agricultural (A) zoned lands, located within the plan boundary with the exception of single house developments for family members on family owned lands, which may be considered subject to compliance with Policy RD1, as appropriate, normal planning, access and servicing requirements and the principles of proper planning and sustainable development. Developments will only be permitted where a substantiated case has been made to the satisfaction of the Planning Authority and the development will not prejudice the future use of the lands for the longer term growth needs of the town. 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.</p>				
<p><b>Assessment Commentary:</b></p> <p>The evaluation against Strategic Environmental Objectives (SEOs) provided for these provisions are consistent with that provided for the selected alternative development strategy in Section 7. The provisions will contribute towards the realisation of this alternative development strategy and the interactions with SEOs reflect the effects detailed on Table 8.2.</p> <p>By providing for new residential development over a relatively small number of sites that are already or most easily served by infrastructure and could serve demand for new development, the approach for Residential Development that is detailed by <b>Residential Development Policies and Objectives</b> and illustrated on accompanying land use zoning map, would result increase significant positive effects arising and decrease the degree of potential conflicts (see Table 8.2 for details of effects). These provisions are consistent with the framework for residential development in County Galway that is already provided for by the County Plan and contribute towards both sustainable development and the protection and management of the environment, for example:</p> <ul style="list-style-type: none"> <li>• Policy RD 1 – Residential Development: “sustainable communities and high quality, well connected and accessible residential areas at appropriate locations”</li> <li>• Policy RD 2 – Phased Development on Residential Zoned Lands: “orderly, sequential and phased residential development”</li> <li>• Objective RD1 – Phased Residential Development: “...subject to compliance with the Core Strategy in the Galway County Development Plan, the principles of proper planning and sustainable development, connectivity, sequential approach, avoidance of leap-frog developments, and subject to meeting normal planning, environmental, access and servicing requirements...”</li> <li>• Objective RD 2 – Sequential Development: “...orderly and phased development...subject to the principles of proper planning and sustainable development and the current County Development Plan”</li> <li>• Objective RD 3– Quality Housing Environments: “...sustainable residential communities... prioritise walking, cycling and public transport options and provide for a high level of permeability, accessibility and connectivity to the existing built environment, services and facilities”</li> <li>• Objective RD 11 – Connectivity Between Phased Residential Lands: “...vehicular, pedestrian and cycle access...”</li> <li>• Objective RD 13 – Natural Features: “...define the character of a site in the context of its surrounding environment (including mature trees, topography, aspect, habitats, flora, fauna, foliage, geological features, stone walls) and integrate these features into development proposals.”</li> </ul>				

- Objective RD 14 – Agricultural Zoned Lands: “...single house developments for family members on family owned lands, which may be considered subject to compliance with Policy RD1, as appropriate, normal planning, access and servicing requirements and the principles of proper planning and sustainable development....”

In combination with other provisions integrated into the Plan, these residential development policies and objectives would help to provide a concentration of growth within the existing settlement centre. This approach would contribute towards sustainable mobility and efficient use of resources. The construction and operation of all development has the potential to result in adverse effects upon all environmental components however these effects have been mitigated by provisions which have been integrated into the Plan, including those which are identified in Section 9 of this report. The potential adverse effects (if unmitigated) are consistent with those detailed on Table 8.2.

## 8.11 Social and Community Development

Plan text	Likely to Improve status of SEOs	Potential Conflict with status of SEOs - likely to be mitigated	Probable Conflict with status of SEOs- unlikely to be fully mitigated	No Likely interaction with status of SEOs
<p><b>Social Inclusion and Universal Design &amp; Access Policies</b>  <b>Policy SI 1 – Social Inclusion and Universal Design &amp; Access</b>                      It is the policy of Galway County Council to support the principles of social inclusion and universal design &amp; access, to ensure that all individuals have access to goods, services and buildings, in order to assist them to participate in and contribute to all aspects of a vibrant life within Tuam.</p> <p><b>Social Inclusion and Universal Design &amp; Access Objectives</b>  <b>Objective SI 1 – Social Inclusion</b>                      Support, as appropriate, the implementation of the provisions of the Galway County Council Social Inclusion Action Plan 2010 and Social Inclusion Work Programme 2011, the County Galway Local Authorities Disability Action Plan 2007-2015, the Galway Age Friendly Strategy 2014-2019, Galway County Integration and Diversity Strategy 2013-2017, Galway Traveller Interagency Strategy, Celebrating Diversity Plan for the Development of LGBT Services &amp; Supports in Galway City &amp; County 2012-2015, the Galway County Local Economic and Community Plan 2016-2022, the National Positive Ageing Strategy and any subsequent updates to these documents.</p> <p><b>Objective SI 2 – Universal Design and Access</b>                      Ensure that housing developments, community facilities, public spaces, public roads, public footpaths and transport services give due consideration to the needs of disabled or mobility impaired people and the requirements of the Disability Act 2005, the Council's Disability Action Plan 2007-2015 (and any updates to this document), and the Traffic Management Guidelines 2003 (and any subsequent reviews/updates to these documents).</p> <p><b>Community Facilities, Amenities and Greenspace Policies</b>  <b>Policy CF 1 – Community Facilities, Amenities and Greenspace</b>                      It is the policy of the Council to support the provision, maintenance and retention of an appropriate provision and equitable distribution of community facilities, amenities and greenspace in the plan area:</p> <ul style="list-style-type: none"> <li>To meet the needs of the local community and as resources permit.</li> <li>To provide opportunities for sport &amp; recreation, targeting community clubs and organisations with existing high levels of participation that lack appropriate facilities.</li> <li>Located in appropriate, accessible locations to serve the residential population in the plan area.</li> <li>Are clustered or linked together wherever facilities and amenities are complementary and it is practicable to do so, to allow for shared and multi-purpose use of facilities.</li> </ul> <p><b>Community Facilities, Amenities and Greenspace Objectives</b>  <b>Objective CF 1 – Lands for Community &amp; Recreation &amp; Amenity Facilities</b>                      Ensure that there are adequate lands zoned and services to cater for the establishment, improvement or expansion of educational, community, recreation and amenity facilities within the plan area. This will include the reservation of lands for existing community facilities and for the expansion and provision of additional community facilities to existing community facility lands.</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><b>Objective CF 2 – Educational Facilities</b> Support the provision and improvement of educational facilities, including primary, post-primary and other training facilities, in order to meet the needs of the widest range of residents within Tuam and its environs.</p> <p><b>Objective CF 3 – Childcare Facilities</b> Facilitate and promote the development of childcare facilities in suitable locations and in accordance with national policy and the Department of the Environment, Heritage and Local Government's document 'Childcare Facilities-Guidelines for Planning Authorities' 2001, (or any updated/amended version of this document).</p> <p><b>Objective CF 4 – Health Services</b> Seek to facilitate the continued improvement and expansion of health and medical care facilities within Tuam in a planned and co-ordinated way by seeking to accommodate projects that assist in providing health and medical care facilities, together with their necessary support services and developments, as well as their infrastructural requirements.</p> <p><b>Objective CF 5 – Recreation, Amenity and Green Spaces</b> Protect existing recreation and amenity green spaces from inappropriate development, so as to maintain their attractiveness and role in enhancing the residential amenity and overall character of Tuam and facilitate the provision of open spaces and civic spaces at suitable locations within the plan area.</p> <p><b>Objective CF 6 – Palace Grounds</b> To ensure the long term protection and management of this important town park, to support and encourage the maintenance and/or improvement of the landscaping.</p> <p><b>Objective CF 7 – Sports, Play and Recreation Facilities</b> Support the provision, maintenance and upgrading of existing sports, play and recreation facilities to service the needs of the local community. Support local sports and community groups in the development of new facilities in appropriate locations. Encourage the shared use of different facilities by multiple groups, teams and clubs as a means of maximising the usage and value of the facilities to the local residents.</p> <p><b>Objective CF 8 – Community, Recreation and Amenity Facilities</b> Retain existing facilities and lands zoned for such uses, and prevent their change of use or redevelopment, unless:</p> <ul style="list-style-type: none"> <li>• A full assessment has been undertaken which has clearly shown the open space, buildings or zoned land to be surplus to requirements; or</li> <li>• Community Facilities, Amenities and Greenspace Policies</li> <li>• Community Facilities, Amenities and Greenspace Objectives</li> <li>• the loss resulting from the proposed development would be replaced by equivalent or better provision in terms of quantity and quality in a suitable location; or</li> <li>• the development is for alternative sports and recreational provision, the needs for which clearly outweigh the loss</li> </ul> <p><b>Objective CF 9 – Amenity Network</b> Support the establishment of an accessible network of greenway linkages and amenities that provide safe and attractive circulation routes for pedestrians and cyclists throughout the town and for the enjoyment and recreational use of the entire community.</p> <p><b>Objective CF 10 – Athletics facilities</b> Support the provision of an athletics track in the town with associated recreational facilities, changing rooms and amenities as part of an integrated mixed use sports development in an appropriate and sustainable location that is convenient to the town, the road network and public transport.</p>				
<p><b>Assessment Commentary:</b></p> <p>The evaluation against Strategic Environmental Objectives (SEOs) provided for these provisions are consistent with that provided for the selected alternative development strategy in Section 7. The provisions will contribute towards the realisation of this alternative development strategy and the interactions with SEOs reflect the effects detailed on Table 8.2.</p> <p>The approach to social and community development provided for is consistent with the framework for community facilities development in County Galway that is already provided for by the County Plan. By requiring community development facilities to be developed in tandem with economic and residential growth the provisions would contribute toward sustainable development. Specific parts of the policies and objectives that contribute towards both sustainable development and the protection and management of the environment include:</p> <ul style="list-style-type: none"> <li>• Policy SI 1 – Social Inclusion and Universal Design &amp; Access: "...all individuals have access..."</li> <li>• Objective SI 2 – Universal Design and Access: "...consideration to the needs of disabled or mobility impaired people and the requirements of the Disability Act 2005, the Council's Disability Action Plan 2007-2015 (and any updates to this document), and the Traffic Management Guidelines 2003 (and any subsequent reviews/updates to these documents)..."</li> <li>• Policy CF 1 – Community Facilities, Amenities and Greenspace: "...appropriate provision and equitable distribution of community facilities, amenities and greenspace in the plan area..."</li> <li>• Objective CF 1 – Lands for Community &amp; Recreation &amp; Amenity Facilities: "...adequate lands zoned and services to cater for the establishment, improvement or expansion of educational, community,</li> </ul>				



recreation and amenity facilities within the plan area...”

- Objective CF 5 – Recreation, Amenity and Green Spaces: “Protect existing recreation and amenity green spaces....”
- Objective CF 9 – Amenity Network: “Support the establishment of an accessible network of greenway linkages and amenities that provide safe and attractive circulation routes for pedestrians and cyclists throughout the town and for the enjoyment and recreational use of the entire community.”

In combination with other provisions integrated into the Plan, these social and community development policies and objectives would help to provide a concentration of growth within the existing settlement centre. This approach would contribute towards sustainable mobility and efficient use of resources. The construction and operation of all development has the potential to result in adverse effects upon all environmental components however these effects have been mitigated by provisions which have been integrated into the Plan, including those which are identified in Section 9 of this report. The potential adverse effects (if unmitigated) are consistent with those detailed on Table 8.2.

## 8.12 Economic Development

Plan text	Likely to Improve status of SEOs	Potential Conflict with status of SEOs - likely to be mitigated	Probable Conflict with status of SEOs- unlikely to be fully mitigated	No Likely interaction with status of SEOs
<p><b>Economic Development Policy</b>  <b>Policy ED 1 – Economic Development</b>                      It is the policy of Galway County Council to support sustainable economic development and employment creation in Tuam through the identification of appropriately located and adequately serviced lands for business and enterprise, retail, industrial, and commercial developments, the promotion of investment in transportation and other support infrastructure and the creation of a high quality environment to encourage economic investment. The promotion of economic development and employment creation will be appropriately guided to ensure the protection of residential amenities, built and natural heritage, landscape and streetscape, character of the town and the vitality and viability of the town centre.</p> <ul style="list-style-type: none"> <li>Support the aims, objectives and recommendations, where appropriate in the context of Tuam, of the following:</li> <li>Regional Planning Guidelines for the West Region 2010-2022, emerging Regional Spatial and Economic Strategy and the</li> <li>County Galway Local Economic and Community Plan 2016-2022.</li> </ul> <p><b>Economic Development Objectives</b>  <b>Objective ED 1 – Employment &amp; Economic Development</b>                      Support the Economic Development Strategy of the West Regional Authority Regional Planning Guidelines 2010-2022 , emerging Regional Spatial and Economic Strategy (or as updated) and the economic development and tourism policies and objectives as set out in the Galway County Development Plan and the Galway County Local Economic and Community Plan 2016-2022.  <b>Objective ED 2 – Business &amp; Technology Park Development</b>                      Facilitate and encourage the establishment of business and technology uses that are considered compatible with surrounding uses, on suitably zoned and serviced sites.  <b>Objective ED 3 – Business/Enterprise and Industrial Development</b>                      Facilitate and encourage the establishment of business/enterprise, technology and industry uses that are considered compatible with surrounding uses, on suitably zoned and serviced sites. Where such uses are developed adjacent to residential areas or community facilities, suitable buffer zones shall be provided as well as adequate screening in the form of planting and landscaping, as appropriate. The Business and Enterprise (BE) and Industrial (I) zonings will be the primary focus for such uses, subject to the guidance provided in DM Guideline LU 2 – Land Use Zoning Matrix.  <b>Objective ED 3 – Retail Development</b>                      Support the development of appropriate types, scales and patterns of retail development in suitable locations within the Town centre and with high quality designs that:</p> <ul style="list-style-type: none"> <li>Comply with the Guidelines for Planning Authorities Retail Planning 2012 (and 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 that may be adopted within the lifetime of this Local Area Plan and the guidance set out in the Retail Design Manual – A Good Practice Guide Companion Document to</li> </ul>	<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>the Guidelines for Planning Authorities Retail Planning (2012).</p> <ul style="list-style-type: none"> <li>• Support the vitality and viability of the existing Town centre and associated main streets and ensure new development does not undermine their vitality and viability.</li> <li>• Protect investment in strategic roads and infrastructure and that are easily accessible, particularly in terms of public transport.</li> <li>• Contribute to the creation of a high quality retail environment.</li> </ul> <p>The Town Centre (C1) zoning will remain the primary focus for the location of new retail development. The Planning Authority will ensure that the location of future retail development is consistent with the key policy principles and order of priority as set out in the Guidelines for Planning Authorities Retail Planning 2012 (and any updated/superseding document) and will require Retail Impact Assessments, including details of the sequential approach, Design Statements and Transport Impact Assessments where appropriate, for retail developments in accordance with the Retail Planning Guidelines and DM Guideline ED1 and ED2.</p> <p><b>Objective ED 4 – Town Centre Viability &amp; Vitality</b> Ensure a balance of development in the retail core in the town centre so as to ensure that the main streets, leading to Market Square are revitalised, vacancies are reduced and an unbalanced retail pull from this area is avoided.</p> <p><b>Objective ED 5 – Town Centre Management</b> Subject to appropriate resources, the Council in collaboration with local stakeholders shall prepare a town centre management plan for Tuam. The Management Plan will consider some or all of the following:</p> <ul style="list-style-type: none"> <li>• The feasibility of a Town Centre Market</li> <li>• Upgrade of public lighting and tidying of wirescapes in the Town centre</li> <li>• Connectivity of the Town centre including upgrade of paving, consideration of feasibility of identified pedestrianised lanes &amp; routes through the town.</li> <li>• Scheme for façade improvement on identified priority streetscapes.</li> <li>• Upgrade and improvement of street furniture.</li> <li>• A co-ordinated vehicular access arrangement, which shall be in consultation and agreement with the Road Design Section of Galway County Council.</li> <li>• Consistent sustained signage design policy within the Town Centre.</li> <li>• Provide footpath and cycling links to the Town centre.</li> <li>• Provision of appropriate quality landscaping and functional public spaces.</li> <li>• Car parking management.</li> </ul> <p><b>Objective ED 6 – Tourism Development</b> Encourage and assist the development of the sustainable tourism potential within Tuam in a manner that respects, builds on, protects and enhances the cultural, built, architectural, archaeological and heritage significance of the town including natural heritage and biodiversity, and its local amenities.</p> <p><b>Objective ED 7 – Visual Quality Working Environments</b> Encourage the provision of high quality designs (including variations in design and scale), layout, boundary treatment and arrival views of development within the Business and Enterprise (BE) and Town Centre Zones (C1) in order to positively contribute to the character and visual amenity of the area.</p> <p><b>Objective ED 8 – Non Conforming Uses</b> Where existing uses do not conform with the land use zoning objectives or matrix of the plan, the Planning Authority shall facilitate/support their relocation, as appropriate, to more sustainable and appropriately zoned lands.</p> <p><b>Objective ED 9 – Proliferation of Any Individual Uses</b> Protect and enhance the vitality and viability of the town centre by ensuring that it remains the primary retail, commercial and mixed use centre in the town and prohibit a proliferation of any individual use which, in the opinion of the Planning Authority, does not contribute to the vitality and viability of the centre.</p> <p><b>Economic Development Management Guidelines</b></p> <p><b>DM Guideline ED1 – Retail Impact Assessments</b> Retail Impact Assessments will be required with planning applications for large retail developments (such as shopping centres or large food/grocery chain stores), mixed use developments with a large retail component, developments that may have a significant effect on the vitality and viability of the Town centre or as otherwise considered appropriate by the Planning Authority. Retail Impact Assessments will be in accordance with the Retail Planning Guidelines for Planning Authorities (2012), including details of the sequential test.</p> <p><b>DM Guideline ED2 – Design and Access Statements</b> Design and Access Statements may be required with planning applications for major proposals, proposals that are located within a sensitive area such as the ACA, and/or for developments as otherwise considered appropriate by the Planning Authority. Design Statements should address the issues</p>				
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<p>raised in Section 5.3 of Guidelines for Planning Authorities Retail Planning 2012 (and any updated/superseding document), including an appraisal of the character of the area adjoining the site and proposals for high quality design that integrates successfully with the context. Design Statements should also take account of the design and layout guidance set out in the Retail Design Manual-A Good Practice Guide Companion Document to the Guidelines for Planning Authorities.</p>				
<p><b>Assessment Commentary:</b></p> <p>The evaluation against Strategic Environmental Objectives (SEOs) provided for these provisions are consistent with that provided for the selected alternative development strategy in Section 7. The provisions will contribute towards the realisation of this alternative development strategy and the interactions with SEOs reflect the effects detailed on Table 8.2.</p> <p>The economic development provisions are consistent with the framework for economic development in County Galway that is already provided for by the County Plan. These provisions contribute towards both sustainable development and the protection and management of the environment, for example:</p> <ul style="list-style-type: none"> <li>• Policy ED 1 – Economic Development: "...sustainable economic development and employment creation...high quality environment"</li> <li>• Objective ED 2 – Business &amp; Technology Park Development: "...suitably zoned and serviced sites..."</li> <li>• Objective ED 3 – Business/Enterprise and Industrial Development: "...compatible with surrounding uses, on suitably zoned and serviced sites..."</li> <li>• Objective ED 3 – Retail Development: "...suitable locations within the Town centre and with high quality designs..."</li> <li>• Objective ED 4 – Town Centre Viability &amp; Vitality: "...ensure that the main streets, leading to Market Square are revitalised, vacancies are reduced and an unbalanced retail pull from this area is avoided..."</li> <li>• Objective ED 5 – Town Centre Management: "...town centre management plan..."</li> <li>• Objective ED 6 – Tourism Development: "...sustainable tourism potential..."</li> <li>• Objective ED 7 – Visual Quality Working Environments: "...high quality design ..."</li> <li>• Objective ED 8 – Non Conforming Uses: "...more sustainable and appropriately zoned lands..."</li> <li>• Objective ED 9 – Proliferation of Any Individual Uses: "Protect and enhance the vitality and viability of the town centre..."</li> </ul> <p>In combination with other provisions integrated into the Plan, these economic development policies, objectives and guidelines would help to provide a concentration of growth within the existing settlement centre. This approach would contribute towards sustainable mobility and efficient use of resources. The construction and operation of all development has the potential to result in adverse effects upon all environmental components however these effects have been mitigated by provisions which have been integrated into the Plan, including those which are identified in Section 9 of this report. The potential adverse effects (if unmitigated) are consistent with those detailed on Table 8.2.</p>				

## 8.13 Transportation Infrastructure

Plan text	Likely to Improve status of SEOs	Potential Conflict with status of SEOs - likely to be mitigated	Probable Conflict with status of SEOs- unlikely to be fully mitigated	No Likely interaction with status of SEOs
<p><b>Sustainable Transportation Policies</b>  <b>Policy ST 1 – Sustainable Transport, Walking and Cycling</b>                      It is the policy of Galway County Council to promote the use of public transport, walking and cycling as safe, convenient and environmentally sustainable alternatives to private transport and to implement the key goals, policy guidance and relevant actions set out in the Department of Transport's policy document Smarter Travel: A Sustainable Transport Future – A New Transport Policy for Ireland 2009-2020 (and any subsequent amendments or updates) and to any Smarter Travel Plan(s) adopted by Galway County Council.</p> <p><b>Sustainable Transportation Objectives</b>  <b>Objective ST 1 – Integrated Land Use and Transport</b>                      Ensure that land use planning is integrated with transportation planning and reduce the need to travel, particularly by private transport, through:</p> <ul style="list-style-type: none"> <li>• Promoting the consolidation of development;</li> <li>• Encouraging intensification and mixed use development along public transport corridors and at public transport hubs and nodes;</li> </ul>	<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>		

<ul style="list-style-type: none"> <li>• Prioritising walking, cycling and public transport within new development proposals, as appropriate;</li> <li>• Ensuring that land use and zoning are fully integrated with the provision and development of a comprehensive, sustainable, efficient, high quality transportation network that accommodates the movement needs of residents, businesses and visitors.</li> </ul> <p><b>Objective ST 2 – Sustainable Transportation</b> Facilitate any Smarter Travel initiatives that will improve sustainable transportation within the plan area and facilitate sustainable transportation options including public transportation, rail freight, electric vehicles, car clubs, public bike schemes, as appropriate.</p> <p><b>Objective ST 3 – Walking</b> Facilitate the improvement of the pedestrian environment and network so that it is safe and accessible to all, through the provision of the necessary infrastructure such as footpaths, lighting, pedestrian crossings etc. New development shall promote and prioritise walking, shall be permeable, adequately linked and connected to neighbouring areas, the town centre, recreational, educational, residential and employment destinations and shall adhere to the principles contained within the national policy document Smarter Travel-A Sustainable Transport Future 2009-2020 and the Design Manual for Urban Roads &amp; Streets (2013), (as updated) or with any associated guidance documents.</p> <p><b>Objective ST 4 – Cycling</b> Facilitate the improvement of the cycling environment/network so that it is safe and accessible, through the provision of the necessary infrastructure, such as surface treatment, junction treatment, cycle track(s), cycle lane(s), lighting, road crossings etc. New development shall promote and prioritise cycling, shall be permeable, adequately linked and connected to neighbouring areas, the town centre, recreational, educational, residential and employment destinations and shall adhere to the principles contained within the national policy document Smarter Travel-A Sustainable Transport Future 2009-2020, the National Cycle Policy Framework, and the Design Manual for Urban Roads &amp; Streets (2013) documents or updated/amended guidance documents.</p> <p><b>Objective ST 5 – Bicycle Parking</b> Seek to provide adequate levels of bicycle parking throughout the plan area, in accordance with the standards as set out in the current Galway County Development Plan, or as varied/updated, and ensure that new private developments provide safe, secure and sheltered bicycle parking facilities.</p> <p><b>Objective ST 6 – Walking &amp; Cycling Strategy</b> Support the principles set out in the Galway County Walking &amp; Cycling Strategy, as appropriate to the plan area.</p> <p><b>Objective ST 7 – Pedestrian Crossings</b> Facilitate the provision of pedestrian crossings adjacent to schools, residential areas and at other appropriate locations within the plan area, as required in Tuam.</p> <p><b>Objective ST 8 – Amenity Walking/Cycling Network</b> Support the progressive improvement of the amenity walking/cycling network within Tuam. This shall include existing and enhanced public footpaths along the main streets and the provision of linkages to existing and future schools, cycling routes where possible and amenity corridors linking the town centre, residential areas, community facilities, public amenity areas and public transport areas.</p> <p><b>Sustainable Transportation Objectives</b></p> <p><b>Objective ST 9 – Mobility Management Plans</b> Require Mobility Management Plans for all medium to large scale residential, commercial, mixed use or business/enterprise, industrial, business and technology developments, as appropriate.</p> <p><b>Objective ST 10 – Charging Points for Electric Vehicles</b> Facilitate the provision and delivery of recharging points for high speed/fast charging of electric vehicles within public car parks and at other appropriate locations in Tuam for domestic, transition and end of journey type travel.</p> <p><b>Objective ST 11 – Bus Facilities &amp; Services</b> Support the improvement of bus facilities and services within the town, including the provision of bus shelters at appropriate locations within the town.</p> <p><b>Roads, Streets and Parking Policies</b></p> <p><b>Objective TI 1– National Road Network</b></p> <ol style="list-style-type: none"> <li>a) Protect the national road network and safeguard the efficiency, safety, capacity and strategic investment in the N83 national secondary route having regard to the Spatial Planning and National Roads Guidelines for Planning Authorities (2012).</li> <li>b) Galway County Council will not normally permit the creation of any additional access points from new development or the generation of increased traffic/intensification from existing accesses onto the N84 where speed limits greater than 60kmh apply.</li> <li>c) Transitional zones – (where national roads on the approaches to or exiting urban areas are subject to a speed limit of 60kmh before a lower 50kmh is encountered) a limited level of direct access to facilitate orderly urban development may be provided. Any such proposal must be subject to a road safety audit carried out in accordance with the TII's requirement and a proliferation of such entrances, which would lead to a diminution in the role of such zones, shall be avoided.</li> </ol>				
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<p>d) There shall be a general presumption against large scale retail proposals located adjacent or close to existing, new or planned national roads and interchanges. Proposals for large scale developments will be required, where appropriate, to submit Traffic and Transport Assessments to assess the impact of the proposed development and associated traffic movements on the efficiency, safety and capacity of the national road network.</p> <p><b>Objective TI 2 – Urban Street Network</b> Support the treatment of the route network within the built areas of the town as urban streets that prioritises the needs of pedestrians, that facilitates cyclists wherever possible and that supports public and private transport movements, stopping and parking, as appropriate. In this regard, the principles, approaches and standards set out within the Design Manual for Urban Roads and Streets (2013) (or as updated) shall be applied to new developments, as appropriate. New developments will be required to facilitate the extension of the urban street network, to provide improved connectivity and permeability, particularly for pedestrians and cyclists, in order to achieve connectivity with the town centre and to promote sustainable transport options.</p> <p><b>Objective TI 3 –Transport Network</b> Facilitate improvements to the existing transportation network and the implementation of traffic management measures, subject to normal planning and environmental considerations.</p> <p><b>Objective TI 4 – Road Schemes/Road Improvements</b> Support the development of appropriately approved schemes/road improvements in and around the plan area. Any indicative roads be subject to needs assessment and detailed corridor and route selection processes taking into account, inter alia, environmental constraints and opportunities.</p> <p><b>Objective TI 5 – Preservation of Routes, Road Upgrades &amp; Infrastructure Provision</b> Prohibit development on lands which are reserved for proposed road corridors and associated buffers and where development would affect a route, line, level or layout of any proposed new roadway.</p> <p><b>Objective TI 6 – Road Safety Audits, Traffic Impact Assessment</b> Require all significant development proposals to be accompanied by a Road Safety Audit and Traffic &amp; Transport Assessment 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 TII Publications &amp; TII GE-STY-01204 Road Safety Audit.</p> <p><b>Objective TI 7 – Noise</b> 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 8,220AADT, 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><b>Objective TI 8 – Schools</b> Promote and facilitate greater ease of traffic movement and safe routes to schools in partnership with local schools and ensure that schools have a safe drop off/collection facilities for pedestrians, cyclists and vehicles and adequate and appropriately located staff parking.</p> <p><b>Objective TI 9 – Signage on or Visible from National Roads</b> Avoid the proliferation of non-road traffic signage on and adjacent to national roads outside of the 50-60kph speed limit area, in the interest of traffic safety and visual amenity, in accordance with the Spatial Planning and National Roads Guidelines for Planning Authorities (2012). The TII document Policy &amp; Provision of Tourist and Leisure Signage on National Roads March (2011) (including any updated/superseding document) shall also be considered in the assessment of relevant developments.</p> <p><b>Objective TI 10 – Preparation of a Revised Traffic Management Plan</b> It is an objective to revise/implement a Traffic Management Plan for Tuam within the life of this Local Area Plan, which shall include provisions to address the issues with parking on the main streets and the traffic congestion resulting from parking on both sides of the streets.</p> <p><b>Objective TI 11 – Local Roads Upgrade</b> Facilitate the upgrade of local roads within the plan boundary. Any upgrade shall facilitate public lighting, pedestrian and cycling facilities and shall have regard to the Design Manual for Urban Roads and Streets (2013).</p> <p><b>Objective TI 12 – Car Parking</b> Facilitate the development and improvement of public car parking facilities in the town.</p> <p><b>Objective TI 13 – Junction Upgrade</b> Seek to upgrade the current road layout in the vicinity of the existing schools from the Frank Stockwell Road/Dublin Road junction to the Dublin Road/Athenry Road junction in the interests of pedestrian and vehicle highway safety. The junction is in the vicinity of many local schools.</p> <p><b>Objective TI 14 – New Developments &amp; Connection to the Town Footpath &amp; Lighting Network</b> New development shall be required to ensure that they are satisfactorily connected to the footpath &amp; public lighting network that currently services the town centre. In order to protect light sensitive species such as bats, lighting fixtures should provide only the amount of light necessary for personal</p>				
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<p>safety and should be designed so as to avoid creating glare or emitting light above a horizontal plane.</p> <p><b>Objective TI 15 – Footpath, Public Lighting, Cycle Provision &amp; Traffic Calming</b></p> <p>Ensure the provision and upgrade of footpaths &amp; public lighting within the town. Traffic calming measure to be considered as part of the traffic management plan. Cycling facilities shall also be provided where feasible. In order to protect light sensitive species such as bats, lighting fixtures should provide only the amount of light necessary for personal safety and should be designed so as to avoid creating glare or emitting light above a horizontal plane.</p>				
<p><b>Assessment Commentary:</b></p> <p>The evaluation against Strategic Environmental Objectives (SEOs) provided for these provisions are consistent with that provided for the selected alternative development strategy in Section 7. The provisions will contribute towards the realisation of this alternative development strategy and the interactions with SEOs reflect the effects detailed on Table 8.2.</p> <p>The provisions for transport and movement are consistent with the framework for transport provision included within the existing development plan and contribute towards sustainable mobility (with associated positive effects on energy usage and greenhouse gas and noise emissions to air). Examples of provisions that contribute towards sustainable mobility include:</p> <ul style="list-style-type: none"> <li>• Policy ST 1 – Sustainable Transport, Walking and Cycling: "...promote the use of public transport, walking and cycling..."</li> <li>• Objective ST 1 – Integrated Land Use and Transport: "...land use planning is integrated with transportation planning..."</li> <li>• Objective ST 2 – Sustainable Transportation: "...improve sustainable..."</li> <li>• Objective ST 3 – Walking: "...improvement of the pedestrian environment..."</li> <li>• Objective ST 4 – Cycling: "...improvement of the cycling environment..."</li> <li>• Objective ST 5 – Bicycle Parking: "...adequate levels of bicycle parking..."</li> <li>• Objective ST 7 – Pedestrian Crossings: "...provision of pedestrian crossings..."</li> <li>• Objective ST 8 – Amenity Walking/Cycling Network: "...improvement of the amenity walking/cycling network within Tuam..."</li> <li>• Objective ST 9 – Mobility Management Plans: "Require Mobility Management Plans..."</li> <li>• Objective TI 2 – Urban Street Network: "...prioritises the needs of pedestrians..."</li> <li>• Objective TI 7 – Noise: "...include a noise assessment..."</li> <li>• Objective TI 14 – New Developments &amp; Connection to the Town Footpath &amp; Lighting Network: "...In order to protect light sensitive species such as bats, lighting fixtures should provide only the amount of light necessary for personal safety and should be designed so as to avoid creating glare or emitting light above a horizontal plane..."</li> <li>• Objective TI 15 – Footpath, Public Lighting, Cycle Provision &amp; Traffic Calming: "...In order to protect light sensitive species such as bats, lighting fixtures should provide only the amount of light necessary for personal safety and should be designed so as to avoid creating glare or emitting light above a horizontal plane..."</li> <li>• Land Use Zoning Objective LU7 (Transport Infrastructure) requires that new roads "shall be subject to needs assessment and detailed corridor and route selection processes taking into account, inter alia, environmental constraints and opportunities."</li> </ul> <p>In combination with other provisions integrated into the Plan, these transport and movement policies and objectives would help to provide a concentration of growth within the existing settlement centre. This approach would contribute towards sustainable mobility and efficient use of resources. The construction and operation of all development has the potential to result in adverse effects upon all environmental components however these effects have been mitigated by provisions which have been integrated into the Plan, including those which are identified in Section 9 of this report. The potential adverse effects (if unmitigated) are consistent with those detailed on Table 8.2.</p>				

## 8.14 Utilities Infrastructure, Climate Change & Flood Risk Management

Plan text	Likely to Improve status of SEOs	Potential Conflict with status of SEOs - likely to be mitigated	Probable Conflict with status of SEOs - unlikely to be fully mitigated	No Likely interaction with status of SEOs
<p><b>Water Supply, Wastewater&amp; Surface Water Policies</b>  <b>Policy UI 1 – Water Supply, Wastewater and Combined Drainage Infrastructure</b>  Support Irish Water in the provision and maintenance of adequate wastewater disposal and water supply and the maintenance of the existing combined (sewage and surface water) drainage infrastructure, in accordance with EU Directives, to service Tuam. This will include satisfactory capacity for public wastewater and a satisfactory quantity and quality of water supply, Sustainable Drainage System approaches and techniques within the plan area shall also be supported.  <b>Policy UI 2 – Irish Water's Water Services Strategic Plan</b>  Support Irish Water in the implementation of their Water Services Strategic Plan (as updated/superseded)</p> <p><b>Water Supply, Wastewater&amp; Surface Water Objectives</b>  <b>Objective UI 1 – Irish Water &amp; Water and Wastewater Projects</b>  Support Irish Water in identifying, prioritising and progressing the implementation of water and wastewater projects in the Tuam plan area, as appropriate.  <b>Objective UI 2 – Water Supply &amp; Water Conservation</b>  Ensure that new developments are adequately serviced with a suitable quantity and quality of drinking water supply, promote water conservation to reduce the overall level of water loss in the public supply and require that new domestic developments provide for water supply metering.  <b>Objective UI 3 – Wastewater Disposal</b>  New developments shall only be permitted where it can be clearly demonstrated that they can be serviced and that there is adequate capacity in the wastewater disposal infrastructure in accordance with applicable requirements and standards, including urban wastewater treatment disposal standards, in order to protect Lough Corrib cSAC and SPA and its respective qualifying interests.  <b>Objective UI 4 – Connections to the Public Sewer &amp; Public Water Mains</b>  Development shall connect to the public sewer and public water mains, subject to a connection agreement with Irish Water, in order to protect all waters in the plan area, and also to consolidate the urban structure and to control ribbon development along approach roads into Tuam.  <b>Objective UI 5 – Surface Water Drainage and Sustainable Drainage Systems</b>  Maintain and enhance, as appropriate, the existing surface water drainage system throughout the plan area and ensure that new developments are adequately serviced with surface water drainage infrastructure and promote the use of Sustainable Drainage Systems in 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, with the developer responsible for the satisfactory disposal of surface water.  <b>Objective UI 6 – Wastewater Treatment Plant Buffer</b>  Provide and protect a 100 metre buffer around the wastewater treatment plant site.</p> <p><b>Water Quality Policy</b>  <b>Policy WQ 1 – Water Quality</b>  It is the policy of Galway County Council to seek the protection and improvement in water quality in all waters, in conjunction with other agencies and stakeholders in accordance with the EU Water Framework Directive (2006/60/EC), EU Groundwater Directive (2006/118/EC) and other relevant EU Directives, including associated national legislation and policy guidance, (including any superseding versions of same), and to support the implementation of the Western River Basin District Management Plan (and subsequent National River Basin Management Plan as updated), including its Programme of Measures and the actions and measures that form part of the Corrib Water Management Unit Action Plan and consider the above when assessing new development proposals.</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><b>Water Quality Objectives</b>  <b>Objective WQ 1 – Western River Basin District Management Plan and Protection of Waters</b>  Support the implementation of the relevant recommendations and measures as outlined in the Western River Basin Management Plan 2009-2015 (and subsequent National River Basin Management Plan or any other such plan that may supersede same during the lifetime of this Local Area 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 water, groundwater quality and quantity, river corridors and associated wetlands.</p> <p><b>Objective WQ 2 – Groundwater &amp; Aquifers</b>  Support the protection of groundwater resources and dependent wildlife/habitats in accordance with the Groundwater Directive 2006/118/EC and the European Communities Environmental Objectives (Groundwater) Regulations, 2010 (S.I. No. 9 of 2010) as amended by the European Communities Environmental Objectives (Groundwater) (Amendment) Regulations 2012 or any other updates. In addition, protect the regionally important aquifer that underlays the plan area from risk of environmental pollution and have regard to any groundwater protection schemes and groundwater source protection zones where data has been made available by the Geological Survey of Ireland.</p> <p><b>Climate Change Policy</b>  <b>Policy ENV 1 – Climate Change Policy</b>  It is the policy of Galway County Council to support EU and national legislation and strategies on climate change in its decision making, in order to contribute to a reduction and avoidance of human induced climate change and to assist in achieving the national targets set out and updated under the EU Effort Sharing Scheme.</p> <p><b>Climate Change, Air Quality &amp; Radon Objectives</b>  <b>Objective ENV 1 – Climate Change &amp; The National Climate Change Adaptation Framework</b>  Galway County Council shall support and facilitate European and national objectives for climate adaptation and mitigation as detailed in the National Climate Change Adaptation Framework 2012, the National Mitigation Plan and emerging National Adaptation Framework and relevant Sectoral Adaptation Plan(s).</p> <p><b>Objective ENV 2 – Climate Change &amp; Green Infrastructure</b>  Galway County Council shall promote the integration of green infrastructure/networks (e.g. interconnected networks of green spaces including aquatic ecosystems) and other physical features on land) into new development proposals in order to mitigate and adapt to climate change.</p> <p><b>Objective ENV 3 – Air Quality</b>  Promote the preservation of best ambient air quality compatible with sustainable development throughout the plan area by seeking to protect and maintain the regulatory standards contained with the EPA's <i>Air Quality in Ireland 2016 Key Indicators of Ambient Air Quality</i> (or any superseding document) and ensure that all air emissions associated with new developments are within Environmental Quality Standards as set out in statutory regulations, namely <i>SI 180/2011 Air Quality Standards Regulations 2011</i>.</p> <p><b>Objective ENV 4 – Air Purification</b>  Encourage landscaping and deciduous tree planting in an environmentally sensitive manner within the plan area as a means of air purification, the filtering of suspended particles and the improvement of the micro-climate for Tuam town.</p> <p><b>Objective ENV 5 – Radon</b>  Galway County Council shall have regard to and implement as appropriate the specific guidance on radon prevention measures for new homes as contained within the Building Regulations.</p> <p><b>Flood Policy</b>  <b>FI Policy FL 1 – Flood Risk Management</b>  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 DoEHLG/OPW publication <i>The Planning System and Flood Risk Management Guidelines for Planning Authorities</i> (2009) and Departmental Circular PL2/2014 (or any updated/superseding legislation or policy guidance). Galway County Council will also take account of the OPW Catchment Flood Risk Management Plans (CFRAMs) as appropriate, the Preliminary Flood Risk Assessment (PFRA), the Strategic Flood Risk Assessment for County Galway 2012 and the Strategic Flood Risk Assessment carried out for Tuam and any recommendations and outputs arising that relate to or impact on the plan area.</p> <p><b>Flood &amp; Flood Related Objectives</b>  <b>Objective FL 1 – Flood Risk Management and Assessment</b>  Ensure the implementation of the DoEHLG/OPW publication <i>The Planning System and Flood Risk Management Guidelines for Planning Authorities</i> 2009, including the Department of the Environment, Heritage &amp; Local Government's Circular PL 2/2014 (or any updated/superseding document) in</p>				
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<p>relation to flood risk management within the Plan Area. This will include the following:</p> <ul style="list-style-type: none"> <li>• Avoid, reduce and/or mitigate, as appropriate in accordance with The Planning System and Flood Risk Management Guidelines for Planning Authorities 2009 (and as updated), the risk of flooding within the flood risk areas indicated on Maps 3– Flood Risk Management, including fluvial, pluvial and groundwater flooding, and any other flood risk areas that may be identified during the period of the plan or in relation to a planning application.</li> <li>• 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 for Planning Authorities 2009, (or any superseding document) and Circular PL2/2014 (as updated/superseded). Any flood risk assessment should include an assessment of the potential impacts of climate change, such as an increase in the extent or probability of flooding, and any associated measures necessary to address these impacts.</li> <li>• 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.</li> <li>• Where certain measures proposed to mitigate or manage the risk of flooding associated with new developments are likely to result in significant effects to the environment or European sites downstream, such measures will undergo environmental assessment and Appropriate Assessment, as appropriate.</li> </ul> <p>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><b>Objective FL 2 – Flood Zones and Appropriate Land Uses</b> Protect Flood Zone A and Flood Zone B from inappropriate development and direct developments/land uses into the appropriate Flood Zone in accordance with The Planning System and Flood Risk Management Guidelines for Planning Authorities 2009 (or any superseding document) and the guidance contained in DM Guidance FL 1- Flood Zones and Appropriate Land Uses. Where a development/land use is proposed that is inappropriate within the Flood Zone, then the development proposal will need to be accompanied by a Development Management Justification Test and Site-Specific Flood Risk Assessment in accordance with the criteria set out under with The Planning System and Flood Risk Management Guidelines for Planning Authorities 2009 &amp; Circular PL2/2014 (as updated/superseded). In Flood Zone C, (Please also refer to DM Guidelines FL1) where the probability of flooding is low (less than 0.1%, Flood Zone C), the developer should satisfy him or herself that the probability of flooding is appropriate to the development being proposed. (&amp; Refer to Map 8 - Flood Risk Management)</p> <p><b>Objective FL 3 – Structural and Non-Structural Risk Management Measures in Flood Vulnerable Zones</b> Ensure that applications to existing developments in flood vulnerable zones shall provide details of structural and non-structural risk management measures to include, but not be limited to specifications of the following - floor levels, internal layout, flood resilient construction, flood resistant construction, emergency response planning, access and egress during flood events. (Please Refer to Objective LU 8 &amp; DM Guideline FL 2)</p> <p><b>Objective FL 4 – Flood Risk Assessment for Planning Applications and CFRAMS</b> Ensure that site specific Flood Risk Assessments (FRA) accompany all planning applications in and adjacent to Flood Zones A and B, even for developments appropriate to the particular Flood Zone. The detail of the site specific FRAs will depend on the level of risk and scale of development. A detailed site specific FRA should quantify the risks and effects of selected mitigation and the management of residual risks. Potential interactions in the event of a flood between the existing or proposed storage of hazardous substances within or adjacent to the lands relating to the planning application shall also be considered. Galway County Council shall have regard to the results of the CFRAMS in the assessment of planning applications.</p> <p><b>Objective FL 5 – Strategic Flood Risk Assessment and Flood Risk Assessments</b> Ensure that Strategic Flood Risk Assessments and site specific Flood Risk Assessments consider and provide information on the implications of climate change with regard to flood risk in relevant locations. The 2009 OPW Draft Guidance on Assessment of Potential Future Scenarios for Flood Risk Management (or any superseding document) shall be consulted with to this effect.</p> <p><b>Objective FL 6 – Environmental Impact Assessment/Statement (EIA/EIS) &amp; Flood Risk Assessment</b> Flood risk may constitute a significant environmental effect of a development proposal that in certain circumstances may trigger a sub-threshold EIS, therefore Galway County Council shall ensure that Flood Risk Assessment would form an integral part of any EIA undertaken for projects within the town.</p> <p><b>Objective FL 7 – Pluvial and Groundwater Flood Risk</b> Planning applications on lands identified within pluvial and/or groundwater flood risk shall be accompanied by a Site Specific Flood Risk Assessment that corresponds with that outlined under Chapter 5 'Flooding and Development Management' of The Planning System and the Flood Risk Management Guidelines for Planning Authorities (2009) (or any updates to same). Such assessments shall be prepared by suitably qualified experts with</p>				
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<p>hydrological experience and shall quantify the risks and the effects of any necessary mitigation, together with the measures needed or proposed to manage residual risks.</p> <p><b>Objective FL 8 – New and Emerging Data</b> Future amendments to the plan shall consider, as appropriate any new and/or emerging data, including, when available, any relevant information contained in the Flood Risk Management Plans and as recommended in the SFRA from the plan area.</p> <p><b>Objective FL 9 – Protection of Water Bodies and Watercourses</b> Protect water bodies and watercourses within the plan area from inappropriate development, including rivers, streams, associated undeveloped riparian strips, wetlands and natural floodplains. This will include a general 10 metre protection buffer from rivers within the plan area, as measured from the near river bank (this distance may be increased and decreased on a site by site basis, as appropriate). In addition, promote the sustainable management and uses of water bodies and avoid culverting or realignment of these features.</p> <p><b>Objective FL 10 – Arterial Drainage Scheme</b> Facilitate access to the channels that the Office of Public Works maintain and ensure that, in general no development takes place within 10 metres of these maintenance channels. (This distance may be increased and decreased on a site by site basis, as appropriate). The OPW shall be consulted with regard to any proposed development in or adjacent to these watercourses.</p> <p><b>Objective FL 11 – Improvement &amp;/Or Restoration of Natural Flood Risk Management Functions</b> Where resources are available and subject to compliance with the Habitats and Birds Directives, Galway County Council will contribute towards the improvement and/or restoration of the natural flood risk management functions of flood plains.</p> <p><b>Waste Management Policy</b> <b>Policy WM 1 – Waste Management</b> It is the policy of the Council to support waste reduction and sustainable waste management through prevention, reduction and recycling and by facilitating the provision of adequate waste infrastructure, such as bring banks, at locations that will not adversely affect residential amenity or environmental quality.</p> <p><b>Policy WM 2 – Waste Management Plan</b> Support the implementation of the Connacht Ulster Waste Management Plan 2015-2021 Replacement Connacht Waste Management Plan 2008-2011, Galway County Council's Litter Management Plan 2015-2018 2007-2010, the National Waste Prevention Programme, the EPA's National Hazardous Waste Management Plan 2014-2020 and any superseding versions of these plans over the lifetime of this Local Area Plan.</p> <p><b>Waste Management Objectives</b> <b>Objective WM 1 – Waste Prevention, Reduction &amp; Recycling</b> Promote the prevention, reduction and recycling of waste in new developments, new development proposals shall be required to submit proposals demonstrating how this is to be achieved and shall 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.</p> <p><b>Objective WM 2 – Bring Bank Facility</b> Facilitate the installation of bring bank(s) at suitable locations within the plan area, which do not adversely affect residential amenity or environmental quality.</p> <p><b>Energy &amp; Communications Policy</b> <b>Policy EC 1 – Energy and Communications</b> It is the policy of Galway County Council to support the provision of adequate energy and communications infrastructure to service developments including gas, electricity, broadband, and telephone services. In particular, the Council supports the increased use of renewable energy and the aims of sustainable energy use and conservation in building design and construction.</p> <p><b>Energy &amp; Communications Objectives</b> <b>Objective EC 1 – Broadband &amp; Telecommunications</b> Facilitate the provision of adequate telecommunication infrastructure within the plan area, including telephone and broadband services, to the requirements of the relevant service providers and in accordance with the principles of proper planning and sustainable development.</p> <p><b>Objective EC 2 – Gas &amp; Electricity Supply</b> Facilitate the provision of an adequate supply of electricity and gas to developments in the plan area, to the requirements of the relevant service provider, and in accordance with the principles of proper planning and sustainable development.</p> <p><b>Objective EC 3 – Energy Conservation &amp; Efficiency</b> New buildings shall be sustainable in their siting, orientation, design and construction. Passive solar design techniques, high energy efficiency, low</p>				
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<p>impact construction methods and the use of local building materials shall be encouraged to ensure that new developments minimise their environmental impacts and long term costs.</p> <p><b>Objective EC 4 – Renewable Energy</b> Promote and facilitate the development of renewable sources of energy within the plan area and encourage the integration of micro-renewable energy sources into the design and construction of new developments, as appropriate.</p> <p><b>Flood Risk Management Guideline</b> <b>DM Guideline FL 1 – Flood Zones and Appropriate Land Uses</b> The table below indicates the types of land uses that are appropriate in each of the Flood Zones identified within the plan area, in accordance with The Planning System and Flood Risk Management Guidelines 2009 (and as updated). Where developments/land uses are proposed that are considered inappropriate to the Flood Zone, then a Development Management Justification Test and Site-Specific Flood Risk Assessment will be required in accordance with The Planning System and Flood Risk Management Guidelines 2009 (and as updated). (Please refer to the Plan for more details.)</p> <p><b>Surface Water Network Development Management Guideline</b> <b>DM Guideline UI 1 – Surface Water Network</b> Require all relevant applications to provide for separate surface and foul water sewers to assist and optimise the use of the existing collection system and the wastewater sewage system. It shall be the responsibility of the developer to satisfactorily dispose of all surface water arising from their development.</p> <p><b>Water Quality Development Management Guideline</b> <b>DM Guideline WQ 1 – Water Bodies and Watercourses</b> Require all relevant applications, which are located in close proximity to water bodies or watercourses to submit measures to reduce and prevent pollution to the water body/watercourse, both during construction and after completion of the scheme.</p> <p><b>Energy and Communications Development Management Guideline</b> <b>DM Guideline EC 1 – Energy Statements</b> All proposals for new non-residential developments with a floor area of 1,000m<sup>2</sup> or more and residential developments comprised of 10 or more units may be required to submit an Energy Statement outlining the methods proposed to minimise energy use in the development, such as building orientation and passive solar design, materials and insulation, renewable/alternative energy sources, etc. <b>DM Guideline EC 2 – Energy Efficient Street Lighting</b> Galway County Council shall require the provision of energy efficient street lighting in all private developments.</p>				
<p><b>Assessment Commentary:</b></p> <p>The evaluation against Strategic Environmental Objectives (SEOs) provided for these provisions are consistent with that provided for the selected alternative development strategy in Section 7. The provisions will contribute towards the realisation of this alternative development strategy and the interactions with SEOs reflect the effects detailed on Table 8.2.</p> <p>The provisions for Utilities Infrastructure, Climate Change &amp; Flood Risk Management primarily relate to the protection of the environment, including human health, and contributions towards sustainable development. Nonetheless, certain types of infrastructure and development that are required to contribute towards the protection of the environment have the potential, including during construction, to adversely impact upon the environment.</p> <p>This Chapter includes provisions for the provision of water services (which encompasses the operation, upgrading and construction of infrastructure) and the protection of water resources. By protecting water resources, appropriately treating waste water and providing safe drinking water the protection of various environmental components would be contributed towards including human health, biodiversity, flora and fauna, the status of waters, flood risk management and soil. There would be potential for significant adverse environmental effects upon various environmental components to arise during construction and operation e.g. outflow could conflict with various components; and abstracting water could conflict with various components. Potential adverse effects would be mitigated by measures which have been integrated into the Plan (see Section 9), resulting in only residual adverse effects which would be likely to be non-significant (see Table 8.2).</p> <p>This Chapter includes provisions for the management of flood risk, surface water drainage and climate change adaptation/mitigation. These provisions would benefit the protection of human health, biodiversity, flora and fauna, cultural heritage, water status and existing infrastructure and services. Flood risk management infrastructure (if ever required) has the potential to result in significant adverse environmental effects during construction and operation on most environmental components. These types of infrastructure are often constructed in ecologically and visually sensitive areas and adjacent to the banks of rivers and streams. Potential adverse effects would be mitigated both by measures which have been integrated into the Plan (see Section 9) and by measures arising from lower tier assessments.</p>				

This Chapter includes provisions for waste management. The implementation of these provisions, including the construction and operation of waste management infrastructure, would facilitate the reduction of waste levels at the same time as presenting potential conflicts with various environmental components. These conflicts would be mitigated by, inter alia, measures which have been integrated into the Plan and waste plans etc. The provision of waste management facilities in certain locations could reduce transport related emissions.

This Chapter includes provisions for energy and communications development that would contribute towards achieving various government objectives including those relating to the amount of energy to be consumed from renewable sources and reducing greenhouse gas emissions. Such development has, however, the potential to impact upon various environmental components. Potential adverse effects would be mitigated both by measures which have been integrated into the Plan (see Section 9) and by measures arising from lower tier assessments.

In combination with other provisions integrated into the Plan, these Utilities Infrastructure, Climate Change & Flood Risk Management provisions would help to provide a concentration of growth within the existing settlement centre. This approach would contribute towards sustainable mobility and efficient use of resources. The construction and operation of all development has the potential to result in adverse effects upon all environmental components however these effects have been mitigated by provisions which have been integrated into the Plan, including those which are identified in Section 9 of this report. The potential adverse effects (if unmitigated) are consistent with those detailed on Table 8.2.

## 8.15 Urban Design and Landscape

Plan text	Likely to <b>Improve</b> status of SEOs	<b>Potential Conflict</b> with status of SEOs - likely to be mitigated	Probable <b>Conflict</b> with status of SEOs - unlikely to be fully mitigated	<b>No Likely</b> interaction with status of SEOs
<p><b>Urban Design and Landscape Policy</b>  <b>Policy UD1 – Urban Design and Landscape</b>            It is the policy of Galway County Council to 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 Tuam, having regard to the guidance contained in the Sustainable Residential Development in Urban Areas Guidelines 2009 and the accompanying Urban Design Manual 2009 &amp; the Design Manual for Urban Roads &amp; Streets 2013 (including any superseding guidance documents). This will focus on the development of a high quality, well landscaped and appropriately scaled built environment with a strong civic and commercial core, responsive building frontages, appropriate building forms, heights, designs and materials and high quality civic, community, recreational and amenity facilities. The creation of a high quality natural environment will also be supported through the protection of the landscape sensitivities, views and prospects in the Town and the promotion of the development of a green network and high quality landscaping.</p> <p><b>Urban Design and Place-Making Objectives</b>  <b>Objective UD 1 – High Quality, Contextually Sensitive Design</b>            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 area in terms of scale, height, massing, building line, urban grain and definition and through high quality design proposals for buildings/structures/shop fronts, the use of high quality, appropriate materials and the provision of appropriate signage, lighting, landscaping proposals and other such details.</p> <p><b>Objective UD 2 – Public Spaces and Streets</b>            Promote the development of high quality public spaces consisting of streets, squares, parks and amenities connected by a network of pedestrian and cycling routes. Public spaces should have a high standard of design and street furniture that will create a coherent character for the area. This would include appropriately designed and located park benches, bus shelters, cycle storage facilities, refuse bins, signage, street sculpture, etc. but should avoid the over-proliferation of different elements and/or cluttering of public spaces.</p> <p><b>Objective UD 3 – Spatial Definition and Animation</b>            Ensure that new developments are designed to provide spatial definition and animation to public spaces and streets through the use of appropriate building lines and built forms, responsive building frontages and passive surveillance and high quality streetscapes and/or landscaping edges to enclose and address public spaces. Perimeter block typologies provide a useful approach in generating good spatial definition, adequate enclosure and a high</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>quality public realm and the creation of focal points, such as landmark buildings and gateways, help to improve spatial definition and legibility and will be encouraged in appropriate locations.</p> <p><b>Objective UD 4 – Green Network and Landscaping</b> Support the development of a network of amenities, open spaces and natural areas that support biodiversity, that incorporate existing landscape features such as local rivers, streams, natural meadows, trees, stone walls and hedgerows, that provide pedestrian and cycling linkages and active and passive recreation opportunities, that help to structure and provide relief from the built environment and that can provide areas for surface water attenuation and flood risk management.</p> <p><b>Objective UD 5 – Street-Oriented Development and Responsive Frontages</b> Promote street-oriented development along the urban street network within the built areas and along the approach routes to the town. This will include improved facilities for pedestrians, cyclists and public transport as appropriate and the promotion of high quality building and/or hard and soft landscaping edges to these routes. Buildings and spaces should be designed to provide a human scale along street frontages with the use of appropriate building heights and responsive ground floor treatments. Intensive, fine-grained developments will generally be encouraged to provide a diversity of building forms and public spaces.</p> <p><b>Objective UD 6 – Design and Access Statements</b> The Planning Authority will require all large scale or sensitively located development proposals, such as those in close proximity to the Architectural Conservation Area, Protected structures, significant public amenity, elevated positions or visually vulnerable areas, and in the case of any other development proposals where this is considered necessary by the planning authority to be accompanied by design and access statements.</p> <p><b>Objective UD 7 – Landscape Character, Values, Sensitivity and Views/Prospects</b> Protect the landscape character, values, sensitivities, focal points and views in the plan area, including those identified in the Galway County Development Plan, included in the Landscape Character Assessment for County Galway. Ensure that new developments are responsive to the high and special sensitivity landscapes within the plan area, visually vulnerable areas, elevated areas or locally important townscape contexts. Require Visual Impact Assessment for developments with potential to impact on areas of significant landscape character, value or sensitivity, including both urban and natural features, such as historic buildings/structures, as appropriate. Prohibit development that will block or interfere with a significant view or prospect. Where it is considered that a development may impact on views or prospects, have regard to the significance of any such impact and any appropriate mitigation measures that should be incorporated.</p> <p><b>Urban Design and Landscape Development Management Guidelines</b> <b>DM Guideline UD1 Design and Access Statements:</b> Design and Access statements will be required of developments over 9 houses, new buildings in excess of 1000 square metres or located within a sensitive area such as the ACA, and/or for developments as otherwise considered appropriate by the Planning Authority. The Design &amp; Access Statements will involve a three stage process:</p> <ul style="list-style-type: none"> <li>• Assessment</li> <li>• evaluation</li> <li>• design.</li> </ul> <p>1. Design and Access statements should be succinct documents that include both text and supporting graphics. 2. The design section should examine the proposed use, amount of development, the proposed layout, the scale, the hard &amp; soft landscaping and the appearance of the proposed development. The document will provide the rationale for the design approach taken in relation to the site and its wider context. 3. The access section will examine the pedestrian and vehicular access and transport links- justification for access points and routes that have been chosen, as well as how the site responds to the existing road layout and public transport provision. 4. And inclusive access -How can everyone get to and move through the place on equal terms regardless of age, disability, ethnicity or social grouping.</p> <p>Urban Design and Landscape Development Management Guidelines.</p>				
<p><b>Assessment Commentary:</b></p> <p>The evaluation against Strategic Environmental Objectives (SEOs) provided for these provisions are consistent with that provided for the selected alternative development strategy in Section 7. The provisions will contribute towards the realisation of this alternative development strategy and the interactions with SEOs reflect the effects detailed on Table 8.2.</p> <p>Sustainable development and protection and management of the environment are two of the primary focuses of the Urban Design and Landscape provisions, with associated positive effects consistent with those detailed on Table 8.2. A number of these provisions support new development that has the potential to adversely impact upon a number of environmental components. Such impacts will be mitigated by measures, including those that have been integrated into Plan (see Section 9).</p>				

## 8.16 Built Heritage & Cultural Heritage

Plan text	Likely to <b>Improve</b> status of SEOs	<b>Potential Conflict</b> with status of SEOs - likely to be mitigated	<b>Probable Conflict</b> with status of SEOs - unlikely to be fully mitigated	<b>No Likely</b> interaction with status of SEOs
<p><b>Built Heritage &amp; Cultural Heritage Policies</b></p> <p><b>Policy HC 1 – Built Heritage</b></p> <p>It is the policy of Galway County Council to support the protection and conservation of the architectural and archaeological heritage in the plan area, including the Protected Structures, Architectural Conservation Area, Recorded Monuments and Places and other important features of architectural or archaeological heritage. Galway County Council will ensure the implementation of the legislative, statutory and policy provisions relevant to the conservation of the built heritage including the following (and any updated/superseding documents):</p> <ul style="list-style-type: none"> <li>Legislative provisions in the Planning and Development Act 2000 (as amended) and National Monuments Act 1930 (as amended).</li> <li>Statutory provisions in the Galway County Development Plan, including the Record of Protected Structures.</li> <li>Policy guidance in Government Policy on Architecture 2009-2015, the Architectural Heritage Protection Guidelines 2004/2011, and the Archaeology and Development: Guidelines for Good Practice for Developers.</li> </ul> <p><b>Policy HC 2 – Cultural Heritage</b></p> <p>It is the policy of Galway County Council to acknowledge and promote awareness of the origins, historical development and cultural heritage of the town and to generally support high quality developments that relate to local heritage and to ensure that new development respects and is responsive to same.</p> <p><b>Built Heritage &amp; Cultural Heritage Objectives</b></p> <p><b>Objective HC 1 – Architectural Heritage and Protected Structures</b></p> <p>Ensure the protection and conservation of the architectural heritage in the plan area, in particular by implementing the relevant legislative provisions of the Planning and Development Act 2000 (as amended) in relation to architectural heritage and policy guidance contained within the Architectural Heritage Protection Guidelines 2004/2011, (or any superseding document).</p> <p><b>Objective HC 2 – Protected Structures</b></p> <p>Ensure the protection and sympathetic enhancement of structures included and proposed for inclusion in the Record of Protected Structures that are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest, together with the integrity of their character and setting.</p> <p><b>Objective HC 3 – Architectural Conservation Areas</b></p> <p>Protect, conserve and enhance the essential character of the Tuam Architectural Conservation Area, through respecting the surviving historic plots and street patterns and through the appropriate management and control of the design, location and layout of new development, alterations or extensions to existing structures, and/or modifications to the setting of the structure and the character of the Architectural Conservation Area.</p> <p><b>Objective HC 4 – Development Relating to Protected Structures and ACAs</b></p> <p>Ensure that any development, modifications, alterations, or extensions materially affecting the character of a protected structure, or structure adjoining a protected structure, or structure within or adjacent to the Architectural Conservation Area, is sited and designed appropriately and is not detrimental to the character or setting of the protected structure, or the Architectural Conservation Area. This will include the following:</p> <ul style="list-style-type: none"> <li>Works materially affecting the character of a protected structure or the exterior of a building/structure within an Architectural Conservation Area will require planning permission.</li> <li>Any works/development carried out to a protected structure or the exterior of a building/structure within an Architectural Conservation Area shall be in accordance with best conservation practice and use sustainable and appropriate materials.</li> <li>Works/development within the Architectural Conservation Area shall ensure the conservation of traditional features and building elements which contribute to the character of the area.</li> <li>New proposals shall have appropriate regard to scale, plot, form, mass, design, materials, colours and function.</li> </ul>	<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 L1</p>		

<p><b>Objective HC 5 – Energy Efficiency and Traditional Buildings</b> Ensure that measures to upgrade the energy efficiency of protected structures and traditionally built structures/buildings are sensitive to traditional construction methods and use appropriate materials and do not have detrimental impact on the material, aesthetic, visual character or function of the building.</p> <p><b>Objective HC 6 – Demolition</b> Prohibit development proposals, either in whole or in part, for the demolition of protected structures or structures within the Architectural Conservation Area, save in exceptional circumstances.</p> <p><b>Objective HC 7 – Architectural Conservation Area Appraisal and Management Plan</b> Prepare and publish an Architectural Conservation Area Appraisal and Management Plan for Tuam over the lifetime of the plan, to preserve, protect and enhance the character of this area, including the public realm and implement any recommendations arising from same.</p> <p><b>Objective HC 8 – Vernacular Architecture &amp; Structures of Local Interest</b> Recognise the importance of the contribution of vernacular architecture to the character of Tuam and ensure the protection, retention, and appropriate revitalisation and use of vernacular heritage, including structures of local interest that contribute to the local distinctiveness, built heritage and/or townscape character and resist the demolition of same.</p> <p><b>Objective HC 9 – Archaeological Heritage</b> a) 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 Archaeology and Development: Guidelines for Good Practice for Developers. b) Ensure that any development in the immediate vicinity of a National Monument and a Recorded Monument is sensitively designed and sited and does not detract from the Recorded Monument or its visual amenity.</p> <p><b>Objective HC 10 – Archaeological Landscapes</b> Seek to facilitate the identification of important archaeological landscapes in the plan area.</p> <p><b>Objective HC 11 – Protection of Monuments and Places</b> Ensure the protection and sympathetic enhancement of the monuments and places included and proposed for inclusion in the Record of Monuments and Places, as well as any monument that may be designated as a National Monument, together with the integrity of their character and setting, by implementing the relevant provisions of the Planning and Development Act 2000 (as amended) and the National Monuments Act 1930 (as amended) and the Archaeology and Development: Guidelines for Good Practice for Developers. This will include the protection of Monuments on the list provided by the National Monument Service, Department of Arts, Heritage and the Gaeltacht, which has statutory responsibility in this area.</p> <p><b>Objective HC 12 – Archaeological Assessment</b> a) Ensure that all planning applications for development within close proximity of Recorded Monuments and Places and any monuments that may be designated as National Monuments, and within Zones of Archaeological Potential are referred to the Department of Arts, Heritage and the Gaeltacht (DAHG) and take account of the archaeological heritage of the area, any advice received from the DAHG and the need for archaeological assessments and, where appropriate, mitigation measures. b) An Archaeological Assessment for such developments within the plan area that include or are proposed to be located at or close to a Recorded Monument, those that are extensive in terms of area (0.5h hectares or more) or length (1 kilometre or more), those that may impact on the underwater environment (riverine) and developments that require an Environmental Impact Statement. National Monuments include:</p> <ul style="list-style-type: none"> <li>• National Monuments in the ownership of the state or Local Authority;</li> <li>• Archaeological and architectural monuments/sites in the Record of Monuments and Places;</li> <li>• Monuments in the Register of Historic Monuments;</li> <li>• Underwater archaeological heritage;</li> <li>• Previously unknown and unrecorded archaeological sites (including subsurface elements with no visible surface remains and potential sites under water in rivers, and can include fish traps, anchorages, bridges, fording points);</li> <li>• Potential sites located in the vicinity of large complexes of sites or monuments;</li> <li>• Present or former wetlands, unenclosed land, and rivers.</li> </ul> <p>c) Flood relief works and other development in or adjacent to the rivers and streams in Tuam have the potential to negatively impact on known, potential submerged or buried archaeology and therefore there will be a need for an appropriate level of archaeological assessment of any proposed works in these areas.</p> <p><b>Objective HC 13 – Underwater Archaeological Sites</b> Protect and preserve the underwater archaeological sites in rivers, lakes, intertidal and sub-tidal locations within the plan area, including forms of</p>				
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<p>underwater archaeology that may await discovery in the waterbodies in Tuam.</p> <p><b>Objective HC 14 – Cultural Heritage: Local Place Names</b></p> <p>Protect local place names as an important part of the cultural heritage and unique character of the plan area, and support the use of appropriate names for new developments that reflect the character/heritage of the area and that contribute to the local distinctiveness of the village. New developments will be required to consult with Coiste Logainmneacha Chontae na Gaillimhe, Galway County Council 'Placename Committee' to identify an appropriate name for new developments that reflect the local character and heritage of the area.</p> <p><b>Development Management Guidelines</b></p> <p>Please Refer to the Development Management Standards and Guidelines in the Galway County Development Plan.</p>				
<p><b>Assessment Commentary:</b></p> <p>The evaluation against Strategic Environmental Objectives (SEOs) provided for these provisions are consistent with that provided for the selected alternative development strategy in Section 7. The provisions will contribute towards the realisation of this alternative development strategy and the interactions with SEOs reflect the effects detailed on Table 8.2.</p> <p>Protection and management of the environment are the primary focus of the Built and Cultural Heritage provisions, with associated positive effects consistent with those detailed on Table 8.2. A number of these provisions support new development that has the potential to adversely impact upon a number of environmental components. Such impacts will be mitigated by measures, including those that have been integrated into Plan (see Section 9).</p>				

## 8.17 Natural Heritage & Biodiversity

Plan text	Likely to Improve status of SEOs	Potential Conflict with status of SEOs - likely to be mitigated	Probable Conflict with status of SEOs- unlikely to be fully mitigated	No Likely interaction with status of SEOs
<p><b>Natural Heritage and Biodiversity Policies</b></p> <p><b>Policy NH 1 – Natural Heritage, Landscape and Environment</b></p> <p>It is the policy of Galway County Council, to support the conservation and enhancement of natural heritage and biodiversity, including the protection of the integrity of European Sites , the protection of Natural Heritage Areas and proposed Natural Heritage Areas 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. The protection of natural heritage and biodiversity, including European Sites, will be implemented in accordance with relevant EU environmental directives and applicable national legislation, policies, plans and guidelines, including the following (and any updated/superseding documents):</p> <ul style="list-style-type: none"> <li>• EU Directives, including the Habitats Directive (92/43/EEC), the Birds Directive (2009/147/EC codified version of Directive), the Environmental Impact Assessment Directive (85/337/EEC) &amp; EIA Directive (2014/52/EU), the Water Framework Directive (2000/60/EC) and the Strategic Environmental Assessment Directive (2001/42/EC); the Environmental Liability Directive 2004/35/EC;</li> <li>• National legislation, including the Wildlife Act 1976, the European Communities (Environmental Impact Assessment) Regulations 1989 (SI No. 349 of 1989) (as amended), the Wildlife (Amendment) Act 2000, the European Union (Water Policy) Regulations 2003 (as amended), the Planning and Development (Amendment) Act 2010 and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011) and the Regulation of the European Parliament and of the Council on the Prevention and Management of the Introduction and Spread of Invasive Non-Native Species [2013/0307 (COD)] (adopted by European Council coming into effect January 2015)</li> <li>• National policy guidelines, including the Landscape and Landscape Assessment Draft Guidelines 2000, the Environmental Impact Assessment Sub-Threshold Development Guidelines 2003, Strategic Environmental Assessment Guidelines 2004 and the Appropriate Assessment Guidelines 2010.</li> </ul>	<p>B1 B2 B3 B4 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>			



<p><b>Natural Heritage and Biodiversity Objectives</b></p> <p><b>Objective NH 1 – European Sites</b></p> <p>Protect European sites that form part of the European Sites 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/superseding 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 and a Habitats Directive Assessment where necessary, that:</p> <ul style="list-style-type: none"> <li>• The plan or project will not give rise to significant adverse direct, indirect or secondary impacts on the integrity of any European Sites (either individually or in combination with other plans or projects); or</li> <li>• The plan or project will adversely affect the integrity of any European Sites 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 European Sites; or</li> <li>• The plan or project will adversely affect the integrity of any European Sites site (that hosts 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, 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 European Sites.</li> </ul> <p><b>Objective NH 2 – Protected Habitats and Species</b></p> <p>Support the protection of protected habitats and species listed in the annexes to the EU Habitats Directive 1992 (92/43/EEC) and the Birds Directive (2009/147/EC) and regularly occurring-migratory birds and their habitats, species protected under the Wildlife Acts and the Flora Protection Order. This includes the protection of the barn owl, otters, salmon, brook lamprey, bats and their roosts and the maintenance of woodland, hedgerows, tree lines, waterways and ecological networks and corridors which serve as feeding areas, flight paths and community routes for bats.</p> <p><b>Objective NH 3 – Natural Heritage Areas and Proposed Natural Heritage Areas</b></p> <p>Protect Natural Heritage Areas and proposed Natural Heritage Areas in accordance with the requirements of the Wildlife Act 1976, the Wildlife (Amendment) Act 2000 and the Planning and Development Act 2000 (as amended). Where a proposed development within the plan area may give rise to likely significant effects on any Natural Heritage Area or proposed Natural Heritage Area an Ecological Impact Assessment or an Environmental Impact Assessment, as appropriate, may be required.</p> <p><b>Objective NH 4 – Impact Assessments</b></p> <p>Ensure full compliance with the requirements of the EU Habitats Directive (92/43/EEC), SEA Directive (2001/42/EC) and EIA Directives including 2011/92/EU &amp; 2014/52/EU and associated legislation/regulations, including the associated European Communities (Birds and Natural Habitats) Regulations 2011 (SI No. 477 of 2011), European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004-2011, Planning and Development (Strategic Environmental Assessment) Regulations 2004-2011 and the European Communities (Environmental Impact Assessment) Regulations 1989-2011 &amp; European Union (Environmental Impact Assessment) Planning and Regulations 2014 (or any updated/superseding legislation). Planning applications for proposed developments within the plan area that may give rise to likely significant effects on the environment may need to be accompanied by one or more of the following: an Environmental Impact Statement, an Ecological Impact Assessment Report, a Habitats Directive Assessment Screening Report or a Natura Impact Statement, as appropriate. Ensure that Natura Impact Statements and any other environmental or ecological impact assessments submitted in support of proposals for development are carried out according to best practice methodologies and contain all necessary baseline assessments.</p> <p><b>Objective NH 5 – Biodiversity &amp; Ecological Networks</b></p> <p>Support the protection of biodiversity and ecological connectivity within the plan area including woodlands, trees, hedgerows, roadside verge vegetation, rivers, streams, natural springs, wetlands, stonewalls, fens, geological and geo-morphological systems, other landscape features and associated wildlife, where these form part of the ecological network. Seek to retain and incorporate these natural features into developments, in order to avoid ecological fragmentation and maintain ecological corridors or stepping stones in the context of Article 10 of the Habitats Directive:</p> <ol style="list-style-type: none"> <li>a) Seek to retain and incorporate these natural features into developments, in order to avoid ecological fragmentation and maintain ecological corridors and stepping stones.</li> <li>b) Protect and enhance the water quality and ecology of the River Nanny, the River Clare and the Suileen River in the plan area and their function of</li> </ol>				
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<p>as ecological corridors, by maintaining the existing banks and channel and ensuring that new developments are generally set back at least 10m as measured from the near river bank (this distance may be increased and decreased on a site by site basis, as appropriate).</p> <p>c) Maintain and enhance biodiversity through the appropriate planting of native trees, shrubs and hedgerows indigenous to the area and of Irish provenance in public and private areas and in new developments.</p> <p>d) Seek to prevent the introduction of imported ash trees/plants or other such species into the plan area in line with the Plant Health Directive and any updated legislation.</p> <p><b>Objective NH 6 – Water Resources</b> Protect all water resources in the plan area, including rivers, streams, springs, wetlands, surface waters and groundwater quality, in accordance with the requirements and guidance in the EU Water Framework Directive 2000 (2000/60/EC), the European Union (Water Policy) Regulations 2003 (as amended), the Western River Basin Management Plan 2009-2015 (and subsequent National River Basin Management Plan) and other relevant EU Directives, including associated national legislation and policy guidance (including any superseding versions of same). Support the application and implementation of a catchment planning and management approach to development and conservation, including the implementation of Sustainable Drainage System techniques for new development in the plan area.</p> <p><b>Objective NH 7 – Wetlands, Springs, Rivers and Streams</b> Seek to preserve the wetlands of Tuam, identify and protect natural springs, streams/rivers, where possible and ensure that any plans/projects with the potential to adversely affect groundwater, springs, streams or rivers, identify the presence of these features and adequately assess the impacts to them. Protect springs identified on Ordnance Survey mapping or any springs newly identified during project assessment, so that they are not impeded.</p> <p><b>Objective NH 8 – Riparian Zones</b> Protect the riparian zones of watercourse systems throughout the plan area, recognising the benefits they provide in relation to flood risk management and in relation to the ecological integrity of watercourse systems. This will include a general 10 metre protection buffer from rivers within the plan area as measured from the near river bank, (this distance may be increased and decreased on a site by site basis, as appropriate).</p> <p><b>Objective NH 9 – Trees and Hedgerows</b> a) Seek to protect important trees, tree clusters and hedgerow in the plan area, as identified by the Planning Authority, and ensure that development proposals take cognisance of significant trees/tree stands and seek to retain natural boundaries including stonewalls, hedgerow and tree boundaries, where possible. b) Seek to carry out a tree survey on important tree stands with the plan area within the lifetime of the plan by suitably qualified personnel.</p> <p><b>Objective NH 10 – Geological and Geo-morphological Systems</b> 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 are adequately assessed with regard to their potential geophysical, hydrological, hydro-geological or ecological impacts on the environment.</p> <p><b>Objective NH 11 – Control of Invasive and Alien Species</b> Seek to prevent the spread of invasive and alien invasive species and require a landscaping plan to be produced for developments near water bodies and ensure that such plans do not include invasive species.</p> <p><b>Objective NH 12 – Consultation with Environmental Authorities</b> Ensure that all development proposals are screened to determine whether they are likely to have a significant direct, indirect or cumulative effect on the integrity or conservation objectives of any European Sites site and, where significant effects are likely or uncertain, there will be a requirement for consultation with the relevant environmental authorities as part of any Habitats Directive Assessment that may be required.</p> <p><b>Objective NH 13 - Construction Environmental Management Plan</b> All significant developments such as large residential development projects will be required to produce a Construction Environmental Management Plan (CEMP) to, inter alia, ensure the conservation of ecological features designated under the EU Habitats Directive 1992 (92/43/EEC) and the Birds Directive (2009/147/EC). The CEMP will detail methods relating to the control of potential impacts such as:</p> <ul style="list-style-type: none"> <li>• Water Protection;</li> <li>• Waste Management;</li> <li>• Protection of Flora and Fauna;</li> <li>• Control of Invasive Species;</li> <li>• Site Lighting;</li> <li>• Noise &amp; Vibrations;</li> <li>• Chemicals – Other Than Fuel, Lubricants and Solvents; and</li> <li>• Dust etc.</li> </ul>				
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<p><b>Control of Invasive Species Development Management Guideline</b>  <b><i>DM Guideline NH 1 – Control of Invasive Species &amp; Bio-Security Measures</i></b>                  Ensure larger developments include the relevant documentation with their planning application to demonstrate the bio-security measures proposed to ensure that invasive species will not be introduced and/or spread within the development site.</p>				
<p><b>Assessment Commentary:</b></p> <p>The evaluation against Strategic Environmental Objectives (SEOs) provided for these provisions are consistent with that provided for the selected alternative development strategy in Section 7. The provisions will contribute towards the realisation of this alternative development strategy and the interactions with SEOs reflect the effects detailed on Table 8.2.</p> <p>Protection and management of the environment are the primary focus of the Natural Heritage and Biodiversity provisions, with associated positive effects consistent with those detailed on Table 8.2.</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 Tuam Local Area Plan.

Various environmental sensitivities and issues have been communicated to the Council through the various SEA, AA and SFRA processes undertaken for the Plan. By integrating SEA, AA and SFRA recommendations into the Local Area Plan, the Council have: contributed towards the protection and management of the environment; and facilitated the avoidance, reduction and offsetting of potential adverse effects.

### **9.2 Integration of Environmental Considerations**

Table 9.1 links key mitigation measure(s) - which have been integrated into both the Local Area Plan and the Galway County Development Plan 2015-2021 (as varied) - to the likely significant effects of implementing the Local Area 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 the Local Area Plan and the County Development Plan.

**Table 9.1 Integration of Environmental Considerations**

Likely Significant Effect, if unmitigated	Mitigation Measures, including:
All	<p><b>Measures from the Local Area Plan</b></p> <ul style="list-style-type: none"> <li>• Objective LU 12 - Galway County Development Plan 2009-2015 (as varied)<sup>39</sup></li> <li>• Objective NH 13 - Construction Environmental Management Plan</li> <li>• Objective TI 4 – Road Schemes/Road Improvements</li> </ul>
<p>Arising from both construction and operation of development and associated infrastructure:</p> <ul style="list-style-type: none"> <li>• Loss of/damage to biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance to biodiversity and flora and fauna;</li> <li>• Habitat loss, fragmentation and deterioration, including patch size and edge effects; and</li> <li>• Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species.</li> </ul>	<p><b>Measures from the Local Area Plan</b></p> <ul style="list-style-type: none"> <li>• Objective DS 4 – European Sites Network and Habitats Directive Assessment</li> <li>• Objective CF 9 – Amenity Network</li> <li>• Objective ED 6 – Tourism Development</li> <li>• Objective UD 4 – Green Network and Landscaping</li> <li>• Policy NH 1 – Natural Heritage, Landscape and Environment</li> <li>• Objective NH 1 – European Sites</li> <li>• Objective NH 2 – Protected Habitats and Species</li> <li>• Objective NH 3 – Natural Heritage Areas and Proposed Natural Heritage Areas</li> <li>• Objective NH 4 – Impact Assessments</li> <li>• Objective NH 5 – Biodiversity &amp; Ecological Networks</li> <li>• Objective NH 6 – Water Resources</li> <li>• Objective NH 7 – Wetlands, Springs, Rivers and Streams</li> <li>• Objective NH 8 – Riparian Zones</li> <li>• Objective NH 9 – Trees and Hedgerows</li> <li>• Objective NH 10 – Geological and Geo-morphological Systems</li> <li>• Objective NH 11 – Control of Invasive and Alien Species</li> <li>• Objective NH 12 – Consultation with Environmental Authorities</li> <li>• DM Guideline NH 1 – Control of Invasive Species &amp; Bio-Security Measures</li> <li>• Objective NH 13 - Construction Environmental Management Plan</li> </ul> <p><b>Measures from the Galway County Development Plan as varied</b></p> <ul style="list-style-type: none"> <li>• Policies NHB 1, NHB 2, NHB 3, NHB 5, NHB 6 and NHB 7</li> <li>• Objectives DS 6, DS 9, EQ1, EQ 4, ICT 1, NHB 1, NHB 2, NHB 4, NHB 5, NHB 6, NHB 7, NHB 11, NHB 13, AFF 6 and DS10</li> </ul> <p>Also see various measures providing for populations in rural and supporting areas.</p>
Potential interactions if effects upon environmental vectors such as water and air are not mitigated	<p><b>Measures from the Local Area Plan</b></p> <ul style="list-style-type: none"> <li>• Objective TI 7 – Noise</li> </ul> <p><b>Measures from the Galway County Development Plan as varied</b></p> <ul style="list-style-type: none"> <li>• Policy CC 8</li> <li>• Objectives TI 12 and EQ 2</li> </ul> <p>Also see measures related to soil, water quality, flooding, waste water treatment and drinking water supply and quality.</p>
Damage to the hydrogeological and ecological function of the soil resource	<p><b>Measures from the Galway County Development Plan as varied</b></p> <ul style="list-style-type: none"> <li>• Objective NHB12 Soil/Ground Water Protection</li> <li>• Objective NH 10 – Geological and Geo-morphological Systems</li> </ul> <p>Also see measures related to water quality and waste water treatment.</p>

<sup>39</sup> Objective LU 12 - Galway County Development Plan 2009-2015 (as varied):

The provisions of the Galway County Development Plan 2009-2015 (as varied), including the measures contributing towards environmental protection and sustainability (some of these measures are repeated in Section 9 of the SEA Environmental Report that accompanies this Plan) shall be complied with by any future development.

Likely Significant Effect, if unmitigated	Mitigation Measures, including:
<p>Adverse impacts upon the status of water bodies arising from changes in quality, flow and/or morphology</p> <p>Increase in the risk of flooding</p>	<p><b>Measures from the Local Area Plan</b></p> <ul style="list-style-type: none"> <li>• Objective NH 6 – Water Resources</li> <li>• Objective NH 7 – Wetlands, Springs, Rivers and Streams</li> <li>• Objective NH 8 – Riparian Zones</li> <li>• Objective DS 8 – Flood Risk Management and Assessment</li> <li>• Objective DS 9 – Climate Change &amp; Adaptation</li> <li>• Objective LU 8 – Constrained Land Use Zone (CL)</li> <li>• Objective LU 9 – Flood Risk Areas and Land Use Zones (Refer to Map 1, 2 and Map 5)</li> <li>• Policy FL 1 – Flood Risk Management</li> <li>• Objective FL 1 – Flood Risk Management and Assessment</li> <li>• Objective FL 2 – Flood Zones and Appropriate Land Uses</li> <li>• Objective FL 3 – Structural and Non-Structural Risk Management Measures in Flood Vulnerable Zones</li> <li>• Objective FL 4 – Flood Risk Assessment for Planning Applications and CFRAMS</li> <li>• Objective FL 5 – Strategic Flood Risk Assessment and Flood Risk Assessments</li> <li>• Objective FL 6 – Environmental Impact Assessment/Statement (EIA/EIS) &amp; Flood Risk Assessment</li> <li>• Objective FL 7 – Pluvial and Groundwater Flood Risk</li> <li>• Objective FL 8 – New and Emerging Data</li> <li>• Objective FL 9 – Water Bodies and Watercourses</li> <li>• Objective FL 10 – Arterial Drainage Scheme</li> <li>• Objective FL 11 – Improvement &amp;/Or Restoration of Natural Flood Risk Management Functions</li> <li>• DM Guideline FL 1 – Flood Zones and Appropriate Land Uses</li> <li>• DM Guideline FL 2 – Structural and Non-Structural Risk Management Measures in Flood Vulnerable Zones</li> <li>• DM Guideline WQ 1 – Water Bodies and Watercourses</li> </ul> <p><b>Measures from the Galway County Development Plan as varied</b></p> <ul style="list-style-type: none"> <li>• Policies NHB 4, FL 1, FL 2, FL 3, FL 4 and FL 5</li> <li>• Objectives NHB 3, NHB12, NHB 14, EQ1, AFF 5, AFF 6, AFF9, CS 4, WS 1, WS 2, WS 7, WS 9, WS 11, WW 1, WW 7, FL 1, FL 2, FL 3, FL 4, FL 5, FL 6, DS 7, DS 8, DS 9 and RA 1</li> <li>• DM Standard 27: Surface Water Drainage &amp; Flooding</li> </ul>
<p>Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity is needed to ensure the mitigation of potential conflicts)</p> <p>Failure to comply with drinking water regulations and serve new development with adequate drinking water that is both wholesome and clean (water services infrastructure and capacity is needed to ensure the mitigation of potential conflicts)</p> <p>Increases in waste levels</p>	<p><b>Measures from the Local Area Plan</b></p> <ul style="list-style-type: none"> <li>• Policy UI 1 – Water Supply, Wastewater and Combined Drainage Infrastructure</li> <li>• Policy UI 2 – Irish Water's Water Services Strategic Plan</li> <li>• Objective UI 1 – Irish Water &amp; Water and Wastewater Projects</li> <li>• Objective UI 2 – Water Supply &amp; Water Conservation</li> <li>• Objective UI 3 – Wastewater Disposal</li> <li>• Objective UI 4 – Connections to the Public Sewer &amp; Public Water Mains</li> <li>• Objective UI 5 – Surface Water Drainage and Sustainable Drainage Systems</li> <li>• Objective UI 6 – Wastewater Treatment Plant Buffer</li> <li>• Policy WM 1 – Waste Management</li> <li>• Policy WM 2 – Waste Management Plan</li> <li>• Objective WM 1 – Waste Prevention, Reduction &amp; Recycling</li> <li>• Objective WM 2 – Bring Bank Facility</li> </ul> <p><b>Measures from the Galway County Development Plan as varied</b></p> <ul style="list-style-type: none"> <li>• Policies WS 1 WS 2 WS 3 WS 4 WS 5 WS 6 WW 1 WM1 WM2</li> <li>• 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, WM 1, WM 2, WM 3, WM 4, WM 5, WM 6, CS 4, RHO 5 and EDT 5</li> </ul>

<b>Likely Significant Effect, if unmitigated</b>	<b>Mitigation Measures, including:</b>
<p>Emissions to air including greenhouse gas emissions and other emissions.</p> <p>Climate adaptation interactions</p>	<p><b>Measures from the Local Area Plan</b></p> <ul style="list-style-type: none"> <li>• Objective DS 9 – Climate Change &amp; Adaptation</li> <li>• Objective CF 9 – Amenity Network</li> <li>• Policy ST 1 – Sustainable Transport, Walking and Cycling</li> <li>• Objective ST 1 – Integrated Land Use and Transport</li> <li>• Objective ST 2 – Sustainable Transportation</li> <li>• Objective ST 3 – Walking</li> <li>• Objective ST 4 – Cycling</li> <li>• Objective ST 5 – Bicycle Parking</li> <li>• Objective ST 6 – Walking &amp; Cycling Strategy</li> <li>• Objective ST 7 – Pedestrian Crossings</li> <li>• Objective ST 8 – Amenity Walking/Cycling Network</li> <li>• Objective ST 9 – Mobility Management Plans</li> <li>• Objective ST 10 – Charging Points for Electric Vehicles</li> <li>• Objective ST 11 – Bus Facilities &amp; Services</li> <li>• Objective TI 7 – Noise</li> <li>• Objective TI 10 – Preparation of a Revised Traffic Management Plan</li> <li>• Objective TI 14 – Junction Upgrade</li> <li>• Objective TI 14 – New Developments &amp; Connection to the Town Footpath &amp; Lighting Network</li> <li>• Objective TI 15 – Footpath, Public Lighting, Cycle Provision &amp; Traffic Calming</li> <li>• Policy ENV 1 – Climate Change Policy</li> <li>• Objective ENV 1 – Climate Change &amp; The National Climate Change Adaptation Framework</li> <li>• Objective ENV 2 – Climate Change &amp; Green Infrastructure</li> <li>• Objective ENV 3 – Air Quality</li> <li>• Objective ENV 4 – Air Purification</li> <li>• DM Guideline EC 1 – Energy Statements</li> <li>• Objective UD 4 – Green Network and Landscaping</li> </ul> <p><b>Measures from the Galway County Development Plan as varied</b></p> <ul style="list-style-type: none"> <li>• Strategic Aims 6, 7 and 11</li> <li>• Policies CC 1, CC2, CC3, CC4, CC5, CC6, CC 7, TI 1, TI 2, TI 3 and TI 4</li> <li>• Objectives DS 1, DS 2, DS 3, DS 8, CS 3, CS 5, TI 1, TI 2, TI 3, TI 4, TI 16, TI 17, TI 18, TI 19, TI 20, TI 21, DS 8, CC1, CC 2, CC3, CC 4 and CC5</li> </ul>

<b>Likely Significant Effect, if unmitigated</b>	<b>Mitigation Measures, including:</b>
<p>Effects on entries to the Record of Monuments and Places and other archaeological heritage</p> <p>Effects on entries to the Records of Protected Structures, Architectural Conservation Areas and other architectural heritage</p>	<p><b>Measures from the Local Area Plan</b></p> <ul style="list-style-type: none"> <li>• Objective ED 6 – Tourism Development</li> <li>• Objective ED 7 – Visual Quality Working Environments</li> <li>• DM Guideline ED2 – Design and Access Statements</li> <li>• Objective UD 6 – Design and Access Statements</li> <li>• DM Guideline UD1 Design and Access Statements</li> <li>• Policy HC 1 – Built Heritage</li> <li>• Policy HC 2 – Cultural Heritage</li> <li>• Objective HC 1 – Architectural Heritage and Protected Structures</li> <li>• Objective HC 2 – Protected Structures</li> <li>• Objective HC 3 – Architectural Conservation Areas</li> <li>• Objective HC 4 – Development Relating to Protected Structures and ACAs</li> <li>• Objective HC 6 – Demolition</li> <li>• Objective HC 7 – Architectural Conservation Area Appraisal and Management Plan</li> <li>• Objective HC 8 – Vernacular Architecture &amp; Structures of Local Interest</li> <li>• Objective HC 9 – Archaeological Heritage</li> <li>• Objective HC 10 – Archaeological Landscapes</li> <li>• Objective HC 11 – Monuments and Places</li> <li>• Objective HC 12 – Archaeological Assessment</li> <li>• Objective HC 13 – Underwater Archaeological Sites</li> </ul> <p><b>Measures from the Galway County Development Plan as varied</b></p> <ul style="list-style-type: none"> <li>• Policies AH 1, AH 2, ARC 1, ARC 2, ARC 3, ARC 4 and ARC 5</li> <li>• Objectives AH 1, AH 2, AH 3, AH 4, AH 5, AH 6, AH 7, AH 8, AH 9, AH 10, AH 11, ARC 1, ARC 2, ARC 3, ARC 4, ARC 5, ARC 6 and ARC 7</li> </ul>
<p>Occurrence of adverse visual impacts</p>	<p><b>Measures from the Local Area Plan</b></p> <ul style="list-style-type: none"> <li>• Objective ED 7 – Visual Quality Working Environments</li> <li>• DM Guideline ED2 – Design and Access Statements</li> <li>• Policy UD1 – Urban Design and Landscape</li> <li>• Objective UD 1 – High Quality, Contextually Sensitive Design</li> <li>• Objective UD 4 – Green Network and Landscaping</li> <li>• Objective UD 6 – Design and Access Statements</li> <li>• Objective UD 7 – Landscape Character, Values, Sensitivity and Views/Prospects</li> <li>• DM Guideline UD1 Design and Access Statements</li> <li>• Policy NH 1 – Natural Heritage, Landscape and Environment</li> </ul> <p><b>Measures from the Galway County Development Plan as varied</b></p> <ul style="list-style-type: none"> <li>• Policy LCM 1</li> <li>• Objectives LCM 1, LCM 2, LCM 3, FPV 1 and WH 1</li> </ul>



## 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, if unmitigated, of implementing the Plan.

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 environmental effects of grants of permission in the Council will provide monitoring of various indicators and targets on a *grant of permission* basis.

The likely significant effects of development proposals on environmental sensitivities are further determined during the development management process. By documenting this determination - e.g. whether a proposed development will impact upon a Protected Structure, for example - while granting permissions, or at a later date, the requirement to monitor the effects of implementing the Plan can be achieved.

Where significant 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

Article 10 of the SEA Directive requires Member States to monitor the significant environmental effects of the implementation of plans "*in order, inter alia, to identify at an early stage unforeseen adverse effects and to be able to undertake appropriate remedial action.*" Existing monitoring arrangements may be used if appropriate, to avoid duplication of monitoring<sup>40</sup>.

A stand-alone Monitoring Report on the significant environmental effects of implementing the Local Area Plan will be prepared within three years of adopting the Local Area Plan.

In monitoring the effects of the Plan, use will be made of any data collected as part of the monitoring of other land use plans within the County as relevant (including the County Plan). Similarly, data collected for monitoring the effects of the Plan may be used in monitoring the effects of other land use plans within the County.

<sup>40</sup> Chapter 7 Implementation of SEA Directive (2001/42/EC): Assessment of the Effects of Certain Plans and Programmes on the Environment Guidelines for Regional Authorities and Planning Authorities. DoEHLG 2004

## **10.5 Thresholds and Corrective Action**

Thresholds at which corrective action will be considered include:

- The occurrence of flood events;
- Court cases taken by the Department of Culture, 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; and
- Fish kills.

**Table 10.1 Selected Indicators, Targets and Monitoring Sources**

Environmental Component	Selected Indicator(s)	Selected Target(s)	Source (Frequency)	Source of Data	Reporting Responsibility for this Programme
<b>Biodiversity, Flora and Fauna</b>	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 <sup>41</sup>	<ul style="list-style-type: none"> <li>Internal monitoring of environmental likely significant effects of grants of permission (grant by grant).</li> <li>Department of Culture, Heritage and the Gaeltacht report of the implementation of the measures contained in the Habitats Directive - as required by Article 17 of the Directive (every 6 years).</li> <li>National Monitoring Report under Article 12 of the Birds Directive.</li> <li>Consultations with the National Parks and Wildlife Service (at monitoring evaluation - see Section 10.4).</li> </ul>	National Parks and Wildlife Service and Galway County Council	Galway County Council
	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"> <li>Internal monitoring of likely significant environmental effects of grants of permission (grant by grant).</li> <li>CORINE mapping resurvey (every c. 5 years).</li> </ul>	EEA/EPA and Galway County Council	Galway County Council
	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 B3ii: Number of significant impacts on the protection of species listed on Schedule 5 of the Wildlife Act 1976	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 B3ii: No significant impacts on the protection of species listed on Schedule 5 of the Wildlife Act 1976	<ul style="list-style-type: none"> <li>Internal monitoring of likely significant environmental effects of grants of permission (grant by grant).</li> <li>Consultations with the National Parks and Wildlife Service (at monitoring evaluation - see Section 10.4).</li> </ul>	Galway County Council and National Parks and Wildlife Service	Galway County Council
	B4: Population involved in land management	B4: Sustain the population involved in land management	<ul style="list-style-type: none"> <li>Central Statistics Office Population Data (every c. 5 years).</li> </ul>	Central Statistics Office	Galway County Council
<b>Population and Human Health</b>	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"> <li>Consultations with EPA and Health Service Executive (at monitoring evaluation - see Section 10.4).</li> </ul>	EPA and Health Service Executive	Galway County Council

<sup>41</sup> Except as provided for in Section 6(4) of the Habitats Directive, viz. There must be:

- no alternative solution available;
- imperative reasons of overriding public interest for the plan to proceed; and
- adequate compensatory measures in place.

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Environmental Component	Selected Indicator(s)	Selected Target(s)	Source (Frequency)	Source of Data	Reporting Responsibility for this Programme
Soil	S1: Soil extent and hydraulic connectivity	S1: To minimise reductions in soil extent and hydraulic connectivity	<ul style="list-style-type: none"> <li>Internal monitoring of likely significant environmental effects of grants of permission (grant by grant).</li> </ul>	Galway County Council	Galway County Council
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 <i>good status</i> <sup>42</sup> 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"> <li>Internal monitoring of likely significant environmental effects of grants of permission (grant by grant).</li> <li>Data issued under the Water Framework Directive Monitoring Programme for Ireland.</li> <li>EPA Quality of Bathing Water in Ireland reports.</li> </ul>	Galway County Council  EPA	Galway County Council
	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"> <li>Internal monitoring of likely significant environmental effects of grants of permission (grant by grant).</li> <li>Data issued under the Water Framework Directive Monitoring Programme for Ireland (multi-annual).</li> </ul>	Galway County Council  EPA	Galway County Council
	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"> <li>Internal monitoring of likely significant environmental effects of grants of permission (grant by grant).</li> </ul>	Galway County Council	Galway County Council

<sup>42</sup> 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)	Source of Data	Reporting Responsibility for this Programme
<b>Material Assets</b>	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"> <li>Internal monitoring of likely significant environmental effects of grants of permission (grant by grant).</li> </ul>	Galway County Council	Galway County Council
	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"> <li>EPA The Provision and Quality of Drinking Water in Ireland reports (multi-annual).</li> <li>EPA Remedial Action List (every quarter).</li> </ul>	EPA	Galway County Council
	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"> <li>EPA National Waste Reports</li> <li>EPA Ireland's Environment Reports</li> </ul>	EPA	Galway County Council
<b>Air and Climatic Factors</b>	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"> <li>CSO Population Data (every c. 5 years).</li> </ul>	Central Statistics Office	Galway County Council
<b>Cultural Heritage</b>	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"> <li>Internal monitoring of likely significant environmental effects of grants of permission (grant by grant).</li> <li>Consultation with Department of Culture, Heritage and the Gaeltacht (at monitoring evaluation - see Section 10.4).</li> </ul>	Galway County Council and Department of Culture, Heritage and the Gaeltacht/ National Monuments Service	Galway County Council
	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"> <li>Internal monitoring of likely significant environmental effects of grants of permission (grant by grant).</li> <li>Consultation with Department of Culture, Heritage and the Gaeltacht (at monitoring evaluation - see Section 10.4).</li> </ul>	Galway County Council and Department of Culture, Heritage and the Gaeltacht/ Architectural Policy Unit	Galway County Council
<b>Landscape</b>	L1: Number of complaints received from statutory consultees regarding avoidable impacts on the landscape - especially with regard to landscapes that 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 landscapes that 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"> <li>Internal monitoring of likely significant environmental effects of grants of permission (grant by grant).</li> </ul>	Galway County Council	Galway County Council

## Appendix I Relationship with Legislation and Other Plans and Programmes

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

<b>European</b>				
<b>Directive/ Plan/ Programme</b>	<b>Highest Level Aim/ Purpose/ Objective</b>	<b>Lower level objectives, actions etc.</b>	<b>Relevant legislation etc. in Ireland</b>	<b>Relevance to the Plan</b>
EU Green Infrastructure Strategy	Aims to create a robust enabling framework in order to promote and facilitate Green Infrastructure (GI) projects	<ul style="list-style-type: none"> <li>Promoting GI in the main EU policy areas;</li> <li>Supporting EU-level GI projects;</li> <li>Improving access to finance for GI projects, and</li> <li>Improving information and promoting innovation</li> </ul>	not applicable	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management
UN Kyoto Protocol (2ND Kyoto Period), the Second European Climate Change Programme (ECCP II), Paris climate conference (COP21) 2015	<p>The UN Kyoto Protocol set of policy measures to reduce greenhouse gas emissions</p> <p>The Second European Climate Change Programme (ECCP II) aims to identify and develop all the necessary elements of an EU strategy to implement the Kyoto Protocol</p> <p>At the Paris climate conference (COP21) in December 2015, 195 countries adopted the first-ever universal, legally binding global climate deal. The agreement sets out a global action plan to put the world on track to avoid dangerous climate change by limiting global warming to well below 2°C.</p>	<ul style="list-style-type: none"> <li>The Kyoto Protocol is implemented through the European Climate Change Programme (ECCP II)</li> <li>EU member states implement measures to improve on or compliment the specified measures and policies arising from the ECCP</li> <li>Under COP21, governments agreed to come together every 5 years to set more ambitious targets as required by science; report to each other and the public on how well they are doing to implement their targets; track progress towards the long-term goal through a robust transparency and accountability system</li> </ul>	National Policy Position and final Heads of the Climate Action and Low-Carbon Development Bill	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management
EU 2020 climate and energy package	<ul style="list-style-type: none"> <li>Binding legislation which aims to ensure the European Union meets its climate and energy targets for 2020</li> <li>Aims to achieve a 20% reduction in EU greenhouse gas emissions from 1990 levels</li> <li>Aims to raise the share of EU energy consumption produced from renewable resources to 20%</li> <li>Achieve a 20% improvement in the EU's energy efficiency</li> </ul>	<p>Four pieces of complimentary legislation:</p> <ul style="list-style-type: none"> <li>Reform of the EU Emissions Trading System (EU ETS) to include a cap on emission allowances in addition to existing system of national caps</li> <li>Member States have agreed national targets for non-EU ETS emissions from countries outside the EU</li> <li>Meet the national renewable energy targets of 16% for Ireland by 2020</li> <li>Preparing a legal framework for technologies in carbon capture and storage</li> </ul>	<p>The Framework for Climate Change Bill</p> <p>European Communities (Renewable Energy) Regulations 2011 (S.I. No. 147/2011)</p>	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management
Habitats Directive (92/43/EEC)	<ul style="list-style-type: none"> <li>Promote the preservation, protection and improvement of the quality of the environment, including the conservation of natural habitats and of wild fauna and flora</li> <li>Contribute towards ensuring biodiversity through</li> </ul>	<ul style="list-style-type: none"> <li>Propose and protect sites of importance to habitats, plant and animal species</li> <li>Establish a network of European sites hosting the natural habitat types listed in Annex I and habitats of the species listed in Annex II, to enable the</li> </ul>	European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477/2011)	The Council is obliged to comply with, as relevant and appropriate, the requirements of the Directive and transposing

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	<p>the conservation of natural habitats and of wild fauna and flora</p> <ul style="list-style-type: none"> <li>• Maintain or restore to favourable conservation status, natural habitats and species of wild fauna and flora of Community interest</li> <li>• Promote the maintenance of biodiversity, taking account of economic, social, cultural and regional requirements.</li> </ul>	<p>natural habitat types and the species' habitats concerned to be maintained or, where appropriate, restored at a favourable conservation status in their natural range</p> <ul style="list-style-type: none"> <li>• Carry out comprehensive assessment of habitat types and species present</li> <li>• Establish a system of strict protection for the animal species and plant species listed in Annex IV</li> </ul>	<p>The Wildlife Act 1976 and the Wildlife (Amendment) Act 2000</p>	<p>regulations</p>
<p>Birds Directive (2009/147/EC)</p>	<ul style="list-style-type: none"> <li>• Conserve all species of naturally occurring birds in the wild state including their eggs, nests and habitats</li> <li>• Protect, manage and control these species and comply with regulations relating to their exploitation</li> <li>• The species included in Annex I shall be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution</li> </ul>	<ul style="list-style-type: none"> <li>• Preserve, maintain or re-establish a sufficient diversity and area of habitats for all the species of birds referred to in Annex 1.</li> <li>• Preserve, maintain and establish biotopes and habitats to include the creation of protected areas (Special Protection Areas); ensure the upkeep and management in accordance with the ecological needs of habitats inside and outside the protected zones, re-establish destroyed biotopes and creation of biotopes</li> <li>• Measures for regularly occurring migratory species not listed in Annex I is required as regards their breeding, moulting and wintering areas and staging posts along their migration routes. The protection of wetlands and particularly wetlands of international importance.</li> </ul>	<p>European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477/2011)</p>	<p>The Council is obliged to comply with, as relevant and appropriate, the requirements of the Directive and transposing regulations</p>
<p>European Union Biodiversity Strategy to 2020</p>	<ul style="list-style-type: none"> <li>• Aims to halt or reverse biodiversity loss and speed up the EU's transition towards a resource efficient and green economy</li> <li>• Halting the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restoring them in so far as feasible</li> </ul>	<ul style="list-style-type: none"> <li>• Outlines six targets and twenty actions to aid European in halting the loss to biodiversity and eco-system services</li> <li>• The six targets cover: <ul style="list-style-type: none"> <li>○ Full implementation of EU nature legislation to protect biodiversity</li> <li>○ Maintaining, enhancing and protecting for ecosystems, and green infrastructure</li> <li>○ Ensuring sustainable agriculture, and forestry</li> <li>○ Sustainable management of fish stocks</li> <li>○ Reducing invasive alien species</li> <li>○ Addressing the global need to contribute towards averting global biodiversity loss</li> </ul> </li> </ul>	<p>Actions for Biodiversity 2011-2016 Ireland's National Biodiversity Plan, 2011</p>	<p>To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management</p>
<p>The Clean Air for Europe Directive (2008/50/EC)</p>	<ul style="list-style-type: none"> <li>• The CAFE Directive merges existing legislation into a single directive (except for the fourth daughter directive)</li> <li>• Sets new air quality objectives for PM2.5 (fine particles) including the limit value and exposure related objectives</li> <li>• Accounts for the possibility to discount natural sources of pollution when assessing compliance against limit values</li> </ul>	<ul style="list-style-type: none"> <li>• Sets objectives for ambient air quality</li> <li>• designed to avoid, prevent or reduce harmful effects on human health and the environment as a whole</li> <li>• Aims to assess the ambient air quality in Member States on the basis of common methods and criteria;</li> <li>• Obtains information on ambient air quality in order to help combat air pollution and nuisance and to monitor long-term</li> <li>• trends and improvements resulting from national</li> </ul>	<p>Air Quality Standards Regulations 2011 (S.I. No. 180 of 2011)</p> <p>Arsenic, Cadmium, Mercury, Nickel and Polycyclic Aromatic Hydrocarbons in Ambient Air Regulations 2009 (S.I. No. 58 of 2009)</p>	<p>The Council is obliged to comply with, as relevant and appropriate, the requirements of the Directive and transposing regulations</p>

<p>Fourth Daughter Directive (2004/107/EC)</p>	<ul style="list-style-type: none"> <li>Allows the possibility for time extensions of three years (PM10) or up to five years (NO2, benzene) for complying with limit values, based on conditions and the assessment by the European Commission.</li> <li>The Fourth Daughter Directive lists pollutants, target values and monitoring requirements for the following: arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air</li> </ul>	<p>and Community</p> <ul style="list-style-type: none"> <li>measures;</li> <li>Ensures that such information on ambient air quality is made available to the public;</li> <li>Aims to maintain air quality where it is good and improving it in other cases;</li> <li>Aims to promote increased cooperation between the Member States in reducing air pollution.</li> </ul>		
<p>Noise Directive 2002/49/EC</p>	<p>The Noise Directive - Directive 2002/49/EC relating to the assessment and management of environmental noise - is part of an EU strategy setting out to reduce the number of people affected by noise in the longer term and to provide a framework for developing existing Community policy on noise reduction from source.</p>	<p>The Directive requires competent authorities in Member States to:</p> <ul style="list-style-type: none"> <li>Draw up strategic noise maps for major roads, railways, airports and agglomerations, using harmonized noise indicators and use these maps to assess the number of people which may be impacted upon as a result of excessive noise levels;</li> <li>Draw up action plans to reduce noise where necessary and maintain environmental noise quality where it is good; and</li> <li>Inform and consult the public about noise exposure, its effects, and the measures considered to address noise.</li> </ul> <p>The Directive does not set any limit value, nor does it prescribe the measures to be used in the action plans, which remain at the discretion of the competent authorities.</p>	<p>Environmental Noise Regulations 2006 (S.I. No. 140 of 2006)</p>	<p>The Council is obliged to comply with, as relevant and appropriate, the requirements of the Directive and transposing regulations</p>
<p>Floods Directive (2007/60/EC)</p>	<ul style="list-style-type: none"> <li>Establishes a framework for the assessment and management of flood risks</li> <li>Reduce adverse consequences for human health, the environment, cultural heritage and economic activity associated with floods in the Community</li> </ul>	<ul style="list-style-type: none"> <li>Assess all water courses and coast lines at risk from flooding through Flood Risk Assessment</li> <li>Prepare flood hazard maps and flood risk maps outlining the extent or potential of flooding and assets and humans at risk in these areas at River Basin District level (Article 3(2) (b)) and areas covered by Article 5(1) and Article 13(1) (b) in accordance with paragraphs 2 and 3</li> <li>Implement flood risk management plans and take adequate and coordinated measures to reduce flood risk for the areas covered by the Articles listed above</li> <li>Inform the public and allow the public to participate in planning process</li> </ul>	<p>European Communities (Assessment and Management of Flood Risks) Regulations (S.I. 122/2010)</p> <p>European Union (Environmental Impact Assessment) (Flood Risk) Regulations 2012 (S.I. No. 470/2012)</p>	<p>The Council is obliged to comply with, as relevant and appropriate, the requirements of the Directive and transposing regulations</p>
<p>Water Framework Directive (2000/60/EC)</p>	<ul style="list-style-type: none"> <li>Establish a framework for the protection of water bodies to include inland surface waters, transitional waters, coastal waters and groundwater and their dependent wildlife and habitats</li> <li>Preserve and prevent the deterioration of water status and where necessary improve and maintain "good status" of water bodies</li> <li>Promote sustainable water usage</li> <li>The Water Framework Directive repealed the</li> </ul>	<ul style="list-style-type: none"> <li>Protect, enhance and restore all water bodies and meet the environmental objectives outlined in Article 4 of the Directive</li> <li>Achieve "good status" for all waters</li> <li>Manage water bodies based on identifying and establishing river basins districts</li> <li>Involve the public and streamline legislation</li> <li>Prepare and implement a River Basin Management Plan for each river basin districts identified and a Register of Protected Areas</li> </ul>	<p>European Communities (Water Policy) Regulations 2003 (S.I. No. 722 of 2003) (as amended)</p>	<p>The Council is obliged to comply with, as relevant and appropriate, the requirements of the Directive and transposing regulations</p>



	<p>following Directives:</p> <ul style="list-style-type: none"> <li>o The Drinking Water Abstraction Directive</li> <li>o Sampling Drinking Water Directive</li> <li>o Exchange of Information on Quality of Surface Freshwater Directive</li> <li>o Shellfish Directive</li> <li>o Freshwater Fish Directive</li> <li>o Groundwater (Dangerous Substances) Directive</li> <li>o Dangerous Substances Directive</li> </ul>	<ul style="list-style-type: none"> <li>• Establish a programme of monitoring for surface water status, groundwater status and protected areas</li> <li>• Recover costs for water services</li> </ul>		
Groundwater Directive (2006/118/EC)	<ul style="list-style-type: none"> <li>• Protect, control and conserve groundwater</li> <li>• Prevent the deterioration of the status of all bodies of groundwater</li> <li>• Implements measures to prevent and control groundwater pollution, including criteria for assessing good groundwater chemical status and criteria for the identification of significant and sustained upward trends and for the definition of starting points for trend reversals.</li> </ul>	<ul style="list-style-type: none"> <li>• Meet minimum groundwater standards listed in Annex 1 of Directive</li> <li>• Meet threshold values adopted by national legislation for the pollutants, groups of pollutants and indicators of pollution which have been identified as contributing to the characterisation of bodies or groups of bodies of groundwater as being at risk, also taking into account Part B of Annex II</li> </ul>	European Communities Environmental Objectives (Groundwater) Regulations 2010 (S.I. No. 9/2010) (as amended)	The Council is obliged to comply with, as relevant and appropriate, the requirements of the Directive and transposing regulations
Drinking Water Directive (98/83/EC)	<ul style="list-style-type: none"> <li>• Improve and maintain the quality of water intended for human consumption</li> <li>• Protect human health from the adverse effects of any contamination of water intended for human consumption by ensuring that it is wholesome and clean</li> </ul>	<ul style="list-style-type: none"> <li>• Set values applicable to water intended for human consumption for the parameters set out in Annex I</li> <li>• Set values for additional parameters not included in Annex I, where the protection of human health within national territory or part of it so requires. The values set should, as a minimum, satisfy the requirements of Article 4(1) (a)</li> <li>• Implement all measures necessary to ensure that regular monitoring of the quality of water intended for human consumption is carried out, in order to check that the water available to consumers meets the requirements of this Directive and in particular the parametric values set in accordance with Article 5</li> <li>• Ensure that any failure to meet the parametric values set in accordance with Article 5 is immediately investigated in order to identify the cause</li> <li>• Ensure that the necessary remedial action is taken as soon as possible to restore its quality and shall give priority to their enforcement action</li> <li>• Undertake remedial action to restore the quality of the water where necessary to protect human health</li> <li>• Notify consumers when remedial action is being undertaken except where the competent authorities consider the non-compliance with the parametric value to be trivial</li> </ul>	<p>European Union (Drinking Water) Regulations 2014 (S.I. No. 106 of 2007) (as amended)</p> <p>European Communities (Water Policy) Regulations 2003 (S.I. No. 722 of 2003)</p>	The Council is obliged to comply with, as relevant and appropriate, the requirements of the Directive and transposing regulations

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<p>Urban Waste Water Treatment Directive (91/271/EEC)</p>	<ul style="list-style-type: none"> <li>This Directive concerns the collection, treatment and discharge of urban waste water and the treatment and discharge of waste water from certain industrial sectors</li> <li>The objective of the Directive is to protect the environment from the adverse effects of waste water discharges</li> </ul>	<ul style="list-style-type: none"> <li>Urban waste water entering collecting systems shall before discharge, be subject to secondary treatment</li> <li>Annex II requires the designation of areas sensitive to eutrophication which receive water discharges</li> <li>Establishes minimum requirements for urban waste water collection and treatment systems in specified agglomerations to include special requirements for sensitive areas and certain industrial sectors</li> </ul>	<p>European Communities (Urban Waste Water Treatment) Regulations 2001 (S.I. No. 254/2001)</p>	<p>The Council is obliged to comply with, as relevant and appropriate, the requirements of the Directive and transposing regulations</p>
<p>Environmental Liability Directive (2004/35/EC)</p>	<ul style="list-style-type: none"> <li>Establish a framework of environmental liability based on the 'polluter-pays' principle, to prevent and remedy environmental damage</li> </ul>	<ul style="list-style-type: none"> <li>Relates to environmental damage caused by any of the occupational activities listed in Annex III, and to any imminent threat of such damage occurring by reason of any of those activities; damage to protected species and natural habitats caused by any occupational activities other than those listed in Annex III, and to any imminent threat of such damage occurring by reason of any of those activities, whenever the operator has been at fault or negligent</li> <li>Where environmental damage has not yet occurred but there is an imminent threat of such damage occurring, the operator shall, without delay, take the necessary preventive measures</li> <li>Where environmental damage has occurred the operator shall, without delay, inform the competent authority of all relevant aspects of the situation and take all practicable steps to immediately control, contain, remove or otherwise manage the relevant contaminants and/or any other damage factors in order to limit or to prevent further environmental damage and adverse effects on human health or further impairment of services and the necessary remedial measures, in accordance with Article 7.</li> <li>The operator shall bear the costs for the preventive and remedial actions taken pursuant to this Directive</li> <li>The competent authority shall be entitled to initiate cost recovery proceedings against the operator</li> <li>The operator may be required to provide financial security guarantees to ensure their responsibilities under the directive are met</li> </ul>	<p>European Communities (Environmental Liability) Regulations, 2008</p>	<p>The Council is obliged to comply with, as relevant and appropriate, the requirements of the Directive and transposing regulations</p>
<p>SEA Directive (2001/42/EC)</p>	<ul style="list-style-type: none"> <li>Contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development</li> <li>Provide for a high level of protection of the environment by carrying out an environmental assessment of plans and programmes which are likely to have significant effects on the environment</li> </ul>	<ul style="list-style-type: none"> <li>Carry out and environmental assessment for plans or programmes referred to in Articles 2 to 4</li> <li>Prepare an environmental report which identifies, describes and evaluates the likely significant effects on the environment of implementing the plan or programme and reasonable alternatives that consider the objectives and the geographical scope of the plan or programme</li> <li>Consult with relevant authorities, stakeholders and public allowing sufficient time to make a submission</li> </ul>	<p>European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. No. 435/ 2004) (as amended)</p> <p>Planning and Development (Strategic Environmental Assessment) Regulations</p>	<p>The Council is obliged to comply with, as relevant and appropriate, the requirements of the Directive and transposing regulations</p>

		<ul style="list-style-type: none"> <li>• Consult other Member States where the implementation of a plan or programme is likely to have transboundary environmental effects</li> <li>• Inform relevant authorities and stakeholders on the decision to implement the plan or programme</li> <li>• Issue a statement to include requirements detailed in Article 9 of the Directive</li> <li>• Monitor and mitigate significant environmental effects identified by the assessment</li> </ul>	<p>2004 (S.I. No. 436/2004) (as amended)</p>	
<p>EIA Directive (2011/92/EU as amended by 2014/52/EU)</p>	<ul style="list-style-type: none"> <li>• Requires the assessment of the environmental effects of public and private projects which are likely to have significant effects on the environment</li> <li>• Aims to assess and implement avoidance or mitigation measures to eliminate environmental effects, before consent is given of projects likely to have significant effects on the environment by virtue, inter alia, of their nature, size or location are made subject to a requirement for development consent and an assessment with regard to their effects. Those projects are defined in Article 4</li> </ul>	<ul style="list-style-type: none"> <li>• All projects listed in Annex I are considered as having significant effects on the environment and require an EIA</li> <li>• For projects listed in Annex II, a "screening procedure" is required to determine the effects of projects on the basis of thresholds/criteria or a case by case examination. This should take into account Annex III.</li> <li>• The environmental impact assessment shall identify, describe and assess in an appropriate manner, in the light of each individual case and in accordance with Articles 4 to 12, the direct and indirect effects of a project on the following factors: human beings, fauna and flora, soil, water, air, climate and the landscape, material assets and the cultural heritage, the interaction between each factor</li> <li>• Consult with relevant authorities, stakeholders and public allowing sufficient time to make a submission before a decision is made</li> <li>• The information to be provided by the developer in accordance with paragraph 1 shall include at least:             <ul style="list-style-type: none"> <li>○ a description of the project comprising information on the site, design and size of the project;</li> <li>○ a description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects;</li> <li>○ the data required to identify and assess the main effects which the project is likely to have on the environment;</li> <li>○ an outline of the main alternatives studied by the developer and an indication of the main reasons for his choice, taking into account the environmental effects;</li> <li>○ a non-technical summary of the information referred to each of the above.</li> </ul> </li> </ul>	<p>European Communities (Environmental Impact Assessment) Regulations 1989 (S.I. No. 349/1989) (as amended)</p> <p>European Union (Environmental Impact Assessment) (Flood Risk) Regulations 2012 (S.I. No. 470/2012)</p>	<p>The Council is obliged to comply with, as relevant and appropriate, the requirements of the Directive and transposing regulations</p>

<b>National/Regional</b>				
<b>Plan/Programme</b>	<b>Highest Level Aim/ Purpose/ Objective</b>	<b>Lower level relevant objectives, actions etc.</b>	<b>Relevant legislation</b>	<b>Relevance to the Plan</b>
Infrastructure and Capital Investment 2012-16: Medium Term Exchequer Framework	<ul style="list-style-type: none"> <li>Reviews infrastructure and capital spending over a medium timeframe to ensure investment is made in the best areas</li> <li>Identifies gaps in existing infrastructure that require addressing to aid economic recovery, social cohesion and environmental sustainability</li> </ul>	<p>The approach identifies four main components of the investment strategy as follows:</p> <ul style="list-style-type: none"> <li>Economic infrastructure – encompassing transport networks, energy provision and telecommunications capacity</li> <li>Investment in the productive sector and human capital – such as direct supports for enterprise development; science, technology and innovation advancement; supports for tourism, agriculture, fisheries and forestry; and capital investment in education infrastructure</li> <li>Environmental infrastructure – including our waste and water systems and investment for environmental sustainability</li> <li>Critical social investment – such as the health service and social housing programmes</li> </ul>	not applicable	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management
Smarter Travel Initiative 2012-2016	<ul style="list-style-type: none"> <li>Sustainable transport investment programme to encourage transport initiatives such as cycling, car sharing, the use of public transport etc.</li> </ul>	<ul style="list-style-type: none"> <li>Certain towns were targeted demonstration areas for smarter transport initiatives and allocated funds to implement same</li> </ul>	not applicable	In combination with this Initiative the Plan will contribute towards smarter travel and associated positive environmental effects.
Smarter Travel – A Sustainable Transport Future – A New Transport Policy for Ireland 2009-2020 (2009)	<ul style="list-style-type: none"> <li>Outlines a policy for how a sustainable travel and transport system can be achieved</li> <li>Sets out five key goals: <ul style="list-style-type: none"> <li>To reduce overall travel demand.</li> <li>To maximise the efficiency of the transport network.</li> <li>To reduce reliance on fossil fuels.</li> <li>To reduce transport emissions.</li> <li>To improve accessibility to transport.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Others lower level aims include: <ul style="list-style-type: none"> <li>reduce distance travelled by private car and encourage smarter travel, including focusing population growth in areas of employment and to encourage people to live in close proximity to places of employment</li> <li>ensuring that alternatives to the car are more widely available, mainly through a radically improved public transport service and through investment in cycling and walking</li> <li>improving the fuel efficiency of motorised transport through improved fleet structure, energy efficient driving and alternative technologies</li> <li>strengthening institutional arrangements to deliver the targets</li> </ul> </li> </ul>	not applicable	In combination with this Policy the Plan will contribute towards smarter travel and associated positive environmental effects.
Ireland's First National Cycle Policy Framework (2009)	<ul style="list-style-type: none"> <li>Outlines objectives and actions aimed at developing a strong cycle network in Ireland</li> <li>Sets out 19 specific objectives, and details the 109 actions, aimed at ensuring that a cycling culture is developed</li> </ul>	<ul style="list-style-type: none"> <li>Sets a target where 10% of all journeys will be made by bike by 2020</li> <li>Proposes the planning, infrastructure, communication, education and stakeholder participations measures required to implement the initiative</li> </ul>	not applicable	In combination with this Framework the Plan will contribute towards smarter travel and associated positive environmental effects

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<p>Scoping Study for a National Cycle Network (NCN)</p>	<ul style="list-style-type: none"> <li>Investigated the feasibility of developing a National Cycle Network for recreational routes in rural areas, urban areas and connecting larger urban areas</li> <li>The scoping study and subsequent workshops resulted in a recommended National Cycle Network</li> </ul>	<p>not applicable</p>	<p>not applicable</p>	<p>In combination with this Study the Plan will contribute towards smarter travel and associated positive environmental effects.</p>
<p>Strategic Framework for Integrated Land use and Transport (SFILT) – Department of Transport, Tourism and Sport</p>	<ul style="list-style-type: none"> <li>Presents the findings and conclusions of a steering group which was convened and tasked with overseeing the preparation of an integrated, evidence-based framework that would guide key land transport investment decisions.</li> </ul>	<p>Key features of the framework policy include the following:</p> <ul style="list-style-type: none"> <li>Focus on economic growth</li> <li>Principles to frame future investment</li> </ul>	<p>not applicable</p>	<p>In combination with this Study the Plan will contribute towards smarter travel and associated positive environmental effects.</p>
<p>National Climate Change Strategy 2007 – 2012 (2007)</p>	<ul style="list-style-type: none"> <li>Outlines measures to be undertaken to meet the commitments under the Kyoto Protocol</li> <li>Identifies specific measures to meet the commitment up to 2012 and further measures to meet the 2020 target</li> </ul>	<p>not applicable</p>	<p>not applicable</p>	<p>To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management</p>
<p>Climate Action and Low Carbon Development Act 2015</p>	<p>Ireland's national policy in response to climate change is determined, in part, by legislation.</p>	<p>In particular, Ireland's first-ever dedicated climate change law, the Climate Action and Low Carbon Development Act 2015, provides for the making of:</p> <ul style="list-style-type: none"> <li>five-yearly National Mitigation Plans to specify the policy measures to reduce greenhouse gas emissions</li> <li>a National Adaptation Framework to specify the national strategy for the application of adaptation measures in different sectors and by local authorities to reduce the vulnerability of the State to the negative effects of climate change.</li> </ul> <p>The Act also establishes the Climate Change Advisory Council to advise ministers and the government on climate change matters.</p>	<p>not applicable</p>	<p>To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management</p>
<p>National Climate Change Policy Position</p>	<p>National climate policy in Ireland:</p> <ul style="list-style-type: none"> <li>recognises the threat of climate change for humanity;</li> <li>anticipates and supports mobilisation of a comprehensive international response to climate change, and global transition to a low-carbon future;</li> <li>recognises the challenges and opportunities of the broad transition agenda for society; and</li> <li>aims, as a fundamental national objective, to achieve transition to a competitive, low carbon, climate-resilient and environmentally sustainable economy by 2050.</li> </ul>	<p>Key issues for consideration in the on-going evolution of national climate policy include:</p> <ul style="list-style-type: none"> <li>the need to take a long-term view</li> <li>the promotion of sustainable development;</li> <li>the need to ensure that objectives are achieved at the least cost to the national economy and that any measures adopted to achieve those objectives are cost-effective, and do not impose an unreasonable burden on the Exchequer;</li> <li>the need to take advantage of environmentally sustainable economic opportunities both within and outside the State;</li> <li>the need to ensure a coherent and cost-effective approach to the twin challenges of sustainable food production and climate change in the agriculture</li> </ul>	<p>not applicable</p>	<p>To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management</p>

		<p>and land use sector; relevant scientific or technical advice; and</p> <ul style="list-style-type: none"> <li>• relevant research on effective measures for mitigation and adaptation.</li> </ul>		
Delivering a Sustainable Energy Future for Ireland – The Energy Policy Framework 2007 – 2020 (2007)	<ul style="list-style-type: none"> <li>• White paper setting out a framework for delivering a sustainable energy future in Ireland</li> <li>• Outlines strategic Goals for: <ul style="list-style-type: none"> <li>○ Security of Supply</li> <li>○ Sustainability of Energy</li> <li>○ Competitiveness of Energy Supply</li> </ul> </li> </ul>	<p>The underpinning Strategic Goals are:</p> <ul style="list-style-type: none"> <li>• Ensuring that electricity supply consistently meets demand</li> <li>• Ensuring the physical security and reliability of gas supplies to Ireland</li> <li>• Enhancing the diversity of fuels used for power generation</li> <li>• Delivering electricity and gas to homes and businesses over efficient, reliable and secure networks</li> <li>• Creating a stable attractive environment for hydrocarbon exploration and production</li> <li>• Being prepared for energy supply disruptions</li> </ul>	not applicable	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management
National Adaptation Framework 2018	<ul style="list-style-type: none"> <li>• The National Adaptation Framework sets out the national strategy to reduce the vulnerability of the country to the negative effects of climate change and to avail of positive impacts. The National Adaptation Framework outlines a whole of government and society approach to climate adaptation.</li> </ul>	<ul style="list-style-type: none"> <li>• Under the Framework a number of Government Departments will be required to prepare sectoral adaptation plans in relation to a priority area that they are responsible for.</li> </ul>	Climate Action and Low Carbon Development Act, 2015	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management
National Mitigation Plan 2017	<ul style="list-style-type: none"> <li>• The first National Mitigation Plan 2017, prepared by the Department of Communications, Climate Action and Environment, represents an initial step to set Ireland on a pathway to achieve the level of decarbonisation required.</li> </ul>	<p>This is a whole-of-Government Plan, reflecting in particular the central roles of the key Ministers responsible for the sectors covered by the Plan – Electricity Generation, the Built Environment, Transport and Agriculture, as well as drawing on the perspectives and responsibilities of a range of other Government Departments.</p>	Climate Action and Low Carbon Development Act, 2015	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management
National Renewable Energy Action Plan	<ul style="list-style-type: none"> <li>• A strategic approach for Ireland including measures to meet European targets for 2020 including Ireland's 16% target of gross final consumption to come from renewables by 2020</li> </ul>	not applicable	Renewable Energy Directive 2009/28/EC	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management
National Energy Efficiency Action Plan for Ireland 2007-2020 (2007)	<ul style="list-style-type: none"> <li>• This is the second National Energy Efficiency Action Plan for Ireland</li> </ul>	<p>The Plan reviews the original 90 actions outlined in the first Plan and updates/renews/removes them as appropriate</p>	not applicable	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management

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Sustainable Development – A Strategy for Ireland (1997)	<ul style="list-style-type: none"> <li>Provides an analysis and a strategic framework for sustainable development in Ireland</li> <li>Identifies the approaches required to support sustainable development</li> </ul>	not applicable	not applicable	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management
Wildlife Act of 1976  Wildlife (Amendment) Act, 2000	<ul style="list-style-type: none"> <li>The act provides protection and conservation of wild flora and fauna</li> </ul>	<ul style="list-style-type: none"> <li>Provides protection for certain species, their habitats and important ecosystems</li> <li>Give statutory protection to NHAs</li> <li>Enhances wildlife species and their habitats</li> <li>Includes more species for protection</li> </ul>	not applicable	The Council is obliged to comply with, as relevant and appropriate, the requirements of this legislation
Actions for Biodiversity 2011-2016 Ireland's National Biodiversity Plan, 2011 (Draft National Biodiversity Action Plan 2017 - 2021)	<ul style="list-style-type: none"> <li>Sets out strategic objectives, targets and actions to conserve and restore Ireland's biodiversity and to prevent and reduce the loss of biodiversity in Ireland and globally</li> </ul>	<ul style="list-style-type: none"> <li>To mainstream biodiversity in the decision-making process across all sectors</li> <li>To substantially strengthen the knowledge base for conservation, management and sustainable use of biodiversity</li> <li>To increase awareness and appreciation of biodiversity and ecosystems services</li> <li>To conserve and restore biodiversity and ecosystem services in the wider countryside</li> <li>To conserve and restore biodiversity and ecosystem services in the marine environment</li> <li>To expand and improve on the management of protected areas and legally protected species</li> <li>To substantially strengthen the effectiveness of international governance for biodiversity and ecosystem services</li> </ul>	not applicable	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management
The Planning System and Flood Risk Management – Guidelines for Planning Authorities (2009)	<ul style="list-style-type: none"> <li>Sets out comprehensive mechanisms for the incorporation of flood risk identification, assessment and management into the planning process</li> <li>Ensures flood risk is a key consideration in preparing development plans and local area plans and, in the assessment, of planning applications</li> <li>Implementation of the Guidelines is through actions at national, regional, local authority and site-specific levels</li> </ul>	<ul style="list-style-type: none"> <li>Avoid inappropriate development in areas at risk of flooding</li> <li>Avoid new developments increasing flood risk elsewhere, including that which may arise from surface water run-off</li> <li>Ensure effective management of residual risks for development permitted in floodplains</li> <li>Avoid unnecessary restriction of national, regional or local economic and social growth</li> <li>Improve the understanding of flood risk among relevant stakeholders</li> <li>Ensure that the requirements of EU and national law in relation to the natural environment and nature conservation are complied with at all stages of flood risk management.</li> </ul>	<p>Planning and Development Act 2000 (as amended)</p> <p>S.I. No. 122/2010 EC (Assessment and Management of Flood Risks) Regulations 2010</p> <p>S.I. No. 470/2012 European Union (Environmental Impact Assessment) (Flood Risk) Regulations 2012.</p>	The Council is obliged to comply with, as relevant and appropriate, the requirements of these Guidelines

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<p>European Communities (Water Policy) Regulations of 2003 (SI 722 of 2003)</p> <p>European Communities (Water Policy) Regulations of 2003 (SI 350 of 2014)</p>	<ul style="list-style-type: none"> <li>• Transposes the Water Framework Directive into legislation</li> <li>• Outlines the general duty of public authorities in relation to water</li> <li>• Identifies the competent authorities in charge of water policy (amended to Irish Water in 2013) and gives EPA and the CER the authority to regulate and supervise their actions</li> </ul>	<ul style="list-style-type: none"> <li>• Implements River basin districts and characterisation of RBDs and River Basin Management Plans</li> <li>• Requires the public to be informed and consulted on the Plan and for progress reports to be published on RBDs</li> <li>• Implements a Register of protected areas, Classification systems and Monitoring programmes for water bodies</li> <li>• Allows the competent authority to recover the cost of damage/destruction of status of water body</li> <li>• Outlines environmental objectives and programme of measures and environmental quality standards for priority substances</li> <li>• Outlines criteria for assessment of groundwater</li> </ul>	<p>Water Framework Directive 2000/60/EC</p>	<p>The Council is obliged to comply with, as relevant and appropriate, the requirements of this legislation</p>
<p>European Communities Environmental Objectives (Surface waters) Regulations of 2009 (SI 272 of 2009)</p>	<ul style="list-style-type: none"> <li>• Transposes the requirements of the Water Framework Directive into Irish Legislation</li> <li>• 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.</li> </ul>	<p>These Regulations provide, inter alia, for:</p> <ul style="list-style-type: none"> <li>• The establishment of legally binding quality objectives for all surface waters and environmental quality standards for pollutants;</li> <li>• 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;</li> <li>• The classification of surface water bodies by the EPA for the purposes of the Water Framework Directive;</li> <li>• The establishment of inventories of priority substances by the EPA; and</li> <li>• 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.</li> </ul>	<p>Water Framework Directive 2000/60/EC</p>	<p>The Council is obliged to comply with, as relevant and appropriate, the requirements of this legislation</p>
<p>European Communities Environmental Objectives (Groundwater) Regulations of 2010 (SI 9 of 2010)</p>	<ul style="list-style-type: none"> <li>• Transposes the requirements of the Groundwater Directive 2006/118/EC into Irish Legislation</li> </ul>	<ul style="list-style-type: none"> <li>• Outlines environmental objectives to be achieved for groundwater bodies of groundwater against pollution and deterioration in quality</li> <li>• Sets groundwater quality standards</li> <li>• Outlines threshold values for the classification and protection of groundwater</li> </ul>	<p>Water Framework Directive 2000/60/EC</p> <p>Groundwater Directive (2006/118/EC)</p> <p>European Communities Environmental Objectives (Groundwater) Regulations 2010 (S.I. No. 9/2010) (as amended)</p>	<p>The Council is obliged to comply with, as relevant and appropriate, the requirements of this legislation</p>
<p>Water Pollution Acts 1977 to 1990</p>	<ul style="list-style-type: none"> <li>• The Water Pollution Acts allow Local Authorities the authority regulate and supervise actions relating to water in their division</li> </ul>	<p>The Water Pollution Acts enable local authorities to:</p> <ul style="list-style-type: none"> <li>• prosecute for water pollution offences;</li> <li>• attach appropriate pollution control conditions in the licensing of effluent discharges from industry, etc., made to waters;</li> <li>• issue notices ("section 12 notices") to farmers, etc., specifying measures to be taken within a prescribed period to prevent water pollution;</li> </ul>	<p>Water Services Act 2013</p>	<p>The Council is obliged to comply with, as relevant and appropriate, the requirements of this legislation</p>



		<ul style="list-style-type: none"> <li>• issue notices requiring a person to cease the pollution of waters and requiring the mitigation or remedying of any effects of the pollution in the manner and within the period specified in such notices;</li> <li>• seek court orders, including High Court injunctions, to prevent, terminate, mitigate or remedy pollution/its effects;</li> <li>• prepare water quality management plans for any waters in or adjoining their functional areas</li> </ul>		
European Communities (Urban Waste Water Treatment) Regulations 2001 (S.I. No. 254/2001)	<ul style="list-style-type: none"> <li>• Transposes the Urban Waste Water Treatment Directive into Irish Legislation</li> <li>• Aims to protect receiving waters from environmental damage arising from Urban Waste water</li> </ul>	<ul style="list-style-type: none"> <li>• Sets out the legislative requirements for urban waste water collection and treatment systems</li> <li>• Provides for monitoring programmes of discharges</li> <li>• Specifies threshold values and minimum standards for water quality</li> </ul>	Urban Waste Water Treatment Directive (91/271/EEC)	The Council is obliged to comply with, as relevant and appropriate, the requirements of this legislation
Water Services Act 2007  Water Services (Amendment) Act 2012  Water Services Act 2013	<ul style="list-style-type: none"> <li>• Provides the water services infrastructure</li> <li>• Outlines the responsibilities involved in delivering and managing water services</li> <li>• Identifies the authority in charge of provision of water and waste water supply</li> <li>• Irish Water was given the responsibility of the provision of water and waste water services in the amendment act during 2013, therefore these services are no longer the responsibility of the 34 Local Authorities in Ireland</li> </ul>	<p>Key strategic objectives include:</p> <ul style="list-style-type: none"> <li>• Ensuring Irish Water delivers infrastructural projects that meet key public health, environmental and economic objectives in the water services sector.</li> <li>• Ensuring the provision of adequate water and sewerage services in the gateways and hubs listed in the National Spatial Strategy, and in other locations where services need to be enhanced.</li> <li>• Ensuring good quality drinking water is available to all consumers of public and group water supplies, in compliance with national and EU drinking water standards</li> <li>• Ensuring the provision of the remaining infrastructure needed to provide secondary waste water treatment, for compliance with the requirements of the EU Urban Waste water Treatment Directive.</li> <li>• Promoting water conservation through Irish Water's Capital Investment Plan, the Rural Water Programme and other measures.</li> <li>• Monitoring the on-going implementation of septic tanks inspection regime and the National Inspection Plan for Domestic Waste Water Treatment Systems.</li> <li>• Ensuring a fair funding model to deliver water services.</li> <li>• Overseeing the establishment of an economic regulation function under the CER.</li> </ul>	not applicable	The Council is obliged to comply with, as relevant and appropriate, the requirements of this legislation
Irish Water's Water Services Strategic Plan 2015 and associated Proposed Capital Investment Plan 2014-2016	<ul style="list-style-type: none"> <li>• This Water Services Strategic Plan sets out strategic objectives for the delivery of water services over the next 25 years up to 2040. It details current and future challenges which affect the provision of water services and identifies the priorities to be tackled in the short and medium term.</li> </ul>	<p>Six strategic objectives as follows:</p> <ul style="list-style-type: none"> <li>• Meet Customer Expectations.</li> <li>• Ensure a Safe and Reliable Water Supply.</li> <li>• Provide Effective Management of Waste water.</li> <li>• Protect and Enhance the Environment.</li> <li>• Support Social and Economic Growth.</li> <li>• Invest in Our Future.</li> </ul>	The Water Services (No. 2) Act (2013)	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management

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<p>Ireland 2040 - Our Plan, the National Planning Framework</p>	<ul style="list-style-type: none"> <li>The National Planning Framework is the Government's high-level strategic plan for shaping the future growth and development of to the year 2040. It is a framework to guide public and private investment, to create and promote opportunities for people, and to protect and enhance the environment - from villages to cities, and everything around and in between.</li> </ul>	<p>The National Planning Framework and accompanying National Development Plan share ten National Strategic Outcomes as follows:</p> <ol style="list-style-type: none"> <li>1. Compact Growth</li> <li>2. Enhanced Regional Accessibility</li> <li>3. Strengthened Rural Economies and Communities</li> <li>4. Sustainable Mobility</li> <li>5. A Strong Economy, supported by Enterprise, Innovation and Skills</li> <li>6. High-Quality International Connectivity</li> <li>7. Enhanced Amenity and Heritage</li> <li>8. Transition to a Low-Carbon and Climate-Resilient Society</li> <li>9. Sustainable Management of Water and other Environmental Resources</li> <li>10. Access to Quality Childcare, Education and Health Services</li> </ol>	<p>not applicable</p>	<p>To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management</p>
<p>National Development Plan 2018-2027</p>	<p>The National Development Plan sets out the investment priorities that will underpin the successful implementation of the new National Planning Framework. This will guide national, regional and local planning and investment decisions in Ireland over the next two decades, to cater for an expected population increase of over 1 million people.</p>	<p>The National Planning Framework and accompanying National Development Plan share ten National Strategic Outcomes as follows:</p> <ol style="list-style-type: none"> <li>1. Compact Growth</li> <li>2. Enhanced Regional Accessibility</li> <li>3. Strengthened Rural Economies and Communities</li> <li>4. Sustainable Mobility</li> <li>5. A Strong Economy, supported by Enterprise, Innovation and Skills</li> <li>6. High-Quality International Connectivity</li> <li>7. Enhanced Amenity and Heritage</li> <li>8. Transition to a Low-Carbon and Climate-Resilient Society</li> <li>9. Sustainable Management of Water and other Environmental Resources</li> <li>10. Access to Quality Childcare, Education and Health Services</li> </ol>	<p>not applicable</p>	<p>To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management</p>
<p>Grid25 Implementation Programme</p>	<ul style="list-style-type: none"> <li>Framework for the development of the electricity transmission grid in the short, medium and long terms, to support a long-term sustainable and reliable electricity supply</li> </ul>	<ul style="list-style-type: none"> <li>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</li> </ul>	<p>not applicable</p>	<p>To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management</p>

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National Landscape Strategy 2015	<ul style="list-style-type: none"> <li>Aims to implement the European Landscape Convention in Ireland by providing for specific measures to promote the protection, management and planning of the landscape.</li> </ul>	<p>The objectives of the National Landscape Strategy are to:</p> <ul style="list-style-type: none"> <li>Recognise landscapes in law</li> <li>Develop a National Landscape Character Assessment;</li> <li>Develop Landscape Policies;</li> <li>Increase Landscape Awareness;</li> <li>Identity Education, Research and Training Needs; and</li> <li>Strengthen Public Participation.</li> </ul>	not applicable	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management
National Rural Development Programme 2014-2020	<ul style="list-style-type: none"> <li>The National Rural Development Programme, prepared by the Department of Agriculture, Fisheries and Food, sets out a national programme based on the EU framework for rural development and prioritises improving the competitiveness of agriculture, improving the environment and improving the quality of life in rural areas</li> </ul>	<p>At a more detailed level, the programme also:</p> <ul style="list-style-type: none"> <li>Supports structural change at farm level including training young farmers and encouraging early retirement, support for restructuring, development and innovation;</li> <li>Aims to improve the environment, biodiversity and the amenity value of the countryside by support for land management through funds such as Natura 2000 payments etc.; and</li> <li>Aims to improve quality of life in rural areas and encouraging diversification of economic activity through the implementation of local development strategies such as non-agricultural activities</li> </ul>	not applicable	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management
National Forestry Programme 2014-2020	<ul style="list-style-type: none"> <li>Represents Ireland's proposals for 100% State aid funding for a new Forestry Programme for the period 2014 – 2020.</li> </ul>	<p>Measures include the following:</p> <ul style="list-style-type: none"> <li>Afforestation and Creation of Woodland</li> <li>NeighbourWood Scheme</li> <li>Forest Roads</li> <li>Reconstitution Scheme</li> <li>Woodland Improvement Scheme</li> <li>Native Woodland Conservation Scheme</li> <li>Knowledge Transfer and Information Actions</li> <li>Producer Groups</li> <li>Innovative Forest Technology</li> <li>Forest Genetic Reproductive Material</li> <li>Forest Management Plans</li> </ul>	not applicable	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management
National Peatlands Strategy (finalised)	<ul style="list-style-type: none"> <li>This Draft Strategy, prepared by the National Parks and Wildlife Service, sets out principles in relation to Irish peatlands in order to guide Government policy. The 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.</li> </ul>	not applicable	not applicable	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management
National Hazardous Waste Management Plan (EPA) 2014-2020	<ul style="list-style-type: none"> <li>Sets out the priorities to be pursued over the next number of years to continually improve the management of Ireland's hazardous waste.</li> </ul>	<p>The objectives of the revised Plan are:</p> <ul style="list-style-type: none"> <li>To prevent and reduce the generation of hazardous waste by industry and society generally;</li> <li>To maximise the collection of hazardous waste with a view to reducing the environmental and health impacts of any unregulated waste;</li> </ul>	Section 26 of the Waste Management Act 1996 as amended	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for

		<ul style="list-style-type: none"> <li>To strive for increased self-sufficiency in the management of hazardous waste and</li> <li>to minimise hazardous waste export;</li> <li>To minimise the environmental, health, social and economic impacts of hazardous waste generation and management</li> </ul>		environmental protection and management
<b>Regional and Inter-County</b>				
<b>Plan/Programme</b>	<b>Highest Level Aim/ Purpose/ Objective</b>	<b>Lower level relevant objectives, actions etc.</b>	<b>Relevant legislation in Ireland</b>	<b>Relevance to the Plan</b>
River Basin Management Plans	<ul style="list-style-type: none"> <li>Establish a framework for the protection of water bodies at River Basin District (RBD) level</li> <li>Preserve, prevent the deterioration of water status and where necessary improve and maintain <i>good status</i> of water bodies in that RBD</li> <li>Promote sustainable water usage</li> </ul>	<ul style="list-style-type: none"> <li>Aims to protect and enhance all water bodies in the RBD and meet the environmental objectives outlined in Article 4 of the Water Framework Directive</li> <li>Identifies and manages water bodies in the RBD</li> <li>Establishes a programme of measures for monitoring and improving water quality in the RBD</li> <li>Involves the public through consultations</li> </ul>	<p>Water Framework Directive (2000/60/EC)</p> <p>European Communities (Water Policy) Regulations, 2003 (SI No. 722) (as amended)</p> <p>Guidelines for the Establishment of River Basin District Advisory Councils (RBDAC)</p>	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management
<p>Regional Spatial Economic Strategy</p> <p>(Replacing Regional Planning Guidelines; To commence in 2018 and will be adopted over lifetime of the Plan)</p>	<p>Regional Planning Guidelines (RPGs) provide long-term strategic planning frameworks and will be replaced by Regional Spatial and Economic Strategies (RSESs).</p> <p>Each one of the three Regional Assemblies will prepare their own RSES, with the Northern and Western Regional Assembly, of which Galway County Council is part, responsible for the preparation of a RSES for the Northern and Western Region. The Regional Spatial and Economic Strategies will provide a long-term regional level strategic planning and economic framework in support of the implementation of the National Planning Framework.</p>	<ul style="list-style-type: none"> <li>RSESs will give regional effect to the National Planning Framework.</li> <li>Account will be taken in the drafting of RSESs of the proposed spatial plans (i.e. Development Plans) and economic plans (i.e. Local, Economic, Community Plans) of local authorities to ensure that the RSESs are informed by identified local and regional needs.</li> </ul>	not applicable	Implementation of the Guidelines need to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Draft Freshwater Pearl Mussel Sub-Basin Management Plans	<ul style="list-style-type: none"> <li>Identifies the current status of the species and the reason for loss or decline</li> <li>Identifies measure required to improve or restore current status</li> </ul>	<ul style="list-style-type: none"> <li>Identifies pressures on Freshwater Pearl Mussels for each of the designated populations in Ireland</li> <li>Outlines restoration measures required to ensure favourable conservation status</li> </ul>	<p>Water Framework Directive (2000/60/EC) and Habitats Directive (92/43/EEC)</p> <p>European Communities (Water Policy) Regulations 2003 (S.I. No. 722 of 2003)</p> <p>European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477/2011) The Wildlife Act 1976 and the Wildlife (Amendment) Act 2000</p>	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management

Management Plans for European Sites	Article 6(1) of the Habitats Directive requires that Member States establish the necessary conservation measures for Special Area of Conservation involving, if need be, appropriate management plans specifically designed for the sites or integrated into other development plans.	<ul style="list-style-type: none"> <li>Integrated Management Plans can be practical, achievable and sustainable and have regard to all relevant ecological, cultural, social and economic considerations and with special regard to local communities.</li> </ul>	Habitats Directive	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management
Outputs from the Western Catchment Flood Risk Assessment and Management Programme	The national Catchment Flood Risk Assessment and Management (CFRAM) programme commenced in Ireland in 2011 and is being overseen by the Office of Public Works. The CFRAM Programme is intended to deliver on core components of the National Flood Policy, adopted in 2004, and on the requirements of the EU Floods Directive. The Programme is being implemented through CFRAM Studies which are being undertaken for each of the six river basin districts in Ireland.	<p>CFRAM Studies are being undertaken for all River Basin Districts.</p> <p>The studies are focusing on areas known to have experienced flooding in the past and areas that may be subject to flooding in the future either due to development pressures or climate change. Flood Maps have been published and Flood Risk Management Plans are currently being finalised having previously been subject to public consultations.</p>	not applicable	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management
Connacht-Ulster Regional Waste Management Plan	This plan provides the framework for waste management for 6 years and sets out a range of policies and actions in order to meet specified mandatory and performance targets.	The strategic vision of the regional waste plan is to rethink our approach to managing waste, by viewing our waste streams as valuable material resources, leading to a healthier environment and sustainable commercial opportunities for our economy. Strategic objectives: Policy & Legislation; Prevention; Resource Efficiency; Coordination; Infrastructure Planning; Enforcement & Regulations; Protection; and Other Wastes	European Directive (2008/98/EC) on Waste (Waste Framework Directive); Council Decision (200/532/EC) establishing a list of wastes; and Regulation (1013/2006) on the shipments of waste	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management
<b>County and Local</b>				
<b>Plan/Programme</b>	<b>Highest Level Aim/ Purpose/ Objective</b>	<b>Lower level relevant objectives, actions etc.</b>	<b>Relevant legislation in Ireland</b>	<b>Relevance to the Plan</b>
County Development Plans including the Galway County Development Plan 2015-2021 (as varied)	<ul style="list-style-type: none"> <li>Outlines planning objectives for County/Town development over six-year lifespan</li> <li>Strategic framework for planning and sustainable development including those set out in National Spatial Strategy and Regional Planning Guidelines</li> </ul>	<ul style="list-style-type: none"> <li>Identifies future infrastructure, development and zoning required</li> <li>Protects and enhances amenities and environment</li> <li>Guides planning authority in assessing proposals</li> </ul>	Requirement of the Planning and Development Act (2000), as amended	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management
Proposed Variation No. 2 (a) to the Galway County Development Plan 2015-2021	<ul style="list-style-type: none"> <li>Proposed Variation 2 (a) is to integrate a plan (including land use zoning) for sustainable development of Bearna into the County Development Plan.</li> </ul>	<ul style="list-style-type: none"> <li>The Bearna Plan further contributes towards the existing framework for the planned, co-ordinated and sustainable development of the Bearna area, and for enhancement and facilitation of the balancing of economic, social and environmental infrastructure in order to maintain and develop a high quality of life, without compromising the protection of the environment and the needs of future generations</li> </ul>	Planning and Development Act (2000), as amended	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management.

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Variation No. 2 (b) to the Galway County Development Plan 2015-2021	<ul style="list-style-type: none"> <li>Variation 2 (b) is to integrate a plan (including land use zoning) for sustainable development of the Gaeltacht (including the settlements of An Cheathrú Rua An Spidéal and Baile Chláir) into the County Development Plan.</li> </ul>	<ul style="list-style-type: none"> <li>The Gaeltacht Plan further contributes towards the existing framework for the planned, co-ordinated and sustainable development of the Gaeltacht area, and for enhancement and facilitation of the balancing of economic, social and environmental infrastructure in order to maintain and develop a high quality of life, without compromising the protection of the environment and the needs of future generations</li> </ul>	Planning and Development Act (2000), as amended	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management.
Local Area Plans, and where relevant Draft Local Area Plans, including those for Athenry, Craughwell, Gort, Loughrea, Maigh Cullinn, Oranmore, Oughterard, Portumna and Clifden	<ul style="list-style-type: none"> <li>Statutory documents which provide detailed planning policies to ensure proper planning and sustainable development of area</li> <li>Set out objectives for future planning and development</li> </ul>	<ul style="list-style-type: none"> <li>Identifies issues of relevance to the area and outlines principles for future development of area</li> <li>Is consistent with relevant County/Town Development Plans, National Spatial Strategy and Regional Planning Guidelines</li> </ul>	Local Government (Planning and Development) Act, 1963 (as amended)  Requirement of the Planning and Development (Amendment) Act (2010)	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management
Local Economic and Community Plan for County Galway	<ul style="list-style-type: none"> <li>The LCEP is to set out, for a six-year period, the objectives and actions needed to promote and support the economic development and the local and community development of the local authority area, both by itself directly and in partnership with other economic and community development stakeholders.</li> </ul>	<ul style="list-style-type: none"> <li>The LCEP and County Development Plan are closely linked. The LCEP must be consistent with the Core Strategy of the County Plan.</li> </ul>	Local Government Reform Act 2014	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management
Groundwater Protection Scheme for County Galway	<ul style="list-style-type: none"> <li>Aims to preserve the quality of groundwater for drinking purposes and other beneficial uses, and for the benefit of present and future generations.</li> </ul>	The objectives, which are interrelated, are as follows: <ul style="list-style-type: none"> <li>to assist the statutory authorities in meeting their responsibilities for the protection and conservation of groundwater resources;</li> <li>to provide geological and hydrogeological information for the planning process, so that potentially polluting developments can be located and controlled in an environmentally acceptable way;</li> <li>to integrate the factors associated with groundwater contamination risk, to focus attention on the higher risk areas and activities, and to provide a logical structure within which contamination control measures can be selected</li> </ul>	not applicable	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management
Galway County Heritage & Biodiversity Plan 2017-2022	The aim of the Galway County Heritage & Biodiversity Plan 2017- 2022 is to place heritage and biodiversity at the heart of public life in the county through increasing awareness, participation, enjoyment, knowledge and understanding of our shared heritage to lead to its proper conservation, management and protection and safeguarding it for future generations.	Three overarching objectives have been identified for the Heritage & Biodiversity Plan as follows: <ol style="list-style-type: none"> <li>To increase awareness, appreciation and participation</li> <li>To gather and share knowledge</li> <li>To manage and conserve our heritage including biodiversity.</li> </ol>	not applicable	To cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management