

Draft Portumna Local Area Plan 2016-2022 Strategic Environmental Assessment- Non Technical Report



**Forward Planning
Galway County Council**

July 2015



**Comhairle Chontae na Gaillimhe
Galway County Council**

TABLE OF CONTENTS

Section 1	Introduction	5
1.1	Background.....	5
1.2	What is a non-technical summary?	5
1.3	Legislation and Policy Compliance.....	5
1.4	Portumna LAP Area.....	5
1.5	Structure of the Draft Portumna LAP	6
1.6	Strategic Environmental Assessment (SEA) and Environmental Report	7
1.7	Appropriate Assessment.....	7
1.8	Strategic Flood Risk Assessment.....	7
Section 2	Methodology.....	9
2.1	Introduction	9
Section 3	Baseline Environment	10
3.1	Introduction	10
3.2	Biodiversity,Flora and Fauna	10
3.2.1	Introduction	10
3.2.2	Special Protection Areas	10
3.2.3	Special Areas of Conservation	12
3.2.4	Natural Heritage Areas	14
3.2.5	Existing Environmental Problems.....	16
3.2.6	Inter-relationship with Other Environmental Parameters.....	16
3.3	Population & Human Health	17
3.3.1	Introduction	17
3.3.2	Existing Problems	17
3.3.3	Inter-relationship with Other Environmental Parameters.....	17
3.4.1	Introduction	18
3.4.2	Geology and Sites of Geological Interest	18
3.4.3	Existing Problems	18
3.4.4	Inter-relationships with Other Environmental Parameters.....	18
3.5	Water	18
3.5.1	Potential Pressures on Water Quality	18
3.5.2	Introduction	19
3.5.3	Ground Waters	19
3.5.4	Flooding	20
3.5.5	Existing Problems.....	20
3.5.6	Inter-relationships with Other Environmental Parameters	20
3.6	Air and Climatic Factors.....	21
3.6.1	Introduction	21

3.6.2	Radon Gas.....	21
3.6.3	Noise.....	21
3.6.4	Climatic Factors	21
3.6.5	Existing Problems	22
3.6.6	Inter-relationships with Other Environmental Parameters	22
3.7	Material Assets	22
3.7.1	Introduction	22
3.7.2	Waste Water Treatment Infrastructure	22
3.7.3	Sludge Management Plan	23
3.7.4	Surface Water Drainage	23
3.7.5	Drinking Water Supply, Capacity and Demand	23
3.7.6	Waste Management.....	23
3.7.7	Transport	23
3.7.8	Energy/Renewable Energy and Telecommunications Infrastructure	23
3.7.9	Licensed Facilities	24
3.7.10	Existing Problems.....	24
3.7.11	Inter-relationships with Other Environmental Parameters	24
3.8	Cultural Heritage.....	24
3.8.1	Record of Monuments and Places	24
3.8.2	Architectural Heritage	24
3.8.3	Record of Protected Structures	24
3.8.4	Architectural Conservation Areas	25
3.8.5	Existing Problems	25
3.8.6	Inter-relationships with other Environmental Parameters	25
3.9	Landscape	25
3.9.1	Introduction	25
3.9.2	Landscape Character Assessment.....	25
3.9.3	Landscape Character Areas.....	26
3.9.4	Landscape Values	26
3.9.5	Landscape Sensitivity Classes	26
3.9.6	Focal Points and Views	26
3.9.7	Existing Problems.....	26
3.9.8	Inter-relationships with Other Environmental Parameters.....	26
3.10	Overlay of Environmental Sensitivities of the Plan Area	27
Section 4	Review of Relevant Policies, Plans and Programmes.....	28
4.1	Introduction	28
Section 5	Strategic Environmental Objectives	30
5.1	Introduction	30
Section 6	Local Area Plan Alternatives	32

6.1	Introduction	32
6.2	Identification and Description of Alternative Plan Scenarios	32
6.3	Alternatives Considered for SEA	32
6.4	Evaluation of SEA Alternatives	32
6.5	SEA Preferred Alternative.....	33
Section 7	Assessment of Effects of Implementing the Portumna Local Area Plan 2016-2022	35
7.1	Introduction	35
7.2.	Overview of Evaluation of Policies and Objectives	35
7.2.1	Development Strategy	35
7.2.2	Residential Development.....	35
7.2.3.	Social and Community Development	36
7.2.4	Economic Development.....	36
7.2.5	Tourism	36
7.2.6	Transport Infrastructure	37
7.2.7	Utilities Infrastructure, Climate Change & Environmental Management	37
7.2.8	Telecommunications, Energy Infrastructure & Renewable Energy.....	37
7.2.9	Urban Design and Landscape	37
7.2.10	Built and Cultural Heritage.....	38
7.2.11	Natural Heritage and Biodiversity.....	38
7.2.12	Overview of Evaluation of Land Use Zoning Objectives	38
Section 8	Mitigation Measures	44
8.1	Introduction	44
Section 9	Monitoring Measures.....	48
9.1	Introduction	48
Section 10	Conclusion	52

List of Figures

List of Tables.....	4
Figure 1.1 The Draft Portumna Local Area Plan 2016-2022. (Source GCC).	8
Figure 3.1 Designated Sites & National Heritage Areas within and surrounding the Plan Area. (Source GCC). 15	
Figure 3.2 Designated Sites & Natural Heritage Areas within 15km of Plan Area. (Source GCC). ...	16
Figure 3.3 Overlay of environmental sensitivities in the Portumna area and the resultant Sensitivity Mapping. 27	
International/EU Level Water Framework Directive (2000/60/EC)	28
Figure 6.1 Preferred Option	34
Figure 7.1 Draft Portumna Local Area Plan Land Use Zoning.....	42
Figure 7.2 Comparison of Land Use Zoning Map 2005-2011 & Draft Portumna Local Area Plan 2016-2022 Land Use Zoning Map.	43

List of Tables

Table 3.1	Population Trend for Portumna for Census Periods 2002 – 2011	17
Table 5.1	Strategic Environmental Objectives	30
Table 5.1	Strategic Environmental Objectives	31
Table 6.1	Alternatives Option Scores against Strategic Environmental Objectives.....	33
Table 9.1	Monitoring and Reporting Programme.....	51

Section 1 Introduction

1.1 Background

Galway County Council is currently preparing a Local Area Plan (LAP) for Portumna. This Local Area Plan (LAP) is a land use plan and overall strategy for the development of Portumna over the period 2016-2022. The Draft Portumna Local Area Plan area is shown in figure 1.

Strategic Environmental Assessment (SEA) promotes sustainable development through a process which identifies environmental issues during the plan making process which formally and systematically assesses and evaluates the significant environmental effect on implementing the plan, in this case the Portumna Local Area Plan 2016-2022.

The successful implementation of the Plan will have a positive impact on Portumna ensuring that it develops in a proper and sustainable manner, and will also complement the implementation of the *Galway County Development Plan 2015-2021*. Strategic Environmental Assessment (SEA) is a key process that promotes sustainable development and highlights significant environmental issues within the planning regime. The purpose of SEA is to formally and systematically evaluate the likely significant effects of implementing a plan or programme, in this instance the Draft Portumna Local Area Plan. SEA is an iterative process and has informed and influenced the preparation of the Draft LAP. The purpose of the Environmental Report is to identify, describe, and evaluate the likely significant effects on the environment of implementing the proposed Draft Local Area Plan and should be read in conjunction with the Draft Plan itself.

1.2 What is a non-technical summary?

This document is the non-technical summary of the Strategic Environmental Assessment (SEA) which has been prepared as part of the SEA of the *Portumna Local Area Plan 2016-2022* in accordance with the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (as amended 2011). The purpose of the non-technical summary is to provide a summary of the prominent issues raised in the main Environmental Report and also provide a clear understanding of the likely environmental consequences of decisions regarding the making of the *Draft Portumna Local Area Plan 2016-2022*.

1.3 Legislation and Policy Compliance

The European Directive (2001/42/EC) on the Assessment of the Effects of Certain Plans and programmes on the Environment (the SEA Directive), was transposed into national legislation in Ireland by the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. 435/2004), as amended by S.I. 4 200 of 2011 and the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. 436/2004), as amended by S.I. 201 of 2011. *The Galway County Development Plan 2015-2021* is the 'parent' document to this *Draft Portumna Local Area Plan 2016-2022*. The Draft Portumna Local Area Plan is made in accordance with policies and objectives of the *Galway County Development Plan 2015-2021*. *The Galway County Development Plan 2015-2021* transposes National and Regional policies and provides the strategic context for this Local Area Plan. Detailed development objectives and land use zoning specific to the plan area are included in the Local Area Plan.

1.4 Portumna LAP Area

Portumna is located in south-east County Galway, approximately 68 kilometres south east of Galway City, 31 kilometres south of Ballinasloe and 24 kilometres west of Birr. The town straddles the county boundary with County Tipperary and it is recognised as the principle urban setting in south-east County Galway serving an extensive rural hinterland on either side of the county divide. Portumna is served by the National Secondary Road, the N65 and same acts as the main vehicular gateway to the town.

The Galway County Development Plan 2015 – 2021 identifies Portumna as a Key Town/Other Villages in the settlement hierarchy for the county. This entails it functioning as a self sufficient service hub, offering a range services including health, community, finance, employment, educational and retail provision to a

broad catchment population. A significant industry and large employer, Green Isle Foods, has recently announced an expansion plan for its existing operation in the town that will result in additional employment at the facility. Tourism represents a major asset to the town which can be enhanced upon further in the future. Portumna is strategically positioned to benefit from boating and angling activity associated with the Shannon waterway. Furthermore, there is scope to augment the heritage tourism product emanating from Lough Derg, the Dominican Friary, Portumna Castle, Portumna Forest Park and Portumna Union Workhouse for the betterment of the locality.

1.5 Structure of the Draft Portumna LAP

Galway County Council is currently preparing a *Draft Portumna LAP 2016-2022* to replace the previous *Portumna Local Area Plan 2005-2011*. The Draft Portumna Local Area Plan has been prepared by Galway County Council under the provisions of The Planning and Development Act, 2000(as amended).

The plan is structured around a range of policies and objectives that aim to promote the sustainable development of the area over the plan period. The vision for Portumna is as follows:

“To promote Portumna as a sustainable, self-sufficient and vibrant town, which maintains its unique character, capitalises on its existing cultural and tourism assets, while offering a pleasant environment for a growing community, for living, shopping for education, business and recreation. This requires there to be a degree of balance whereby the environmental sensitivities of the area and Portumna Castle and Demense, Portumna Forest Park and Lough Derg in particular are safeguarded, for present and future generations to come”

This strategic vision is informed by guiding principles enabling the overall vision to be achieved, these include the following:

- Realising the town’s potential as one of the ‘Key Towns’ as set out in the *Galway County Development Plan* and attracting the population target established in the Core Strategy up to 2021 and beyond;
- Acknowledging that the medium term growth of Portumna should focus on new sustainable communities and adopt 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);
- Reflecting the needs and aspirations of local communities, business and other interested and affected groups, as expressed through the public consultation process;
- Promoting sustainable land use and transport by capitalising on the opportunity presented by the potential to develop walking and cycling opportunities within the town focused around the forest and the river, so that sustainable travel such as walking, cycling and other smarter travel initiatives, along with integrated land use and transportation become central to the development of new neighbourhoods and the future development of Portumna;
- Maintaining and promoting a strong and vibrant town centre which sustains the ability to attract new businesses and meets the retailing and service needs of the town and its surrounding hinterland, in addition to offering a pleasant and attractive environment for shopping, business, tourism, recreation and living;
- 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;
- Optimising the potential of the town’s strategic location, in close proximity to the River Shannon and as a service hub to an extensive rural hinterland, through facilitating and fostering appropriate tourism and economic development, through setting a positive and flexible framework, which enhances Portumna as a place for tourism and employment opportunities;
- Supporting the delivery of the necessary infrastructure to facilitate the future growth and sustainable development of the town;

- Protecting the natural assets, environment, built heritage and public realm of the town, including its local character for the benefit of future generations to come;
- Promoting a strong sense of community spirit, civic pride, local identity and social inclusiveness in the locality and establishing a strong local identity that is distinguishable from other areas.

A land use zoning map, strategic objectives maps and a land use matrix provides additional details to the above policies and objectives.

1.6 Strategic Environmental Assessment (SEA) and Environmental Report

Strategic Environmental Assessment (SEA) promotes sustainable development through a process which identifies environmental issues during the plan making process which formally and systematically assesses and evaluates the significant environmental effects of implementing the Plan, in this case the *Draft Portumna Local Area Plan 2016-2022*.

SEA is an iterative process which has informed the preparation of the Portumna Local Area Plan, the purpose of which is to identify where potential significant environmental effects may arise and identify mitigation measures which can be integrated into the policies and objectives of the Local Area Plan so as to avoid, reduce or off-set any significant adverse environmental effects of its implementation. This process has been followed in the preparation of the *Portumna Local Area Plan 2016-2022*.

1.7 Appropriate Assessment

The Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora) formed a basis for the designation of Special Areas of Conservation (SACs). Similarly, Special Protection Areas (SPAs) are legislated for under the Birds Directive (Council Directive 79/409/EEC on the Conservation of Wild Birds). Collectively SACs and SPAs are referred to as European sites. Under Article 6(3) of the Habitats Directive an Appropriate Assessment must be undertaken for any plan or programme that is likely to have significant effects on the conservation objectives of a European site. This includes the preparation of the *Portumna Local Area Plan 2016-2022*. The purpose of an Appropriate Assessment is to identify the possible effects of implementing the *Portumna Local Area Plan 2016-2022* on the conservation status of designated European sites within the Plan area. An Appropriate Assessment has been carried out in parallel with the Plan and SEA and a Natura Impact Report accompanies the *Draft Portumna Local Area Plan 2016-2022*.

1.8 Strategic Flood Risk Assessment

A Strategic Flood Risk Assessment has been undertaken to inform the preparation of the Draft Portumna Local Area Plan 2016- 2022 by providing a broad assessment of flood risk throughout the plan area, which in turn informs the land-use zoning and objectives of the Plan in accordance with the Planning System and Flood Risk Management Guidelines, issued under the Planning and Development Act 2000, as amended. The Strategic Flood Risk Assessment accompanies the Plan.

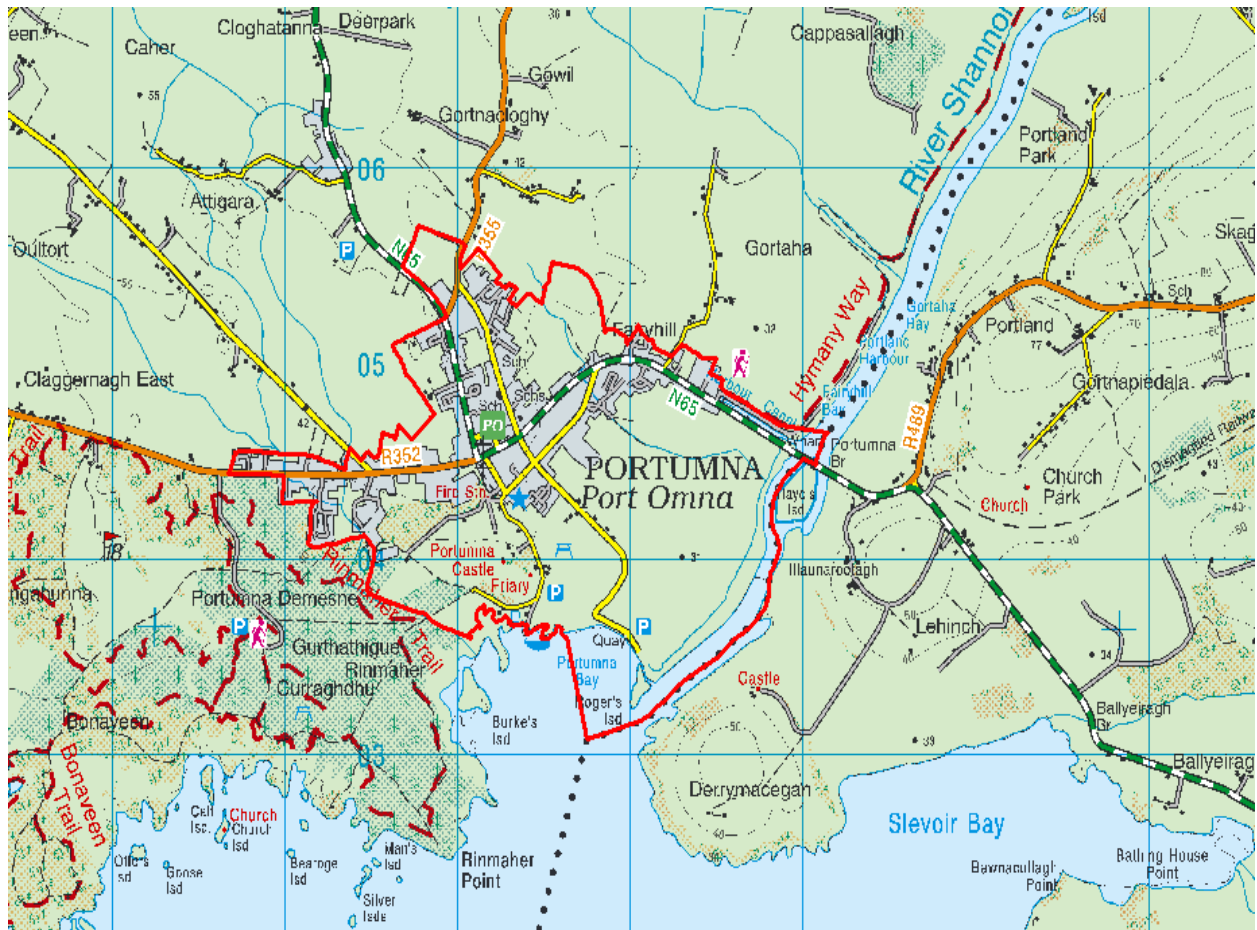


Figure 1.1 The Draft Portumna Local Area Plan 2016-2022. (Source GCC).

Section 2 Methodology

2.1 Introduction

The SEA Directive requires that certain Plans and Programmes, which are likely to have a significant impact on the environment, be subject to the SEA process. The SEA process is broadly comprised of the steps listed in Table 2.1 below.

SEA Step/Stage	Purpose	Status
Screening	This initial step identifies whether or not a particular plan would be likely to have significant environmental effects and would then require a SEA. Given the population of the plan area a full SEA is required.	Completed in January 2015
Scoping	This step helps to identify the range of environmental issues and the level of detail to be included in the Environmental Report, in consultation with the prescribed environmental authorities. Furthermore, submissions made by the public in relation to the preparation of the LAP at pre-draft stage helped to inform the scope of the SEA and Environmental Report.	Completed in April 2015
Environmental Assessment	Assessment of the likely significant impacts on the environment as a result of the Plan or Programme culminating in the production of an Environmental Report. In preparing this Environmental Report a Geographical Information System was established that mapped relevant environmental data on the town and where relevant on areas outside the town boundary. Available policies and legislation were also referred to.	Ongoing process. Draft Portumna Local Area Plan and Environmental Reports published July 2015
Consultation	Consultation on the draft Plan/Programme and associated Environmental Report.	
SEA Statement	Identification of how environmental considerations and consultation have been integrated into the final Plan/Programme culminating in the production of an SEA Statement.	

Section 3 Baseline Environment

3.1 Introduction

This section describes the principal environmental parameters that are of relevance to the functional area of Portumna and its environs and the constraints and targets that this imposes on the Local Area Plan. The following sections summarises key environmental resources and issues for the Portumna area.

3.2 Biodiversity, Flora and Fauna

3.2.1 Introduction

Designated ecological sites in close proximity to the LAP area are shown in Figures 3.1 and Figure 3.2 respectively. The legislative protection of habitats and species provided by the Habitats Directive has been implemented in Ireland and throughout Europe through the establishment of a network of designated conservation areas known as the European site. The European sites include sites designated as Special Areas of Conservation (SACs), under the EU Habitats Directive and Special Protection Areas (SPAs) designated under the EU Birds Directive. Under the Habitats Regulations all designated sites are referred to as European Sites. There are a number of ecologically designated sites within and surrounding the Portumna plan area. It is noted that some of the ecological sensitivities occur beyond the fringes of the plan area. They are included, however, to ensure that areas which could be impacted as a result of implementing the plan are identified and assessed.

Special Protection Areas (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 DEHLG due to their conservation value for birds of importance in the European Union.

There are a number of ecologically designated sites within and surrounding the Portumna plan area. It is noted that some of the ecological sensitivities that have been outlined in this section occur beyond the fringes of the plan area. They are included, however, to ensure that areas which could be impacted as a result of implementing the plan are identified and assessed.

3.2.2 Special Protection Areas

Special Protection Areas (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 DEHLG due to their conservation value for birds of importance in the European Union.

SPA's are designated in areas that support 1% or more of the population of bird species listed on Annex I of the EU Birds Directive; 1% or more of the population of migratory species; and more than 20,000 waterfowl. There are two designated SPAs in the plan area-The Lough Derg(Shannon) (Site Code 004058) and Middle Shannon Callows(Site Code 004096), which transverse the plan area and are summarised as follows:

- **Lough Derg (Shannon) SPA¹**
Site Code: 004058

Lough Derg is the largest of the Shannon lakes, being some 40km long. The greater part of the lake lies on Carboniferous limestone and it shows high hardness levels and alkaline pH from its mainly limestone catchment basin, and it has most recently been classified as a mesotrophic system. Lough Derg designated as a Special Protection Area under the EU Birds Directive is of importance for both breeding and wintering birds. It is a breeding colony for Common Tern, Black-Head Gull, Cormorant, Great Crested Grebe and Tufted Duck. Furthermore, the lake is important for a range of waterfowl species especially diving ducks. Lough Derg is of conservation interest for its fish and freshwater invertebrates. Lampreys, listed on Annex II of the E.U. Habitats Directive, are known to occur and the lake contains a landlocked population of sea lamprey (*Petromyzon marinus*) The endangered fish species Pollan (*Coregonus autumnalis pollan*) is recorded from Lough Derg, one of only four sites (L. Neagh, L. Erne, L.

¹ Text in this section is taken from the National Parks and Wildlife Service's Site Synopses. Full Site Synopses for these designations can be found in **Appendix III**

Ree and L. Derg) in which it occurs. Lough Derg is also a well-known fishing lake with a good Trout (*Salmo trutta*) fishery. Atlantic Salmon (*Salmo salar*) also use the lake as a spawning ground.

Lough Derg was classified as being strongly eutrophic in the early 1990s. Since 1997, a monitoring programme on the Shannon lakes has shown that the symptoms of eutrophication previously documented (i.e. high chlorophyll level and reduced water visibility) have been ameliorated significantly. These reductions have coincided with the invasion of the Shannon system by the Zebra Mussel (*Dreissena polymorpha*), a species which feeds on plankton, and also with measures to reduce phosphorus in sewage plants in the catchment. Enrichment of the lake, both by agricultural run-off and sewage, remains a threat and could affect the bird populations, especially the diving duck. Whilst the presence of Zebra Mussel in Lough Derg appears to have improved water quality in the lake, in the long-term this invasive bivalve may threaten the ecology of the lake. Recreational activities presently cause some disturbance to the birds and an increase in such activities would be of concern.

Lough Derg SPA is of high ornithological importance as it supports nationally important breeding populations of Common Tern, Cormorant, Great Crested Grebe, and probably Tufted Duck and Black-headed Gull. In winter, it has nationally important populations of Tufted Duck and Goldeneye, as well as a range of other species including Whooper Swan. The site is still used on occasions by Greenland White-fronted Goose. The presence of Common Tern, Whooper Swan and Greenland White-fronted Goose is of particular note as these are listed on Annex I of the E.U. Birds Directive.

Objective: To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:

Bird Code	Common Name	Scientific Name
A017	Cormorant	<i>Phalacrocorax carbo</i>
A061	Tufted Duck	<i>Aythya fuligula</i>
A067	Goldeneye	<i>Bucephala clangula</i>
A193	Common Tern	<i>Sterna hirundo</i>

To acknowledge the importance of Ireland's wetlands to wintering waterbirds, "Wetland and Waterbirds" may be included as a Special Conservation Interest for some SPAs that have been designated for wintering waterbirds and that contain a wetland site of significant importance to one or more of the species of Special Conservation Interest.

Thus, a second objective is included as follows:

Objective: To maintain or restore the favourable conservation condition of the wetland habitat at Lough Derg (Shannon) SPA as a resource for the regularly-occurring migratory waterbirds that utilise it.

- **Middle Shannon Callows SPA**
Site Code 004096

The Middle Shannon Callows SPA is a long and diverse site which extends for approximately 50km north of the town of Athlone (At the southern point of Lough Ree) to the town of Portumna (northern point of Lough Derg).

Two habitats listed in Annex I of the EU Habitats Directive are well represented within the site-Molinia meadows and lowland hay meadows. It qualifies as a site of international importance for wintering waterfowl and for the Whooper Swan and Corncrake which are listed on Annex I of the EU Habitats Directive. It is also of national importance for breeding waterfowl.

The Shannon Callows continues to hold approximately 40% of the Irish population of Corncrake, a species of global conservation concern that is also listed on Annex I of the EU Birds Directive.

The Shannon Callows has by far the largest area of lowland semi-natural grassland and associated aquatic habitats in Ireland and one in which there is least disturbance of natural wetland processes. Botanically, it is extremely diverse. In winter the site is internationally important for the total numbers of birds (regularly exceed 20,000) and for Whooper Swan in particular. It also holds nationally important populations of a further five species. Some of the wintering species are listed on Annex I of the EU Birds Directive, including Whooper Swan, Greenland White-fronted Goose and Golden Plover. In summer the site supports important populations of breeding waders. Perhaps the most important species which occurs in the site is Corncrake (the site holds 40% of the national total), as this is listed on Annex I of the EU Birds Directive and is Ireland's only globally endangered species.

Main conservation objective:

Objective: To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:

Bird Code	Common Name	Scientific Name
A038	Whooper Swan	<i>Cygnus cygnus</i>
A050	Wigeon	<i>Anas penelope</i>
A122	Corncrake	<i>Crex crex</i>
A140	Golden Plover	<i>Pluvialis apricaria</i>
A142	Lapwing	<i>Vanellus vanellus</i>
A156	Black-tailed Godwit	<i>Limosa limosa</i>
A179	Black-headed Gull	<i>Chroicocephalus ridibundus</i>

To acknowledge the importance of Ireland's wetlands to wintering waterbirds, "Wetland and Waterbirds" may be included as a Special Conservation Interest for some SPAs that have been designated for wintering waterbirds and that contain a wetland site of significant importance to one or more of the species of Special Conservation Interest.

Thus, a second objective is included as follows:

Objective: To maintain or restore the favourable conservation condition of the wetland habitat at Middle Shannon Callows SPA as a resource for the regularly-occurring migratory waterbirds that utilise it.

3.2.3 Special Areas of Conservation

Special Areas of Conservation (SACs) have been selected for protection under the European Council Directive on the conservation of natural habitats and of wild fauna and flora (92/43/EEC) - referred to as the Habitats Directive - by the DEHLG due to their conservation value for habitats and species of importance in the European Union. SACs are designated in areas that support habitats listed on Annex 1 and/or species listed on Annex II of the Habitats Directive. There are two SACs within the plan area-The River Shannon Callows(Site Code 000216) and the Lough Derg,North-East Shore SAC(Site Code 002241) which transverse the plan area. These are summarised as follows:

- **River Shannon Callows
Site Code 000216**

The River Shannon Callows is a long and diverse site which consists of seasonally flooded, semi-natural, lowland wet grassland, along and beside the river between the towns of Athlone and Portumna. The site is a Special Area of Conversation SAC selected for the following habitats and/or species listed in Annex I/II of the EU Habitats Directive.

The Shannon Callows has by far the largest area of lowland semi-natural grassland and associated aquatic habitats in Ireland, and one in which there is least disturbance of natural wetland processes. Botanically, it is extremely diverse with two legally protected species of plants and many scarce species. Excellent examples of two habitats listed on Annex I of the E.U. Habitats Directive occur within the site – Molinia meadows and lowland hay meadows with good examples of a further two Annex habitats (both with priority status). In winter the site is internationally important for numbers and species of waterfowl. In spring it feeds large numbers of birds on migration, and in summer it holds very large numbers of breeding waders, rare breeding birds and the endangered Corncrake, as well as a very wide variety of more common grassland and wetland birds. The presence of Otter, an Annex II species, adds further importance to the site.

Objective: To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected:

Code	Description
6410	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>)
6510	Lowland hay meadows (<i>Alopecurus pratensis</i> , <i>Sanguisorba officinalis</i>)
8240	Limestone pavements*
91E0	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)*

* denotes a priority habitat

Code	Common Name	Scientific Name
1355	Otter	<i>Lutra lutra</i>

- Lough Derg, North-East Shore SAC**
Site Code 002241

Lough Derg is the lowest order lake on the River Shannon, is one of the largest bodies of freshwater in Ireland. This SAC, however, only includes the northern shore of the lake from the mouth of the Cappagh River in the north west to just below Black Lough at the north-eastern shore. The site is a Special Area of Conservation SAC selected for the following habitats and/or species listed in Annex I/II of the EU Habitats Directive.

The lake is rated as nationally important for waterfowl. The entire lake, including all of the islands, is a designated SPA (Special Protection Area). The lake also supports a number of the Greenland White-fronted Goose, a bird species listed on Annex I of the E.U. Birds Directive. There is a Wildlife Sanctuary at the north western edge of the lake.

Lough Derg is of conservation interest also for its fish and freshwater invertebrates. Lampreys, are known to occur and the lake contains an apparently self-sustaining landlocked population of Sea Lamprey (*Petromyzon marinus*). The endangered fish species Pollan (*Coregonus autumnalis pollan*) is recorded from Lough Derg. Lough Derg is also a well known fishing lake with a good Trout (*Salmo trutta*) fishery. Atlantic Salmon (*Salmo salar*) also use the lake as a spawning ground.

Otter and Badger have been recorded within the site.

Land use within the site is mainly of a recreational nature with many boat hire companies, holiday home schemes and angling clubs located at the lake edge.

Recreational disturbance may pose a threat to the wintering wildfowl populations, though tourism is scaled down during the winter. The water body is surrounded mainly by improved pastoral farmland to the south and east, with areas of bog to the south-west and west. Coniferous plantations are present along

the west and north- west shore and small areas of these are included within the site. If these areas are felled no further planting should take place as afforestation damages the wetland habitats between the plantation and lake edge.

The main threats to the quality of the site are water polluting activities resulting from intensification of agricultural activities around the lake shore, uncontrolled discharge of sewage, which is causing eutrophication of the lake, and housing and boating development which has resulted in the destruction of lakeshore habitats. There is also significant fishing and shooting pressure on and around the lake. Forestry can result in the loss of some areas of wetland habitat. The spread of Zebra Mussel (*Dreissena polymorpha*) in Lough Derg also poses a threat to the ecology of the lake.

This is a site of significant ecological interest, with six habitats listed on Annex I of the E.U. Habitats Directive. Four of these are priority habitats - Cladium fen, alluvial woodland, limestone pavement and Yew woodland. Other annexed habitats present include alkaline fen and Juniper scrub formations on heath and calcareous grasslands. In addition, the lake itself is an SPA that supports important numbers of wintering wildfowl, Greenland White-fronted Goose, Common Tern and Cormorant, a number of which are listed under Annex I of the E.U. Birds Directive.

Objective: To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected:

Code	Description
5130	<i>Juniperus communis</i> formations on heaths or calcareous grasslands
7210	Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> *
7230	Alkaline fens
8240	Limestone pavements*
91E0	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)*
91J0	<i>Taxus baccata</i> woods of the British Isles*

* denotes a priority habitat

3.2.4 Natural Heritage Areas

Natural Heritage Areas (NHAs) are designated due to their national conservation value for ecological and/or geological/geo-morphological heritage. They cover nationally important semi-natural and natural habitats, landforms or geo-morphological features, wildlife plant and animal species or a diversity of these natural attributes. NHAs are designated under the Wildlife (Amendment) Act 2000, and are legally protected under the Wildlife Acts, 1976-2000.

There are no NHA and two p NHA, Lough Derg (Site Code: 000011) and River Shannon Callows(Site Code: 000216) in Portumna. These are mapped on Figure 3.3 overleaf.

- **Lough Derg pNHA²**
Site Code:000011
- **River Shannon Callows pNHA³**
Site Code: 000216

² Text in this section is taken from the National Parks and Wildlife Service's Site Synopses. Full Site Synopses for these designations can be found in **Appendix III**

³ Text in this section is taken from the National Parks and Wildlife Service's Site Synopses. Full Site Synopses for these designations can be found in **Appendix III**

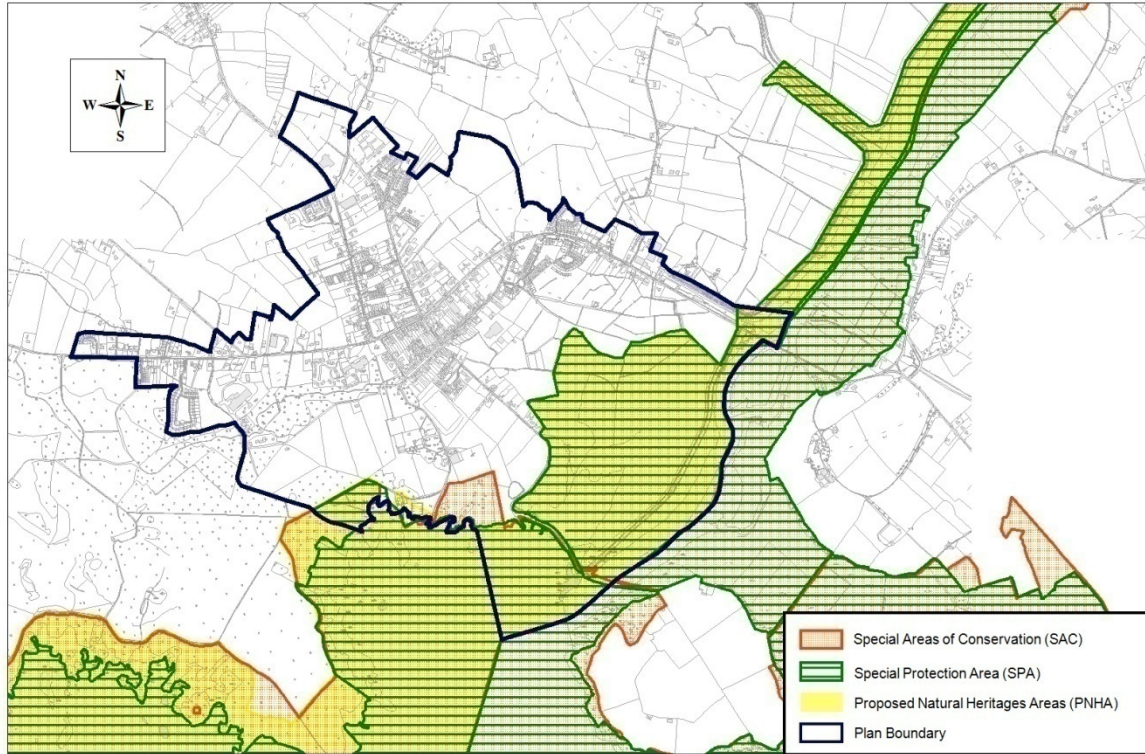


Figure 3.1 Designated Sites & National Heritage Areas within and surrounding the Plan Area. (Source GCC).

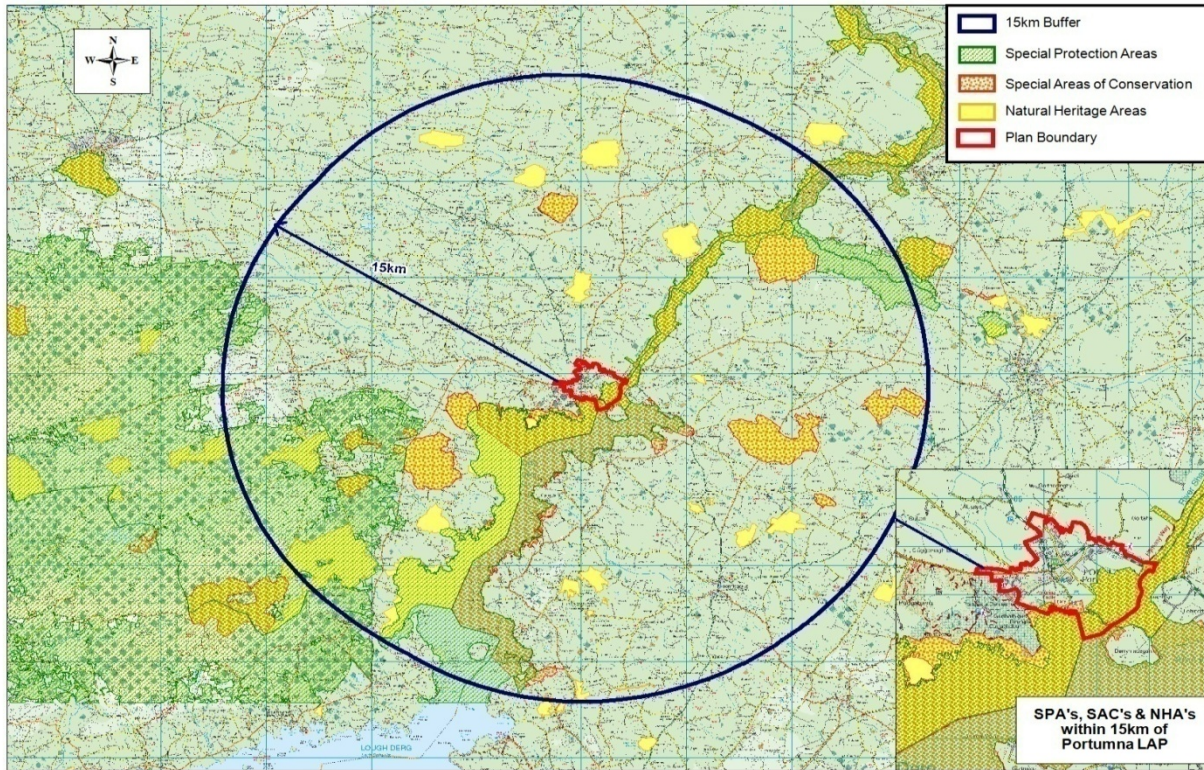


Figure 3.2 Designated Sites & Natural Heritage Areas within 15km of Plan Area. (Source GCC).

3.2.5 Existing Environmental Problems

There are a number of issues relating to biodiversity, flora and fauna within the plan area;

- Pressures as a result of the projected growth in population may result in the development of the plan area on greenfield lands and/or the removal of trees/hedgerows which may impact on these networks and the integrity of designated areas;
- Habitat loss and fragmentation can occur as a result of development;
- Development in Portumna is generally buffered from the designated ecological sites. The site synopsis for these sites identify certain threats to the conservation value of these sites-tourism activities are identified in relation to the Lough Derg, North-East Shore SAC in the form of boating, fishing and shooting pressures on and around the lake;
- Aquatic flora and fauna is vulnerable to all forms of pollution such as that which can occur as a result of agricultural run-off and industrial and municipal effluents;
- Disturbance of wildlife, and particularly birds, occur as a result of inappropriately sited development and increased recreational pressure;
- The spread of invasive alien species is particularly important threat to local biodiversity as they compete for space and food.

3.2.6 Inter-relationship with Other Environmental Parameters

Bio-diversity has an inter-relationship with all environmental parameters presented in this section. There is a significant overlap between nature, human beings, soil, landscape and water.

	PHH	SG	W	AC	M	CH	L
Biodiversity, Flora & Fauna	√	√	√	√	√	√	√

(B=Biodiversity, Flora & Fauna, PHH=Population, Human Health, SG=Soil & Geology, W=Water, AC=Air & Climatic Factors, M=Material Assets, CH=Cultural Heritage, L=Landscape).

3.3 Population & Human Health

3.3.1 Introduction

The *National Spatial Strategy* sets out a national settlement structure which focuses on growing urban centres such as the identified gateways, the hubs, linked hubs and larger towns. It is envisaged that these areas would reach a sufficient size or 'critical mass' in order to enhance economic competitiveness within the region. The *Regional Planning Guidelines for the West Region 2010-2022* prescribe that an additional 12,640 persons will be living in the County (not including Galway City) by 2022. Portumna is on Tier 4 of the County Settlement Strategy hierarchy and its role as 'Other Towns' is regarded as a key service centre and driver of growth for the immediate and surrounding area.

In terms of population trends, according to the most recent 2011 CSO figures, the total population of Portumna was recorded as 1,530 persons. This represents a population increase of 10 % (153 persons) from the previous census of 2006 (see Table 3.1).

The population growth target for Portumna as set out in the current County Development Plan is an additional 230 persons by 2021. This projected forecast will require housing land of 6.48ha, or 9.72ha with 50% over-zoning, in order to accommodate residential development over the plan period. The plan will consider various development zoning and phasing options so as to comply with the Core Strategy as outlined within the *Galway County Development Plan* and to ensure that suitable lands are brought forward for development during the plan period.

Population Census 2002	Population Census 2006	Population Census 2011
1,235	1,377	1,530

Table 3.1 Population Trend for Portumna for Census Periods 2002 – 2011

3.3.2 Existing Problems

- Certain environmental vectors within the plan area - such as air, water or soil - have the potential to transport and deposit contaminants or pollutants, which have the potential to cause harm and adversely impact upon the health of the area's population;
- The occurrence of severe rainfall events - and changes in the occurrence and magnitude of these events as a result of climate change - have the potential to cause flooding which would be likely to result in a hazard to human health and damage and loss to built development, infrastructure and biodiversity;
- Traffic hotspots located along the main road routes - especially at intersections - are likely to have sensory environments that are relatively more stressful due to air pollution and noise levels.

3.3.3 Inter-relationship with Other Environmental Parameters

Issues relating to population, human health and quality of life are inter-related with all of the environmental parameters.

	B	SG	W	AC	M	CH	L
Population & Human Health	√	√	√	√	√	√	√

(B=Biodiversity, Flora & Fauna, PHH=Population, Human Health, SG=Soil & Geology, W=Water, AC=Air & Climatic Factors, M=Material Assets, CH=Cultural Heritage, L=Landscape).

3.4 Soil and Geology

3.4.1 Introduction

Soils are offered protection through the proposed EU Directive 2004/35/EC of the European Parliament and of the Council through establishing a framework for the protection of soil and amending Directive 2004/ 35/EC. Whilst this Directive has not been established into law and therefore not established into National Legislation, Article 5 of the proposed Directive states that

“for the purposes of preserving the various functions of soil, sealing, the development of artificial surfaces on top of soil resources should be limited”.

The biodiversity, flora and fauna present in the area are facilitated by these soils. Urban soil underlies the built-up areas within the town. The majority of the plan area is covered by limestone till. Made ground dominates the centre of the plan area; the remainder of the plan area is comprised of lake sediment, alluvial soils and water bodies along the southern and eastern boundary perimeter.

3.4.2 Geology and Sites of Geological Interest

The soils and habitats of Portumna have been influenced by the areas underlying geology. The majority of the plan area is underlain by Lucan Formation (Calp Limestone). Slevior Formation (Dinantian Limestone) makes up the remainder of the geology, occurring in the west of the plan area.

3.4.3 Existing Problems

- Greenfield development involves the building upon and thereby sealing of soil, thus representing an environmental problem;
- Soil has the potential to be polluted and contaminated as a result of pollution from development which is not serviced by appropriate waste water infrastructure and from agricultural sources;
- Soil erosion due mainly to surface erosion resulting from construction works and agricultural/forestry operations has the potential to impact on water quality. In addition to water quality, these can impact on infrastructure and can have health and safety implications.

3.4.4 Inter-relationships with Other Environmental Parameters

The environmental parameters soil and geology have a strong inter-relationship with all of the other parameters especially biodiversity, flora and fauna, population and human health and material assets.

	B	PHH	W	AC	M	CH	L
Soil & Geology	√	√	√	√	√	√	√

(B=Biodiversity, Flora & Fauna, PHH=Population, Human Health, SG=Soil & Geology, W=Water, AC=Air & Climatic Factors=Material Assets, CH=Cultural Heritage, L=Landscape).

3.5 Water

The water resources of the region comprise surface waters including rivers, lakes and ground water. These resources are utilised for a wide range of uses including potable water, industry, amenity, agriculture and in the substance of ecosystems. Water within and surrounding Portumna has many functions; it provides drinking water to the area’s population; it sustains biodiversity and flora and fauna; and it is also an integral part of the landscape.

3.5.1 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.

3.5.2 Introduction

Since 2000, water management in the EU has been directed by the Water Framework Directive 2000/60/EC (WFD). The WFD requires all member states implementing the necessary measures to prevent deterioration of the status of all waters-surface, ground, estuarine and coastal and to protect, enhance and restore all waters with the aim of achieving good status by 2015.

For the purpose of implementing the WFD, Ireland has been divided into eight river basin districts. The plan area is located in the Shannon International River Basin District (SIRBD) and as such much information regarding the environmental baseline is derived from the Shannon International River Basin Management Plan (SIBMP)⁴. Portumna is located within the Lough Derg Water Management Unit of the Shannon International River Basin Management Plan. The implementation of the Shannon International River Basin Management Plan will bring incremental improvement leading to the majority of waters reaching at least “good status” at the latest by 2027.

Rivers flowing through or adjacent to the plan area are as follows:

- The River Shannon originates in the Cuilcagh Mountains, in Counties Cavan and Fermanagh, and runs south through Galway to meet the sea adjacent to the Dingle Peninsula in north Kerry. As the river reaches Portumna it merges into Lough Derg which is the largest lake along its course. The river is in the middle stages of its journey as it passes through the town;
- The Deerpark River flows through Portumna Demesne and enters Lough Derg in the south west of the plan area.

There are also a number of streams that enter Lough Derg within the plan area:

- The Lickmolassy stream and Deerpark/Portumna stream converge in the west of the plan area;
- The Gortyneill stream enters the River Shannon to the south east of the plan area.

The most recent river water body quality data⁵ identifies the following:

- The Shannon, Tributary of Shannon Lower ((IE_SH_25_3904 & IE_SH_25_655) are classified as being of Moderate Status;
- Lough Derg(IE_SH_25_191A) is classified as being of Poor Status;
- The Portumna, Tributary of the Shannon Lower (IE_SH_25_2616) is classified as Poor Status.

3.5.3 Ground Waters

Groundwater is defined as the water stored underground in formations of saturated rock, sand, gravel and soils. The protection of groundwater from human activity is crucial as the resource is highly susceptible to contamination with long term consequences for humans and the environment. The main groundwater water-body in the plan area is – The Tynagh (IE_SH_G_236). According to the Water Framework Directive the ground water-body is at risk (1a) of not achieving good status by 2015. The overall WFD objective is to protect this ground water –body

⁴ The Shannon International River Basin District Management Plan 2009-2015 is a plan for the implementation of the EU Water Framework Directive, which commits all members’ states to preventing deterioration and achieving at least good status in our rivers, lakes, estuaries, coastal and ground waters by the year 2015. The Plan describes actions that are proposed to ensure the necessary protection of waters over the coming years. It sets out the aims and objectives of improving and protecting water quality and ecology in the waters of each river basin district could be achieved, by means of a Programme of Measures.

⁵ WFD RBMP Implementation Plan 2011

3.5.4 Flooding

Flooding is a natural environmental phenomenon. Floods are usually caused by a combination of events including overflowing river banks, coastal storms or blocked or overloaded drainage ditches. As well as causing economic, social and ecological impacts, floods in certain circumstances pose a risk to human health. Portumna is vulnerable to adverse effects from changes in the occurrence of severe rainfall events and associated flooding of the local rivers.

The Department of the Environment Heritage and Local Government and the Office of Public Works (OPW) published national flood risk management guidelines entitled *The Planning System and Flood Risk Management: Guidelines for Planning Authorities 2009* and the associated Circular PL2/2014. These Guidelines and associated circular require Planning Authorities to ensure that, where relevant, flood risk is a key consideration in preparing development plans, local area plans and the assessment of planning applications. The aim of the guidelines is to avoid flood risk where possible, substitute less vulnerable uses when avoidance is not possible and mitigate and manage the risk where avoidance and substitution are not possible.

The OPW has produced flood maps as part of the Draft Preliminary Flood Risk Assessment (PFRA) that identify areas at risk of flooding, including fluvial, coastal, pluvial and groundwater flooding. More accurate maps for each Area for Further Assessment (AFA) will be produced for areas of potentially significant risk under a programme of Western and Shannon Catchment Flood Risk Assessment and Management Studies (CFRAMS). However, due to the delay in publishing the final CFRAM maps, the Planning Authority has carried out a Stage 2 Strategic Flood Risk Assessment (SFRA), which forms part of the preparation of the plan. The flood zones identified within the plan are derived from a number of sources which helped prepare the Stage 2 Flood Risk Assessment. Undeveloped land within Flood Zone A and Flood Zone B have been zoned as Open Space, Recreation and Amenity as outlined within the Land Use Zoning Maps 1A/1B of the *Portumna Local Area Plan 2016-2022*, thus avoiding incompatible uses and directing inappropriate development away from these zones. Such development would be assessed in accordance with the Planning System and Flood Risk Management Guidelines 2009. Circular PL2/2014 was published in August 2014 and specifically relates to flooding in areas that are developed. There are a number of existing developments that lie within Flood Zone A and Flood Zone B, a Constrained Land Use Zoning has been applied to these areas which seeks to facilitate the appropriate development of existing buildings while ensuring protection against flood risk.

3.5.5 Existing Problems

The above descriptions identify a number of sensitivities with regard to the status of water bodies within the Portumna plan area.

- The majority of surface waters are at significant risk of failing to achieve the WFD's objectives of good status by 2015;
- The pressures which have been identified by the SIRBD in the characterisation of the water bodies within and surrounding the plan area include:
 - Diffuse source pressures such as the EPA's diffuse sources model;
 - Morphological pressures including intensive land use; and
 - Point sources such as combined sewer and treatment plant overflows and waste water treatment plants.
- Potential increase in the levels of flooding within the plan area.

3.5.6 Inter-relationships with Other Environmental Parameters

The environmental parameter water has a strong inter-relationship with all of the other parameters especially biodiversity, flora and fauna, population and human health and material assets. It is essential that a clean and sufficient water supply is provided for the general population of the area.

	B	PHH	SG	AC	M	CH	L
Water	√	√	√	√	√	√	√

(B=Biodiversity, Flora & Fauna, PHH=Population, Human Health, SG=Soil & Geology, W=Water, AC=Air & Climatic Factors=Material Assets, CH=Cultural Heritage, L=Landscape).

3.6 Air and Climatic Factors

3.6.1 Introduction

An updated and integrated approach to monitoring, assessment and management of air quality within the European Union was introduced through the Clean Air for Europe Directive, (CAFE, 2008/50/EC) on the 21st May 2008. The Directive replaced the pre-existing Air Quality Framework Directive (96/62/EC, 2nd September 1996) and three of the four preceding Air Quality Framework Daughter Directives. It came into effect as of June 2010. The EU *Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive (2008/50/EC)* was transposed into Irish legislation by the *Air Quality Standards Regulations 2011 (SI No. 180 of 2011)*. The basic principle of the CAFE Directive is that each country should be divided into zones and that the monitoring assessment management and reporting air quality will be undertaken in relation to these zones.

In order to comply with the directives mentioned above, the EPA measures the levels of a number of atmospheric pollutants. For the purposes of monitoring in Ireland, four zones are defined in the Air Quality Standards Regulations 2011 (SI No. 280 of 2011). Portumna falls into Zone D. The current air quality in the Portumna Urban AQIH Region is 1 – Good.

3.6.2 Radon Gas

Radon is a naturally occurring radioactive and carcinogenic gas that originates from the decay of uranium in rocks and soils. Radon has no smell, colour or taste and can only be detected using special detectors. The Radon Protection Institute of Ireland (RPiI) indicates that less than one per cent of the homes in the grid that encompasses Portumna are estimated to be above the threshold level. The RPiI highlights the dangers of exposure to radon, including increased risk of lung cancer. The RPiI website provides details with regard to assessing homes for the risk of radon (www.rpii.ie).

3.6.3 Noise

The EU Directive 2002/49/EC, transposed into Irish law under Statutory Instrument number 140 of 2006 (the Regulations', which calls for the development of strategic noise maps and action plans for major roads, railways, airports and cities. Under the regulations, the National Roads Authority is responsible for the development of noise maps for all national roads carrying in excess of 3 million vehicles a year.

The over-riding noise source in Portumna is from traffic. Traffic hotspots located along the N65 main road routes especially at intersections are likely to have sensory environments that are relatively more stressful due to air pollution and noise levels.

According to the National Secondary Road Needs Study, Network Options Report-West Region (March 2011), the N65 carries traffic of the order of 5,000 AADT (Annual Average Daily Traffic and therefore it does not surpass the aforementioned threshold).

3.6.4 Climatic Factors

In order to reduce greenhouse gas emissions the internationally agreed Kyoto Protocol established emissions reduction targets for developing countries. Ireland's emission target for greenhouse gases is to limit the increase in their combined emissions during the five-year period 2008-2012 to 13 per cent above 1990 levels.

Under the EU Commission's Climate and Energy Package, Ireland is required to deliver a 20% reduction in non-ETS greenhouse gas emissions by 2020 (relative to 2005 levels). In addition, Ireland also has binding annual emission limits for the period 2013-2020 to ensure a gradual move towards the 2020 target. A *National Climate Change Adaptation Framework* is already in place since 2012 and provides the policy context for a strategic national adaptation response to climate change. This policy includes mitigation and adaptation measures and the integration of climate change considerations in planning and delivering work programmes.

3.6.5 Existing Problems

- Traffic hotspots within the plan area are likely to have elevated levels of air pollution and noise due to traffic congestion;
- Localised air pollution incidences with regard to PM10 and PM2.5 and noise pollution are both likely to occur when demolition/construction takes place;
- The occurrence of severe rainfall events and changes in the occurrence and magnitude of these events as a result of climate change could have an impact on the Portumna area;
- The loss of habitats could present problems for species numbers and diversity especially in the European sites.

3.6.6 Inter-relationships with Other Environmental Parameters

The environmental parameter air and climatic factors have a strong inter-relationship with all of the other environmental parameters. In order for the other environmental parameters to succeed it is essential that climate change and air quality is closely monitored and measures incorporated to reduce the impact of climate change on the local environment which has a direct result on the quality of life of the local population. Reduction in greenhouse gases contributes to the air quality thus improving the quality of life of the general population of the area.

	B	PHH	SG	W	M	CH	L
Air & Climatic Factors	√	√	√	√	√	√	√

(B=Biodiversity, Flora & Fauna, PHH=Population, Human Health, SG=Soil & Geology, W=Water, AC=Air & Climatic Factors, M=Material Assets, CH=Cultural Heritage, L=Landscape).

3.7 Material Assets

3.7.1 Introduction

The material assets of Portumna may be broken down into a number of relevant categories including:

- Wastewater;
- Drinking water;
- Waste management;
- Transport infrastructure, telecommunication and energy infrastructure;

Irish Water is responsible for the operation of public water and wastewater services. In May 2014, Irish Water published the Proposed Capital Investment Plan 2014-2016 and will implement same in conjunction with the Water Services Section of Galway County Council in order to secure the provision of an adequate public water supply and wastewater infrastructure network within the county.

3.7.2 Waste Water Treatment Infrastructure

The Urban Waste Water Treatment Directive (91/271/EEC) (amended by Directive 98/15/EEC) aims to protect the environment from the adverse effects of wastewater discharges by ensuring that waste water is appropriately treated before it is discharged to the environment. Such treatment is essential in order to meet the requirements of the Water Framework Directive. The Waste Water Treatment Plant began operating in 2001 and currently treats effluent for a population equivalent (p.e) of 2,870 (2014) and an estimated (p.e) of 3,043 in 2020. Portumna WwTP was designed and constructed to cater for a design population of 3,100, providing secondary and nutrient treatment after which it discharges to Lough Derg. As outlined above the current loading is 2,870 (2014) which indicates that the site is significantly under loaded.

The European Union Directive on Urban Waste Water Treatment specifies monitoring requirements and sets waste water discharge limits for the water quality indicator parameters of biochemical oxygen demand (BOD), chemical oxygen demand (COD) and total suspended solids (TSS). The Portumna

WwTP has been identified as having passed the requirements of the Urban Waste Water Treatment Regulations (Irish Water, 2015, *Portumna Waste Water Discharge License Application (D0196-01)*).

3.7.3 Sludge Management Plan

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

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

3.7.4 Surface Water Drainage

There is no dedicated surface water sewer network serving Portumna. Under the Portumna Sewage Scheme 1991-2001, some separation took place from the combined surface and foul sewerage system. More segregation is required to reduce the quantity of storm water been received at the treatment plant especially a storm sewer on the R352 out from the town and along the Bridge Road/N65.

Developments within the plan area will be required to comply with the Sustainable Drainage System (SUDS) as contained within the EPA document entitled *Guidance on Authorisation of Discharges to Groundwater 2011* (or any updated /superseding document).

3.7.5 Drinking Water Supply, Capacity and Demand

The availability of a water supply of sufficient quality and quantity is essential for public health and the sustainable economic growth of Portumna town. Similarly water conservation is also essential to prevent the unnecessary loss of this precious resource. The primary source of Portumna's public water supply is from Lough Derg. The abstracted water is treated prior to consumption at the local treatment plant through processes of coagulation, filtration, chlorination and fluoridation. The reservoirs serving Portumna Town and the surrounding areas are located on site and at Gallas Hill. The water treatment plant is operating above design capacity. It is designed for 90m³/h but regularly exceeds 100m³/h.

3.7.6 Waste Management

The Replacement Connaught Waste Management Plan 2006-2011 provides policy guidance on waste management in County Galway. Best practice in terms of waste management recommends that as much waste as possible is dealt with through reduction, reuse and recycling, with as little as possible remaining to be disposed of to landfill. A segregated waste collection services for dry recyclables and landfill waste is currently provided in Portumna area by a private operator for domestic and commercial waste. A brink bank facility is provided for the collection of glass.

3.7.7 Transport

In the *Galway County Development Plan 2015-2021*, Portumna has been identified as a Key Town. One of the strategic aims within the planning area is a move towards a more sustainable and integrated concept of development with regard to land use, transportation, water services and energy supply. The spatial/settlement strategy focused development in Tuam Hub Town and key towns and villages along strategic development corridors emerging along the main transportation infrastructure nodes as recommended in the *Galway Transportation and Planning Study (GTPS 1999, 2003)*.

3.7.8 Energy/Renewable Energy and Telecommunications Infrastructure

Developments require adequate power, energy and telecommunications services, including electricity, gas supply, telephone services and broadband, which are provided by a number of different service providers. Portumna is served by Eircom and a number of mobile telecommunications operators.

3.7.9 Licenced Facilities

There is currently one licenced IPPC Facilities in operation in the plan area. The EPA licence reference is P0816-01 and it relates to Green Isle Foods Limited. The receiving water is a tributary stream to Lough Derg.

3.7.10 Existing Problems

- Certain regions of the plan area are not within the catchment of the waste water treatment network and consequently developments in these areas use septic tanks to treat waste water arising;
- The main impacts on Lough Derg are the Portumna WWTP and agricultural run-off.

3.7.11 Inter-relationships with Other Environmental Parameters

The environmental parameter material assets (wastewater, drinking water, waste management & transport) all have inter-relationships with the other environmental parameters. It is essential that there are an adequate and sufficient waste water treatment system and quality drinking water for the residents of the plan area. The transport infrastructure is centrally linked with a number of environmental parameters, it has a direct threat to local biodiversity, flora and fauna but it also improves the quality of life for the local residents.

	B	PHH	SG	W	AC	CH	L
Material Assets	√	√	√	√	√	√	√

** In relation to Material Assets as this encompasses a wide spectrum of categories it is considered that the inter-relationship with water, wastewater and waste management would be regarded as minimal however there would be a relationship with transport infrastructure.*

(B=Biodiversity, Flora & Fauna, PHH=Population, Human Health, SG=Soil & Geology, W=Water, AC=Air & Climatic Factors, M=Material Assets, CH=Cultural Heritage, L=Landscape).

3.8 Cultural Heritage

3.8.1 Record of Monuments and Places

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

The Record of Monuments and Places (RMP) is an inventory, put on a statutory basis by amendment to the National Monuments Act 1994, of sites and areas of archaeological significance, numbered and mapped. In Portumna, there are currently 16 entries to the Record of Monuments and Places (RMP), some of which overlap. The heritage of Portumna is a unique resource which is fundamental to the cultural identity of the town and the quality of life of its citizens - it is central to how we see ourselves and to our identity as individuals and communities. Historic buildings can define localities and communities within the area and can become a focus of community identity and pride. A historic church or park, for example, can help define a neighbourhood and create a sense of local cohesion.

3.8.2 Architectural Heritage

Portumna originated as a monastic settlement in the thirteenth century when the Cistercian chapel was founded in 1254. Thereafter, the chapel/priory was taken over by the Dominican's in 1426 and subsequently it came into the ownership of the Earl of Clanricarde in 1577. Portumna Castle was built by Richard Burke (De Burgo) the fourth Earl of Clanricarde in 1617. Historically, the town was structured around one street extending from the gates of the Castle towards the ferry point in the north-east. In the early nineteenth century, a new main street was built north of the original main street and same constitutes St Brendan's Street and Clonfert Avenue today.

3.8.3 Record of Protected Structures

The Record of Protected Structures (RPS) is legislated under Section 12 and Section 51 of the Planning and Development Act 2000 (as amended). There are currently 33 Protected Structures within the plan

area. Of note is the Workhouse which is of regional value while Portumna Castle is a protected structure of national importance.

3.8.4 Architectural Conservation Areas

There is currently one Architectural Conservation Areas (ACAs) within the plan area

3.8.5 Existing Problems

- Developments within archaeologically or architecturally sensitive areas have the potential to individually or cumulatively impact upon cultural heritage of the plan area;
- Archaeology can be previously unknown but can be damaged through development causing ground disturbance;
- Development which involves material alteration or additions to protected structures can detract from the special character of the structure and its setting;
- Development on sites adjoining protected monuments, places or structures can also impact upon the setting of these cultural heritage items;
- Encouraging and facilitating the accommodation of growth on brownfield sites will contribute to mitigating a number of the adverse impacts associated with greenfield development, however, brownfield development has the potential to have a significant adverse impact upon cultural heritage both archaeological and architectural if unmitigated against.

3.8.6 Inter-relationships with other Environmental Parameters

The environmental parameter cultural heritage has an inter-relationship with the other key environmental parameters.

	B	PHH	SG	W	AC	M	L
Cultural Heritage	√	√	√	√	√	√	√

(B=Biodiversity, Flora & Fauna, PHH=Population, Human Health, SG=Soil & Geology, W=Water, AC=Air & Climatic Factors, M=Material Assets, CH=Cultural Heritage, L=Landscape).

3.9 Landscape

3.9.1 Introduction

Landscapes are areas which are perceived by people and are made up of a number of layers: landform, which results from geological and geo-morphological history; land cover, 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 land cover. Portumna's green pastoral landscape has been shaped primarily by the impact of the Celts, Monks, Gaelic and Normans in pre-historic times. The River Shannon which caresses the town has also played a key role in shaping the development of the town.

3.9.2 Landscape Character Assessment⁶

In accordance with the DEHLG's Landscape and Landscape Assessment Guidelines (2000), Galway County Council prepared a Landscape Character Assessment (LCA) for the County in 2003 which also forms part of the current CDP. It classifies landscapes according to their:

- Character;
- Values; and,
- Sensitivity.

⁶ Text in this section is sourced from the Galway Landscape Character Assessment (Galway County Council, 2003)

3.9.3 Landscape Character Areas

Landscape character is a combination of landform, land cover and visual units, which are attractive in the landscape. The LCA identified 25 character areas within the county. The following are the character areas relating to the plan area:

- Area 1: East Central Galway (Athenry, Ballinasloe to Portumna)
- Area 2: Shannon and Suck River Valley between Ballinasloe and Portumna
- Area 3: North West Lough Derg

3.9.4 Landscape Values

The LCA derived landscape values were derived for each landscape character area by consideration of environmental and cultural benefits such as visual beauty, ecology, archaeology, social history, religious sites and mythology. The values were given a score ranging from low to medium to high to outstanding. The southern area of the plan, encompassing Lough Derg and segments of adjoining terrain is classified as being of high value. The central band of the plan area - including the town centre and Shannon River Callows - is classified as being of a moderate value, while the north of the plan area is designated as being of a low value.

3.9.5 Landscape Sensitivity Classes

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

The following five sensitivity classes were established by the LCA:

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

The callows of the Shannon River and the general surrounds of Portumna Castle are both classified as having a high sensitivity. The landscape associated with Lough Derg and segments adjoining same are classified as having special sensitivity. These aforementioned landscapes are most vulnerable to change. The central band of the plan area - including the town centre - is classified as being of a moderate sensitivity while the remainder of the north of the plan area is designated as being of a low sensitivity.

3.9.6 Focal Points and Views

There is currently one listed focal point and view within the plan area and it relates to the two church towers in the town.

3.9.7 Existing Problems

A problem with regard to the environmental component of landscape is the cumulative visual impact which occurs as a result of developments such as one off houses. Such developments, which individually often do not have significant adverse impacts, have the potential to cumulatively and adversely have a significant impact upon sensitive landscapes.

3.9.8 Inter-relationships with Other Environmental Parameters

The environmental parameter landscape has an inter-relationship with the other key environmental parameters. The landscape in which we live in inter-relates all facets of the environment, including human health and quality of life. It also impacts on the biodiversity, flora and fauna and water quality.

	B	PHH	SG	W	AC	M	CH
Landscape	√	√	√	√	√	√	√

(B=Biodiversity, Flora & Fauna, PHH=Population, Human Health, SG=Soil & Geology, W=Water, AC=Air & Climatic Factors M=Material Assets, CH=Cultural Heritage, L=Landscape).

3.10 Overlay of Environmental Sensitivities of the Plan Area

In order to identify where the most sensitivities within the plan area occur, a number of the environmental sensitivities described in this section were weighed and mapped overlapping each other. Figure 3.3 provides an overlay of environmental sensitivities in the Portumna area. By mapping key environmental layers (GIS) to produce an environmental sensitivities map, it provides a visual impression which can assist in identifying which areas within the plan area experience environmental sensitivities, the highest concentration (i.e. indicates the level of overlap) of environmental sensitivities and consequently the areas potentially most vulnerable to environmental impacts from development.

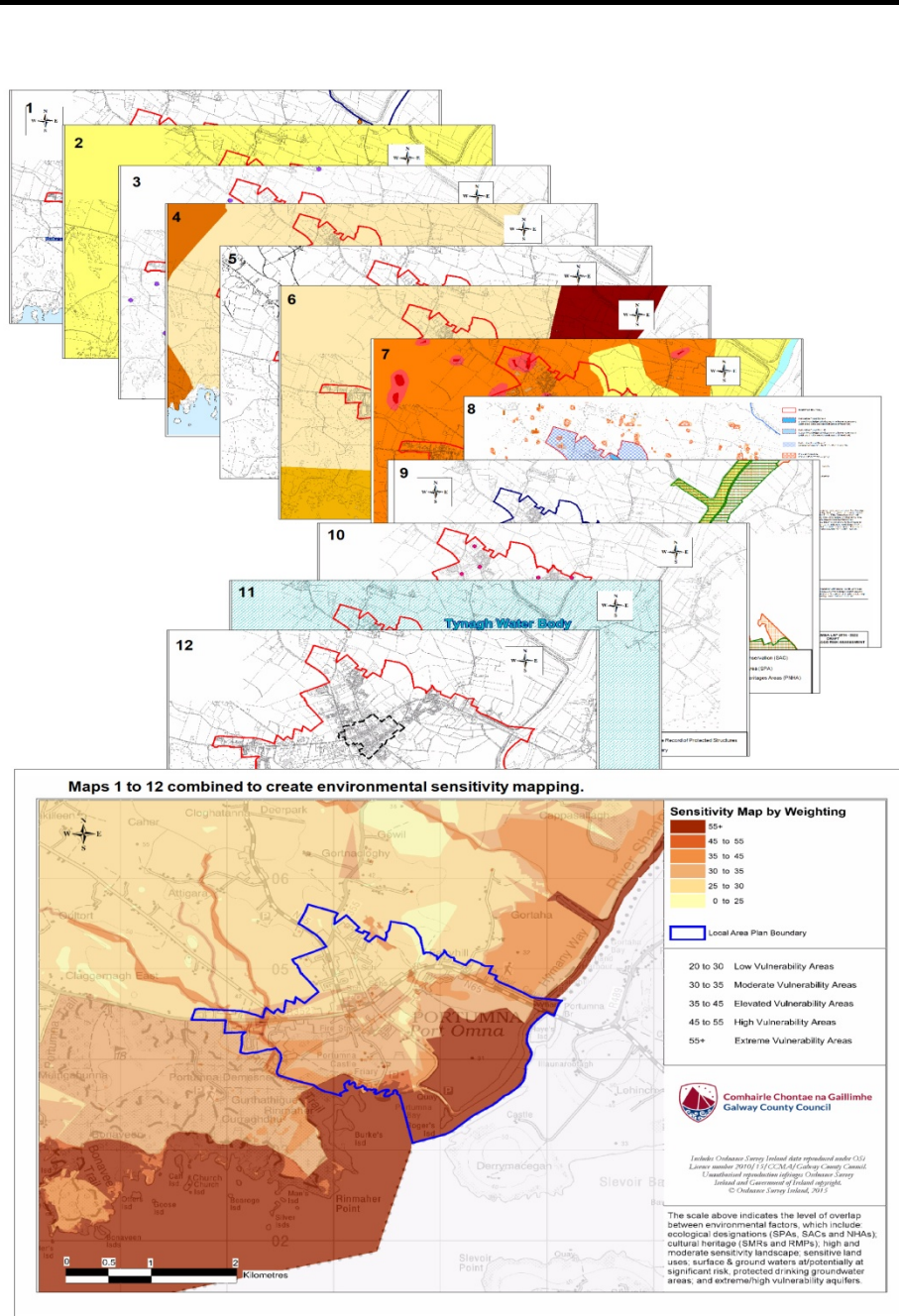


Figure 3.3 Overlay of environmental sensitivities in the Portumna area and the resultant Sensitivity Mapping.

Section 4 Review of Relevant Policies, Plans and Programmes

4.1 Introduction

The Draft Portumna Local Area Plan 2016-2022 is situated within a hierarchy of International, National, Regional and county level policy guidelines. In addition, there is an overarching legislative framework which provides the statutory (legal) basis for designations and objectives. This section of the Environmental Report reviews the consistency of the Draft Plan within this policy and regulatory framework.

International/EU Level

- Water Framework Directive (2000/60/EC)
- Floods Directive (2007/60/EC)
- SEA Directive (2001/42/EC)
- Bathing Water Directive (2006/7/EC)
- Habitats Directive (92/43/EEC)
- Birds Directive (79/409/EEC)
- Freshwater Fish Directive (78/659/EEC)
- Drinking Water Directive (98/83/EC)
- EIA Directive(85/337/EEC) as amended by Directive 97/11/EC
- Sewage Sludge in Agriculture Directive
- Groundwater Directive (2006/118/EC)
- Urban Waste Water Treatment Directive
- Nitrates Directive
- IPPC Directive
- Waste Framework Directive
- The Environmental Noise Directive (2002/49/EC)
- Convention for the Protection of the Archaeological Heritage of Europe (revised) (Valletta 1992)
- Convention for the Protection of the Architectural Heritage of Europe (Granada 1985)
- Landfill Directive (99/31/EC)
- Soil Thematic Strategy (COM) 2006/231) and proposal for a Soil Framework Directive (COM(2006)(232)

National Level

- National Development Plan (as amended)
- National Spatial Strategy 2002-2020
- National Climate Change Strategy
- Climate Change Adaptation and Mitigation Framework
- Government White Paper – Delivering a Sustainable Energy Future for Ireland
- Our Sustainable Future, A Framework for Sustainable Development for Ireland
- “Actions for Biodiversity 2011-2016”, Ireland’s 2nd National Biodiversity Plan
- Flora Protection Order 1999
- The Wildlife Act 1976 and the Wildlife (Amendment) Act 2000
- European Communities (Natural Habitats) Regulations, S.I 94/1997, as amended S.I. 233/1998,S.I. 378/2005
- European Communities (Birds and Natural Habitats) Regulations 2011(S.I. No 477 of 2011)
- National Heritage Plan 2002-2006
- The National Monuments Acts (2004)
- The Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999
- Planning and Development Acts 2000(as amended)
- Planning and Development (Strategic Infrastructure) Act 2006
- Sustainable Residential Development in Urban Areas
- Best Practice Urban Design Manual

Relevant Plans, Programmes

The Planning System and Flood Risk Assessment
Guidelines, 2009
Local Area Plan Guidelines
Retail Planning Guidelines & Retail Design Manual
Spatial Planning and National Roads Guidelines'
Transport 21
Water Services Investment Programme
Waste Water Discharge (Authorisation)
Regulations 2007(SI No.684 of 2007)
Surface Water Regulations 2009
Waste Management Act 1996(as amended)

Regional Level

River Basin Management Plans,
Flood Risk Management Plans,
Regional Planning Guidelines for the West
Region 2010-2022,
Water Services Strategic Plans
Regional Waste Management Plans,
Groundwater Protection Schemes,
A Platform for Change Strategy 2000-2016,

Local Level

Galway County Development Plan
Galway County Heritage Plan 2010-2016,
Galway County Council Walking & Cycling Strategy Report 2012
Local Area Plans
Regional Planning Guidelines for the West
Region 2010-2022,
Water Services Investment Programme

Section 5 Strategic Environmental Objectives

5.1 Introduction

The overall aim of the SEA is to facilitate environmental protection and to allow the integration of environmental considerations into the development of the Draft Local Area Plan. The SEA process assesses the Draft Local Area Plan as it evolves in terms of environmental impacts. This process highlights how improvements can be integrated into the Draft Plan of Portumna to increase its environmental performance and maintain resources. Establishing environmental objectives is a key element of the SEA as it allows the assessment of the Strategy as it is implemented over time. SEA Environmental Objectives are different to objectives detailed in the Draft LAP, however they are used to assess the development strategies of the Local Area Plan and allow its evaluation and identification of where conflicts may occur.

Table 5.1 Strategic Environmental Objectives

SEA Topics	SEO Objectives
Biodiversity, Flora and Fauna	<p>B1: To ensure compliance with the Habitats and Birds Directive with regard to the protection of European Sites and Annexed habitats and Species⁷</p> <p>B2: To ensure the protection, conservation to avoid the loss of diversity and integrity of a broad range of habitats, species and ecological and wildlife corridors and networks (non-designated sites) which provide connectivity between areas of local biodiversity within the <i>Draft Portumna Local Area Plan</i>.</p> <p>B3: Conserve and protect other sites of Nature conservation including NHAs and pNHAs.</p>
Population, Human Health	<p>PHH: To protect human health from hazards or nuisances arising from exposure to incompatible land uses.</p>
Soil & Geology	<p>SG1: To prevent pollution and/or contamination of soil.</p> <p>SG2: Conserve, protect and avoid loss of diversity and integrity of designated habitats, geological features, species or their sustaining resources in designated ecological sites</p>
Water	<p>W1: To maintain and improve, where possible, the status of surface waters.</p> <p>W2: To prevent pollution and contamination of ground water.</p> <p>W3: To comply as appropriate with the Provisions of the <i>Planning System and Flood Risk Management Guidelines for Planning Authorities (DEHLG,2009) and associated Circular PL 2/2014</i>.</p>
Air and Climatic Factors	<p>AC: To reduce travel related greenhouse emissions to air and to encourage modal change from car to more sustainable forms of transport.</p>
Material Assets	<p>M1: To serve new development with adequate and appropriate waste water treatment.</p> <p>M2: To serve growth areas with drinking water that is both wholesome and clean.</p> <p>M3: Make the best use of existing road and transportation infrastructure.</p>

⁷ '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.

Cultural Heritage	<p>CH1: To protect the archaeological heritage of the town including entries to the Record of Monuments and Places and/or their context and Architectural Conservation Areas.</p> <p>CH2: To preserve and protect the special interest and character of the town's architectural heritage.</p>
Landscape	<p>L: To avoid significant adverse impacts on the landscape, especially with regard to landscapes which are most valuable and most sensitive to change and protected focal points and views.</p>

Table 5.1 Strategic Environmental Objectives

Section 6 Local Area Plan Alternatives

6.1 Introduction

One of the critical roles of the SEA is to facilitate an evaluation of the likely environmental consequences of a range of alternative strategies for accommodating future development in Portumna. These alternative strategies must be realistic, capable of implementation, and should represent a range of different approaches within statutory and operational requirements of the particular plan. This section identifies and describes different plan scenarios, taking into account higher level strategic actions as well as the geographical scope of the town.

6.2 Identification and Description of Alternative Plan Scenarios

A range of three potential scenarios for the types of planning strategies that could be adopted are described in this section, they represent increasingly intensive and extensive development. A number of features are core to all scenarios, namely the location, extent and use of lands adjoining the European sites and the requirements of lands for housing. As a result the following are key components of the alternatives:

- It is estimated that there is a requirement of 88 additional housing units by 2021;
- The housing land requirement is 9.72ha (with 50% over provision) in order to accommodate residential development over the plan period;
- Sufficient town centre lands to be provided to allow Portumna to develop;
- Sufficient employment lands to be provided to allow Portumna function as “Key Town/Other Towns” in accordance with the Galway County Development Plan 2015-2021;
- New residential development to be located in proximity to community facilities, educational facilities and local services;
- Phasing of Residential lands;
- The natural and built heritage of the plan area should be protected and enhanced where possible.

6.3 Alternatives Considered for SEA

The following strategic alternatives for the Local Area Plan were considered for assessment and are shown in Figures 6.1. The strengths and weaknesses of the various approaches are evaluated and a preferred alternative derived. The following criteria have been used in the Assessment Matrix:

	Alternative is consistent with environment goal
	Alternative is in conflict with environment goal
	Alternative is both consistent and in conflict with environmental goal
	Neutral/No Impact

6.4 Evaluation of SEA Alternatives

The visual appraisal for each development alternative against the SEO objectives is shown in Table 6.1. Each alternative is mapped in Figures 6.1 and should be referred to whilst reviewing Table 6.1.

Alternative	Biodiversity, Flora and Fauna	Population, Human Health	Soil & Geology	Water	Air and Climatic Factors	Material Assets	Cultural Heritage	Landscape
1. Concentrated Development to North-West of Plan Area	Light Green	Red	Red	Red	Red	Light Green	Yellow	Red
2. Urban Sprawl on the Arterial Routes of the Plan Area	Red	Red	Red	Red	Red	Light Green	Yellow	Red
3. Consolidate Town Expansion & Promote Sequential Development with a Refined Plan Boundary.	Light Green	Dark Green	Light Green	Light Green	Dark Green	Light Green	Light Green	Light Green

Table 6.1 Alternatives Option Scores against Strategic Environmental Objectives

6.5 SEA Preferred Alternative

Table 6.1 highlights that Alternative 3 is generally considered to be the most positive alternative when measured against the SEOs of this Environmental Report. Alternative 1 and 2 are generally considered to be more negative when reviewed in relation to the SEOs of this environmental report. Therefore the preferred SEA Alternative for the purpose of the Local Area Plan is Alternative 3.

The alternative chosen within the Portumna Local Area Plan is in accordance with preferred alternative scenario as prepared in this Environmental Report. This alternative scenario would meet a large number of the objectives of the plan as it supports the consolidation of existing developed areas and will ensure the availability of optimal residential lands to accommodate anticipated growth requirements. This alternative also encourages the development of vacant and under-utilised sites in the town and ensures that those lands close to the town are the primary focus for development, thereby placing future residents within reasonable walking and cycling distance from the town centre services and thus reducing or minimising the demand for car generated trips by providing a more sustainable and integrated transport and land-use structure.

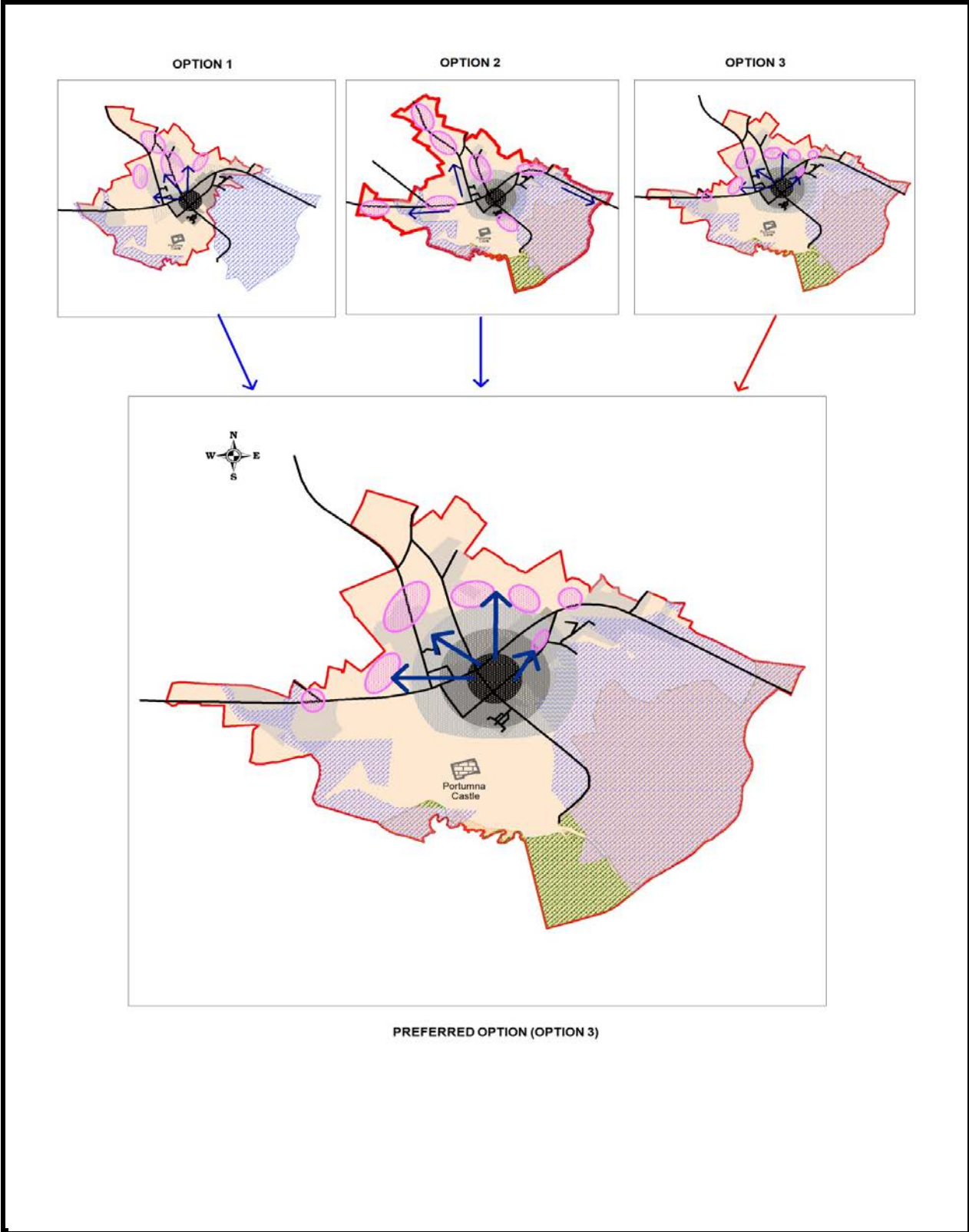


Figure 6.1 Preferred Option

Section 7 Assessment of Effects of Implementing the Portumna Local Area Plan 2016-2022

7.1 Introduction

The purpose of Sections 6, 7 and 8 of the Environmental Report is to evaluate as far as possible the potential environmental effects of the Local Area Plan policies, objectives and zonings and set out measures to prevent, reduce and as far as possible offset any significant adverse effects on the environment.

7.2. Overview of Evaluation of Policies and Objectives

7.2.1 Development Strategy

Development Strategy objectives aims to support orderly and sequential development which are to be consistent with the following:

- The Core Strategy of the Galway County Development Plan;
- To protect Natura 2000 Network and Habitats Directive;
- To implement the development management standards and guidelines as set out in Galway County Development Plan;
- To ensure that development is preceded by sufficient capacity in the public waste water and potable water infrastructure;
- To direct residential development into appropriately zoned land and serviced lands;
- To ensure that all new developments will be assessed in accordance with the provisions of the Flood Risk Management Guidelines 2009 and associated circular PL2/2014.

The policies and objectives for the Development Strategy support and facilitate the sustainable development of the plan area in line with the preferred development strategy option, **Option 3- Consolidate Town Expansion and Promote Sequential Development with a refined Plan Boundary.** This strategy maintains and enhances the quality of life of the local community, promotes opportunities for economic development, social integration, sustainable transport options, protects the cultural, built and natural heritage and environment. There is some potential for negative impacts on biodiversity, water and human health as a result of development and the requirement for population growth in line with the Core Strategy. Any new development applications in this regard will be subject to the objective DS5 which specifically relates to the sufficient capacity in the public waste water and potable infrastructure and therefore potential impacts will be minimised or mitigated at this stage.

7.2.2 Residential Development

The policies and objectives for Residential Development are generally aimed at the provision of adequate suitable housing and at a rate and scale which is in line with the core strategy of the County Development Plan and the Portumna Local Area Plan. These policies and objectives are expected to result in positive direct and indirect impacts to population through improvements to quality of life and ensure that there is suitable accommodation for a wide section of the population. Appropriate densities, housing mix and provision of services in relation development of new residential developments are promoted within the section.

Policy RD1 & RD2 & Objective RD1 promotes the phasing of development and the prioritisation of phase 1 residential zoned lands within close proximity of the town centre during the lifetime of the plan. This will indirectly assist in maintaining the habitat networks and rivers in undeveloped rural areas by promoting development in the town centre and established settlement areas of the town. There is also a specific objective RD 2 which promotes sequential development of lands in an orderly and phased manner. There is some potential for negative impacts on biodiversity, water and soils; however there are sufficient policies and objectives that will ensure that these impacts are mitigated especially in Section 3.10.2, Policy NH1, Objectives NH1, NH2, NH5, NH6 & NH8. Any new development proposals in this regard will also be subject to development management requirements of the *Portumna Local Area Plan 2016-2022*

and the *Galway County Development Plan* and potential impacts will be minimised or mitigated during this process.

Impacts on the human health of the local population as a result of promoting the consolidation of development within and immediate to the town centre would be positive in the promotion of walking and cycling.

7.2.3. Social and Community Development

The policies and objectives for social and community development in Section 3.3.2 are generally aimed at the provision of services and education for the community (Policy CF1, Objectives CF1, CF2, CF3, CF4, CF5, CF6 & CF7). It is considered that there would be a direct positive impact on the local population in terms of the requirement that social and community developments are located in close proximity to the residential population (Objective CF1). There will be an indirect positive impact with respect to the air and climatic factors of the town as a result of the reduction in travel related journeys due to the encouragement of the social and community developments to be in close proximity to the local residential population.

There is some potential for negative impacts on biodiversity, water and soils; however there are sufficient policies and objectives especially in Section 3.10.2 (Policy NH1, Objectives NH1, NH2, NH5, NH6 & NH8) that will ensure that these impacts are mitigated. Any new development proposals in this regard will also be subject to development management requirements of the *Portumna Local Area Plan 2016-2022* and the *Galway County Development Plan* and potential impacts will be minimised or mitigated during this process.

7.2.4 Economic Development

The policies and objectives regarding Economic Development are aimed at facilitating and encouraging tourism, retail and economic development of Portumna which would reinforce the town's designation as a Key Town/Other Towns" in accordance with the *Galway County Development Plan*. To achieve this and maintain the status of Portumna as the "Key Town/Other Towns" policies and objectives in Section 3.4.2 are crafted to exploit the towns location and to ensure that lands are strategically located to provide for future development. As with any new commercial and industrial related developments there is potential for negative impacts arising, however there are sufficient policies and objectives that will ensure that these impacts are mitigated. There are sufficient policies and objectives especially in Section 3.10.2 objectives NH1, NH2, NH6, NH7 & NH8 which will ensure that these impacts are mitigated. Any new development proposals in this regard will also be subject to development management requirements of the *Portumna Local Area Plan 2016-2022* and the *Galway County Development Plan* and potential impacts will be minimised or mitigated during this process.

7.2.5 Tourism

The policies and objectives for Tourism in Section 3.5.2 are generally aimed at the provision of tourism developments (Policy T1, Objectives T1, T2, T3, and T4 & T5). It is anticipated that tourism developments could have the potential to increase tourism and employment numbers which would directly have an impact on the quality of life for the local residents in that with new employment opportunities there is less time commuting to outside the area for work. The objectives in relation to the tourism potential (T2 & T3) are largely anticipated to have a positive impact on population through improving the economic prosperity of Portumna.

As with any new tourism related developments there is potential for negative impacts arising; however there are sufficient policies and objectives that will ensure that these impacts are mitigated. There are sufficient policies and objectives especially in Section 3.10.2 objectives NH1, NH2, NH6, NH7 & NH8 which will ensure that these impacts are mitigated. Any new development proposals in this regard will also be subject to development management requirements of the *Portumna Local Area Plan 2016-2022* and the *Galway County Development Plan* and potential impacts will be minimised or mitigated during this process.

7.2.6 Transport Infrastructure

A number of policies and objectives in Section 3.6.2 promotes the use of sustainable forms of transport such as walking, cycling and public transport which will all have positive impacts on the wider environment. This promotion of sustainable transport will also have positive indirect and cumulative impacts on the air and climatic factors as a result of the decrease in emissions associated with the reduction in the use of private vehicles. There are positive impacts on the quality of life for local residents and positive impacts on the material assets through the provision of improved infrastructure for users of sustainable transport modes, e.g. Public Transport, cycling and walking.

In addition, the promotion of sustainable travel with integrated land use and transportation policies should encourage the redevelopment of Portumna rather than development on sites that are not serviced by public transport or cycle/walking networks, which results in a positive direct impact on the quality of life for the residents of the plan area.

In relation to section 3.6.3 there is potential for indirect negative effects with regard to the development of new transport infrastructure with respect to biodiversity, water, soils and landscape in particular; however, it is considered that there are sufficient policies and objectives especially in Section 3.10.2 under Policy NH1, Objectives NH1, NH2, NH5, NH6 & NH8, which will ensure that these impacts are mitigated.

7.2.7 Utilities Infrastructure, Climate Change & Environmental Management

The adequacy of water, waste water and environmental services is essential for the sustainable development of Portumna. These key issues are addressed in various policies and objectives in Section 3.7.3 & 3.7.5 to provide for sufficient water, wastewater and drainage infrastructure to serve the projected growth in population that is envisaged.

In relation to Climate Change there are a number of policies and objectives that focuses on climate change and green infrastructure and air quality. The promotion of improved air quality and climate change adaptation framework will result in positive direct impacts on air and climatic factors, population and human health, biodiversity and material assets.

In section 3.7.9 there are a number of policies and objectives that ensures that the avoidance of development in flood risk areas and the recognition of existing built up areas that are prone to flood risk. There are a number of objectives (FL1, FL2, FL3 & FL4) that will result in positive direct impacts on water, population and human health, soils and biodiversity.

In section 3.7.10 there are a number of policies and objectives that specifically relate to the provision of waste management. The policies and objectives in relation to waste management will generally have positive direct and indirect impacts through the provision of recycling facilities throughout the plan area which will benefit biodiversity, flora and fauna, human health, soils, air & climatic factors, landscape and material assets.

7.2.8 Telecommunications, Energy Infrastructure & Renewable Energy

The provision of telecommunications and energy infrastructure within the plan area will have direct and indirect positive impacts on population by improving the quality of life for the residents of Portumna.

In Section 3.7.13 the provision of energy infrastructure, renewable energy and telecommunications ensures that existing and future telecommunication requirements of the town are planned in an environmental sustainable manner for the duration of the plan period.

7.2.9 Urban Design and Landscape

The protection of the built environment and the recognition of the requirement of high quality, and sensitive design of buildings within Portumna are outlined in Section 3.8.1. The importance of Portumna's townscape qualities which are derived from its historic urban structures are noted throughout the Local Area Plan. Policy UD1 and objectives (UD1, UD2, UD3, UD4, UD5, UD6 & UD6) supports the urban

fabric of Portumna and these objectives will result in positive direct impacts on population and human health, material assets and cultural heritage.

In relation to landscape there is a positive presumption in the promotion of the landscape character, values, sensitivities and views within the plan area. The objective in relation to Landscape (UD 7) will result in positive direct impacts on population and human health, material assets and the landscape itself.

7.2.10 Built and Cultural Heritage

The built heritage should be carefully considered in any such proposed developments. The consolidation and expansion of the town centre is primarily expected to result in positive impacts as these could result in the redevelopment of brownfield lands, thereby protecting soils, water and biodiversity and population from cumulative impacts of new developments. There can also be instances where development and intensification of construction may have indirect impacts in terms of placing pressure on soils, water and biodiversity. However it is considered that the integration of the policies and objectives in Section 3.9.2 would be expected to reduce indirect negative impacts on other receptors.

The protection and enhancement of Portumna's towns built heritage is central to the Local Area Plan. The policies and objectives for cultural, architectural and archaeological heritage will generally be positive through the protection and preservation of the cultural heritage.

7.2.11 Natural Heritage and Biodiversity

The importance of green infrastructure and ecological networks is recognised within the plan area. There is a designated ecological site within the plan area, policies and objectives ensure the protection of this designated site. In addition to this designated site there is also proposed natural heritage areas within the plan area, policies and objectives are also set out to ensure that these sites are also protected. The policies and objectives in Section 3.10.2 for natural heritage and biodiversity for the Portumna Local Area Plan will generally be positive for biodiversity as it aims to protect and promote opportunities for enhancement of local biodiversity features throughout the plan area. It is considered that there will be indirect positive impacts on water and soil as the protection, conservation and enhancement of biodiversity is expected to also result in protection of these resources.

The policies and objectives in this section are expected to result in largely positive direct and indirect impacts to population through the improvements to the quality of life. It is considered that there will be indirect positive effects in relation to biodiversity and landscape.

7.2.12 Overview of Evaluation of Land Use Zoning Objectives

The Portumna Local Area Plan 2016-2022 provides a development framework to guide the development for the next six years. As part of the development framework, one of the key principles to this approach as set out in the Portumna plan is to achieve consolidated growth rates over the short to medium term through development of residential, employment, cultural, retail and educational facilities. The framework for the plan is outlined on Map 1A and Map 1B of the Portumna plan and associated land use zoning objectives. Figure 7.1 illustrates the proposed land use map as contained in the Draft Local Area Plan and Figure 7.2 illustrates the comparison between the land use zoning as adopted under the 2005-2011 Local Area Plan and the Draft Local Area Plan 2016-2022. The purpose of land use zoning is to indicate to property owners, and to the general public, the types of development that the Council considers most appropriate in each zone.

Land use zoning objectives are provided for with respect to the following uses:

- Town Centre/Commercial (C1);
- Commercial/Mixed Use(C2);
- Residential (Phase 1);
- Residential (Phase 2);
- Industrial;

- Business & Enterprise;
- Community Facilities;
- Environmental Management;
- Tourism
- Open Space/Recreation & Amenity;
- Public Utilities;
- Transport Infrastructure.

Town Centre/Commercial

Lands zoned for town centre uses are generally considered to be quite positive with respect to population, climate change and material assets as they promote the consolidation and improvement of these areas and provision of services in close proximity to same. This will have indirect positive effects on landscape due to the promotion of vacant lands and underutilized sites which will have a net positive effect through reduction in development on greenfield lands.

Commercial/Mixed Use

Lands zoned for commercial/mixed use are generally considered to be quite positive with respect to population and material assets as they promote the consolidation and improvement of these areas and provision of services in close proximity to same. This will have positive effects on landscape due to the promotion of vacant lands and underutilised sites within the town centre.

Residential Phase 1

Undeveloped lands zoned for new residential development during the lifetime of the plan are zoned R-Residential in Map 1A of the *Portumna Local Area Plan 2016-2022*. These undeveloped zoned lands include lands which have the benefit of planning permission and have not yet been developed. R-Residential (Phase 1) zoned lands also include residentially zoned lands identified as part of the development strategy for the Portumna Local Area Plan which will aim to deliver the Core Strategy allocations as set out in the *Galway County Development Plan*. Phase 1 lands are strategically located in close proximity to existing residential and business/commercial developments.

Residential Phase 2

Map 1A of the Portumna Plan makes provision for residentially zoned Phase 2 lands under zoning R2. These undeveloped lands are reserved for the longer term growth needs of the town and are generally located in more peripheral areas to the north and east of the town. These lands will not normally be eligible for development during the lifetime of this Plan. However, consideration will be given to single house developments for family members on family owned lands or where it is apparent that Residential (Phase 1) lands cannot or will not be developed within the plan period. These lands may accommodate residential units however compliance with the core strategy is required and the principles of proper planning and sustainable development will also be required.

The phased development of lands for residential use in accordance with Map 1A will have an overall beneficial effect on population, climate change, landscape and material assets as residential development will be developed in a planned, phased and serviced manner. This would result in high quality living environments; it promotes sustainable transport, walking and cycling and will reduce potential effects on landscape from otherwise sprawling developments throughout the environs of the town.

As with all new developments on greenfield sites, there is potential for negative effects on biodiversity, water and soils. However, it is anticipated that any potential mitigation measures would be offset or mitigated against through the normal development management process which is likely to offset any significant impacts associated with development of these lands.

Industrial

Objectives for the development of Industrial lands are anticipated to have a positive direct impact on population and material assets as these land uses will help to reinforce the town's designation as the "Key Towns/Other Towns" under the Core Strategy of the *Galway County Development Plan*. The zoning

of these lands provides an opportunity to increase employment in these areas and as a result has a direct positive impact on the quality of life for those living in Portumna.

Zoning of Industrial lands to the north and west of the plan area in close proximity to the town centre is in line with the Local Area Plan's development strategy which supports the use of public transport and walking and cycling and will as a result reduce impacts on climate change. Secondary positive impacts on population, climate, landscape and material assets as these objectives would be expected to discourage sprawl of these uses in an unregulated manner throughout the town.

As with all new developments, there is the potential for in combination effects (along with other developments planned for the town) to have impacts on biodiversity, soil, water and landscape through pressure on wastewater systems, water supplies and through development of greenfield lands. However, any new developments on these lands would be subject to the normal development management process which is likely to offset any significant impacts associated with development of these lands.

Business and Enterprise

Objectives for the development of Business and Enterprise lands are anticipated to have a positive direct impact on population and material assets as these land uses will help to reinforce the town's designation as the "Key Towns/Other Towns" under the Core Strategy of the *Galway County Development Plan*.

The zoning of these Business and Enterprise lands which are in close proximity to existing residential lands and which are within easy access of the town centre supports the use of public transport, walking and cycling and will as a result reduce impacts on climate change. Secondary positive impacts will also occur on population, climate, landscape and material assets as these objectives would be expected to discourage sprawl of the business and enterprise uses in an unregulated manner throughout the town.

Community Facilities

The aim of the land use zoning objective for community facilities is to protect and provide for the development of schools, community and educational facilities. It is anticipated that this land use zoning objective would have an overall positive effect on population as it would improve educational and community facilities serving the public. As with all new developments there is potential to impact on biodiversity, soils, landscape and water through the development of greenfield lands. However, any new development would be subject to development management requirements of the *Portumna Local Area Plan* and the *Galway County Development Plan*.

Environmental Management

Objectives for the development of Environmental Management lands relate to lands that have a high biodiversity value and/or environmental sensitivities which include the protection of the integrity of European sites that form part of the Natura 2000 network. It is anticipated that this land use will have a positive direct impact on population, biodiversity and material assets. This land use objective is expected to result in direct positive impacts to biodiversity. Positive and secondary impacts are also likely to occur in the areas of soil and water due to the controls that would be placed on development as a result of implementation of this objective.

Tourism

The aim of this land use zoning objective is to protect and provide for the development of tourism facilities. It is anticipated that this land use zoning objective would have an overall positive effect on population as it would improve the provision of tourism facilities within the town. As with all new developments there is potential to impact on biodiversity, soils, landscape and water through the development of greenfield lands. However, any new development would be subject to development management requirements of the *Portumna Local Area Plan* and the *Galway County Development Plan*.

Open Space/Recreation & Amenity

The land use objective for Open Space/Recreation and Amenity aims to retain and protect existing open space and recreational facilities and uses and to protect these lands from urban sprawl and ribbon development. Additionally, these lands are zoned to ensure that any flood risk areas within the OS zone

are appropriately managed to avoid, reduce and/or mitigate, as appropriate, the risk and potential impact of flooding.

This land use objective will have an overall positive effect with respect to population and climate change. It will help to maintain the quality of people's lives through high quality environments and providing recreational areas which may indirectly have positive effects on people. This land use objective is expected to result in direct positive impacts to biodiversity. Positive and secondary impacts are also likely to occur in the areas of soil and water due to the controls that would be placed on development as a result of implementation of this objective.

Public Utilities

The land use objective for public utilities aims to facilitate the provision and maintenance of essential public utility infrastructure, together with necessary ancillary facilities and uses, as appropriate. Zoning of lands for public utilities is necessary to take account of existing wastewater treatment within the boundary of the plan area. This zoning provides lands for improvements to existing wastewater infrastructure and therefore has the potential to provide positive impacts on population, biodiversity and water quality. However, as with all new developments, development within public utilities zones have potential for impacts on biodiversity, soil, water and landscape through construction activities and development of greenfield lands. However, any new developments on these lands would be subject to the normal development management process which is likely to offset any significant impacts associated with development of these lands.

Constrained Land Use Zone (CL) (Refer to Maps 1A/1B)

The land use zoning for constrained land use applies to developed areas that are located within a flood risk area. The underlying zonings or the existing permitted uses are deemed to be acceptable in principal for minor developments to existing buildings subject to normal planning and flood risk assessment (such as small extensions to houses, most changes of use of existing buildings). This land use objective will have overall positive effects with respect to population and human health which would help to maintain the quality of people's lives through high quality environments and ensuring that the flood mitigation measures are considered fully which will directly have positive effects on people and their property.

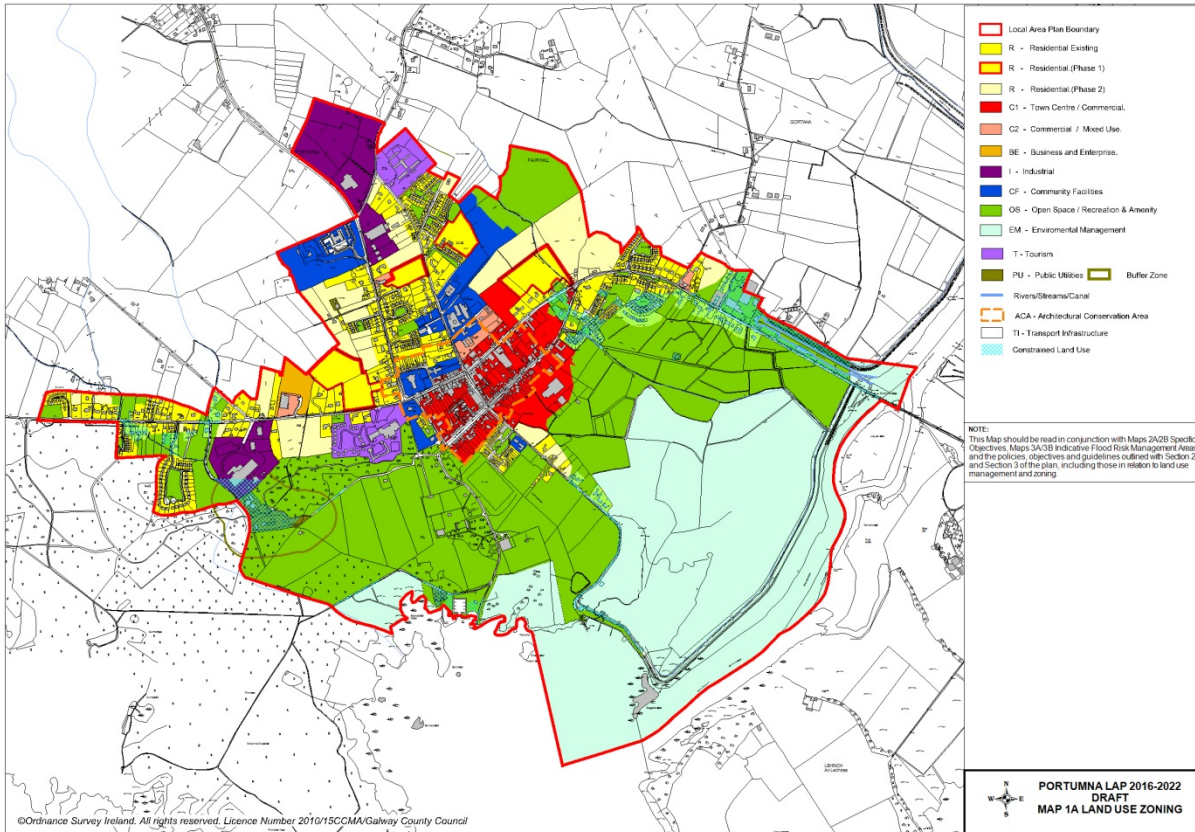


Figure 7.1 Draft Portumna Local Area Plan Land Use Zoning

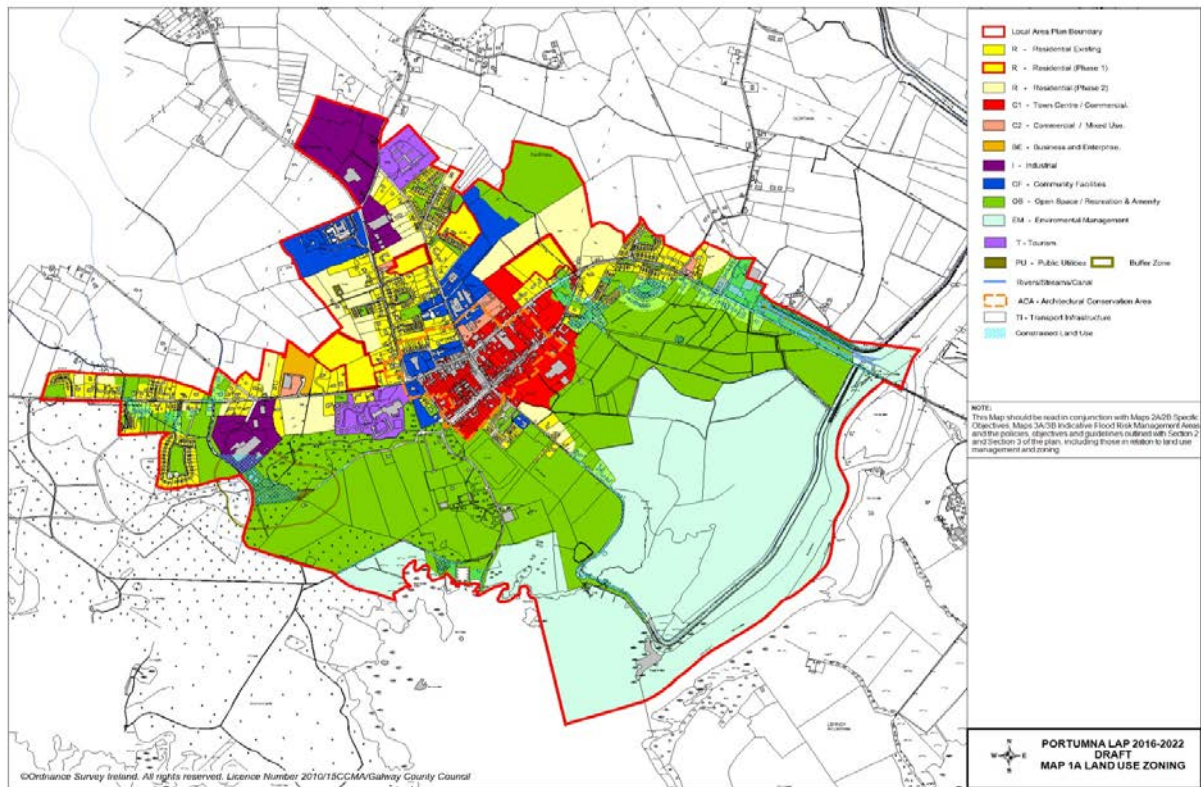
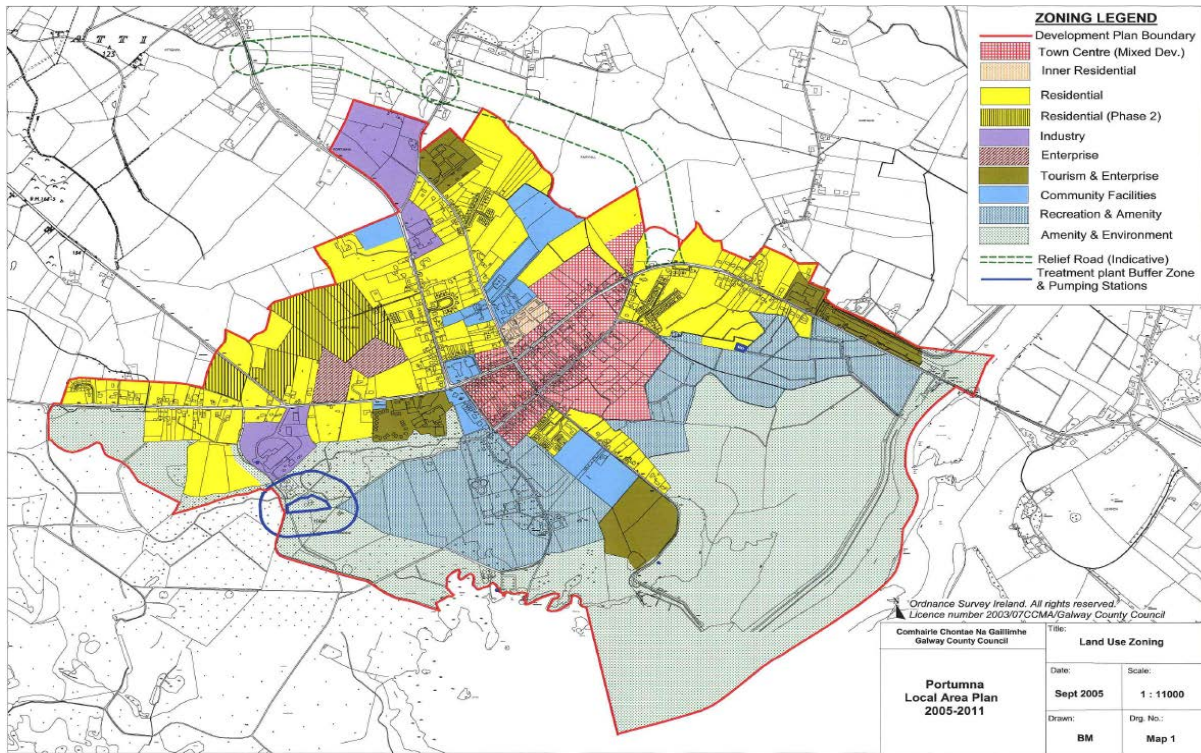


Figure 7.2 Comparison of Land Use Zoning Map 2005-2011 & Draft Portumna Local Area Plan 2016-2022 Land Use Zoning Map.

Section 8 Mitigation Measures

8.1 Introduction

This section outlines the mitigation measures that will prevent, reduce and offset as much as possible any significant adverse effects on the environment of the plan area resulting from the implementation of the *The Draft Portumna Local Area Plan 2016-2022*.

Table 8.1 proposes a number of changes (indicated in **green font**) to a number of draft objectives and additional new objectives in order to strengthen protection of environmental resources. These have been informed by both the SEA and the AA process.

SEA Recommendations and Suggested Mitigation	Change to the Draft Local Area Plan
<p>Objective LU 1 – Town Centre/Commercial (C1) (Refer to Map 1A/1B)</p> <p>Promote the sustainable 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 provides a range of retail services, facilities and amenities to the local community and visitors to the town. The town centre and associated main streets shall remain the primary focus for retail and service activity within Portumna.</p>	Wording accepted as proposed.
<p>Objective LU 2 – Commercial/Mixed Use (C2) (Refer to Map 1A/1B)</p> <p>Promote the sustainable development of commercial and complimentary 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>	Wording accepted as proposed.
<p>Objective LU 3 – Residential (R) (Refer to Map 1A/1B & Objective RD1)</p> <p>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.</p> <p>It is an objective to:</p> <p>(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, and sustainable transport options to serve the residential population of the area and the surrounding environment;</p> <p>(b) Protect existing residential amenities and facilitate</p>	Wording accepted as proposed.

<p>compatible and appropriately designed new infill development, in accordance with the proper planning and sustainable development of the area.</p>	
<p>Objective LU 4 – Industrial (I) (Refer to Map 1A/1B) 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>Wording accepted as proposed.</p>
<p>Objective LU 5 – Business & Enterprise (BE) (Refer to Map 1A/1B) Promote the sustainable development of business and enterprise uses, light industry/warehousing and the facilitation of enterprise park/office park type uses, 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 networks and to public transport facilities.</p>	<p>Wording accepted as proposed.</p>
<p>Objective LU 6 – Community Facilities (CF) (Refer to Map 1A/1B) Promote the sustainable 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>Wording accepted as proposed.</p>
<p>Objective RD 2 – Sequential Development 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 <i>Sustainable Residential Development in Urban Areas (Cities, Towns & Villages) Guidelines 2009</i> (or as updated). This shall include a positive presumption in favour of the sequential development of suitably serviced 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 <i>County Development Plan</i>. This objective shall not refer to single house build.</p>	<p>Wording accepted as proposed</p>
<p>Objective CF 8 – Amenity Network Support the establishment of an accessible and sustainable network of greenway linkages and amenities that provide safe and attractive circulation</p>	<p>Wording accepted as proposed.</p>

<p>routes for pedestrians and cyclists for the enjoyment and recreational use of the entire community. This network should link together community facilities, amenities and built heritage features in the plan area and surrounding areas. Galway County Council will subject to compliance with the Habitats Directive seek to promote the functioning of greenway networks as wildlife corridors and habitats to enhance the biodiversity and the natural environment.</p>	
<p>Objective CF 9 – Riverside Networks Encourage and support the sustainable development of riverside walkways and cycleways throughout the plan area where feasible and incorporate same into the development of adjoining lands of the marina, streams, woods and the demesne of Portumna Castle, as appropriate. Any potential impacts on natural heritage and designated conservation areas arising from such networks will be duly considered in accordance with the Habitats Directive as part of any proposal.</p>	<p>Wording accepted as proposed.</p>
<p>Objective ED 5 – Town Centre Viability, Vitality & Vacancy Ensure a balance of development in the retail core of Portumna town so as to ensure that the main streets, St. Brendan’s Street, Clonfert Avenue and St. Patrick’s Street are revitalised, retail/commercial vacancies rates are reduced and that an unbalanced retail pull away from this area is avoided.</p>	<p>Wording accepted as proposed.</p>
<p>Objective ED 6 – Brownfield Development and Vacancy Encourage the redevelopment of existing brownfield sites within the plan area in order to maximize the sustainable regeneration of underutilised/vacant lands and/or buildings for potential commercial, retail and residential developments.</p>	<p>Wording accepted as proposed.</p>
<p>Green Infrastructure Green infrastructure can be defined as networks of green areas that provide multiple environmental, social, educational and economic benefits to society and can include open spaces, woodlands, parks, farmland and private gardens. The environmental benefits of identifying a green infrastructure network cannot be underestimated as the protection of natural features like flood plains, wetlands, woodlands and hedgerows provide far-reaching benefits, e.g. in climate change adaptation. Developing a green infrastructure approach can assist with the loss of biodiversity while enhancing an environment in which we live and thereby creating a high quality environment. Comhar Sustainable Development Council publication (2010) “<i>Creating Green Infrastructure for Ireland: Enhancing Natural Capital for Human Wellbeing</i>” sets out how a network of green spaces can be developed to benefit natural heritage and biodiversity as well as the greater economy and society.</p>	<p>Wording accepted as proposed.</p>

<p>Invasive Species Non-native species both animal and plants can represent a major threat to local, regional and global biodiversity. Terrestrial and aquatic habitats can be negatively affected, resulting in significant damage to conservation and economic interests such as agriculture, forestry and civil infrastructure. The <i>Third Schedule of European Communities (Birds & Natural Habitats) Regulations, 2011</i> lists restricted non-native species and Regulation No.49 and No. 50 specifically relate to recognised invasive species.</p> <p>Development proposals must ensure that the presence or absence of invasive alien species has been addressed in accordance with the new European Regulations for the prevention and management of the introduction and spread of Invasive Alien Species (1st Jan 2015) and the EC (Birds and Habitats) Regulations 2011. Where invasive alien species are present on a development site an Invasive Alien Species Management Plan will be required.</p>	
<p>Objective NH 12 - Control of Invasive and Invasive Alien Species Seek to prevent the spread of invasive, and alien invasive alien species and noxious weeds and require a landscaping plan to be produced for developments near water bodies and ensure that such plans do not include invasive species.</p>	Wording accepted as proposed.

Section 9 Monitoring Measures

9.1 Introduction

It is proposed, in accordance with the SEA Directive, to base monitoring on a series of indicators which measure changes in the environment, especially changes which are critical in terms of environmental quality, for example water or air pollution levels. Monitoring will focus on the aspects of the environment that are likely to be significantly impacted upon by the implementation of the Draft Local Area Plan. The targets and indicators are derived from the Strategic Environmental Objectives discussed in Section 6 of the Environmental Report and are presented in Table 9.1 overleaf. The target underpins the objective whilst the indicators are used to track the progress of the objective and targets in terms of monitoring of impacts.

The monitoring programme will consist of an assessment of the relevant indicators and targets against the data relating to each environmental component. Similarly, monitoring will be carried out frequently to ensure that any changes to the environment can be identified.

It is recommended that data arising from planning applications, particularly in terms of environmental constraints mapping and Environmental Impact Statements be integrated into the GIS and monitoring system. This will assist in assessing cumulative impacts also, in particular ecology and water quality.

Environmental Component	SEO Objectives	Target	Indicator	Source/Responsibility
Biodiversity, Flora and Fauna	<p>B1: To ensure compliance with the Habitats and Birds Directive with regard to the protection of European Sites and Annexed habitats and Species⁸;</p> <p>B2: To ensure the protection, conservation to avoid the loss of diversity and integrity of a broad range of habitats, species and ecological and wildlife corridors and networks (non-designated sites) which provide connectivity between areas of local biodiversity within the <i>Draft Portumna Local Area Plan</i>;</p> <p>B3: Conserve and protect other sites of Nature conservation including NHAs and pNHAs.</p>	<p>B1: Maintenance of favourable conservation status for all habitats and species protected under national and international legislation to be unaffected by implementation of the Plan⁹;</p> <p>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;</p> <p>B3: No net loss of habitat and species.</p>	<p>B1:No significant negative impacts on designated habitats and species of the SPA;</p> <p>B2:Habitat Loss e.g. loss of hedgerow, loss of mature trees, treelines, wooded areas and stone walls; No loss of locally rare species/habitats; No net loss of green linkages/ecological networks especially rivers;</p> <p>B3: Habitat quantity and quality of species</p>	<ul style="list-style-type: none"> Galway County Council; National Parks and Wildlife.
Population, Human Health	<p>PHH: To protect human health from hazards or nuisances arising from exposure to incompatible land uses.</p>	<p>PHH: No spatial concentrations of health problems arising from environmental factors as a result of implementing the Plan.</p>	<p>PHH: Number of newly constructed developments Population Equivalent input to WWTP;</p> <p>Also see Water and Biodiversity Indicators.</p>	<ul style="list-style-type: none"> Galway County Council.
Soil & Geology	<p>SG1:To prevent pollution and/or contamination of soil;</p> <p>SG2: Conserve, protect and avoid loss of diversity and integrity of designated habitats, geological features, species or their sustaining resources in designated ecological sites.</p>	<p>SG1 & SG2: To minimise reductions in soil extent and hydraulic connectivity;</p> <p>SG1 & SG2: Limit residential development to phase 1 lands.</p>	<p>SG1 & SG2: Area of soil where function and quality is compromised e.g. where soil sealing occurs;</p> <p>SG1 & SG2:Limit net loss of groundwater recharge capability through loss of permeable soil resource.</p>	<ul style="list-style-type: none"> Galway County Council; Environmental Protection Agency.
Water	<p>W1: To maintain and improve, where possible, the status of surface waters;</p>	<p>W1 To improve Biotic Quality Rating (Q Values) and Risk Assessment of Water Bodies;</p>	<p>W1:The Biotic Quality Rating;</p>	<ul style="list-style-type: none"> Galway County Council; Environmental Protection Agency.

⁸ '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.

⁹ 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.

	<p>W2: To prevent pollution and contamination of ground water;</p> <p>W3: To comply as appropriate with the Provisions of the Planning System and Flood Risk Management Guidelines for Planning Authorities (DEHLG,2009) and associated Circular PL 2/2014.</p>	<p>W2 No reductions in the Q value in relevant water courses; No change or improvement in groundwater quality associated with development;</p> <p>% increase in waters achieving “good status” as defined by WFD;</p> <p>W3 No new development in Flood Zone A Developments proposed with Flood Risk Zones to comply with Floods Directive;</p> <p>SUDS in all new developments.</p>	<p>W2 Risk Assessment Implementation of the Programme of Measures identified under the SERBD River Basin Management Plan;</p> <p>Ensure wastewater collection system capacity is provided either prior to construction of new development or is developed in parallel;</p> <p>W3 Number and area of developments within Flood Risk Zones;</p> <p>Ensure that there is no development granted on lands which are outlined in the flood risk assessment as not suitable for development.</p>	
Air and Climatic Factors	<p>AC: To reduce travel related greenhouse emissions to air and to encourage modal change from car to more sustainable forms of transport.</p>	<p>AC Reduce Greenhouse gas emissions in line with 2020 commitments;</p> <p>% Increase in number of people travelling to work and school via public transport.</p>	<p>AC: All new development applications within areas at risk of flooding to be accompanied by Flood Risk Assessment;</p> <p>Increase access by households to public transport, including bus and rail services;</p> <p>Increase number of people travelling to work and school via public transport.</p>	<ul style="list-style-type: none"> Galway County Council.
Material Assets	<p>M1: To serve new development with adequate and appropriate waste water treatment;</p> <p>M2: To serve growth areas with drinking water that is both wholesome and clean;</p> <p>M3: Make the best use of existing road and transportation infrastructure.</p>	<p>M1: % Compliance in wastewater discharges from municipal treatment;</p> <p>M2: % Compliance in potable water quality monitoring;</p> <p>M3: Increase in population in urban areas.</p>	<p>M1: % compliance in wastewater discharges from municipal treatment;</p> <p>M2:% compliance in potable water quality monitoring; % compliance in wastewater discharges from municipal treatment;</p> <p>M3: Maximise development potential within urban envelope in order to reduce travel.</p>	<ul style="list-style-type: none"> Galway County Council.

<p>Cultural Heritage</p>	<p>CH1: To protect the archaeological heritage of the town including entries to the Record of Monuments and Places and/or their context and Architectural Conservation Areas;</p> <p>CH2: To preserve and protect the special interest and character of the town's architectural heritage.</p>	<p>CH1: Ensure that the culture heritage of the town is maintained and protected from damage and deterioration;</p> <p>CH1: Number of monuments on the RMP, impacted by granted planning permissions;</p> <p>CH1: Number of protected structures impacted by development granted planning permission;</p> <p>CH1 & CH2: Number of protected structures that have been demolished because of long term neglect and dereliction.</p>	<p>CH1: % of Protected Structures 'at risk'; No. of archaeological sites Investigated; No impact on the fabric or setting of monuments on the Record of Monuments and Places (RMP) by development granted planning permission; No impacts on the architectural heritage value or setting of protected structures by development granted planning permission;</p> <p>CH2: No. of ACAs Protect and preserve features of special interest as included in the RPS, RMP and ACA;</p> <p>CH2: Protect and enhance physical features and areas that contribute to the town's special character and setting.</p>	<ul style="list-style-type: none"> Galway County Council; Buildings at Risk Register, Heritage Council Ireland.
<p>Landscape</p>	<p>L: To avoid significant adverse impacts on the landscape, especially with regard to landscapes which are most valuable and most sensitive to change and protected focal points and views.</p>	<p>L: Minimal negative impacts on designated landscapes and scenic views, landscape features of local value;</p> <p>L: Number of protected views impacted by development.</p>	<p>L: Number of developments impacting on designated landscapes and scenic views, routes and landscape features of local value;</p> <p>L: No planning permission granted within special qualities of landscapes that materially contravene the policies or objectives of the plan, within the lifetime of the plan.</p> <p>L: No negative alteration to</p> <ul style="list-style-type: none"> Protected views. 	<ul style="list-style-type: none"> Galway County Council.

Table 9.1 Monitoring and Reporting Programme

Section 10 Conclusion

The Draft Portumna LAP sets out an overall strategy, policies and objectives for the period 2016 to 2022 which seeks to provide for the long term planning and overall benefit of the town and its environs. The SEA Environmental Report demonstrates how environmental parameters have been addressed in the LAP preparation process to date. Consultation has been undertaken for the Scoping of the Environmental Report, and current baseline information has been described for all SEA parameters. The Environmental Report forms a key part of the consultation process and is accompanied by the Habitats Directive Assessment and *Draft Portumna Local Area Plan 2016-2022* which is subject to public display.

Policies, objectives and land use zonings were assessed in terms of the impacts on the environment and mitigation measures proposed through rewording of the policies/objectives or rezoning where necessary. The mitigation measures proposed for the policies/objectives through the SEA and AA process have been incorporated into the Draft Local Area Plan. The SEA and Appropriate Assessment (AA) have informed the Draft LAP through an ongoing iterative process that incorporated environmental considerations and sensitivities throughout the Local Area Plan development. The SEA and HDA has been undertaken in line with the Planning and Development (Strategic Environmental Assessment) Regulations 2004 to 2011 (as amended) and the European Union (Natural Habitats) Regulations 94 of 1999, as amended SI 233/1998 and SI 378/2005. Subject to the full and proper implementation of the mitigation measures outlined in the SEA Environmental Report (and subsequently incorporated into the Portumna Draft Local Area Plan), including appropriate site level investigations, it is considered that significant adverse impacts on the environment will be avoided.

The Environmental Report, which identifies the likely significant effects on the environment of implementing the LAP has been submitted to the Elected Members of Galway County Council for their consideration and should be read in conjunction with the *Draft Portumna Local Area Plan 2016-2022*. Subject to the full and proper implementation of the mitigation measures outlined in the ER, including appropriate site level investigations, it is considered that significant adverse impacts on the environment will be avoided. The Environmental Report must be taken account of before adopting the Plan.