

Draft Seven Strategic Towns Local Area Plan 2018-2024

- An Clochán Liath (Dungloe)
- Ballybofey-Stranorlar
- Ballyshannon
- Bridgend
- Carndonagh
- Donegal Town
- Killybegs

Environmental Report



**Comhairle Contae
Dhún na nGall**
Donegal County Council

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TABLE OF CONTENTS

1	Introduction	1
1.1	NON TECHNICAL SUMMARY.....	1
1.2	STATUTORY CONTEXT.....	8
1.3	CONSULTATION	8
1.4	CHECKLIST OF CONTENTS OF ENVIRONMENTAL REPORT	9
1.5	PLANNING CONTEXT.....	9
1.6	METHODOLOGY.....	34
2	Consultations	39
3	Appropriate Assessment (Natura Impact Report)	42
4	Alternative Approaches to the Plan	44
5	Current State of the Environment	46
5.1	BIODIVERSITY, FLORA AND FAUNA.....	48
5.1.1	Natura 2000 Sites	48
5.1.2	Natural Heritage Areas.....	62
5.2	DESIGNATED SHELLFISH WATERS.....	69
5.3	FRESHWATER PEARL MUSSEL	73
5.4	RAMSAR SITES	78
5.5	ECOLOGICAL NETWORKS	81
5.6	STATUTORY NATURE RESERVES.....	82
5.7	INVASIVE SPECIES.....	83
5.8	POPULATION	85
5.8.1	Population Trends	85
5.8.2	Population Projections.....	87
5.9	HUMAN HEALTH.....	89
5.10	SOIL AND GEOLOGY.....	91
5.11	LAND COVER	99
5.12	WATER.....	100
5.12.1	River Basin Districts and Water Bodies.....	100
5.12.2	Water Environment in the Plan area.....	107
5.12.3	Ground Water Status	108
5.12.4	Surface Water Status.....	110
5.13	WASTEWATER	116
5.14	WASTEWATER TREATMENT	119
5.15	WASTE WATER TREATMENT SYSTEMS SERVING SINGLE HOUSES	122
5.16	DRINKING WATER.....	126
5.16.1	Public Water Supplies	126

5.16.2	Public Water Supplies – Recommendations.....	129
5.16.3	Private Water Supplies.....	131
5.16.4	Private Water Supplies – Recommendations.....	132
5.17	BATHING WATER QUALITY.....	134
5.17.1	Blue Flag Beaches.....	135
5.17.2	Green Coast Awards.....	137
5.18	CLIMATE CHANGE AND AIR QUALITY.....	138
5.19	MARINE AND COSTAL MANAGEMENT.....	142
5.20	MATERIAL ASSETS.....	144
5.21	CULTURAL, ARCHAEOLOGICAL AND ARCHITECTURAL HERITAGE.....	144
5.22	LANDSCAPE AND VISUAL IMPACTS.....	147
5.22.1	Landscape Character Assessment.....	147
5.22.2	Visual Impact.....	149
5.23	INTER-RELATIONSHIP BETWEEN ENVIRONMENTAL TOPICS.....	152
6	Significant Environmental Pressures.....	153
6.1	BIODIVERSITY, FLORA AND FAUNA.....	155
6.2	POPULATION AND HUMAN HEALTH.....	158
6.3	SOIL.....	159
6.4	WATER.....	159
6.5	CLIMATE CHANGE AND AIR QUALITY.....	163
6.6	MARINE AND COASTAL RESOURCE.....	163
6.7	MATERIAL ASSETS.....	164
6.8	CULTURAL, ARCHAEOLOGICAL AND ARCHITECTURAL HERITAGE.....	164
6.9	LANDSCAPE AND VISUAL IMPACTS.....	164
6.10	INTER-COUNTY AND TRANSBOUNDARY ISSUES.....	164
6.11	SUMMARY OF MAIN ENVIRONMENTAL PRESSURES IN THE PLAN AREA.....	165
7	Flood Risk.....	167
7.1	BACKGROUND.....	167
7.2	LEGISLATION AND GUIDANCE.....	167
7.3	STRATEGIC AND POLICY FRAMEWORK WITHIN THE LOCAL AREA PLAN.....	168
7.4	LIKELY ENVIRONMENTAL EFFECTS OF FLOOD RELATED POLICIES AND OBJECTIVES OF THE PLAN.....	171
8	Likely Evolution of the Environment in the Absence of the Implementation of the Local Area Plan.....	172
8.1	MONITORING, ENVIRONMENTAL OBJECTIVES, INDICATORS AND TARGETS.....	173
8.2	ASSESSMENT OF OBJECTIVES, POLICIES AND SETTLEMENT FRAMEWORKS.....	177
8.3	CONCLUSION.....	178
9	Mitigation Measures and Incorporating Environmental Issues into the Draft Plan.....	237

LIST OF FIGURES

Figure 1.1:	Local Area Plan linkages with other Plans	10
Figure 1.2:	Vulnerability Mapping within the Town Boundaries and a 15km buffer.....	38
Figure 3.1:	The 4 stages in the Appropriate Assessment.....	42
Figure 5.1:	Town Location Map	50
Figure 5.2:	Natura 2000 sites (SACs and SPAs) within the Town Boundaries and a 15km buffer	51
Figure 5.3:	Natura 2000 sites within An Clochán Liath (Dungloe) and a 15km buffer	53
Figure 5.4:	Natura 2000 sites within Ballybofey-Stranorlar and a 15km buffer	54
Figure 5.5:	Natura 2000 sites within Ballyshannon and a 15km buffer	55
Figure 5.6:	Natura 2000 sites within Bridgend and a 15km buffer.....	56
Figure 5.7:	Natura 2000 sites within Carndonagh and a 15km buffer	59
Figure 5.8:	Natura 2000 sites within Donegal Town and a 15km buffer.....	60
Figure 5.9:	Natura 2000 sites within Killybegs and a 15km buffer.....	61
Figure 5.10:	Natural Heritage Areas and Proposed Natural Heritage Areas within the Town Boundaries and a 15km buffer	63
Figure 5.11:	Freshwater Pearl Mussel catchments and sites and Designated Shellfish Waters within the Town Boundaries and a 15km buffer	77
Figure 5.12:	Ramsar Sites and Statutory Nature Reserves within the Town Boundaries and a 15km buffer	80
Figure 5.13:	Components of Population Change in County Donegal 2006- 2016.....	86
Figure 5.14:	Relative Affluence and Deprivation in County Donegal	90
Figure 5.15:	Geology within the Town Boundaries and a 15km buffer.....	97
Figure 5.16:	Distribution of Land cover within the Town Boundaries and a 15km buffer	98
Figure 5.17:	Biological classification of rivers in the NWIRBD 2011–2013	103
Figure 5.18:	Biological status of lakes in the NWIRBD 2007–2013.....	105

Figure 5.19:	Average ortho-phosphate in NWIRBD Rivers in 2013	106
Figure 5.20:	Average total phosphorus in NWIRBD Lakes in 2013.....	106
Figure 5.21:	Number of Unsewered Properties within the Town Boundaries and a 15km buffer	123
Figure 5.22:	Bathing Water Quality within the Town Boundaries and a 15km buffer	136
Figure 5.23:	Scenic Amenity Map – extract From Part B of Draft County Development Plan.....	151
Figure 6.1:	Significant Pressure in At Risk River and Lake Water Bodies in County Donegal.....	160
Figure 6.2:	Significant Pressure in At Risk River and Lake Water Bodies Nationally	160
Figure 6.3:	Expansion of Agricultural Production as a Threat to Water Quality Nationally.....	160
Figure 7.1:	Ballybofey-Stranorlar Fluvial Flood Extents.....	169
Figure 7.2:	Carndonagh Fluvial Flood Extents.....	169
Figure 7.3:	Donegal Town Centre Fluvial Flood Extents	170
Figure 7.4:	Killybegs Centre Fluvial Flood Extents	171

LIST OF TABLES

Table 1.1:	Steps in the SEA Process	1
Table 1.2:	Summary of Main Environmental Pressures within the Plan area	5
Table 1.3:	Checklist of Contents of Environmental Report.....	9
Table 1.4:	Other Relevant Plans, Programmes and Strategies containing Environmental Protection Objectives	11
Table 1.5:	Weighting System in Respect of Environmental Vulnerabilities	35
Table 1.6:	Range of Vulnerabilities.....	35
Table 2.1:	Submissions Received from Prescribed Environmental Authorities	40
Table 4.1:	Assessment of Alternative Approaches to the Plan in the Context of the Strategic Environmental Objectives (SEO's).....	45
Table 5.1:	List of Natura 2000 Sites within An Clochán Liath (Dungloe) and a 15km buffer	49

Table 5.2:	List of Natura 2000 sites within Ballybofey-Stranorlar and a 15km buffer.....	50
Table 5.3:	List of Natura 2000 sites within Ballyshannon and a 15km buffer.....	51
Table 5.4:	List of Natura 2000 sites within Bridgend and a 15km buffer	52
Table 5.5:	List of Natura 2000 sites within Carndonagh and a 15km buffer	57
Table 5.6:	List of Natura 2000 sites within Donegal Town and a 15km buffer	58
Table 5.7:	List of Natura 2000 sites within Killybegs and a 15km buffer	62
Table 5.8:	NHAs and pNHAs within An Clochán Liath (Dungloe) and a 15km buffer	64
Table 5.9:	NHAs and pNHAs within Ballybofey-Stranorlar and a 15km buffer.....	64
Table 5.10:	NHAs and pNHAs within Ballyshannon and a 15km buffer.....	65
Table 5.11:	NHAs and pNHAs within Bridgend and a 15km buffer	65
Table 5.12:	NHAs and pNHAs within Carndonagh and a 15km buffer	65
Table 5.13:	NHAs and pNHAs within Donegal Town and a 15km buffer	66
Table 5.14:	NHAs and pNHAs within Killybegs and a 15km buffer	67
Table 5.15:	Protected Ecological Sites within the Zone of Influence of the Plan in Donegal	69
Table 5.16:	Potential Threats to Shellfish Growing Areas.....	69
Table 5.17:	Designated Shellfish Waters within the Plan area.....	70
Table 5.18:	Freshwater Pearl Mussel Catchments within the Plan area.....	73
Table 5.19:	Freshwater Pearl Mussel Objectives and Threats.....	74
Table 5.20:	Ramsar Sites within the Plan area	78
Table 5.21:	Statutory Nature Reserves within or adjacent to the Plan area	82
Table 5.22:	Summary of the threats to the integrity of various categories of habitats (the list of threats is not exhaustive).....	84
Table 5.23:	Population Change in the Seven Towns 2011-2016.....	87
Table 5.24:	Population Projections for the Draft LAP.....	88

Table 5.25:	List of County Geological Sites within the Plan area.....	92
Table 5.26:	North Western International River Basin District Sub-catchments.....	100
Table 5.27:	Three Tier Governance Structure for the 2nd Cycle RBMP for Ireland.....	101
Table 5.28:	Physico-chemical assessment of Rivers in NWIRBD 2007–2013 within the Plan area.	102
Table 5.29:	Physico-chemical status of lakes within the Plan area in 2007-2013.....	103
Table 5.30:	Biological status of lakes within the Plan area in 2007-2013	104
Table 5.31:	EPA Catchment and Sub-catchments within the LAP area	107
Table 5.32:	Groundwater Status Results in the LAP area during the period 2010-2015	109
Table 5.33:	Summary of Groundwater Status and Risk for Groundwaters in the LAP area	110
Table 5.34:	Summary of WFD Water Status at National Level for Surface Waters during 2010-2015...	111
Table 5.35:	Summary of River Status and Risk for Rivers in the LAP area	114
Table 5.36:	Summary of Lake Status and Risk for Lakes in the LAP area	114
Table 5.37:	Summary of Transitional and Coastal Waters Status and Risk in the LAP area	116
Table 5.38:	Irish Water Investment Plan 2017-2021 (IP2) Wastewater Projects in the Plan area....	118
Table 5.39:	Wastewater Treatment Compliance Levels in the LAP area 2015.....	120
Table 5.40:	Predicted Sludge Load for County Donegal up to 2040*	121
Table 5.41:	Current Sludge Treatment Capacity for Donegal	121
Table 5.42:	Number of Inspections to be carried out in County Donegal during the period 2015-2017	124
Table 5.43:	Summary of Factors Taken into Consideration for Risk Assessment Methodology	124
Table 5.44:	Extent of Donegal County Council in Each Risk Category and No. of Site Inspections	124
Table 5.45:	Results of Inspection Targets and Failure Rates for County Donegal to End of 2015...	125
Table 5.46:	Number of Inspections by Risk Zone for County Donegal in 2015	125
Table 5.47:	Advisory Notices and Reasons for non-compliance as a result of inspections carried out by Donegal County Council from 1st January to 31st December 2015	125

Table 5.48:	Status of Advisory Notices issued by Donegal County Council from 1st January to 31st December 2015	126
Table 5.49:	Summary of EPA's Monitoring Programme for Public Water Supplies from 2012-2015	127
Table 5.50:	EPAs Recommended Priority Actions for Public Water Supplies	129
Table 5.51:	Water Quality Information for Private Water Supplies in Donegal in 2015	132
Table 5.52:	EPAs Recommended Priority Actions for Private Water Supplies	132
Table 5.53:	Results of EPA Water Quality Assessments for the Plan Area for the period 2014-2016	134
Table 5.54:	Summary of the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report Findings (IPCC 2013)	142
Table 5.55:	Inter-relationships of Environmental Topics	152
Table 6.1:	Scoping of SEA Topics	154
Table 6.2:	Summary of Main Environmental Pressures within the Plan area	165
Table 8.1:	Environmental Protection Objectives, Indicators and Targets	173
Table 8.2:	Categories for Assessment	177
Table 8.3:	Strategic Environmental Objectives.....	177
Table 8.4:	Assessment of Strategic Policy Objectives,	179

1 Introduction

This Environmental Report forms part of the Strategic Environmental Assessment (SEA) of the Draft Seven Strategic Towns Local Area Plan 2018-2024 (hereinafter referred to as the Draft LAP) for the towns of An Clochán Liath (Dungloe), Ballybofey-Stranorlar, Ballyshannon, Bridgend, Carndonagh, Donegal Town and Killybegs and shall be published alongside the Draft LAP and the Appropriate Assessment (AA).

Within a land use development plan process the SEA is a systematic process that predicts and evaluates the likely environmental effects of implementing a plan and provides an understanding of the environmental consequences of implementing the objectives and policies of a plan. This Environmental Report sets out how the SEA was carried out for the Draft LAP, and includes a description of the current environment along with an assessment of the effects of implementing the policies and objectives of the Draft LAP, necessary changes and considerations and mitigation and monitoring.

1.1 Non Technical Summary

Introduction

This is a Non-Technical Summary of the Environmental Report on the Draft Seven Strategic Towns Local Area Plan 2018-2024 (the Draft LAP).

The Planning and Development Act 2010 requires that a Strategic Environmental Assessment (SEA), (pursuant to the SEA Directive) and an Appropriate Assessment (AA) (pursuant to the EU Habitats Directive) be carried out as part of the Local Area Plan process.

The preparation of the Draft LAP runs in parallel with the SEA and AA and both these processes have significantly influenced the preparation of the Plan. In this regard environmental considerations have been considered throughout the plan process and have been incorporated in the Draft LAP ensuring a continuation of a qualitative environment. The Environmental Report is the primary element in the SEA process and shall be published alongside the Draft LAP.

Table 1.1: Steps in the SEA Process

Scoping: Consultation with Statutory Bodies and other interested parties on the scope and level of detail to be considered in the assessment	Completed
Preparation of Environmental Report: An assessment of the likely significant impacts on the environment as a result of the new Local Area Plan	Completed
Consultation on the Draft Local Area Plan and associated Environmental Report and Appropriate Assessment	Not Completed
Evaluation of submissions and observations made on the Draft Local Area Plan, Environmental Report and Appropriate Assessment	Not Completed
Assessment of the likely significant impacts on the environment as a result of the Material Alterations	Not Completed
Consultation on the Material Alterations to the Draft Local Area Plan and associated Environmental Report and Appropriate Assessment	Not Completed
Evaluation of submissions and observations made on the Material Alterations to the Draft Local Area Plan, Environmental Report and Appropriate Assessment	Not Completed
Preparation of an SEA Statement identifying how environmental considerations and consultation have been integrated into the Adopted Local Area Plan 2018-2024	Not Completed

Content of Environmental Report

The Environmental Report considers the following in accordance with the requirements of the SEA Directive:

- Biodiversity
- Population and Human Health
- Flora and Fauna
- Soil
- Water
- Air and Climate
- Material Assets
- Cultural Heritage (including Archaeological and Architectural)
- Landscape
- Interrelationship between above

In the first instance the Environmental Report details the 'Current State of the Environment' of the seven towns under each of the sub-headings set out above, including interrelationships between each of the environmental topics. The Environmental Report then examines significant environmental pressures that may affect each of the environmental topics and the 'Current (Baseline) State of the Environment'.

Key Strategic Policy Objectives for the Draft LAP

The Council has identified a number of key strategic objectives for the seven towns which the new Local Area Plan will address. The strategic objectives of the Draft LAP reflect the vision for each town and are as follows:

- S01:** To consolidate and enhance the strategic role of **An Clochán Liath (Dungloe)** as: (i) a key retail and services centre and tourism destination for the western seaboard; and (ii) an attractive and sustainable place to live and work for existing and future residents.
- S02:** To enhance and develop **Ballybofey-Stranorlar** by 2024 so as to enhance its reputation as a sporting centre of excellence and as a key centre of recreation and hospitality for the County. In addition, the Twin Towns will have an enhanced reputation also as an attractive place to live and work on foot of expanded residential and retail facilities and on foot also of strategic infrastructural improvements to the town.
- S03:** To develop **Ballyshannon** as a Regional exemplar for successful historic towns with a viable and renewed historic town centre demonstrating its own local distinctiveness and character, reduced vacancy levels and regenerated brownfield sites in tandem with the establishment of flagship enterprise and economic vitality within the wider geographical area of the town and quality residential environments for the projected population of around 2900 people by 2024.
- S04:** To develop **Bridgend** as a balanced and a sustainable village with cross-border strategic economic development opportunities; a vibrant, diverse, consolidated, high quality and pedestrian-friendly village centre; and quality new residential areas served by adequate environmental infrastructure and amenities.
- S05:** To promote the sustainable growth of **Carndonagh** as a service and tourism destination in north east Donegal, recognising its status as the second largest town on the Inishowen Peninsula and its strategic location along the Wild Atlantic Way.
- S06:** To develop **Donegal Town** as a key service centre for employment, retail, services and community facilities in the south of the County as well as performing as one of the best tourism hubs in the country for accommodation and tourism product thereby sustaining a population of upwards of 3,000 people by 2024.
- S07:** To strengthen the Strategic Importance of **Killybegs** as: a Fishing Port of National Importance, as a sub-regional service town, and as a regional coastal tourism gateway and to develop the town as an Innovation Hub for Marine Resources including Food, Tourism and Ocean Energy.

Policy Context

The Core Strategy of the Draft County Donegal Development Plan 2018-2024 (the Draft CDP) is required to be consistent with the Border Regional Planning Guidelines 2010-2022 (RPGs) and set out a settlement hierarchy for the County along with population and housing targets for all towns, villages and the open countryside. Local Area Plans are required to be consistent with the Core Strategy of the CDP.

The Draft LAP sets out an overall strategy for the proper planning and sustainable development of the seven towns in the context of the Draft CDP and the RPGs. It is informed by Ministerial Guidelines issued pursuant to Section 28 of the P&D Acts together with EU requirements regarding Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA). The commitment to prepare a LAP for the seven strategic towns and the programme for delivery is set out in the Core Strategy in Chapter 2 of Part A of the Draft CDP.

Appropriate Assessment

An Appropriate Assessment (AA) has also been carried out in accordance with the requirements of Article 6(3) of the EU Habitats Directive (92/43/EEC); the Planning and Development Act 2000 (Part XAB) (as amended) and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011 as amended by S.I. 355 of 2015). The AA is a separate but parallel process that has overlapped significantly with the SEA process in the drafting of the new LAP, not least because of the large land area of the Plan area covered by Natura 2000 sites. The AA specifically assesses the potential impact on Natura 2000 sites (and their conservation objectives) as a result of the implementation of the Plan based on the Natura Impact Report and other supplementary information; the ultimate aim being to avoid significant adverse impacts on these sites. The Natura Impact Report determined that there is no requirement to proceed to Stage 3 of the AA as there is no significant detrimental effect identified as the result of implementation of the Plan to the integrity of any European Site. The Natura Impact Report shall be published parallel to the Draft LAP and this Environmental Report.

Alternative Approaches to the Plan

The SEA Directive requires the consideration of SEA Alternatives. Section 4 of this Environmental Report entitled 'Alternative Approaches to the Plan' considers this and sets out and examines the following three alternative growth models.

Alternative 1: Business As Usual

This approach would involve the continuation of existing patterns of development and minimal intervention in relation to strategic planning policy described as 'Business As Usual'. 'Demand' rather than 'need' would drive development patterns. This development pattern would weaken the capacity of towns to support economic growth and viability. There would be a risk of pressure for development at locations with insufficient servicing, both in the context of physical infrastructure such as adequate wastewater treatment and also in relation to 'soft' infrastructure such as community facilities, health services. It would increase impacts and encroachment on the natural environment. It would also reduce capacity to spatially coordinate employment and skills base/human capital. The 'Business As Usual' approach would not respond in a prioritised manner to each town's unique development opportunities that have been identified through the LAP process.

Alternative 2: Effective Sustainable Urban Growth

This approach would focus on 'effective' urban growth commensurate with the size and structure of each town to guide and facilitate appropriate development. This approach would recognise the role of each Strategic Towns as it sits within the overall economic development of the County, due to either their infrastructural capacity to accommodate population growth and/or their characteristics as towns that perform special economic functions at present or have the potential to do so in the future. The appropriate development and strengthening of these towns would facilitate the provision of vital services and facilities as well as local employment to support the surrounding rural hinterlands. The appropriate application of the population distribution of 36% of the County total, as set by the Draft CDP 2018-2024 would facilitate regeneration and renewal alongside of these towns.

In summary, having regard to the principles of sustainable development and to the existing and emerging national and regional policy frameworks, Alternative , 'Effective Sustainable Urban Growth' is the most appropriate strategic alternative for the seven Strategic Towns. In undertaking this alternative, growth will be managed so as to coordinate with programmes for investment in infrastructure and where possible to innovate in the delivery of critical infrastructure so as to result in maximum benefit from investment and to ensure that significant growth can be accommodated with appropriate and adequate servicing and no resultant negative impacts on the environment. The particular strengths, opportunities and niche potential that exist within the different areas of the each town are to be harnessed through this approach to produce benefits and meaningful change for the communities and consequently the county.

Current State of the Environment

Donegal is the fourth largest and most northerly County in Ireland comprising c. 484,559.33 hectares or c. 7% of the total land area of the state. The County has an extensive coastline of c.1,132km along the Atlantic Ocean to the north and west, a c. 140km border with Northern Ireland to the east, and only abuts the rest of the Republic of Ireland along a c. 9km stretch with County Leitrim at its most southerly point.

The Draft Seven Strategic Towns Local Area Plan 2018-2024 includes the towns of An Clochán Liath (Dungloe), Ballybofey-Stranorlar, Ballyshannon, Bridgend, Carndonagh, Donegal Town and Killybegs.

An Clochán Liath (Dungloe) is a Gaeltacht town strategically located in the west of the County along the N56 National Secondary Route approximately 51km west of Letterkenny, 26km north of Glenties and 45km south-west of Dunfanaghy. It is the main town in 'The Rosses' (a large part of which is in the Gaeltacht) and is the largest town in the Donegal Gaeltacht.

The twin towns of **Ballybofey-Stranorlar** collectively comprise the third largest urban centre in Donegal and are strategically located within a strong rural hinterland in the heart of the Finn Valley in the east of the County. The towns are located at a key point along the N15/N13 National Primary Routes (part of the wider Atlantic Corridor) approximately 21km south of Letterkenny and 49km south-west of Derry in Northern Ireland. The towns are also served by the R252 Regional Road from Ballybofey to Glenties. The two towns are connected by a bridge over the River Finn which separates the towns; Ballybofey is located generally to the south of the river and Stranorlar is located generally to the north of the river.

Ballyshannon is located along the north-west Atlantic coast in the south of the County, on the N15 North South Transport Corridor (part of the wider Atlantic Corridor) which links Sligo to Lifford. It is situated approximately 6km north-east of Bundoran, 22km south of Donegal Town, 44km north-east of Sligo and 45km west of Enniskillen adjacent to Counties Fermanagh and Leitrim.

The village of **Bridgend** is located at a strategic position in east Donegal, on the Inishowen peninsula, adjoining the border with Northern Ireland, on the N13 National Primary Route (the primary transport corridor within the North West City Region of Derry-Letterkenny). Bridgend is located in an agricultural hinterland within the valley of the Skeoge River approximately 8km from Derry City Centre and 29.5km from Letterkenny Town Centre at the junction of the N13 and the R238 roads.

The town of **Carndonagh** is situated approximately 3km south of Trawbreaga Bay on the Inishowen Peninsula in the north of the County, within the valleys of Glenagannon and Donagh Rivers. It is located approximately 19.5km north-east of Bunrana, 33km north of Bridgend, 62km north-east of Letterkenny and 24km north of Muff which is adjacent to the border with Northern Ireland. The town is served by three Regional Roads, the R244 from Bunrana, the R240 from Quigley's Point and the R238 from Muff and Bridgend which extends from the N13 National Primary Route from Letterkenny. The R238 is a ring road around the Inishowen Peninsula, part of which is the main road from Derry to Bunrana while other sections of the road form part of the Wild Atlantic Way. Carndonagh is the second largest town in the peninsula after Bunrana.

Donegal Town is strategically located at a key point on the N15 North South Transport Corridor (part of the wider Atlantic Corridor) at the junction with the N56 National Secondary Route which serves the west of the County. It is located approximately 49km south-west of Letterkenny, 28km south-west of Ballybofey-Stranorlar, 28km east of Killybegs and 22km north of Ballyshannon. The town sits at the mouth of the River Eske and Donegal Bay and is overshadowed by the Blue Stack Mountains and the surrounding drumlin type landscape. It is the fifth largest town in Donegal and the principal urban centre in the south of the County.

Killybegs is a fishing town located in south-west Donegal. It is situated along the R263 Regional Road and just off the N56 National Secondary Route. It is located c. 27km west of Donegal Town and c. 26km east of Gleann Cholm Cille (Glencolmcille). The town has developed organically around a natural harbour and is framed by this harbour area to the east and by steeply rising lands to the west.

The seven towns host a rich and varied environment of significant geological, environmental, marine, cultural and social resources that shall be considered within this Environmental Report. For the purposes of this strategic environmental assessment (SEA), baseline data within the Plan area (i.e. within the town boundaries for each of the seven towns) and within the likely zone of influence of the Plan (i.e. a 15km radius around each of the towns) was collated and assessed. Any ecological sites or designations that are more than 15km from the Plan area were also considered depending on the likely impacts of the Plan, the sensitivities of the ecological receptors, and the potential for in combination effects. Section 5 of this Environmental Report describes in detail the current state of the environment using available environmental data.

Significant Environmental Pressures

Section 6 of this Environmental Report describes in detail the current environmental pressures in the Plan area using available environmental data and these are summarised Table 1.2:

Table 1.2: Summary of Main Environmental Pressures within the Plan area

Topic	Environmental Issue/Pressures
Biodiversity, Fauna and Flora	Certain developments and activities associated with agricultural activities, forestry, urban developments, windfarms, quarries, tourism, peat extraction, commercial fishing, ports and airports and a wide range of infrastructural works (including road works, water abstraction, wastewater disposal) that are located within or close to ecologically sensitive sites can give rise to significant environmental pressures. The protection of shellfish growing areas, freshwater pearl mussel and salmon have been highlighted as of particular importance. There are a relatively high number of Natura 2000 sites (SACs and SPAs) and Natural Heritage Sites located within the Plan area. These sites are particularly sensitive to certain development works and activities. Invasive non-native plant and animal species are a major threat to the biodiversity of the region.
Population and Human Health	Increases in population, their activities and settlement patterns have the potential to place increased pressure on biodiversity, water quality, landscape, cultural heritage and air. In particular, increased pressure on water quality arising from pollution can have a significant impact on human health. Individual and cumulative changes in the quality of the natural and built environment at local, regional and national level has the potential to impact to varying degrees on human health and wellbeing. High levels of radon in buildings and road safety have also been highlighted as significant issues.
Soil	Certain forms of development and activities including, urban and rural development, windfarms, waste disposal, afforestation, recreation and agricultural activities can place a significant pressure in soils. Changes in precipitation arising from global warming could have significant impacts on slope stability and could impact on soil and water quality.
Water	Development and activities can often impact on water quality including groundwater, drinking water and bathing water. Urban and rural development including wastewater and surface water disposal, landfills, quarries, contaminated lands, illegal dumping, agricultural activity, water recreational activities and afforestation can have significant impacts on water quality.

Topic	Environmental Issue/Pressures
	Excessive inputs of nutrients, namely phosphorous and nitrogen present one of the most significant risks to water quality.
Air and Noise	Currently no significant impacts have been identified in respect to air quality or noise levels. Impacts arising from air pollution are primarily associated with transport and industrial emissions.
Coast/Marine Resource	<p>Inappropriate development near /on the coast</p> <p>Dynamic needs of the coast (coastal squeeze)</p> <p>Flood risk and coastal defences</p> <p>Tourism impacts and sustainable management e.g. Sensitive dune systems and beach access points</p> <p>Litter disposal and public services (e.g. toilets)</p> <p>Activities in the water</p> <p>Coastal /Marine spatial planning</p>
Climatic factors	<p>Increased greenhouse gas emissions have been linked with climate change resulting in increases in the intensity and frequency of flooding.</p> <p>Of particular concern is the high dependency on the use of the car arising from a dispersed rural settlement pattern and lack of adequate public transport system.</p>
Renewable Energy	<p>Onshore and offshore opportunities and implications</p> <p>Onshore – scenic amenity access roads loss of biodiversity</p> <p>Offshore – impact on birds & marine mammals deployment issues grid connection locations</p>
Material Assets	<p>Material assets include a wide range of natural and man made assets. These can include infrastructural services and facilities and other items such as cultural heritage, agricultural lands quarries and coastal and water resources. Developments and activities can often impact on these assets, some of which have been referred to herein. It has been highlighted that there is a high level of residential and commercial vacancy within the Plan area. These properties represent an underutilized resource and if left idle, they can over time deteriorate and detract from the character of urban areas.</p>
Cultural Heritage, including Architectural and Archaeological	<p>Pressures can arise from certain developments and activities on or near sites of heritage value. The visual amenities and character of urban and rural areas and items of architectural, archaeological and historical importance, including shipwrecks, may be placed under pressure by such works. It is acknowledged that development works can often have a positive impact on our cultural heritage.</p>
Landscape	<p>Developments and activities can impact on visually sensitive areas including designated landscape and seascapes.</p>
Interrelationship between the above topics	<p>Cumulative impacts and interaction of above mentioned items can give rise to increased pressure on the environment. The impacts and interactions will obviously vary in extent and nature. In particular, issues in respect to water quality, climate change and the issue of one-off housing in the countryside crosses a number of environmental topic areas. Population increase and changes in people's activities and settlement patterns can impact on a wide range of the topics mentioned above.</p>

The following is a summary of certain items where particular environmental pressures have been identified in the Draft LAP:

Summary of Environmental Pressures in the Draft LAP

- Much of the Plan area is covered by Natura 2000 sites that are susceptible to environmental degradation, as a result of development.
- Shellfish growing areas potentially posing threats to protected habitats and water quality.
- Offshore resource exploration potentially posing threats to natural habitats.
- On-shore renewable energy developments.
- Infrastructural schemes such as the committed road line of the proposed A5/N2 dual carriageway, upgrade to the TEN-T network and the potential routes for proposed new rail links.
- North West City Region and associated supporting infrastructure such as broadband ducting.
- One-off housing in the countryside and associated proliferation of septic tanks.
- Tourism associated development particularly in coastal locations including, *inter alia*, holiday homes, adventure and ecological tourism among others.
- Certain agricultural practices.
- Aquaculture and hatcheries.
- Increased afforestation.

Flood Risk

The Council shall seek to manage development through a suite of policies set out in Chapter 5 of Part B of the Draft County Donegal Development Plan 2018-2024 which are based on the 'precautionary principle' as detailed in Section 7 of this Environmental Report.

Likely Evolution of the Environment in the Absence of the Implementation of the LAP

The SEA Directive requires the consideration of the likely evolution of the environment in the absence of the implementation of the Plan. Essentially it is a legislative requirement to make the LAP, notwithstanding this, an examination of the 'do-nothing scenario' (Section 8 of this Report) demonstrates that to proceed in the absence of the implementation of the Plan would have detrimental impacts on the environment and be contrary to the proper planning and development of the area.

Monitoring, Environmental Objectives, Indicators and Targets

Monitoring of the implementation of the LAP is required in order to properly consider the effects of the implementation of the Plan and to highlight areas that need re-assessed and /or considered for review. Part of this monitoring shall be that required by the SEA process and shall be based on the Environmental Objectives, Indicators and Targets as set out in Section 8 of this Environmental Report.

Assessment of Aims, Objectives and Policies

All of the Aims, Objectives and Policies contained within the Draft LAP were assessed in terms of their likely impact on the environment as set out in Table 8.4 in Section 8 of this Environmental Report. This assessment was in addition to the Appropriate Assessment which focuses solely on the impact of the Plan on Natura 2000 sites (SACs and SPAs).

Mitigation Measures and Incorporating Environmental Issues into the Draft Local Area Plan

The SEA of the Draft Plan was carried out in-house within the wider Plan drafting team; as such environmental vulnerabilities, issues and constraints were considered in the first instance through the Plan writing process and in this regard the Plan was formulated with the explicit intention of protecting the environment and avoiding potentially adverse environmental impacts. As such, the Plan writing process and the incorporation of environmental issues has been carried out as an iterative process. The 'Assessment' proper as outlined in Table 8.4 of this document assessed each aim, objective and policy individually.

Within Table 8.4 there are objectives and policies identified as being potentially in conflict with the Strategic Environmental Objectives (SEOs) or otherwise as having an uncertain interaction with the SEOs. The assessment concludes that the potential conflicts identified can be mitigated to an acceptable level through further detailed assessment and mitigation at implementation stage through best practice in the development management process and implementation of the Plan. In addition, this

will be assisted and guided through the mitigation provided for in the general objectives and policies of Chapter 3 of the Draft LAP as well as the relevant objectives and policies of the Draft CDP. Furthermore, certain individual applications for developments within the Plan area may be subject to individual Environmental Impact Assessments and Appropriate Assessments.

1.2 Statutory Context

The Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. No. 436 of 2004) (as amended by SI No. 201 of 2011) transpose the European Strategic Environmental Assessment (SEA) Directive 2001/42/EC into Irish Law. The former Department of the Environment Heritage and Local Government issued guidelines in November 2004 on the implementation of the SEA Directive (2001/42/EC) entitled 'Assessment of the Effects of Certain Plans and Programmes on the Environment'.

A Strategic Environmental Assessment (SEA) of the the Draft LAP is a mandatory requirement pursuant to Article 14B of the aforementioned SEA Regulations, as the total population of the Plan area is greater than 10,000 persons, and has been drafted pursuant to the SEA Regulations and in accordance with the SEA Guidelines. The SEA guidelines outline the SEA process and set out the following requisite steps:

- Screening
- Scoping
- Environmental Assessment
- Environmental Report (currently at this stage)
- Consultation
- Evaluation of submissions and observations made
- SEA statement

1.3 Consultation

A preliminary Scoping Report was circulated to the requisite statutory bodies in September 2015 as prescribed under the aforementioned SEA Guidelines; as a result, the Northern Ireland transboundary authorities as listed below, made formal written submissions.

- Department of Agriculture, Food and Marine
- Derry City and Strabane District Council, Local Development Plan Team
- Northern Ireland Environment Agency, Department of the Environment (NI)

The issues raised in the submissions were considered by the Council, and where appropriate the suggestions have informed the SEA process. A summary of the submissions and the Councils consideration and response are detailed in Table 2.1 of this Environmental Report.

The submission from the Department of Agriculture, Food and Marine made reference to both the AA and the SEA processes and set out specific legislation and issues that should be considered throughout the SEA process, along with suggested sources on relevant marine data and suggested a further list of consultees that may assist in the appropriate assessment process.

The other two submissions from Northern Ireland Authorities mainly concerned transboundary environmental issues for consideration particularly in relation to shared Natura 2000 sites.

1.4 Checklist of Contents of Environmental Report

Table 1.3 sets out the information to be contained within the Environmental Report, as set out in Annex 1 of the SEA Directive (2001/42/EC), and indicates where in this Report each is included.

Table 1.3: Checklist of Contents of Environmental Report

Contents of Environmental Report		Section of Report
(a)	An outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes	1
(b)	The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the Plan or programme	5 8
(c)	The environmental characteristics of areas likely to be significantly affected	5
(d)	Any existing environmental problems which are relevant to the Plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directive 79/409/EEC (as amended by Directive 2009/147/EC) and Directive 92/43/EEC	5
(e)	The environmental protection objectives, established at international, Community or Member State level, which are relevant to the Plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation	8
(f)	The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors	6
(g)	The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the Plan or programme	9
(h)	An outline of the reasons for selecting alternatives dealt with and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know how) encountered in compiling the required information	4
(i)	A description of the measures envisaged concerning monitoring in accordance with Article 10	8
(j)	A Non-Technical Summary of the information provided under the above headings	1

1.5 Planning Context

The Draft Seven Strategic Towns Local Area Plan 2018-2024 (the Draft LAP) is set within a hierarchy of strategic planning policy across National, Regional and Local contexts. Figure 1.1 demonstrates the relationship of the LAP with other plans, both land use and non-land use plans. Taken together, the suite of plans are to deliver a coordinated and integrated development approach for the region.

The Draft County Donegal Development Plan 2018-2024 (the Draft CDP) sets out the overall strategy for the proper planning and sustainable development of the County I in accordance with national and regional policy.

The Border Regional Planning Guidelines 2010-2022 (RPGs) sets out a long-term strategic planning framework for the proper planning and development of the Region (comprising of the Counties of Donegal, Sligo, Leitrim, Cavan, Monaghan and Louth) to provide for sustainable communities and implement the strategic planning framework set out in the National Spatial Strategy 2002-2020 (NSS).

The NSS and the RPGs are the current national and regional planning frameworks which will be superseded in due course by the National Planning Framework (NPF) and the North West Regional Economic & Spatial Strategy (RSES).

The RPGs set out the settlement hierarchy for the Border Region and population and housing targets for each County. The RPGs identify the development of Letterkenny as the strategic driver of growth for County Donegal and to facilitate integrated sustainable development between urban and rural areas.

The Core Strategy of the CDP is required to be consistent with the RPGs and set out a settlement hierarchy for County Donegal along with population and housing targets for all towns, villages and the open countryside. LAPs are required to be consistent with the Core Strategy of the CDP.

Figure 1.1: Local Area Plan linkages with other Plans

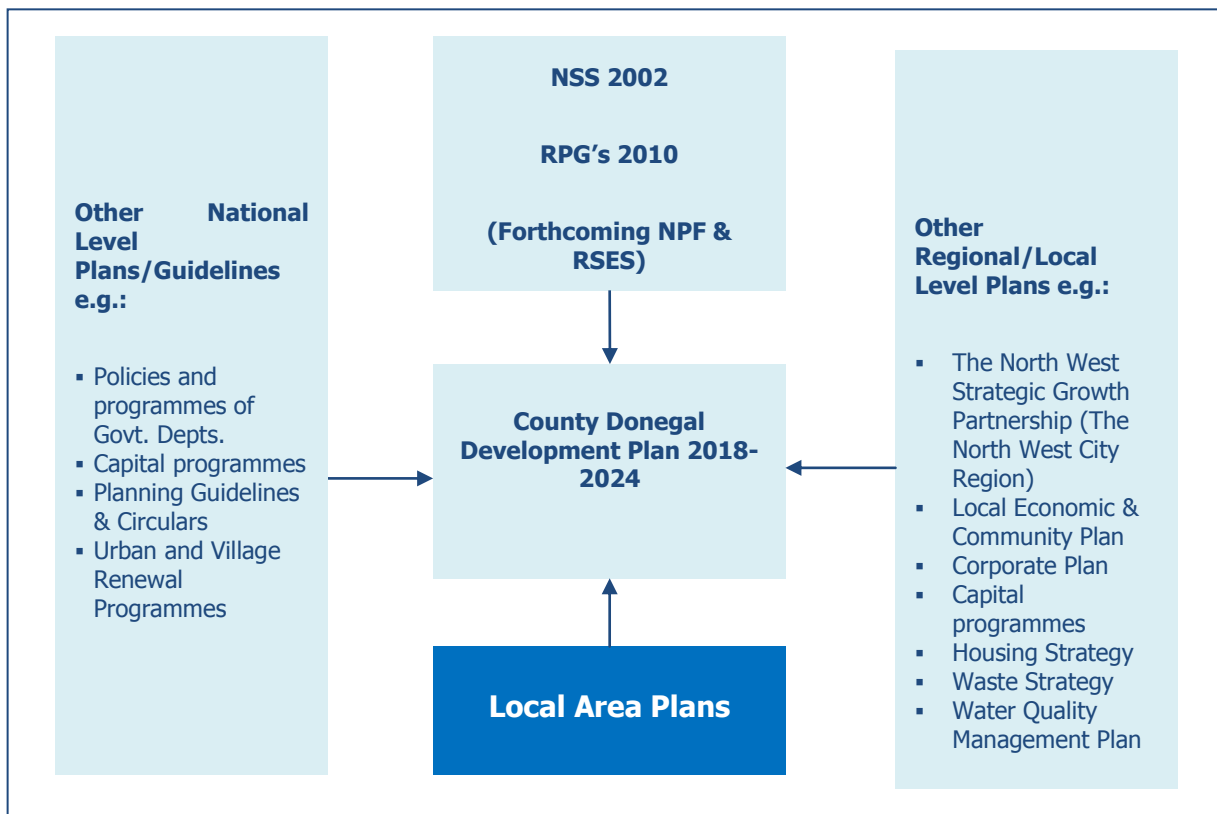


Table 1.4 lists the relevant Directives, legislation, regulations, plans, programmes and strategies containing environmental protection objectives, indicators and targets that must be considered within the Plan making process. (Note: This list is not exhaustive)

Table 1.4: Other Relevant Plans, Programmes and Strategies containing Environmental Protection Objectives

	Plan, Programme or Strategy	Key Consideration for County Development Plan
Biodiversity, Fauna and Flora		
International	Agreements, Conventions and Treaties:	
	EU Common Agricultural Policy (created by the Treaty of Rome 1957)(1962-2013)	Implements a system of agricultural subsidies and other programmes.
	EU Common Fisheries Policy (1970-2013)	Sets quotas for which member states are allowed to catch each type of fish, as well as encouraging the fishing industry by various market interventions.
	Convention on Wetlands of International Importance 1971 (amended 1982 and 1987) (Ramsar Convention)	Conservation and wise use of wetlands and their resources.
	UN Convention on International Trade in Endangered Species of Wildlife and Flora (CITES) 1975	Protection of endangered plants and animals.
	Convention on the Conservation of European Wildlife and Natural Habitats 1979 (Bern Convention)	Protection of wild flora and fauna and their natural habitats and endangered species, including migratory species.
	Convention of the Conservation of Migratory Species of Wild Animals 82/461/EEC (Bonn Convention)	Conservation of terrestrial, marine and avian migratory species.
	Convention for the Protection of the Marine Environment of the North-East Atlantic 1992 (OSPAR Convention)	Protection of the marine environment in the North-East Atlantic.
	UN Convention on Biological Diversity 1993	Requirement to develop national strategies for the conservation of biological diversity.
	Directives:	
	Birds Directive (79/409/EEC as amended by 2009/147/EC)	Conservation and management of wild Birds in Europe – identification of Special Protection Areas (SPAs).
	Habitats Directive (92/43/EEC)	Conservation of species and natural habitats of importance – identification of Special Areas of Conservation (SACs) (Natura 2000 sites) – requirement to carry out Appropriate Assessment.
	Environmental Liability Directive (2004/35/EC as amended by 2005/21/EC, 2009/31/EC and 2013/30/EU)	Environmental liability based on the 'polluter-pays' principle to prevent and remedy environmental change.
	Marine Strategy Framework Directive (2008/56/EC)	Requirement to reach 'good environmental status' in the marine environment by the year 2020 at the latest.
	Plant Protection (Products) (PPPs) Directive 2009/127/EC	Provides rules governing PPPs and the active substances contained in those products.
	Maritime Spatial Planning Framework Directive (2014/89/EU)	Requirement to have Maritime Spatial Plans in place by April 2021.
	Regulations:	
	EU Timber Regulations (No. 995 of 2010)	Prevent the circulation of illegally logged wood.
	EU Communication on Green Infrastructure - Enhancing Europe's Natural Capital (2013) (COM/2013/0249)	Promotes the principle that protecting and enhancing nature and natural processes, are consciously integrated into spatial planning and development.
	EU Invasive Alien Species Regulations (No. 1143 of 2014)	Prevention and management of the spread of invasive alien species.

		Guidelines, Plans, Programmes and Strategies:
	EU Common Implementation Strategy for the Water Framework Directive (2000/60/EC) (2003)	Guidance document on the requirements of the Water Framework Directive (WFD).
	EC Managing Natura 2000 Sites: The Provision of Article 6 of the Habitats Directive 92/43/EEC (2000)	Guidance document to facilitate the interpretation of Article 6 of the Habitats Directive by competent authorities.
	EU Guidance - Assessment of Plans and Projects Significantly affecting Natura 2000 Sites (2001)	Guidance document on how to carry out or review an Appropriate Assessment as required by the Habitats Directive.
	EU Forest Law Enforcement, Governance and Trade (FLEGT) Action Plan 2003	Prevent the circulation of illegally logged wood and support demand for timber from responsibly managed forests.
	Guidance Document on Article 6(4) of the Habitats Directive 92/43/EEC (January 2007)	Clarification of the Concepts of: Alternative Solutions, IROPI, Compensatory Measures, Overall Coherence and Opinion of the Commission.
	North-East Atlantic Environment Strategy - Strategy of the OSPAR Commission for the Protection of the Marine Environment of the North-East Atlantic 2010-2020	Requirement to monitor and assess the status of the marine environment and to achieve 'good environmental status'.
	OSPAR Regional Implementation Framework for the EU Marine Strategy Framework Directive 2010-2020	Illustrates the need to develop criteria for the assessment of 'good environmental status' in the marine environment.
	UN Strategic Plan for Biodiversity 2011-2020, 'Living in Harmony with Nature'	Requirement to update and review National Biodiversity Plans to halt the loss of biodiversity and conserve, maintain and restore ecosystems by 2020.
	Pan-European 2020 Strategy for Biodiversity	Prevent further loss of biodiversity to meet the EU's 2020 target for biodiversity.
	EU Commission, Our Life Insurance, Our National Capital: an EU Biodiversity Strategy to 2020 (June 2011)	Requirement to maintain and restore ecosystems and to conserve valuable or threatened habitats and species (SPAs, SACs, Natura 2000 sites).
	Fourth Ramsar Strategic Plan for 2016-2024	Conservation and wise use of wetlands through local and national actions and international cooperation.
	EU Commission Action Plan: for nature, people and the economy (April 2017)	15 actions to improve the implementation of the Birds and Habitats Directives by 2019
National	Acts and Orders:	
	Foreshore Acts 1933 to 2014	Legislative basis for marine planning and foreshore development.
	Forestry Act 1988	Promotes sustainable forest management principles.
	Forestry Act 2014	An Act to make further and better provision in relation to forestry, to provide for the development and promotion of sustainable forest management.
	Inland Fisheries Act 1959 to 2010	Protection of fish and their spawning grounds.
	Fishery Harbour Centres Acts 1965 to 2015	Establishment of fishery harbour centres to promote and develop sea fishing, processing, packing and selling of fish and the manufacture of fish related products.
	Wildlife Acts 1976 to 2014	Legislative basis for nature conservation and the protection of wildlife.
	Aquaculture Acts 1997 to 2006	Legislative basis governing the licensing and control of the aquaculture industry.
	Sea Fisheries and Maritime Jurisdiction Act 2006	Provisions for the management of sea fisheries and conservation of fish resources in specific

	areas of the sea.
Flora Protection Order 2015	Includes the current list of plant species protected by the Wildlife Acts.
Sea Fisheries Amendment Bill 2017	To amend section 10 of the 2006 Sea Fisheries Act to allow vessels registered in Northern Ireland to fish closer to Irish coasts.
Regulations:	
Sea-Fisheries Regulations (various)	Legislative basis for implementing fisheries policy and legislation.
European Communities (Quality of Salmonid Waters) Regulations 1988 (S.I. 293 of 1988)	Requirement for the protection of water dependent species and habitats in designated Salmonid Waters.
Aquaculture (Licence Application) Regulations 1998 (S.I. 236 of 1998 as amended by S.I. 145 of 2001, S.I. 197 of 2006, S.I. 280 of 2010, S.I. 301 of 2012 and S.I. 410 of 2012)	Requirement for any person who engages in aquaculture to obtain an aquaculture license.
European Communities (Quality of Shellfish Waters) Regulations 2006 (S.I. 268 of 2006 as amended by S.I. 55 of 2009 and S.I. 464 of 2009)	Requirement to protect or improve the quality of water in designated shellfish water sites.
European Communities Environmental Objectives (Freshwater Pearl Mussel) Regulations 2009 (S.I. 296 of 2009)	Requirement to prepare Freshwater Pearl Mussel Sub-basin Plans.
European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011 as amended by S.I. 355 of 2015)	Requirement to protect the habitats of listed species and address the problem of invasive species.
European Union (Birds And Natural Habitats) (Seafisheries) Regulations 2013 (S.I. 290 of 2013)	Sets out requirements in relation to sea-fishing in Natura 2000 sites.
European Union (Water Policy) Regulations 2014 (S.I. 350 of 2014)	Sets out requirements in relation to river basin management planning.
European Union (Framework For Maritime Spatial Planning) Regulations 2016 (S.I. 352 of 2016)	Transposes the Maritime Spatial Planning Framework Directive into Irish Law-requirement to have Maritime Spatial Plans in place by April 2021.
Forestry Regulations 2017 (S.I. 191 of 2017)	Provides detailed rules for the control of forestry activities in the areas of felling, afforestation, forest road works and aerial fertilisation of forests.
Guidelines, Plans, Programmes and Strategies:	
River Basin Management (RBM) Plans 2009-2014 (1 st cycle of RBMs)	An integrated approach to the protection, improvement and sustainable management of the water environment.
Actions for Biodiversity 2011-2016, Ireland's National Biodiversity Plan (Ireland's 2 nd National Biodiversity Plan)	Includes objectives, targets and actions to protect Ireland's biodiversity and to control the spread of invasive alien species.
Harnessing Our Ocean Wealth: An Integrated Marine Plan for Ireland (2012)	Sets out a roadmap for the Government's vision, goals and integrated actions to enable marine potential to be realised.
National Ports Policy (2013)	Objective to facilitate a competitive and effective market for maritime transport services.
Forests, Products and People (2014)	Sets National forest policy and responsible for implementing sustainable forest management principles.
Forestry Programme 2014-220: Ireland	Promoting economic, social and environmentally sustainable forestry programme to meet EU targets.
National Seafood Operational Programme 2014-2020	Promoting fisheries and aquaculture which are competitive, economically viable, socially and

		environmentally sustainable.
	National Peatlands Strategy (NPWS, 2015)	Aims to address peatlands conservation and management.
	National Strategic Plan for Sustainable Aquaculture Development (October 2015)	Aims to secure sustainable development and growth of aquaculture through coordinated spatial planning.
	Environmental Requirements for Afforestation (DAFM, 2016)	Aims to ensure that the establishment of new woodlands and forests protect and enhance the environment.
	Ireland's Environment An Assessment (EPA, 2016)	Provides the national evidence base about the condition of our natural environment and the challenges and opportunities associated with its protection and management.
	Draft 3 rd (December 2016)	
	Draft River Basin Management Plan for Ireland 2018-2021 (February 2017)	Public Consultation on the 2nd cycle of RBM Plans extends to 21 st August 2017. The 2nd cycle adopts a single river basin district approach to plan preparation with a much improved evidence base to underpin decision making.
	National Marine Research & Innovation Strategy 2017-2021 (July 2017)	Sets out Ireland's Marine Research and Innovation Strategy for the period up to 2021.
	National Biodiversity Action Plan 2017-2021 (October 2017)	Sets out a plan, from 2017-2021, through which a range of government, civil and private sectors will undertake to achieve Ireland's Vision for Biodiversity.
Local	Guidelines, Plans, Programmes, Strategies:	
	Biodiversity Species List for County Donegal (with priorities) May 2009 - An Action of the County Donegal Heritage Plan (2007-2011)	A list of species of flora and fauna (excluding microbes) recorded in Donegal.
	Working Together Managing Our Shared Waters: The North Western International River Basin District River Basin Management Plan 2009-2015	Implements the requirements of the WFD to ensure good quality water by 2015.
	Pollution Reduction Programmes for the Designated Shellfish Waters at: Donegal Bay; Drumcliff Bay; Dunglow Bay; Gweebarra Bay; Inver Bay; Lough Swilly; Loughros Beg; McSwynes Bay; Mulroy Bay; Sheephaven; Sligo Bay; Trawbreaga Bay; Trawenagh Bay	Fulfils the aims of the Shellfish Directive (now subsumed in the WFD) - to protect or improve shellfish waters in order to support shellfish life and growth - prepared as part of the 1 st cycle of RBM Plans for 2009-2015.
	Freshwater Pearl Mussel (FPM) Plans 2009-2015	Prepared for 6 Natura designated FPM catchments in Co. Donegal as part of the 1 st cycle of RBM Plans for 2009-2015.
	Fisheries Natura Plans (Marine Institute, 2013)	Article 6 Assessment of Aquaculture and Fisheries in Inner Donegal Bay SAC (Murvagh, 0133), SPA (Donegal Bay, 004151), SPA (Durnesh Lough, 004145).
	County Donegal Heritage Plan 2014-2019	Promotion and conservation of the County's heritage resources.
	Lough's Agency Licensing Programme	Conservation, management, promotion and development of the fisheries and marine resources of Lough Foyle and Carlingford Lough.
Transboundary	Acts and Orders:	
	Foyle Fisheries Act (Northern Ireland) 1952 (as amended 1983 and amended by the Foyle and Carlingford Fisheries Act 2007)	Authorising certain fishing rights in the tidal waters of the Lough and River Foyle and its tributaries.
	Wildlife and Countryside Act 1981	Bans certain methods of killing or taking wild animals, including birds, and restricts the introduction and sale of certain non-native animals and plants.

Nature Conservation and Amenity Lands (Northern Ireland) Order 1985 (as amended)	Sets out the DoE's rights and duties to protect and enhance sites of natural beauty or special scientific interest in Northern Ireland.
Wildlife (Northern Ireland) Order 1985 No. 171 (as amended)	Provisions for controlling the growth of invasive plant species in the wild.
Pesticides Act 1998	Provisions for controlling pesticides.
Plant Health Order (Northern Ireland) 2006 SR 82 (as amended by 2006 SR 165, 2006 SR 435 and 2012 SR 392)	Implements protective measures for preventing the spread of organisms harmful to plants or plant products.
Natural Environment and Rural Communities Act 2006	Conservation and management of the natural environment in a sustainable manner.
UK Marine and Coastal Access Act 2009	Framework for managing the seas of the UK – Identification of Marine Conservation Zones (MCZs).
Wildlife and Natural Environment Act (Northern Ireland) 2011	Adds new provisions to protect a greater range of plants, animals, birds and to increase protection to Areas of Special Scientific Interest (ASSI).
Marine Act (Northern Ireland) 2013	Implementation of marine planning based on balanced conservation, energy and resource needs - identification of MCZs.
Regulations:	
Control of Pesticides Regulations (Northern Ireland) 1987 SR 414 (as amended by 1997 SR 469)	Defines which pesticides are controlled and require full approval and consent from DARDNI, before they may be advertised, sold, supplied, stored, or used.
Plant Protection Products Regulations (Northern Ireland) 1995 SR 371 (as amended)	Controls the sale and supply of PPPs, mainly agricultural pesticides.
Conservation (Natural Habitats, etc) Regulations (Northern Ireland) 1995 SR 380 (as amended by 2004 SR 435, 2007 SR 345, 2009 SR 8, 2011 SR 216 and 2012 SR 368)	Implements the Birds Directive and the Habitats Directive and places a duty on public bodies to take measures to preserve, maintain and re-establish habitat for wild birds.
Water Environment (Water Framework Directive) Regulations (Northern Ireland) 2003 SR 544	Sets out requirements for managing, protecting and improving the quality of water resources, particularly river basins.
Environmental Impact Assessment (Forestry) Regulations (Northern Ireland) 2006 SR 518	Sets out measures for managing and developing forestry projects.
Environmental Liability (Prevention and Remediation) Regulations (Northern Ireland) 2009 SR 252 (as amended by 2009 SR 361 and 2011 SR 210)	Sets rules to force polluters to prevent and repair damage to water systems, land quality, species and their habitats and protected sites.
Plant Protection Products (Sustainable Use) Regulations 2012 S.I. 1657	Sets out requirements for supervision, distribution, storage, handling and use of PPPs.
The Foyle Area Regulations 2014	Regulations governing fishing in Lough and River Foyle and its tributaries.
Water Framework Directive (Classification, Priority Substances and Shellfish Waters) Regulations (NI) 2015 SR 351	Transposes Directive 2013/39/EU into Irish Law - revised environmental standards for ensuring quality of surface waters.
Guidelines, Plans, Programmes, Strategies:	
Towards an Integrated Coastal Zone Management Strategy for Northern Ireland 2006-2026	Aims to establish sustainable levels of economic and social activity in coastal areas while protecting the coastal environment.
Northern Ireland Countryside Survey 2007: Broad Habitat Change 1998-2007	Provides a record of habitat change that can be used as a measure of the effectiveness of biodiversity conservation.
Working Together Managing Our Shared Waters: The North Western International River Basin District River Basin Management Plan 2009-2015	Implements the requirements of the Water Framework Directive to ensure good quality water by 2015.

	UK National Ecosystem Assessment: Technical Report 2011 (Chapter 18)	Provides an introduction to the habitats and ecosystems of Northern Ireland.
	State of the Seas Report (January 2011)	Implements the requirements of the Marine Strategy Framework Directive.
	Biodiversity Strategy for Northern Ireland to 2020 (July 2015)	A strategy for Northern Ireland to meet its international obligations and local targets to protect biodiversity and the sustainability of the environment.
	Marine Conservation Zones in the Northern Ireland Inshore Region (December 2016)	DAERA Marine and Fisheries Division designated four new MCZs in the Northern Ireland Inshore Region.
Soil		
International	Guidelines, Plans, Programmes, Strategies:	
	EU Thematic Strategy for Soil Protection 2006	Aims to maintain and protect soil quality.
	The European Environment – State and Outlook 2010 Report	Includes soil assessment which details key processes affecting soil resources in Europe.
	The State of Soil in Europe 2012	Aims to protect soils across Europe and ensure their sustainable use.
	The Seventh Environment Action Programme (EAP) of the European Union 2013-2020 (January 2014)	Aims to reduce soil and remediate contaminated sites by 2020.
National	Guidelines, Plans, Programmes, Strategies:	
	Quarries and Ancillary Actions - Guidelines to Planning Authorities (April, 2004)	Provides guidance to planning authorities on planning for the quarrying industry through the Development Plan.
	Irish Soils Information System – Phase 1 (EPA, September 2014)	Provides a soil map of Ireland at a scale of 1:250,000 with an associated web-based soil information system.
Transboundary	Guidelines, Plans, Programmes, Strategies:	
	AFBI Soil Survey project	Systematic study of the soils of Northern Ireland includes a series of maps, books and extensive digital datasets.
	General Soil Map of Northern Ireland at 1:250 000 scale (Agri-Food and Biosciences Institute (AFBI))	Provides a soil map of Northern Ireland with an associated web-based soil information system.
Water		
International	Directives:	
	Sewage Sludge Directive (86/278/EEC as amended by 91/692/EEC)	Sets controls on the use of sewage sludge in agriculture.
	Urban Waste Water Treatment Directive (91/271/EEC)	Protection of the environment from adverse effects of urban waste water discharges.
	Nitrates Directive (91/676/EEC)	Protection of waters against pollution caused by nitrates from agricultural sources.
	Drinking Water Directive (98/83/EC)	Sets controls in relation to the quality of water intended for human consumption.
	Water Framework Directive (2000/60/EC as amended) and associated directives which have been subsumed ¹ into the WFD	Requirement to achieve good ecological status by 2015 or at the latest 2027.
	Bathing Water Directive (revised) (2006/7/EC)	Sets controls in relation to the management of

¹ Drinking Water Abstraction Directive; Sampling Drinking Water Directive; Exchange of Information on Quality of Surface Freshwater Directive; Shellfish Directive; Freshwater Fish Directive; Groundwater (Dangerous Substances) Directive; and Dangerous Substances Directive.

		bathing water quality.
	Groundwater Directive (2006/118/EC as amended by 2014/80/EU)	Requirement to achieve good quantitative and chemical status of groundwater by 2015.
	Floods Directive (2007/60/EC)	Assessment and management of flood risk through preliminary flood risk assessment, preparation of flood risk maps and flood risk management plans.
	Integrated Pollution Prevention and Control (IPPC) Directive (2008/1/EC)	Defines the obligations with which industrial and agricultural activities with a high pollution potential must comply.
	Marine Strategy Framework Directive (2008/56/EC)	Aims to protect more effectively the marine environment across Europe.
	Priority Substances Directive (2008/105/EC as amended by Directive 2013/39/EU)	Aims to protect the quality of surface waters.
	Seveso Directive (2010/18/EU)	Aims at the prevention of major accidents involving dangerous substances.
	Guidelines, Plans, Programmes, Strategies:	
	EU Common Implementation Strategy for the Water Framework Directive (2000/60/EC) (2003)	Guidance document on the implementation of the requirements of the Water Framework Directive.
National	Acts:	
	Arterial Drainage Act 1945 (as amended 1995)	OPW permitted to implement localised flood relief schemes to provide flood protection for cities, towns and villages.
	Local Government (Water Pollution) Act 1997 to 1990	Control of water pollution where an IPPC licence is not required – local authorities responsible for the issuing of effluent discharge licences for effluents discharged to waters and to sewers.
	Water Services Act 2007 to 2014	Control of water pollution where an IPPC licence is not required – local authorities responsible for the issuing of effluent discharge licences for effluents discharged to waters and Irish Water are responsible for effluent discharges to sewers.
	Water Service (Amendment) Act 2016	An Act to suspend charging for domestic water services; for those purposes to amend the Water Services Act 2014.
	Regulations:	
	Local Government (Water Pollution) Act, 1977 (Water Quality Standards For Phosphorus) Regulations 1998 (S.I. 25 of 1998)	Sets controls for the prevention of pollution caused by certain dangerous substances discharged into the aquatic environment.
	Urban Waste Water Treatment Regulations 2001 (S.I. 254 of 2001 as amended by S.I. 440 of 2004 and S.I. 48 of 2010)	Sets controls for urban waste water treatment.
	European Communities (Water Policy) Regulations, 2003 (S.I. 722 of 2003)	Monitoring and assessment of different water categories as per the requirements of the Water Framework Directive.
	Waste Water Discharge (Authorisation) Regulations 2007 (S.I. 684 of 2007 as amended by S.I. 231 of 2010)	Requirement to obtain certification from the EPA for waste water discharges serving a population of less than 500.
	Quality of Bathing Water Regulations 2008 (S.I. 79 of 2008 as amended by S.I. 351 of 2011)	Requirement on local authorities to monitor bathing water quality and make information available to the public on water quality during the summer bathing season.
	European Communities Environmental Objectives (Surface Waters) Regulations, 2009 (S.I. 272 of 2009)	Outlines a set of environmental standards for Irish surface waters in line with the Water Framework Directive.
	European Communities Environmental Objectives (Groundwater) Regulations, 2010 (S.I. 9 of 2010 as amended by S.I. 389 of 2011)	Established environmental objectives to be achieved in groundwater quality in line with the Water Framework Directive.

	European Communities (Marine Strategy Framework) Regulations 2011 (S.I. 249 of 2011)	Gives effect to the Marine Strategy Framework Directive in Irish legislation to protect the marine environment.
	European Communities (Technical Specifications for the Chemical Analysis and Monitoring of Water Status) Regulations, 2011 (S.I. 489 of 2011)	Sets out requirements for the monitoring of water in line with the Water Framework Directive.
	Water Services Acts 2007 & 2012 (Domestic Waste Water Treatment Systems) Regulations 2012 (S.I. 223 of 2012)	Outlines a set of environmental standards for the operation and maintenance of domestic waste water treatment systems including de-sludging.
	European Communities (Drinking Water) Regulations 2014 (S.I. 122 of 2014)	Provides the EPA with supervisory powers for public water supplies - EPA can direct Irish Water to improve the management or quality of a public water suppl.
	European Communities (Good Agricultural Practice for Protection of Waters) Regulations, 2014 (S.I. 31 of 2014 as amended by S.I. 463 of 2014) [Nitrates Regulations]	Provides measures to ensure the protection of waters, including drinking water sources, against pollution caused by nitrogen and phosphorus from agricultural sources in line with the Water Framework Directive.
	Guidelines, Plans, Programmes, Strategies:	
	National Floods Policy (OPW, September 2004)	Development of a planned programme of feasible works, with a greater emphasis for non-structural measures.
	The Planning System and Flood Risk Management: Guidelines for Planning Authorities (November, 2009)	Guidelines for planning authorities in relation to the assessment and management of flood risk.
	Nitrates Action Programme 2014-2017	Measures to prevent pollution of surface waters and ground water from agricultural sources and to protect and improve water quality.
	Water Services Strategic Plan 2015 (Irish Water)	Integrated National Plan for the delivery of water services and ensuring the availability of safe drinking water.
	National Strategy to Reduce Exposure to Lead in Drinking Water (June 2015)	Highlights the need for collective action to reduce exposure of the public to lead in drinking water.
	Draft Lead in Drinking Water Mitigation Plan (Irish Water, 2016)	Provides a detailed framework of measures to effectively address lead in drinking water.
	National Wastewater Sludge Management Plan (Irish Water, 2016)	Strategy for managing wastewater sludge over the next 25 years.
	National Water Resources Plan (In preparation)	Strategic development of water supplies that comply with the water quality standards and promotes security of supply.
Local	Guidelines, Plans, Programmes, Strategies:	
	North Western – Neagh Bann Catchment-based Flood Risk Assessment and Management (CFRAM) Study (2012-2016)	Assessment and management of flood risk in North Western and Neagh Bann districts in line with the Floods Directive.
Transboundary	Acts and Orders:	
	Water (Northern Ireland) Order 1999 SI 662 (including amendments up to 2004)	Measures to combat water pollution and conserve water resources and to promote the use of waterways for recreation.
	Water and Sewerage Services (Northern Ireland) Order 2006 S.I. 3336 (NI 21)	Establishes obligations for water supply, drinking water quality, trade effluent and sewage disposal, water and sewerage charges and customer service.
	Regulations:	
	Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations (Northern Ireland) 2003 SR 319	Sets out conditions for making silage and storing slurry and fuel oil, with limited exceptions.

	Protection of Water Against Agricultural Nitrate Pollution (Northern Ireland) Regulations 2004 SR 419	Establishes that an Action Programme applies in Northern Ireland.
	Water Resources (Environmental Impact Assessment) Regulations (Northern Ireland) 2005 SR 32 (as amended by 2006 SR 483)	Outlines measures for public participation in creating plans or programmes relating to the environment.
	Drainage (Environmental Impact Assessment) Regulations (Northern Ireland) 2006 SR 34	Requires conditions to be met before projects such as drainage works and marina works are carried out.
	Urban Waste Water Treatment Regulations (Northern Ireland) 2007 SR 187	Reflects new arrangements for sewerage services set out in the Water and Sewerage Services (Northern Ireland) Order 2006.
	Private Water Supplies Regulations (Northern Ireland) 2009 SR 413 (as amended by 2010 SR 131)	Regulates the quality of water intended for human consumption that come from private supplies.
	Groundwater Regulations (Northern Ireland) 2009 SR 254 (as amended by 2009 SR 359, 2011 SR 211, 2014 SR 208, 2016 SR 119)	Introduces classification systems in line with EU developments, makes it an offence to discharge listed substances without an authorisation.
	Nitrates Action Programme Regulations (Northern Ireland) 2014 SR 307 (as amended 2015 SR 369)	Sets out an action programme for the period 1 Jan. 2015 to 31 Dec. 2018 concerning the protection of waters against pollution caused by nitrates from agricultural sources.
	Phosphorus (Use in Agriculture) Regulations (Northern Ireland) 2014	Measures to improve the use of agricultural nutrients on farms and reduce their impact on Northern Ireland's water environment.
Guidelines, Plans, Programmes, Strategies:		
	North Western – Neagh Bann Catchment-based Flood Risk Assessment and Management (CFRAM) Study (2012-2016)	Assessment and management of flood risk in the North Western and Neagh Bann districts in line with the Floods Directive (2007/60/EC).
	Nitrates Action Programme and Phosphorous Regulations 2015-2018	Measures to prevent pollution of surface waters and ground water from agricultural sources and to protect and improve water quality.
Climate Change		
International	Agreements, Conventions and Treaties:	
	United Nations Framework Convention on Climate Change (UNFCCC) 1992	Objective to prevent dangerous man-made interference with the global climate system.
	Kyoto Protocol (1997)	Sets international targets and mechanisms for addressing climate change.
	European Climate Change Programme (ECCP II) 2005	Second ECCP to identify and develop all the necessary elements of an EU strategy to implement the Kyoto Protocol.
	Bali Road Map 2007	Outlines a new negotiating process designed to tackle climate change.
	Cancun Agreements 2010	A set of significant decisions to address the long-term challenge of climate change.
	Doha Climate Gateway 2012	Set out a timetable to adopt a universal climate agreement by 2015, which will come into effect in 2020.
	Paris Agreement (COP 21) (Adopted December 2015)	Due to enter into force in 2020 - 1st legally binding global climate agreement.
	Directives:	
	Emissions Trading Directive 2003 (2003/87/EC)	Establishes a scheme for greenhouse gas emission allowance trading within the EC.
	Greenhouse Gas Emissions Allowance Trading Directive (Linking Directive) (2004/101/EC)	Amends Emissions Trading Directive in respect of the Kyoto Protocol's project mechanisms.

	Aviation Directive (2008/101/EC)	Amends Emissions Trading Directive to include aviation activities for greenhouse gas emissions allowance trading.
	Energy Performance of Buildings Directive (2010/31/EU)	Aims to reduce energy consumption of buildings.
	Energy Efficiency Directive (2012/27/EC)	Aims to reduce energy consumption of buildings.
	Regulations:	
	EC Substances that Deplete the Ozone Layer Regulations (No. 1005 of 2009 as amended by No. 744 of 2010)	Measures to control substances that damage the ozone layer.
	EU Monitoring and Reporting Greenhouse Gas Emissions Relevant Regulations (No. 525 of 2013)	Mechanism for monitoring and reporting greenhouse gas emissions at national, EU, and local level relevant to climate change.
	EU Fluorinated Greenhouse Gases Regulations (No. 842 of 2006 as amended by No. 517 of 2014)	Objective to protect the environment by reducing emissions of fluorinated greenhouse gases.
	Guidelines, Plans, Programmes, Strategies:	
	EU Guidelines on Climate Change and Natura 2000	Guidance in relation to the benefits from Natura 2000 sites in mitigating the impacts of climate change, reducing vulnerability and increasing resilience.
	EU Adaptation Strategy 2013	Assessment of climate change through the adoption of Adaptation Strategies and Action Plans.
	Implementing the Energy Performance of Buildings Directive (2016)	Provides details on the implementation of the Energy Performance of Buildings Directive in Ireland.
National	Acts and Orders:	
	Climate Action and Low Carbon Development Act 2015	Sets requirement for 5-yearly National Mitigation Plans specifying policies to reduce greenhouse gas emissions and preparation of a National Adaptation Framework.
	Regulations:	
	EC Greenhouse Gas Emissions Trading Regulations 2004 (S.I. 437 of 2004)	Transposes the Greenhouse Gas Emissions Trading Directive into Irish Law.
	Control Of Substances that Deplete the Ozone Layer Regulations 2006 (S.I. 281 of 2006)	Requirements to control substances that damage the ozone layer.
	European Communities (Greenhouse Gas Emissions Trading) (Aviation) Regulations 2010 (S.I. 261 of 2010)	Transposes the Aviation Directive into Irish Law.
	European Union (Energy Performance of Buildings) Regulations 2012 (S.I. 243 of 2012)	Transposes the Energy Performance of Buildings Directive into Irish Law.
	Guidelines, Plans, Programmes, Strategies:	
	National Climate Change Adaption Framework, Building Resilience to Climate Change (December 2012)	Aims to ensure that actions are taken across key sectors and also at local level to reduce Ireland's vulnerability to climate change.
	National Policy Position on Climate Action and Low Carbon Development 2014	High-level policy direction for the adoption and implementation by Government of plans to enable the State to move to a low carbon economy by 2050.
	Draft Adaptation Plan for the Agriculture and Forest Sector (November, 2016)	Seeks to identify vulnerabilities and adaptation options to strengthen the resilience of the sector to the changing climate.
Draft Adaptation Planning – Developing Resilience to Climate Change in the Irish Transport Sector ,	Outlines adaptation actions to avoid or reduce the adverse impacts of climate change and to	

	2016	anticipate possible future changes.
	Department of Communications, Climate Action & Environment, Statement of Strategy 2016-2019 (January, 2017)	Sets the key outcomes and indicators that the department will use to measure its performance in meeting obligations under international agreements.
	Department of Communications, Climate Action & Environment, National Mitigation Plan (July 2017)	Ireland's first statutory climate change National Mitigation Plan provides a robust framework for action and accountability to reduce greenhouse gas emissions.
Local	Guidelines, Plans, Programmes, Strategies:	
	IMCORE Lough Swilly and Climate Change 2008-2011	EU funded programme of the impacts of climate change on Lough Swilly.
Transboundary	Acts and Orders:	
	Energy Efficiency (Northern Ireland) Order 1999 SI 659 (NI 3)	Promote efficient energy use in industry and in residential accommodation.
	Climate Change Act 2008	Sets 2050 as the target for reducing greenhouse gas emissions.
	Regulations:	
	Climate Change Agreements (Eligible Facilities) Regulations 2001 SI 662	Specifies that for an installation or site to be eligible for inclusion in a climate change agreement, at least 90% of the energy supplied to it will be used within the site.
	Energy Performance of Buildings (Certificates and Inspections) Regulations (Northern Ireland) 2008 (as amended by 2014 SR 43)	Requires building owners to supply an energy performance certificate for buyers or tenants and public buildings to display an energy certificate within the building.
	Environmental Protection (Controls on Ozone-Depleting Substances) Regulations 2011 SI 1543	Enforces the provisions of the EC Substances that Deplete the Ozone Layer Regulations.
	Controls on Ozone-Depleting Substances Regulations (Northern Ireland) 2011 SR 239	Implements the EC Substances that Deplete the Ozone Layer Regulations.
	Ozone Depleting Substances (Qualifications) Regulations (Northern Ireland) 2011 SR 240	Specifies the minimum training and qualifications required by anyone working with ozone-depleting substances.
	Greenhouse Gas Emissions Trading Scheme Regulations 2012 S.I. 3038 (as amended by S.I. 3135)	Provides a framework to allow greenhouse gas emissions permits to be bought and sold between businesses.
	Energy Savings Opportunity Scheme Regulations 2014 (as amended 2015)	Introduces the Energy Savings Opportunity Scheme (ESOS) - all large undertakings must audit their energy use and identify ways to improve their energy efficiency.
	Fluorinated Greenhouse Gases Regulations 2015 SR 310	Applies to offshore installations in Northern Ireland.
	Fluorinated Greenhouse Gases Regulations (Northern Ireland) 2015 SR 425	Attempts to limit emissions of fluorinated greenhouse gases into the atmosphere.
Material Assets		
International	Directives:	
	Packaging Waste Directive (94/62/EC)	Aims to prevent or limit the negative effects of the incineration of waste.
	Hazardous Waste Directive (96/59/EC)	Requirements for the disposal of certain hazardous chemicals.
	Landfill Directive (99/31/EC)	Sets stringent technical requirements for waste and landfills.
	Waste Incineration Directive (2000/76/EC)	Aims to prevent or limit the negative effects of the incineration of waste.

	WEEE Directive (2002/96/EC)	Aims to prevent the generation of electrical and electronic waste and to promote reuse, recycling and other forms of recovery.
	Mining Waste Directive (2006/21/EC)	Requirement for Waste Management Plans for extractive industries.
	EU Integrated Pollution Prevention and Control Directive (IPPC) (2008/1/EC)	Provides for a permit system for activities including waste management.
	Waste Framework Directive (2008/98/EC)	Sets down basic requirements for handling waste and defines what is meant by 'waste'.
	Regulations:	
	EU Regulation on Shipments of Waste (No. 1013 of 2006)	Establishes procedures and control regimes for shipping waste depending on its origin, destination and route, and the type of waste and treatment that will be applied.
	Guidelines, Plans, Programmes, Strategies:	
	EU Action Plan on Urban Mobility 2009	Proposes measures to encourage/help local, regional and national authorities in achieving goals for sustainable urban mobility.
	EU White Paper on Transport 2011	Roadmap to a single EU transport area to build a competitive transport system that will increase mobility, remove barriers in key areas and fuel growth and employment.
National	Acts and Orders:	
	Roads Acts 1961-2012	Provides for the construction and maintenance of public roads.
	Waste Management Acts 1996-2011	Legislative basis for waste management.
	Dumping at Sea Act 1996 (as amended 2004 and 2009)	Restrictions on dumping waste at sea.
	Dangerous Substances Acts 1972-1979	Restrictions regarding the storage and disposal of dangerous substances.
	Protection of the Environment Act 2003	Transposes the IPPC Directive into Irish Law.
	Regulations:	
	Waste Management Regulations, 2001-2016 (Various)	Transposes EU Waste Directives into Irish law and sets out measures to implement EU waste obligations.
	Guidelines, Plans, Programmes, Strategies:	
	Delivering Change - Preventing and Recycling Waste, 2002 (DoEHLG)	Proposals to give local authorities more power to tackle the waste problem.
	Waste Management- Taking Stock and Moving Forward, 2004 (DoEHLG)	Information on the progress and challenges faced by Irish society in tackling waste.
	National Biodegradable Waste Management Strategy in 2006	Sets out measures to progressively divert biodegradable municipal waste from landfill.
	Smarter Travel, a Sustainable Transport Future, A New Transport Policy for Ireland 2009-2020	Aims to improve our current transport and travel patterns.
	National Cycle Policy Framework 2009	Outlines specific objectives and integrated actions to ensure a cycling culture is developed in Ireland and by 2020, 10% of all journeys will be by bike.
	A Resource Opportunity Waste Management Policy in Ireland (DECLG, 2012)	Sets out the policy on eliminating landfill, reducing the amount of waste produced and maximising waste as a source of products and renewable energy.
National Hazardous Waste Management Plan 2014-2020	Sets out priorities to improve the management of hazardous waste.	

	Connacht-Ulster Region Waste Management Plan 2015-2021	Framework for the prevention and management of waste in a safe and sustainable manner.
	Investing in our Transport Future – A Strategic Investment Framework for Land Transport 2015	Establishes high level priorities for future investment in land transport and key principles to which transport investment proposals will be required to adhere to.
	National Aviation Policy 2015	Outlines policies and actions to enable the Irish aviation industry to build on its existing strong reputation to compete effectively in the growing global market.
Local	Guidelines, Plans, Programmes, Strategies:	
	Donegal Waste Management Plan 2006-2010	Provides a framework for waste management in the County.
Transboundary	Acts and Orders:	
	Mines Act (Northern Ireland) 1969	Sets out controls on tips, blasting, dust precautions, record-keeping and fencing of disused or abandoned mines.
	Waste and Contaminated Land (Northern Ireland) Order 1997 S.I. 2778 (NI 19) (as amended by 2007 S.I. 611)	Sets out waste management measures covering waste carrier registration and identifying and remedying contaminated land.
	Producer Responsibility Obligations (Northern Ireland) Order 1998 S.I. 1762 (Northern Ireland 16) (including amendments up to 2004)	Imposes obligations on producers to recover and recycle prescribed products and materials, and related obligations to meet recovery and recycling targets.
	Waste and Contaminated Land (Amendment) Act (Northern Ireland) 2011	Gives the DOE and District Councils investigative, enforcement and clean up powers to deal with illegally dumped waste.
	Regulations:	
	Landfill Regulations (Northern Ireland) 2003 SR 496 (as amended by 2004 SR 297, 2007 SR 179, 2007 SR 258, 2011 SR 101 and 2013 SR 161)	Introduces permits to create and operate a landfill, and sets out which categories of waste can be accepted at each landfill site.
	Hazardous Waste Regulations (Northern Ireland) 2005 SR 300 (as amended by 2005 SR 461, 2015 SR 238 and 2015 SR 288)	Details measures for controlling and tracking the movement of hazardous waste.
	Waste Management Regulations (Northern Ireland) 2006 SR 280	Categorises waste as household, industrial or commercial - 'controlled waste' includes mine, quarry and agricultural waste.
	Producer Responsibility Obligations (Packaging Waste) Regulations (Northern Ireland) 2007 SR 198 (as amended by 2008 SR 373, 2008 SR 77, 2010 SR 396, 2012 SR 437, 2013 SR 262, 2016 SR 241 and 2016 SR 79 and 2017 SR 3)	Requires producers to recover and recycle packaging waste to achieve EU targets.
	Waste (Northern Ireland) Regulations 2011 SR 127 (as amended by 2013 SR 241 and 2016 SR 95)	Requires businesses to apply the waste management hierarchy, introduces a two-tier system for waste carrier, broker and dealer registration, establishes waste prevention programmes.
	Waste Electrical and Electronic Equipment (WEEE) Regulations 2013 S.I. 3113 (as amended by 2015 S.I. 1968)	Aim to combat the rapid growth of WEEE and its impact on the environment due to its hazardous content.
	Food Waste Regulations (Northern Ireland) 2015 SR 14	Place a duty on food businesses producing in excess of 5kg of food waste per week to present food waste for separate collection.
	Planning (Management of Waste from Extractive Industries) Regulations (Northern Ireland) 2015 SR 85	Transposes the Mining Waste Directive into Northern Ireland law.

	Packaging (Essential Requirements) Regulations 2015 (No. 1640 of 2015)	Implements the Packaging Waste Directive and sets out requirements for packaging.
The Built, Natural and Cultural Heritage		
International	Agreements, Conventions and Treaties:	
	The Venice Charter 1964	International framework for the conservation and restoration of historic buildings.
	UNESCO World Heritage Convention, 1972	International classification of World Heritage Sites based on cultural, historical, scientific or some other importance.
	The Burra Charter 1979	International framework for the conservation of places of cultural significance.
	The Washington Charter 1987	International framework for the conservation of historic towns and districts.
	European Convention on the Protection of the Archaeological Heritage (Valletta Convention), 1992	Requirement to ensure optimum conservation of archaeological heritage in urban and regional planning policies.
	European Convention on the Protection of the Architectural Heritage (Granada Convention), 1997	Strengthen and promotes policies for the conservation and development of cultural heritage in Europe.
National	Acts and Orders:	
	National Monuments Acts 1930 (as amended 1954, 1987, 1994 and 2004)	Provides for the protection of national monuments through the use of preservation orders.
	Continental Shelf Act, 1968	Defines the territorial waters of Ireland.
	The Heritage Act 1995	Protection and conservation of the built, natural and cultural heritage of Ireland.
	National Cultural Institutions Act 1997	Provisions for the protection of National Cultural Institutions.
	Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999	Established the National Inventory of Architectural Heritage (NIAH) and defined the roles of its officers.
	The Heritage Fund Act 2001	Provides financial resources for the acquisition of heritage objects.
	Regulations:	
	National Monuments Regulations 2005	Implements the National Monuments Acts.
	Guidelines, Plans, Programmes, Strategies:	
	Irish Geological Heritage (IGH) Programme 1998	Protect and conserve the geological heritage of Ireland.
	Framework and Principles for the Protection of Archaeological Heritage (Code of Practice ,Department of Arts, Heritage and the Gaeltacht) 1999	Sets out the basic national principles in respect of development and archaeological heritage.
	National Heritage Plan 2002	Ensure the protection of National Heritage and to promote its enjoyment by all.
	Heritage Council's Strategic Plan 2007-2011	Outlines strategic themes, high-level targets, policies and actions for the protection of the National heritage.
	Heritage Council Priorities 2016 and Beyond	A series of community initiatives to help ensure that the social and economic benefits of protecting and enhancing our National heritage is

		realised by local communities.
	Architectural Heritage Protection- Guidelines for Planning Authorities 2011	Guidelines to assist planning authorities in understanding the guiding principles of conservation and restoration.
	Heritage Plan 2016-2020 (Waterways Ireland)	Strategic framework for the integration of built, natural and cultural heritage into the future management of Irelands waterways.
Local	Guidelines, Plans, Programmes, Strategies:	
	County Donegal Heritage Plan 2014-2019 (as varied)	Promotion and conservation of the County's heritage resources including the built, natural and cultural heritage.
Transboundary	Guidelines, Plans, Programmes, Strategies:	
	A Future for Northern Ireland's Built Heritage (March, 2009)	Recognises the need to protect the built heritage to ensure that this record of the past continues into the future as a real and living part of the landscape and townscape.
Energy		
International	Directives:	
	EU Biofuels Directive 2003/30/EC)	Promotion of the use of biofuels or other renewable fuels for transport.
	EU Renewables (Res) Directive 2009/28/EC	Establishes a policy for the production and promotion of energy from renewable sources in the EU – target to achieve 20% of total energy through renewables by 2020.
	EU Electricity Market Directive 2009/72/EC	Establishes common rules for the internal market in electricity.
	EU Natural Gas Directive 2009/73/EC	Establishes common rules for the internal market in natural gas.
	EU Energy Efficiency Directive 2012/27/EU	Establishes a set of binding measures to help the EU reach its 20% energy efficiency target by 2020.
	Indirect Land Use Change Directive (2012/0288(COD))	Establishes measures to restrict the indirect land use change impacts of increased carbon emissions from expansion of crop-lands for biofuel production.
	Alternative Fuels Infrastructure Directive (2014/94/EU)	The Clean Power for Transport package aims to facilitate the development of a single market for alternative fuels for transport in Europe.
	Guidelines, Plans, Programmes, Strategies:	
	Energy 2020 – A strategy for competitive, sustainable and secure energy (November, 2010)	Objective to ensure the uninterrupted physical availability of energy products and services on the market, at a price which is affordable for all consumers.
	EU Priorities for 2020 and beyond – A blueprint for an integrated European energy network (November, 2010)	Establishes the EU's core energy policy objectives of competitiveness, sustainability and security of supply.
	EU Energy Efficiency Plan 2011 (Com 2011)	Affirms energy efficiency at the heart of the EU's Europe 2020 Strategy for smart, sustainable and inclusive growth.
	EU Blue Growth Strategy 2012	Identifies 'Blue Energy' as a sector that could help compliance with the EU renewable energy targets.
	A Policy Framework for Climate and Energy in the Period from 2020 to 2030 (January 2014)	Contains a binding target to cut emissions in EU territory by at least 40% below 1990 levels by 2030.

National	Acts and Orders:	
	Gas Act 1976 (as amended)	Regulation of gas production, gas infrastructure and gas distribution.
	Electricity Regulation Act 1999	Established the Commission of Electricity Regulation (now the Commission for Energy Regulation (CER)) as the independent regulator of the electricity industry in Ireland.
	Sustainable Energy Act 2002	Established Sustainable Energy Ireland to promote the development of sustainable energy across all sectors of the economy.
	Energy (Miscellaneous Provisions) Act 2006	Expanded the functions of the CER to encompass an all-island energy market.
	National Oil Reserves Agency (NORA) Act 2007	Established NORA to ensure that Ireland meets its obligations under EU legislation.
	Energy (Biofuel Obligation and Miscellaneous Provisions) Act 2010	Promotes the use of bio fuel - provide for the increased supply of biofuel by means of a biofuel obligation requiring that a specified amount of road transport fuel is biofuel.
	Gas Regulation Act 2013	Provides for the reorganisation of Bord Gáis Éireann transmission and distribution operations and energy business for the continued public ownership of the national gas networks.
	Energy Act 2016 (No. 12 of 2016)	Provides for various amendments of the Electricity Regulation Act 1999, the Gas Act 1976, the NORA Act 2007 and the Sustainable Energy Act 2002 and the Registration of Title Act 1964.
	Energy Act 2016 (Commencement of Certain Provisions) Order 2017	Brings into operation certain provisions of the Energy Act 2016.
	Regulations:	
	European Communities (Internal Market in Electricity) Regulations (S.I. 445 of 2000 as amended by S.I. 60 of 2005, S.I. 524 of 2006)	Gives effect to Electricity Market Directive in relation to the monitoring and regulation of the internal electricity retail markets.
	European Communities (Internal Market in Natural Gas) (BGÉ) Regulations 2005 (S.I. 760 of 2005 as amended by S.I. 377 of 2007, S.I. 239 of 2008, S.I. 450 of 2010)	Give effect to Natural Gas Directive in relation to the monitoring and regulation of the internal natural gas retail markets.
	European Communities (Internal Market in Electricity and Gas) (Consumer Protection) Regulations of 2011 (S.I. 463 of 2011)	Give effect to Electricity Market Directive and the Natural Gas Directive in relation to consumer protection in the internal natural gas and electricity retail markets.
	European Communities (Internal Market in Natural Gas and Electricity) Regulations 2011 (S.I. 630 of 2011 as amended by S.I. 16 of 2015)	Give effect to Electricity Market Directive and the Natural Gas Directive in relation to the monitoring and regulation of the internal natural gas and electricity retail markets.
	European Union (Energy Efficiency) Regulations 2014 (S.I. 426 of 2014)	Transposes Energy Efficiency Directive into Irish law.
	European Union (Renewable Energy) Regulations 2014 (S.I. 483 of 2014)	Transposes the Renewables Directive into Irish Law in relation to the promotion of renewable energy sources.
	European Communities (Internal Market in Natural Gas and Electricity) (Amendment) Regulations 2015 (S.I. 16 of 2015)	Transposes the Renewables Directive into Irish Law in relation to common rules for the internal markets in natural gas and electricity.
	Guidelines, Plans, Programmes, Strategies:	
	Planning Guidelines – Wind Energy Development Guidelines 2006	Advice to planning authorities on planning for wind energy through the development plan process and in determining applications for

		planning permission.
	Government White Paper: Delivering a Sustainable Energy Future for Ireland – The Energy Policy Framework 2007-2020 (2007 and updated 2015)	Sets a clear path for ensuring safe and secure energy supplies, promoting a sustainable energy future, and supporting competitiveness.
	All Island Grid Study 2008	Assessment of the ability of the transmission network (the grid) on the island of Ireland to absorb large amounts of electricity produced from renewable energy sources.
	National Renewable Energy Action Plan (NREAP) (July 2010)	Sets out a strategic approach and measures to deliver on Ireland's 16% target under the Renewables Directive.
	Strategy for Renewable Energy 2012-2020 (DCENR)	Informs Ireland's binding EU obligations under the Renewables Directive to support the development of the renewable energy sectors in the short to medium term.
	Offshore Renewable Energy Development Plan (OREDP) (February 2014)	Recognises that development of offshore renewable energy represents a significant opportunity for ports, particularly along the western Atlantic Coast.
	Draft Bioenergy Plan (October, 2014)	Recognises that meeting the demand for biomass from indigenous sources could deliver significant economic and employment benefits.
	Government White Paper: Irelands Transition to a Low Carbon Energy Future, 2015-2030 (DCENR)	Framework to guide energy policy to 2030, with the aim to improve Irelands renewable energy target and reduce carbon emissions in accordance with the EU objective of a low carbon society by 2050.
	Renewable Electricity in Ireland 2015 (SEAI, August 2016)	Examines the contribution made by renewables to Ireland's electricity requirements for the period 1990 to 2015.
	Draft National Policy Framework on Alternative Fuels Infrastructure 2016	Includes proposals for the deployment of alternative fuels infrastructure for transport in Ireland.
Local	Guidelines, Plans, Programmes, Strategies:	
	Development of the Green Economy in County Donegal - Good Practice Transfer Guide (April, 2011)	Target is for the region to increase both its use of renewable energy and its own production of this, and to become a leader in the green economy.
Transboundary	Acts and Orders:	
	Electricity (Northern Ireland) Order 1992	Sets out the basic licensing regime for carrying out electricity related business activities in Northern Ireland.
	Energy Act (Northern Ireland) 2011	Provisions in connection with the regulation of the gas and electricity industries.
	Guidelines, Plans, Programmes, Strategies:	
	UK Government's 2007 Energy White Paper Meeting the Energy Challenge	Sets out energy policy goals to cut CO ₂ emissions by 60% by c. 2050 with real progress by 2020.
	Sustainable Development Strategy (May, 2010)	Ensuring reliable, affordable and sustainable energy provisions are reducing Northern Ireland's carbon footprint.
	Strategic Energy Framework for Northern Ireland 2010 (September 2010)	Outlines the direction for Northern Ireland energy policy over the next ten years - concentrates on the key areas of electricity, natural gas, and renewable energy sources.
	Sustainable Energy Action Plan 2012-2015 and Beyond (May, 2012)	Outlines the various initiatives being undertaken by the Northern Ireland Executive which

		demonstrates a commitment to sustainable energy.
	Offshore Renewable Energy Strategic Action Plan 2012-2020	Recognises that a combination of both offshore and onshore renewable energy will be needed to meet the target of 40% electricity consumption from renewable sources by 2020.
	Onshore Renewable Electricity Action Plan 2013–2020	Examines the role and cumulative impact of potential market led renewable electricity generation mixes to meet the target of 40% electricity consumption from renewable sources by 2020.
	Envisioning the Future: Considering Energy in Northern Ireland to 2050 (May, 2015)	Intended to guide thinking on what can be achieved in 2050 and what early decisions and activities may be needed to support development towards 2050.
Landscape		
International	Agreements, Conventions and Treaties:	
	European Landscape Convention (2000)	Requires actions to be taken on the landscape and European wide cooperation on landscape issues.
	Florence Declaration on Landscape (2012)	Supports national initiatives and affirms the importance of safeguarding and improving the landscape for the benefit of all.
	Guidelines, Plans, Programmes, Strategies:	
	EU Guidelines for the Implementation of the European Landscape Convention 2008	Sets out a series of theoretical, methodological and practical guidelines for the implementation of the European Landscape Convention at a national level.
National	Guidelines, Plans, Programmes, Strategies:	
	Draft Guidelines for Planning Authorities on Landscape and Landscape Assessment (June, 2000)	Requires protection and enhancement of landscapes.
	National Landscape Strategy for Ireland 2015-2025	Implements the European Landscape Convention in Ireland by providing for specific measures to promote the protection, management and planning of the landscape.
Local	Guidelines, Plans, Programmes, Strategies:	
	Landscape Character Assessment of County Donegal (which include Seascape and Settlement Character Assessments)	Provides a framework for the identification, assessment, protection, management and planning of the landscape (including seascape) of County Donegal in accordance with current legislation and the requirements of the European Landscape Convention 2000.
Transboundary	Guidelines, Plans, Programmes, Strategies:	
	Towards a Land Strategy for Northern Ireland (January 2015)	Implements the European Landscape Convention in Northern Ireland by providing for specific measures to promote the protection, management and planning of the landscape.
Interrelationships/Sustainable Development		
International	Agreements, Conventions and Treaties:	
	World Summit on Sustainable Development in Johannesburg, Earth Summit 2002	Agreement was made to restore the world's depleted fisheries for 2015.
	United Nations Conference on Sustainable Development Rio+20, Earth Summit 2012	Requires political commitment to build a green economy to achieve sustainable development.
	UN Sustainable Development Summit in New York 2015	Adoption of a new sustainable development agenda fostering sustainable economic growth and promoting sustainable consumption and

		production.
	Guidelines, Plans, Programmes, Strategies:	
	Agenda 21 (1992) Action for Sustainable Development	Un Action Plan for sustainable development.
	'The Gothenburg Strategy' Communication from the Commission on Sustainable Europe for a Better World 2001	EU Strategy for sustainable development.
	Johannesburg Plan of Implementation 2001	UN programme for the integration of three pillars of sustainable development: economic development, social development and environmental protection.
	EU Environment and Health Strategy 2004-2010	Focuses on the links between environmental risk factors and priority diseases.
	European Strategy for Sustainable Development (2006)	Identifies key priorities for sustainable development.
	Europe 2020 Strategy (2010)	Identifies 5 key targets for the creating a resource-efficient Europe over the period to 2020: employment, research and development, climate change/energy, education and poverty/social exclusion.
	Towards Green Growth (OECD, 2011)	Recommendations to help Governments to identify policies that can help achieve the most efficient shift to greener growth.
	EU 7th Environmental Action Programme to 2020 'Living well, within the limits of our planet' (2014)	Framework for actions to address unsustainable trends in climate change, biodiversity, environment and health, and in the sustainable use of resources and management of waste.
	Transforming our world: the 2030 Agenda for Sustainable Development (2015)	17 goals covering a broad range of sustainable development issues based on people, planet and prosperity.
National	Guidelines, Plans, Programmes, Strategies:	
	Sustainable Future – a Framework for Sustainable Development for Ireland (June 2012)	Provides for the integration of sustainable development into key areas of policy, to put in place effective implementation mechanisms and to deliver measures to progress sustainable development.
	Sustainable Urban Housing: Design Standards for New Apartments, Guidelines for Planning Authorities (December 2015)	Specific planning policy requirements stated in this document take precedence over policies and objectives of development plans, local area plans or strategic development zone planning schemes.
	Food Wise 2025 (2015)	Strategic plan for the sustainable development of the agri-food sector.
Transboundary	Acts and Orders:	
	Environmental Better Regulation Act (Northern Ireland) 2016	Creation of an integrated environmental permitting regime - rationalising powers of entry and associated powers (inspection and investigation).
	Guidelines, Plans, Programmes, Strategies:	
	Sustainable Development Strategy – Everyone's Involved (May, 2010)	Provides a framework to support decisions and actions taken by individuals, groups and organisations in progressing the sustainability agenda.
	Focus on the Future: Sustainable Development Implementation Strategy 2011-2014	A set of actions focussed on the principles, priorities and objectives identified in the Sustainable Development Strategy.
	UK Sustainable Development Goals (September,	Implements the UN's 2030 Agenda – 17

	2015)	sustainable development goals.
Air Quality		
International	Agreements, Conventions and Treaties:	
	Stockholm Convention on Persistent Organic Pollutants, 2001	Aims to eliminate or restrict the production and use of persistent organic pollutants (POPs).
	Directives:	
	Air Quality 4th Daughter Directive (2004/107/EC)	Sets out limits for specific pollutants.
	Ambient Air Quality And Cleaner Air For Europe (CAFE) Directive (2008/50/EC)	To improve air quality and control emissions.
	Industrial Emissions Directive (IPPC) (2010 /75/EU)	To control industrial emissions, prevent and pollution into the air, water and land and to avoid generating industrial waste.
	National Emission Ceilings for Certain Atmospheric Pollutants Directive (2016/2284/EC)	Legislative instrument to achieve the 2030 objectives of 'Clean Air' on the reduction of national emissions of certain atmospheric pollutants.
	Regulations:	
	European Pollutant Release and Transfer Register Regulations (No. 166 of 2006)	Contains information on releases of pollutants to air, water and land, as well as off-site transfers of pollutants present in waste-water and waste.
	European Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) Regulations (No. 1907 of 2006)	Aims to improve the protection of human health and the environment through the better and earlier identification of the intrinsic properties of chemical substances.
Guidelines, Plans, Programmes, Strategies:		
WHO Air Quality Guidelines (1999)	Recommends air quality levels and improvements.	
National	Acts and Orders:	
	Air Pollution Acts 1987 and 2011	Legislative basis for preventing and limiting air pollution in Ireland.
	Environmental Protection Agency Act 1992-1997	Established the EPA – provisions for the protection of the environment and the control of pollution.
	Regulations:	
	Air Quality Arsenic, Cadmium, Mercury, Nickel and Polycyclic Aromatic Hydrocarbons in Ambient Air Regulations (S.I. 58 of 2009)	Transposes the 4th Daughter Directive & amending Air Quality Zones into Irish Law.
	Air Quality Standards Regulations 2011 (S.I. 180 of 2011)	Transposes the CAFE Directive into Irish law.
	Air Pollution Act, 1987 (Marketing, Sales and Distribution of Fuels) (Amendment) Regulations 2011 (S.I. 270 of 2011)	Regulation regarding the marketing, sale and distribution of fuels.
	Guidelines, Plans, Programmes, Strategies:	
Draft National Air Quality Monitoring Programme, 2000	To improve air quality and control emissions.	
Transboundary	Acts and Orders:	
	Clean Air (Northern Ireland) Order 1981 SI 158 (NI 4) (including amendments up to 2004)	Sets out controls on smoke, dust and fumes, including rules on chimneys, and introduces smoke control areas.
	Environment (Northern Ireland) Order 2002 SI 3153 (NI 7) (including amendments up to 2004)	Covers several environmental issues, including pollution prevention control, assessment and management of air quality, and designation of areas of special scientific interest (ASSIs).
	Clean Neighbourhoods and Environment Act	Sets out rules on statutory nuisance and the

	(Northern Ireland) 2011	enforcement powers available to district councils
	Regulations:	
	Clean Air (Emission of Dark Smoke) Regulations (Northern Ireland) SI 1981 of 340 (as amended)	Bans emission of dark smoke from chimneys.
	Smoke Control Areas (Authorised Fuels) Regulations (Northern Ireland) SR 2013/205 (as amended by 2015 SR 367)	Contains the current list of fuels authorised for use in smoke control areas, for the purposes of the Clean Air (NI) Order 1981.
	Pollution Prevention Control (Industrial Emissions) Regulations (Northern Ireland) 2013 SR 160	Transposes industrial emissions (integrated pollution prevention and control) Directive into Northern Ireland law.
Planning		
International	Directives:	
	EIA Directive (85/337/EEC as amended by 97/11/EC, 2003/35/EC, 2009/31/EC and now codified in 2011/92/EU as amended by 2014/52/EU)	Requirement to carry out an EIA of certain projects where they are likely to have significant effects on the environment.
	Strategic Environmental Assessment (SEA) Directive (2001/42/EEC)	Requirement to carry out an SEA of plans and programmes where they are likely to have significant effects on the environments.
	Guidelines, Plans, Programmes, Strategies:	
	EC Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions (May 1999)	Provides guidance on practical methods and approaches to assess indirect and cumulative impacts of a project as well as impact interactions.
	EC Guidance on EIA Screening (June 2001)	Provides practical help to those involved in these stages in the EIA process.
	EC Guidance on EIA Scoping (June 2001)	Provides practical help to those involved in these stages in the EIA process.
	EC Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment (April 2013)	Aims to help improve the way in which climate change and biodiversity are integrated in EIAs.
National	Acts and Orders:	
	Planning and Development Act 2000 (as amended)	Legislative basis for planning and development in Ireland.
	Urban Regeneration and Housing Act 2015	Provides for important reforms in the planning area including revision of Part V, reduced development contributions, and the introduction of a new vacant site levy.
	Planning and Development (Housing) and Residential Tenancies Act 2016	To facilitate the implementation of the document entitled 'Rebuilding Ireland - Action Plan for Housing and Homelessness'.
	Regulations:	
	Planning and Development Regulations 2001 (as amended)	Implements planning law in Ireland.
	Environmental Assessment of Certain Plans and Programmes Regulations (S.I. 435 of 2004 as amended by S.I. 200 of 2011)	Requirement to carry out an SEA of plans and programmes where they are likely to have significant effects on the environment.
	Planning and Development (Strategic Environmental Assessment) Regulations (S.I. 436 of 2004 as amended by S.I. 201 of 2011)	Mandatory SEA population threshold for Local Area Plans reduced from 10,000 to 5,000 persons - LAP areas of greater than 50sq.m subject to mandatory SEA.
	European Communities (Environmental Impact Assessment (Agriculture) Regulations (S.I. 456 of 2011)	Gives effect to the new provisions and procedures compliant with the EIA Directive.
	European Union (Environmental Impact Assessment and Habitats) Regulations 2011 (S.I.	Gives effect to the Birds Directive and Habitats Directive in the EIA process.

473 of 2011 as amended by S.I. 584 of 2011)	
European Union (Environmental Impact Assessment) (Planning and Development Act, 2000) Regulations 2012 (S.I. 419 of 2012)	Gives effect to the 2011 EIA Directive on the assessment of the effects of certain public and private projects on the environment.
Guidelines, Plans, Programmes, Strategies:	
National Spatial Strategy 2000-2020	Sets National policy and framework for future development across the country.
Childcare Facilities Guidelines for Planning Authorities, June 2001	Framework to guide planning authorities in preparing development plans and assessing applications for planning permission for childcare facilities.
EPA Guidelines on Information to be contained in Environmental Impact Statements (March 2002)	Guidelines on information to be contained in an EIS.
EPA Advice Notes on Current Practice in the preparation of Environmental Impact Statements (September 2003)	Provide greater detail on the topics to be contained in an EIS.
Environmental Impact Assessment (EIA) Guidance for Consent Authorities regarding Sub-threshold Development (2003)	Provides guidance for the competent authorities in deciding whether or not a sub-threshold development is likely to have significant effects on the environment.
Implementation of SEA Directive (2001/42/EC): Assessment of the Effects of Certain Plans and Programme on the Environment - Guidelines for Regional Authorities and Planning Authorities (November, 2004)	Intended to assist regional and planning authorities in implementing the requirements of the SEA Directive.
Guidelines for Planning Authorities on Sustainable Rural Housing (April, 2005)	Sets out how the Government's policies on rural housing are to be implemented by planning authorities in making their development plans.
Development Plans – Guidelines for Planning Authorities (June, 2007)	Intended to assist planning authorities when preparing and implementing their Development Plan.
Appropriate Assessment of Plans and Projects in Ireland – Guidelines for Planning Authorities (2009)	Sets out the different steps and stages that are needed to establish whether a plan or project can be implemented without damaging a Natura 2000 site.
Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (May, 2009)	Sets out the key planning principles for residential development in urban areas which should be reflected in development plans and local area plans.
Government Policy on Architecture 2009-2015 - Towards a Sustainable Future: Delivering Quality within the Built Environment	Places an emphasis on sustainable development of the environment and urban design, incorporates architectural heritage in a holistic integrated manner, and encourages and supports high quality modern architecture.
Border Regional Planning Guidelines 2010-2022	Sets regional policy for development in the border region.
Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (March, 2013)	Provides guidance to planning authorities on legal and procedural issues arising from the requirement to carry out an EIA in relevant cases.
Local Area Plans (LAP) - Guidelines for Planning Authorities (June, 2013)	Provides guidance to planning authorities on the legislative and policy requirements of preparing and implementing an LAP.
Rural Development Programme 2014-2020	Sets out key principles that should be used as a strategic guide in implementing planning legislation in Ireland.
Social Housing Strategy 2020 (2014)	Objective that every household in Ireland will have access to secure, good quality housing suited to their needs at an affordable price in a sustainable community.

	National Broadband Plan (December 2015)	A Government policy initiative which aims to deliver high speed broadband to every citizen and business in Ireland.
	Rebuilding Ireland - Action Plan for Housing and Homelessness' (July, 2016)	Designed to accelerate housing supply in Ireland and tackle the Country's housing shortage.
	Construction 2020, A Strategy for a Renewed Construction Sector	Government package aimed at stimulating activity in the building industry.
	Ireland 2040 Our Plan, National Planning Framework (Issues Paper, February 2017)	Sets National policy and framework for future development across the country.
	Draft Guidelines on the Information to be Contained in Environmental Impact Assessment Reports' (EPA, May 2017)	Intended to guide practitioners during the transition to new Regulations transposing the updated EIA Directive. Projects falling within the scope of the amended Directive will now be accompanied by an Environmental Impact Assessment Report (EIAR), formerly referred to as an EIS.
	Interim Guidelines for Planning Authorities on Statutory Plans, Renewable Energy and Climate Change (July 2017)	The recent guidance from the Department effectively reinforces and clarifies the fact that it is incumbent on Planning Authorities to implement national climate change policies through their development plan processes, and emphasises that the need to combat climate change is to the fore in considering all planning policies and objectives contained within a County Development Plan. It is also a clear indication of continued national support for on-shore wind energy as an appropriate and effective means of achieving national climate change targets.
	Regional Spatial and Economic Strategy for the Northern and Western Region (In preparation)	Sets regional policy for development in the Northern and Western Region.
Local	Guidelines, Plans, Programmes, Strategies:	
	County Donegal Development Plan 2012-2018 (as varied)	Sets statutory policy for County Donegal.
	Letterkenny & Environs Development Plan 2009-2015 (as varied)	Sets local policy for Letterkenny & Environs.
	Bundoran & Environs Development Plan 2009-2015	Sets local policy for Bundoran & Environs.
	Buncrana & Environs Development Plan 2014-2020	Sets local policy for Buncrana & Environs.
	Donegal Local Economic and Community Plan 2016-2022	Identifies actions to strengthen and develop the economic and community dimensions of the County.
Transboundary	Acts and Orders:	
	Planning (Northern Ireland) Order 1991 SI 1220 (NI 11) (as amended) [only Article 2, part 3, part 7, part 9, schedule 2 remain]	Consolidates the law in Northern Ireland relating to planning and related matters including environmental protection.
	Planning Act (NI) 2011	Provides for the transfer of the majority of planning functions from Central Government to District Councils - reform of the planning system.
	Regulations:	
	The Environmental Assessment of Plans and Programmes Regulations (Northern Ireland) 2004	Provides a framework for the Environmental Assessment Regulations and set up a system for Tree Preservation Orders.
	Planning (Environmental Impact Assessment) Regulations (Northern Ireland) 2015 SR 74	Provides for the transfer of the majority of planning functions from Central Government to District Councils - reform of the planning system.
	Guidelines, Plans, Programmes, Strategies:	

	Omagh Area Plan 2002	Sets local policy for Omagh area.
	Fermanagh Area Plan 2007	Sets local policy for Fermanagh area.
	Strabane Area Plan 2001	Sets local policy for Strabane area.
	Derry Area Plan 2011	Sets local policy for Derry area.
	Sligo County Development Plan 2017-2023	Sets local policy for Sligo.
	Leitrim County Development Plan 2015-2021	Sets local policy for Leitrim.
	Regional Development Strategy for Northern Ireland 2035 – Building a Better Future (March 2012)	Outlines the economic ambitions and needs of the Region, and spatial planning, transport and housing priorities that will support and enable the aspirations of the region to be met.
	Derry City and Strabane District Local Development Plan 2030 (In preparation – once adopted will replace the Strabane and Derry Area Plans)	Policy framework and land use proposals that will implement the strategic objectives of the Regional Development Strategy and guide development decisions within Derry City and Strabane District up to 2030.
	Fermanagh and Omagh Local Development Plan 2030 (In preparation – once adopted will replace the Fermanagh Area Plan 2007 and Omagh Area Plan 2002)	Policy framework and land use proposals that will guide development decisions within the District up to 2030.

1.6 Methodology

A Preliminary Scoping Report forming part of the Strategic Environmental Assessment of the Draft Tier 2 Local Area Plan was prepared in accordance with Article 14C of the Planning & Development (Strategic Environmental Assessment) Regulations 2004 (as amended), the carrying out of a Strategic Environmental Assessment of the LAP is mandatory as the total population of the Plan area is greater than 10,000 persons. The 'Preliminary Scoping Report' was prepared under Article 14C of the Planning & Development (Strategic Environmental Assessment) Regulations 2004 (as amended) and issued to the statutory consultees inviting submissions on the scope and content of the Environmental Report in September 2015.

This Final Scoping Report sets out the conclusions of the Planning Authority as to what information is to be included in the Environmental Report, taking account of any recommendations from the Environmental Authorities (in line with the DECLG, Guidelines to Planning Authorities, 'Implementation of the SEA Directive (2001/42/EC), 2004').

This Environmental Report details the 'Current State of the Environment' or 'Baseline' of the seven towns using known available data sources. Geographical Information Systems (GIS) were used heavily in both the identification and mapping of the various layers of environmental vulnerabilities and also as a tool in assessing the cumulative effect of potential developments.

The baseline environmental data and indicators were considered at all times during the drafting of the objectives and policies in Chapters 3-10 of the Draft LAP, and in particular the location and conservation status of Natura 2000 sites, Freshwater Pearl Mussel, shellfish waters and the requirements of the River Basin Management Plan.

Strategic Environmental Objectives were drafted following the collation of the baseline data and are based on the particular environmental issues affecting County Donegal whilst also complying with the requirements of Schedule 2(B) of the Planning and Development Regulations 2001 (as amended), and the SEA Guidelines², 2004.

² Implementation of SEA Directive (2001/42/EC): Assessment of the Effects of Certain Plans and Programme on the Environment - Guidelines for Regional Authorities and Planning Authorities (November, 2004).

Assessment of Environmental Vulnerabilities

Environmental Vulnerabilities within the seven towns which were identified as part of the SEA process of the Draft LAP were mapped individually and also compiled into a 'Map of Vulnerabilities' (see Figure 1.2). The 'vulnerability' mapping system developed has been constantly updated with new data sets and the vulnerability mapping illustrated below shows an up to date picture of the environmental vulnerabilities that exist in the Plan area at present. The environmental vulnerability mapping consists of 39 layers of environmental data were overlaid spatially and weighted in order to show an output range of environmental vulnerability ranging from High (red) to Low (blue). The Environmental Vulnerabilities GIS mapping displays environmental data on layers and enables easy identification of areas of high vulnerability that have been considered through the drafting of policies, and as a tool in identifying areas that may be subject to mitigation.

A weighting system was applied to each layer through the GIS system in order to arrive at a value of vulnerabilities for the Plan area. The sequential weightings system gives International datasets (Natura 2000 sites) a value of 15, National, Regional & Local datasets a rating value of 10 and the 15km buffer zone around Natura 2000 sites a value of 5 as detailed in Table 1.5.

Table 1.5: Weighting System in Respect of Environmental Vulnerabilities

Weighting Applied	Environmental Vulnerability Factor
15	Natura 2000 sites (SACs and SPAs) and Sites of Freshwater Pearl Mussel Population (International)
10	NHA, pNHA, Ramsar Sites, Nature Reserves, National Parks, Broadleafed woodland, RPS, Monuments in State care, Sites and Monuments Record, Archaeological monuments, Archaeological complexes, EHSA, Views and prospects, Geological sites, Aggregate Potential, Bathing Water Quality, Blue Flag Beaches, Green Coast Awards, Aquifers, Source Protection Areas, Abstraction Points, Flood Points, Benefiting lands, FPM Catchments, Unsewered Properties, Walking routes, Blue Stack Way, IPPC licences, EPA Waste licences, NWIRBD coastal, Transitional, lakes and river bodies and risk and Shellfish catchments
5	15km buffer areas around Natura 2000 sites

The range of vulnerability consists of the layering of the vulnerability factors. The vulnerability value for an area is the sum of the ratings values that overlap that area. For example, where two datasets with a rating value of 10 each overlap, the resulting overlapping area will have a final vulnerability of 20. An overlap value can also be calculated, this indicates the number of datasets affecting a specific area, for example where a site has five different layers of vulnerability, the overlap value will be 5. Table 1.6 sets out the range of vulnerabilities used in the mapping.

Table 1.6: Range of Vulnerabilities

Vulnerability	Category
0	No Vulnerability(i.e. areas without any environmental vulnerabilities)
<5	Low Vulnerability
5 - 10	Moderate Vulnerability
15 - 20	Elevated Vulnerability
25 - 30	High Vulnerability
35 - 40	Extreme Vulnerability
>45	Acute Vulnerability

This Vulnerabilities Map (Figure 1.2) shows the most environmentally sensitive areas of the Plan area (red) to the least environmentally sensitive (blue). There are certain limitations and an element of subjectivity to the vulnerabilities mapping developed, however the exercise was fundamental to assessing potential conflicts of the Draft LAP with environmental vulnerabilities.

As visible from the Vulnerabilities Mapping the areas of acute vulnerability in County Donegal are in Glenveagh, headlands, inlets and the islands, including An Charraig (Carrick), Oileán Thoraí (Tory Island), Lough Swilly, Donegal Bay, Horn Head. These can be attributed to Natura 2000 sites (Special Areas of conservation (SACs) and Special Protection Areas (SPAs), designated waters and landscape vulnerability. Inland areas of acute vulnerability in the County include Slieve League, Pettigo plateau, Lough Derg and Lough Eske and these also can be attributed to Natura 2000 sites, designated waters and landscape vulnerability.

Areas of high vulnerability on the map (Figure 1.2) can be attributed to specific towns and areas within the Plan area that have overlapping of natural and built, International and National designations as described in Section 5 of this Report. An overview of the environmentally sensitive areas within each of the seven towns is outlined below.

An Clochán Liath (Dungloe)

The area within the LAP town boundary for An Clochán Liath (Dungloe) is predominantly categorised as 'Elevated Vulnerability' with a small area categorised as 'Low Vulnerability' including the area beyond the town boundary to the west and south-west. The remaining lands adjacent to the town are generally categorised as 'Elevated Vulnerability'. There is a large area of land to the east of the town, within the 15km buffer, categorised as 'High Vulnerability' with pockets of 'Extreme Vulnerability' evident. These can be attributed to Natura 2000 sites, designated waters and landscape vulnerability. Generally, the area within the 15km buffer furthest away from the town is categorised as 'Low Vulnerability'. The Plan area for An Clochán Liath (Dungloe) is adjacent to a SAC and SPA and the Dungloe River runs through the Plan area into Trawenagh Bay Natura 2000 site; there are also multiple other SACs and SPAs within the zone of the influence of the Plan for the town (see Section 5.1.1 of this report for further details).

Ballybofey-Stranorlar

The area within the LAP town boundary for Ballybofey-Stranorlar is categorised as 'Moderate Vulnerability', as is most of the land adjacent to the town except for an area to the immediate north which is categorised as 'Elevated Vulnerability'. These can be attributed to Natura 2000 sites, designated waters and landscape vulnerability. In addition there are pockets of land categorised as 'No Vulnerability' to the west and south-east of the town. Generally, the land within the 15km buffer furthest away from the town is categorised as 'Low Vulnerability'. The environmental sensitivity of Ballybofey-Stranorlar can be attributed to the River Finn SAC which runs through the town and the presence of other SACs within a 15km radius of the town including the River Foyle and its tributaries (see Section 5.1.1 of this Report for further details).

Ballyshannon

The area within the LAP town boundary for Ballyshannon is generally categorised as 'Elevated Vulnerability' with a pocket of 'Low Vulnerability' in the south-west corner of the Plan area and an area of 'High Vulnerability' in the western portion of the town. The area immediately adjacent to the Plan area generally consists of areas of 'Low Vulnerability' and 'Elevated Vulnerability'. There is a large area to the west and north-west of the town categorised as 'High Vulnerability'. At the northern boundary of the 15km buffer which overlaps with that of Donegal Town there is an area categorised as 'Extreme Vulnerability' and 'Acute Vulnerability'. These can be attributed to Natura 2000 sites, designated waters and landscape vulnerability; most notably the presence of Donegal Bay SAC and SPA (see Section 5.1.1 of this Report for further details).

Bridgend

The area within the LAP town boundary for Bridgend and immediately adjoining the village to the west is generally categorised as 'Elevated Vulnerability' while there is also an area of 'Moderate Vulnerability' to the east and south of the village. Most notably, there is a large area of 'Acute Vulnerability' with pockets of 'Extreme Vulnerability' and 'High Vulnerability' to the west of the Plan area within the 15km buffer. These can be attributed to Natura 2000 sites, designated waters and landscape vulnerability; most notably the presence of Lough Swilly SAC and SPA and Inch Levels Wildfowl Reserve. Lough Swilly is of major ornithological importance for wintering waterbirds with 18 species regularly occurring in nationally important numbers and three species in internationally important numbers (see Section 5.1.1 and 5.6 of this Report for further details).

Carndonagh

The Plan area for Carndonagh is generally categorised as 'Low Vulnerability' in the eastern portion of the town and 'Elevated Vulnerability' in the western portion of the town. To the immediate north and south of the town boundary, and further west, the area is categorised as 'Elevated Vulnerability' while the remainder of the lands within the 15km buffer are categorised as 'Low Vulnerability'. There is also an area to the north-west of the town which is categorised as 'Extreme Vulnerability' with a pocket of 'Acute Vulnerability'. These can be attributed to Natura 2000 sites, designated waters and landscape vulnerability; a large aquifer extends from the northern part of the town to Trawbreaga Bay SPA, which is also designated shellfish water (see Section 5.1.1 and 5.6 of this Report for further details).

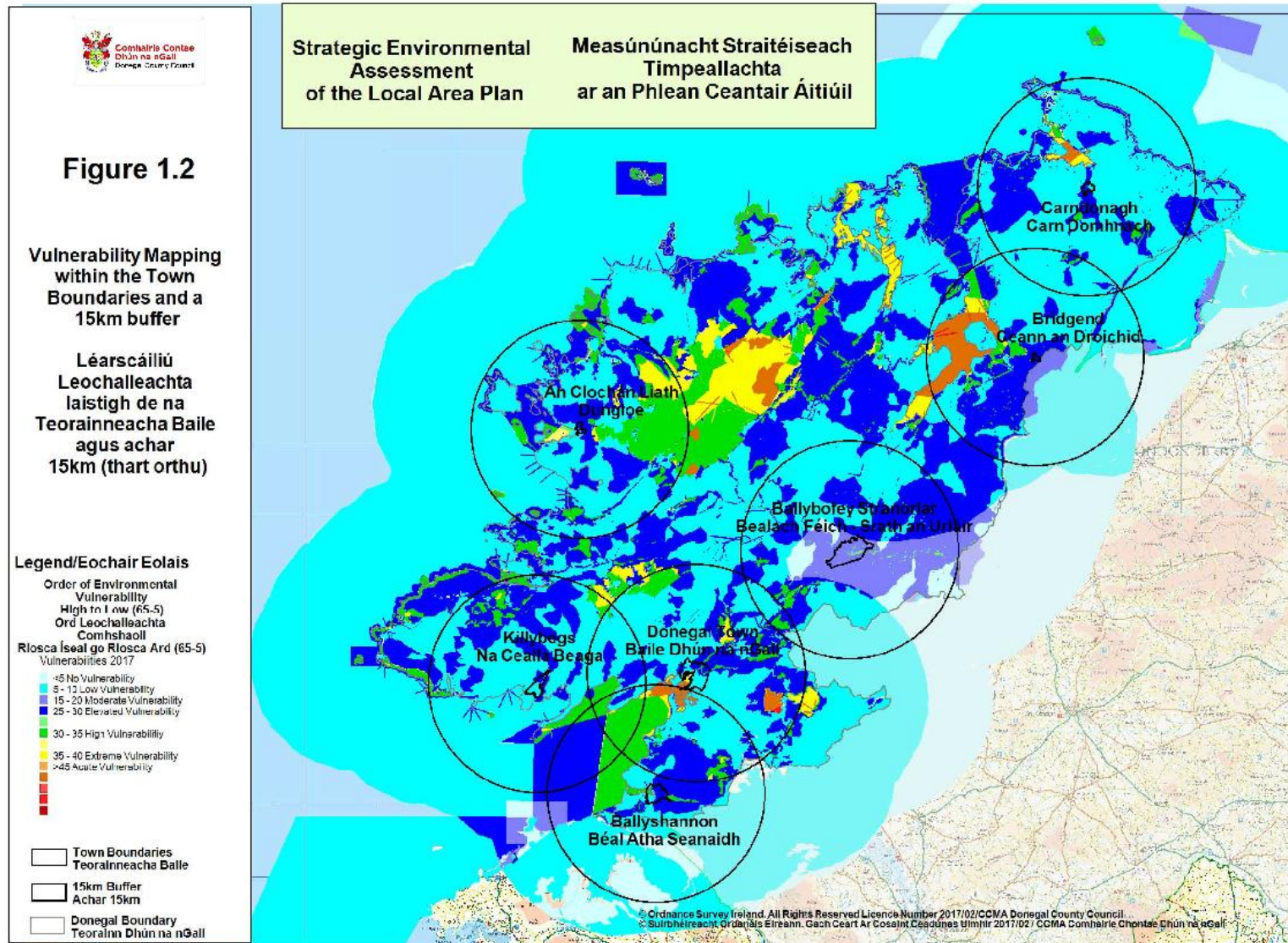
Donegal Town

The area within the LAP town boundary for Donegal Town is generally categorised as 'low Vulnerability' with a pocket of 'Elevated Vulnerability' in the north-eastern portion of the town. The area within the 15km buffer for the town is predominantly categorised as 'Low Vulnerability' with large pockets of 'Elevated Vulnerability'. Notably, the area adjacent to the town to the south-west is categorised as 'Extreme Vulnerability' surrounded by an area of 'Acute Vulnerability'. Beyond this is a larger area of land categorised as 'High Vulnerability'. These can be attributed to Natura 2000 sites, designated waters and landscape vulnerability; most notably the presence of Donegal Bay SAC and SPA (see Section 5.1.1 of this Report for further details).

Killybegs

The area within the LAP town boundary for Killybegs is categorised mostly as 'Low Vulnerability' with an area of 'Elevated Vulnerability' in the north-eastern portion of the town. The area within the zone 15km buffer is generally categorised as 'Low Vulnerability' with large areas of 'Elevated Vulnerability' to the north-west and south-east with pockets of 'High Vulnerability' throughout the zone of influence of the Plan for Killybegs. These can be attributed to Natura 2000 sites, designated waters and landscape vulnerability; including the presence of Slieve League SAC and Donegal Bay SPA (see Section 5.1.1 of this Report for further details).

Figure 1.2: Vulnerability Mapping within the Town Boundaries and a 15km buffer



2 Consultations

In accordance with article 13D(1) of the Planning & Development (Strategic Environmental Assessment) Regulations 2004 (as amended) the preliminary scoping exercise was circulated to the following statutory bodies as prescribed under article 13A(4) of the aforementioned Regulations.

- Environmental Protection Agency (EPA)
- Department of Housing, Planning and Local Government
- Department of Agriculture, Food and the Marine
- Department of Communications, Climate Change and Natural Resources
- Development Applications Unit, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs
- National Parks and Wildlife Service
- Sligo County Council
- Strategic Planning Division, Department of the Environment, Northern Ireland
- Transboundary consultation with Northern Ireland Environment Agency, Department of the Environment (NI)
- Transboundary consultation with Planning Service Northern Ireland
 - Fermanagh and Omagh District Council
 - Causeway Coast and Glens Borough Council
 - Derry City and Strabane District Council

In response three submissions were received from consultees as listed below:

- Department of Agriculture, Food and Marine
- Derry City and Strabane District Council, Local Development Plan Team
- Northern Ireland Environment Agency, Department of the Environment (NI)

The submission from the Department of Agriculture, Food and Marine made reference to both the AA and the SEA processes and set out specific legislation and issues that should be considered throughout the SEA process, along with suggested sources on relevant marine data and suggested a further list of consultees that may assist in the appropriate assessment process. The other two submissions from Northern Ireland Authorities mainly concerned transboundary environmental issues for consideration particularly in relation to shared Natura 2000 sites.

The comments from the Environmental Authorities in relation to the SEA and the Council's responses are summarised in Table 2.1.

Table 2.1: Submissions Received from Prescribed Environmental Authorities

Submission by	Issues Raised	Response
Department of Agriculture, Food and Marine	<ol style="list-style-type: none"> 1) Commented on the SEA process and highlighted a number of relevant legislation, plans and policies. 2) Raised the following issues for consideration: <ol style="list-style-type: none"> a) Potential impacts on marine environmental quality. b) Potential impact on the microbiological quality of shellfish. c) Impacts on human health of micro biological contaminated shellfish. d) Impacts on commercially important fish and shellfish stocks, licensed aquaculture sites and areas of importance for fish/shellfish and fisheries. e) Impacts on fresh water aquaculture operations. f) Designations of areas of importance to the aquaculture & fisheries sector. g) Relevant EU Directives and National Legislation in the area of Marine Spatial Planning. 3) Stressed that major land-use changes can significantly impact the quality of the marine environment. 4) Provided a list of Sources of marine data. 5) Provided a list of people with whom to consult including DAFM, SFPA, Marine Institute and BIM. They also feel consideration should be given to consulting with the sea food sector. Which may include regional inshore fisheries forums, Fisheries Local Action Groups, fisheries representative's bodies, including producer organizations, local advisory committees, association, co-operatives, seafood processors and aquaculture representative bodies etc. 	<ol style="list-style-type: none"> 1) All highlighted legislation, plans and policies will be referenced by Donegal County Council (DCC). 2) The specific issues raised in items (2)a-f will be given cognisance in the SEA Environmental Report and these issues will be taken into consideration in relation to the appropriate assessment of any Natura 2000 site within the Natura Impact Report. DCC will reference the list of sources of marine data suggested by the Department. 3) The Environmental Report will take into consideration all potential major land-use changes which could significantly impact on the quality of the marine environment. 4) DCC will take into consideration the list of sources of marine data. 5) DCC has consulted all relevant Environmental Authorities.

Derry City and Strabane District Council, Local Development Plan Team	<ol style="list-style-type: none"> 1) Satisfied that intentions and level of detail outlined to ensure the minimising/mitigation of likely environmental effects when the final Plan is adopted. 2) Highlights that the shared border contains many protected sites, significant landscapes and seascapes, and also contains a great wealth of biodiversity and stresses the importance to driving local tourism and economy and would in this respect suggest that a specific section to be included in the Environmental Report. States that such a section along with the necessary informal liaison between our respective planning officials will assist in demonstrating 'joined up' planning to promote cross border collaboration. 3) Comment on consultation in the future on Derry City and Strabane District Council's new Local Development Plan (LDP 2015-30). 	<ol style="list-style-type: none"> 1) Comments noted. 2) DCC will insert a section as suggested into the Environmental Report and agree with the importance of joined up planning and promoting cross border collaboration. 3) Note that DCC will be consulted in the near future.
Northern Ireland Environment Agency, Department of the Environment (NI)	<ol style="list-style-type: none"> 1) Welcomes the SEA Scoping Issues Paper and screening Report for AA. 2) States that where the Republic of Ireland has environmental connections with Northern Ireland, there is potential impacts in Northern Ireland. Anticipates that transboundary nature of any significant effects on the environment on the Republic of Ireland would be of particular relevance to consider in relation to Northern Ireland. 3) Would like the SEA Environmental Report to contain a clear statement indicating the opinion of Donegal County Council about whether or not the implementation of the Plan, in combination with any identified measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment, is likely to have a significant effect on Northern Ireland. 4) List a number of websites which highlight the current state of the environment in Northern Ireland. 	<ol style="list-style-type: none"> 1) The welcoming of Strategic Environmental Assessment is noted. 2) Notes environmental transboundary concerns and if there are any likely significant adverse effects on the Republic of Ireland transboundary considerations will be applied in any measures to offset any significant adverse effects. 3) DCC will insert a statement as required by the Northern Ireland Environment Agency into the Environmental Report. 4) DCC will take the information sources into consideration in the preparation of the Environmental Report.

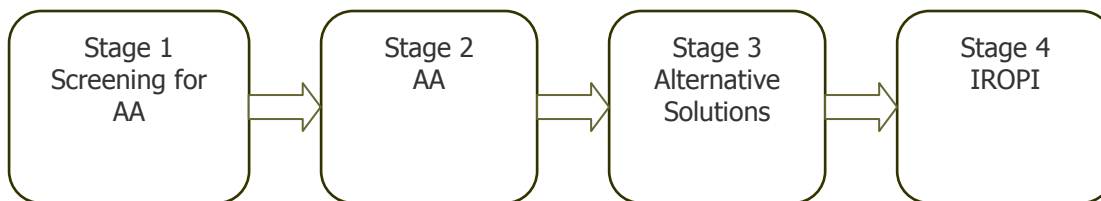
3 Appropriate Assessment (Natura Impact Report)

An Appropriate Assessment of the Draft Seven Strategic Towns Local Area Plan 2018-2024 (the Draft LAP) was carried out pursuant to Article 6 of the EU Habitats Directive (92/43/EEC), the EU (Birds and Natural Habitats) Regulations 2011 (S.I No 477 of 2011 as amended by S.I. No 355 of 2015) and the Planning and Development Act 2000 as amended (including by the Environmental (Miscellaneous Provisions) Act 2011).

The EU Habitats Directive (92/43/EEC) created a network of protected wildlife sites of highest biodiversity importance for rare and threatened habitats and species throughout the EU through the designation of Special Areas of Conservation and Special Protection Areas, collectively known as Natura 2000 sites.

The Department of Environment, Heritage and Local Government, DEHLG, issued 'Appropriate Assessment of Plans and Projects in Ireland; Guidance for Planning Authorities' in 2009 that provides guidance and sets out the 4 steps in the Appropriate Assessment Process, as detailed below.

Figure 3.1: The 4 stages in the Appropriate Assessment



Stage One: Screening — the process which identifies the likely impacts upon a Natura 2000 site of a project or plan, either alone or in combination with other projects or plans, and considers whether these impacts are likely to be significant;

Stage Two: Appropriate Assessment — the consideration of the impact on the integrity of the Natura 2000 site(s) of the project or plan, either alone or in combination with other projects or plans, with respect to the site's structure and function and its conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts;

Stage Three: Assessment of alternative solutions — the process which examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the Natura 2000 site; and

Stage Four: Assessment where no alternative solutions exist and where adverse impacts remain — an assessment of compensatory measures where, in the light of an assessment of imperative reasons of overriding public interest (IROPI), it is deemed that the project or plan should proceed.

Appropriate Assessment of the Draft Local Area Stage One: Screening

Screening for Appropriate Assessment on the implications of the Draft LAP on Natura 2000 sites in accordance with the requirements of Article 6 of the Habitats Directive was carried out in July 2016. It examined the likely effects of the Plan on Natura 2000 sites within the seven towns and within a 15km buffer of each of the towns and considered whether it could be objectively concluded that these sites would not be significantly impacted upon.

There are a total of 75 Natura 2000 sites either within the LAP boundary for each of the seven towns or within a 15km radius of each town boundary (i.e. Zone of Influence of the Plan) (58 in Donegal, 4 in

Leitrim, 3 in Sligo and 10 in Northern Ireland). The Screening Report concluded that due to the expansive nature and extent of Natura 2000 sites within the Plan area, the potential for development over the 6 year plan period could impact on the integrity of the sites, that an Appropriate Assessment of the Plan was required and that the AA should proceed to Stage 2.

Stage Two – Appropriate Assessment (Natura Impact Report)

All Natura 2000 sites in-situ and ex-situ (within 15km of each town boundary) were identified and a Scientific Assessment of the potential risks and impacts of the objectives and policies of the Plan on the Natura 2000 sites was carried out.

Where potential risks and impacts were identified, the policies and objectives were reworded or mitigating measures proposed and have been included within the text of the Plan.

Stage Three and Stage Four IROPI

The Appropriate Assessment on the Plan involved Stages 1 and 2 of the Appropriate Assessment process only and there was therefore no requirement to proceed to Stages 3 and 4.

Appropriate Assessment Conclusions

The Natura Impact Report concluded a finding of No Significant Effects following the completion of Stage 2 of the process. Any potential impact on the Natura 2000 network has been mitigated against through iterative development and inclusion of appropriate policies and objectives in the Draft LAP. The determination of the Appropriate Assessment is that there is no requirement to proceed to Stage 3 of the AA as there is no significant detrimental effect identified as the result of implementation of the Plan to the integrity of any European Site.

4 Alternative Approaches to the Plan

Planning Context

The Draft Seven Strategic Towns Local Area Plan 2018-2024 (the Draft LAP) for the towns of An Clochán Liath (Dungloe), Ballybofey-Stranorlar, Ballyshannon, Bridgend, Carndonagh, Donegal Town and Killybegs has been prepared in accordance with the requirements of the Planning and Development Acts 2000-2017 (P&D Acts).

The Draft LAP sets out an overall strategy for the proper planning and sustainable development of the seven towns in the context of the Draft County Donegal Development Plan 2018-2024 (the Draft CDP) and the Border Regional Authority's Regional Planning Guidelines 2010-2022 (RPGs). It is informed by Ministerial Guidelines issued pursuant to Section 28 of the Planning and Development Act 2000-2017 (P&D Acts) together with EU requirements regarding Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA). The commitment to prepare a LAP for the seven strategic towns and the programme for delivery is set out in the Core Strategy in Chapter 2 of Part A of the Draft CDP (see Objective CS-O-15, Chapter 2 of Part A of the Draft CDP).

The Core Strategy of the County Development Plan is required to be consistent with the RPGs and set out a settlement hierarchy for County Donegal along with population and housing targets for all towns, villages and the open countryside. Local Area Plans are required to be consistent with the Core Strategy of the County Development Plan. The Core Strategy of the Draft County Development Plan 2018-2024 is set out in Chapter 2 of Part A of the Draft CDP.

Details of the Alternative Approaches

The following paragraphs set out the nature of each alternative and the likely impacts that will arise.

Alternative 1: Business As Usual

This approach would involve the continuation of existing patterns of development and minimal intervention in relation to strategic planning policy described as 'Business As Usual'. 'Demand' rather than 'need' would drive development patterns.

This development pattern would weaken the capacity of towns to support economic growth and viability. There would be a risk of pressure for development at locations with insufficient servicing, both in the context of physical infrastructure such as adequate wastewater treatment and also in relation to 'soft' infrastructure such as community facilities, health services. It would increase impacts and encroachment on the natural environment. It would also reduce capacity to spatially coordinate employment and skills base/human capital.

The 'Business As Usual' approach would not respond in a prioritised manner to each town's unique development opportunities that have been identified through the LAP process.

This approach would be most likely to have the following impacts:

- Weaken towns and villages and lack of regeneration and revitalisation.
- Pressure of limited resources to make required investments in wastewater and water infrastructure.
- Demand for the uneconomic extension of community services and facilities.
- Pressure on rural areas immediately outside urban areas.
- Further proliferation of individual wastewater treatment systems.
- Provision of higher cost services and facilities in an unplanned way- developer driven and occurring as the need arises.
- Contradictions in identifying investment priorities and delivery of key infrastructural projects.
- Lack of clarity for economic and employment investors in terms of preferred locations for new economic development, and provision of the factors of competitiveness.
- Increase risk of non-compliance with environmental legislation, with damage to environmentally sensitive areas.

Alternative 2: Effective Sustainable Urban Growth

This approach would focus on 'effective' urban growth commensurate with the size and structure of each town to guide and facilitate appropriate development.

This approach would recognise the role of each Strategic Towns as it sits within the overall economic development of the County, due to either their infrastructural capacity to accommodate population growth and/or their characteristics as towns that perform special economic functions at present or have the potential to do so in the future. The appropriate development and strengthening of these towns would facilitate the provision of vital services and facilities as well as local employment to support the surrounding rural hinterlands. The appropriate application of the population distribution of 36% of the County total, as set by the Draft CDP 2018-2024 would facilitate regeneration and renewal alongside of these towns.

This approach would be most likely to have the following impacts:

- Achieve maximum benefit from investment in physical, social and economic infrastructure for each town.
- Support the strengthening of the towns as drivers for economic growth in the County.
- Support activity resulting in local employment opportunities.
- Enable place-making through regeneration and renewal.
- Result in environmental benefits as development would be linked inextricably to ensuring the appropriate and adequate provision of hard infrastructure.
- Improve quality of life through positive place-making.

Having regard to the foregoing, it is considered that this alternative would be the optimum option for the strategic direction of each LAP town in the context of the wider development of the County.

Assessment and Selection of Alternatives

Having regard to the principles of sustainable development and to the existing and emerging national and regional policy frameworks, Alternative , 'Effective Sustainable Urban Growth' is the most appropriate strategic alternative for the seven Strategic Towns. In undertaking this alternative, growth will be managed so as to coordinate with programmes for investment in infrastructure and where possible to innovate in the delivery of critical infrastructure so as to result in maximum benefit from investment and to ensure that significant growth can be accommodated with appropriate and adequate servicing and no resultant negative impacts on the environment.

The particular strengths, opportunities and niche potential that exist within the different areas of the each town are to be harnessed through this approach to produce benefits and meaningful change for the communities and consequently the County.

Table 4.1 assesses the alternative approaches to the Draft Plan in the context of the Strategic Environmental Objectives (SEO's) set out in Section 1.1 of this Report.

Table 4.1: Assessment of Alternative Approaches to the Plan in the Context of the Strategic Environmental Objectives (SEO's)

Alternative	Probably conflict with status of SEO's- unlikely to be mitigated to an acceptable level.	Potential conflict with the status of SEO's- likely to be mitigated to an acceptable level.	Uncertain interaction with status of SEO's.	Neutral interaction with status of SEO's.	No likely interaction with status of SEO's.	Likely to improve status of SEO's.
Business as usual	S01, S02, S03, S04, S05, S06, S07					
Effective Sustainable Urban Growth						S01, S02, S03, S04, S05, S06, S07

5 Current State of the Environment

Donegal is the fourth largest and most northerly County in Ireland comprising c. 484,559.33 hectares or c. 7% of the total land area of the state. The County has an extensive coastline of c.1,132km along the Atlantic Ocean to the north and west, a c. 140km border with Northern Ireland to the east, and only abuts the rest of the Republic of Ireland along a c. 9km stretch with County Leitrim at its most southerly point.

The Seven Strategic Towns Draft Local Area Plan 2018-2024 includes the towns of An Clochán Liath (Dungloe), Ballybofey-Stranorlar, Ballyshannon, Bridgend, Carndonagh, Donegal Town and Killybegs. Figure 5.1 shows the geographical location of each of the towns within the County.

An Clochán Liath (Dungloe)

An Clochán Liath (Dungloe) is a Gaeltacht town strategically located in the west of the County along the N56 National Secondary Route approximately 51km west of Letterkenny, 26km north of Glenties and 45km south-west of Dunfanaghy. It is the main town in 'The Rosses' (a large part of which is in the Gaeltacht) and is the largest town in the Donegal Gaeltacht.

Ballybofey-Stranorlar

The twin towns of Ballybofey-Stranorlar collectively comprise the third largest urban centre in Donegal and are strategically located within a strong rural hinterland in the heart of the Finn Valley in the east of the County. The towns are located at a key point along the N15/N13 National Primary Routes (part of the wider Atlantic Corridor) approximately 21km south of Letterkenny and 49km south-west of Derry in Northern Ireland. The towns are also served by the R252 Regional Road from Ballybofey to Glenties. The two towns are connected by a bridge over the River Finn which separates the towns; Ballybofey is located generally to the south of the river and Stranorlar is located generally to the north of the river.

Ballyshannon

Ballyshannon is located along the north-west Atlantic coast in the south of the County, on the N15 North South Transport Corridor (part of the wider Atlantic Corridor) which links Sligo to Lifford. It is situated approximately 6km north-east of Bundoran, 22km south of Donegal Town, 44km north-east of Sligo and 45km west of Enniskillen adjacent to Counties Fermanagh and Leitrim.

Bridgend

The village of Bridgend is located at a strategic position in east Donegal, on the Inishowen peninsula, adjoining the border with Northern Ireland, on the N13 National Primary Route (the primary transport corridor within the North West City Region of Derry-Letterkenny). Bridgend is located in an agricultural hinterland within the valley of the Skeoge River approximately 8km from Derry City Centre and 29.5km from Letterkenny Town Centre at the junction of the N13 and the R238 roads.

Carndonagh

The town of Carndonagh is situated approximately 3km south of Trawbreaga Bay on the Inishowen Peninsula in the north of the County, within the valleys of Glenagannon and Donagh Rivers. It is located approximately 19.5km north-east of Bunrana, 33km north of Bridgend, 62km north-east of Letterkenny and 24km north of Muff which is adjacent to the border with Northern Ireland. The town is served by three Regional Roads, the R244 from Bunrana, the R240 from Quigley's Point and the R238 from Muff and Bridgend which extends from the N13 National Primary Route from Letterkenny. The R238 is a ring road around the Inishowen Peninsula, part of which is the main road from Derry to Bunrana while other sections of the road form part of the Wild Atlantic Way. Carndonagh is the second largest town in the peninsula after Bunrana.

Donegal Town

Donegal Town is strategically located at a key point on the N15 North South Transport Corridor (part of the wider Atlantic Corridor) at the junction with the N56 National Secondary Route which serves the west of the County. It is located approximately 49km south-west of Letterkenny, 28km south-west of Ballybofey-Stranorlar, 28km east of Killybegs and 22km north of Ballyshannon. The town sits at the mouth of the River Eske and Donegal Bay and is overshadowed by the Blue Stack Mountains and the surrounding drumlin type landscape. It is the fifth largest town in Donegal and the principal urban centre in the south of the County.

Killybegs

Killybegs is a fishing town located in south-west Donegal. It is situated along the R263 Regional Road and just off the N56 National Secondary Route. It is located c. 27km west of Donegal Town and c. 26km east of Gleann Cholm Cille (Glencolmcille). The town has developed organically around a natural harbour and is framed by this harbour area to the east and by steeply rising lands to the west.

The seven towns host a rich and varied environment of significant geological, environmental, marine, cultural and social resources that shall be considered within this Environmental Report. For the purposes of this strategic environmental assessment (SEA), baseline data within the Plan area (i.e. within the LAP town boundaries for each of the seven towns) and within the likely zone of influence of the Plan (i.e. a 15km buffer around each of the towns) was collated and assessed. Any ecological sites or designations that are more than 15km from the Plan area were also considered depending on the likely impacts of the Plan, the sensitivities of the ecological receptors, and the potential for in combination effects.

Given the geographical location of the seven towns within the Plan area there is potential for inter-county, and cross border (transboundary) environmental issues particularly in relation to shared Natura 2000 sites, and these potential transboundary impacts are considered within this Environmental Report.

This section of the Report sets out the existing known and available baseline environmental data for the seven towns that have contributed to configuring the Strategic Environmental Objectives as set out in Section 8 of this Report. The baseline data combined with the Strategic Environmental Objectives shall provide an environmental picture of the Plan area that all emerging policies and objectives of the Draft LAP must be assessed and evaluated against.

The current state of the environment of the Plan area will be considered under the following environmental headings:

- Biodiversity, Fauna and Flora
- Population
- Human Health
- Soil and geology
- Land Cover
- Water
- Climatic factors
- Air Quality
- Material Assets
- Cultural heritage, including Architectural and Archaeological
- Landscape
- The interrelationship between the above topics

Annex 1 of the SEA Directive 2001/42/EC also requires secondary and cumulative effects to be considered.

5.1 Biodiversity, Flora and Fauna

The conservation of biodiversity in Ireland has been strengthened and expanded by EU law, most notably by the EU Birds Directive (79/409/EEC as amended by 2009/147/EC) and EU Habitats Directive (92/43/EEC) and also by the EIA Directive (85/337/EEC as amended by 97/11/EC, 2003/35/EC, 2009/31/EC and now codified in 2011/92/EU as amended by 2014/52/EU).

The Habitats Directive was transposed into Irish national law in 1997. The European Union (Natural Habitats) Regulations, S.I. 94/1997 represent a fundamental shift in nature conservation policy and law. These Regulations have since been amended twice by S.I. 233/1998 and S.I. 378/2005. The 1997 Regulations and their amendments were subsequently revised and consolidated in the European Communities (Birds and Natural Habitats) Regulations 2011. The requirements in respect to the Habitats Directive are dealt with in Section 3 of this report.

The EU Birds Directive on the conservation of wild birds is the EU's oldest piece of nature legislation and one of the most important, creating a comprehensive scheme of protection for all wild bird species naturally occurring in the Union. The Directive places great emphasis on the protection of habitats for endangered as well as migratory species (listed in Annex I), especially through the establishment of a coherent network of Special Protection Areas (SPAs) comprising all the most suitable territories for these species. Since 1994 all SPAs form an integral part of the Natura 2000 ecological network, along with Special Areas of Conservation (SACs).

Compared to the national ratio of Natura 2000 sites, Donegal has a large share; Donegal comprises c. 7% of the land cover of the Country as a whole and yet has 12% of the entire Country's SAC and SPA designated sites. Donegal's relatively large SAC and SPA (terrestrial) designated sites comprising 89,650 hectares or 18.5% of the total land cover of the County sits well above the national average of 13%. 61 Annex 1 Habitats as listed in the Habitats Directive are found in Ireland, and 41 of these habitats are represented within the SACs in County Donegal. Of the 61 Annex 1 Habitats in Ireland, 16 are priority habitats and 9 of these are found in the SACs in County Donegal. Annex II of the Habitats Directive lists species of Community interest to be maintained at, or restored to favourable conservation status, and some 17 of these species also occur in County Donegal.

5.1.1 Natura 2000 Sites

There are a total of 75 Natura 2000 sites either within the LAP town boundary for each of the seven towns or within a 15km radius of each town (58 in Donegal, 4 in Leitrim, 3 in Sligo and 10 in Northern Ireland). These sites are illustrated on Figure 5.2 and listed in Tables 5.1-5.7 below

A total of 50 of these Natura 2000 sites are SACs (which are primarily designated for the protection of habitats) and 25 are SPAs (which are primarily designated for the protection of birds). Given the geographical location of the seven towns there is some overlap of the 15km buffers surrounding the towns resulting in some Natura 2000 sites being located within the zone of influence for more than one town as illustrated on Figure 5.2.

Four of the seven towns namely, Ballybofey-Stranorlar, Ballyshannon, Bridgend and Donegal Town are located adjacent to Northern Ireland and as a result ten of the Natura 2000 sites are located within Northern Ireland. Furthermore Ballyshannon has Natura 2000 sites within its 15km buffer within Leitrim, Sligo and Northern Ireland.

An Clochán Liath (Dungloe)

There are a total of 14 Natura 2000 sites located within the zone of influence of the Plan for An Clochán Liath (Dungloe) as listed in Table 5.1 and illustrated on Figure 5.3. While there are no Natura 2000 sites located within the town boundary there are eight SACs and six SPAs located within a 15km radius of the town, all of which are located in Co. Donegal.

Table 5.1: List of Natura 2000 Sites within An Clochán Liath (Dungloe) and a 15km buffer

Site Type	Site Code	Site Name	Located within the town	Located within a 15km radius of the town
Co. Donegal				
SAC	000111	Aran Island (Donegal) Cliffs	No	Yes
SAC	000140	Fawnbog/ Lough Nacung	No	Yes
SAC	000142	Gannivegil Bog	No	Yes
SAC	000197	West of Ardara/ Maas Road	No	Yes
SAC	001107	Coolvoy Bog	No	Yes
SAC	001141	Gweedore Bay & Islands	No	Yes
SAC	002047	Cloghernagore Bog & Glenveagh National Park	No	Yes
SAC	002283	Rutland Island & Sound	No	Yes
SPA	004039	Derryveagh & Glendowan Mountains SPA	No	Yes
SPA	004116	Inishkeel	No	Yes
SPA	004121	Roaninish	No	Yes
SPA	004132	Illancrone & Inishkeeragh	No	Yes
SPA	004150	West Donegal Coast	No	Yes
SPA	004230	West Donegal Islands	No	Yes

Ballybofey-Stranorlar

There are a total of 4 Natura 2000 sites located within the zone of influence of the Plan for Ballybofey-Stranorlar as listed in Table 5.2 and illustrated on Figure 5.4. These Natura 2000 sites comprise two SACs located in Co. Donegal, one of which is located within the town boundary (the River Finn SAC) and one is located within a 15km radius of the town. A further two SACs are also located within the 15km buffer area within Northern Ireland.

The River Finn SAC, located within the town boundary, comprises most of the freshwater element of the River Finn and its tributaries, and also includes Lough Finn, where the river rises. The River Finn passes through a number of towns in the County including the towns of Ballybofey-Stranorlar. Agriculture, with particular emphasis on grazing, is the main land use in Ballybofey-Stranorlar in the vicinity of the river. The River Finn SAC includes several important habitats listed in Annex I of the EU Habitats Directive and supports a number of important species as listed in Annex II of the Directive, as well as examples of other important habitats. The SAC includes blanket bog which is considered a rare habitat type in Europe and if active (i.e. still supporting peat forming vegetation) receives priority status on Annex I of the EU Habitats Directive. The overall ecological and conservation value of the River Finn SAC is increased by the presence of populations of several rare or threatened birds, mammals, fish and plants and the Finn system is recognised as one of Ireland's premier salmon waters.

The 15km buffer for Ballybofey-Stranorlar and Donegal Town overlap and as a result two of the SACs (Croaghonagh Bog and River Finn) are listed within the zone of influence of the Plan for both towns (see Figure 5.2).

Table 5.2: List of Natura 2000 sites within Ballybofey-Stranorlar and a 15km buffer

Site Type	Site Code	Site Name	Located within the town	Located within a 15km radius of the town
Co. Donegal				
SAC	000129	Croaghonagh Bog	No	Yes
SAC	002301	River Finn	Yes	Yes
Northern Ireland				
SAC	UK0030211	Moneygal Bog	No	Yes
SAC	UK0030320	River Foyle & Tributaries	No	Yes

Ballyshannon

There are a total of 18 Natura 2000 sites located within the zone of influence of the Plan for Ballyshannon as listed in Table 5.3 and illustrated on Figure 5.5. These Natura 2000 sites comprise seven SACs and one SPA located in Co. Donegal; one of the SACs and the SPA are located within the town boundary (Dunmuckrum Turloughs SAC and Donegal Bay SPA). A further seven SACs and three SPAs are located within a 15km radius of the town as follows: three SACs and one SPA in Leitrim, two SACs and one SPA in Sligo and two SACs and one SPA located in Northern Ireland.

Dunmuckrum Turloughs SAC is located approximately 2km south-west of Ballyshannon town centre, alongside the bypass and situated mostly outside the Plan boundary. 35% of the area of the SAC is located within the Plan boundary and 65% of it is located outside the Plan boundary immediately adjoining its western fringe. The land consists of a series of low-lying winter-flooded depressions set in an undulating landscape of limestone hills. Dunmuckrum Turloughs is an important habitat listed under Annex I of the EU Habitats Directive and is of conservation importance as it represents the most northerly turlough known in the country.

Donegal Bay SPA is a very large, marine-dominated, site which extends from Doorin Point, to the west of Donegal Town, to Tullaghan Point in County Leitrim. The site includes the estuary of the River Erne, which flows through Ballyshannon and westwards to the sea into Donegal Bay SPA which is partly located within the Plan boundary. This sheltered estuary is partially enclosed by a large sand dune system at its mouth. Intertidal sand flats are the dominant estuarine habitat while the sand extends as a beach south to Bundoran. Donegal Bay is a site of high ornithological importance with special conservation interest for Wetland and Waterbirds; five of the regularly occurring species are listed on Annex I of the EU Birds Directive.

The 15km buffer for the three towns of Ballyshannon, Donegal Town and Killybegs all overlap. As a result, six of the SACs (Ballintra, Donegal Bay (Murvagh), Durnesh Lough, Tamur Bay, Lough Golagh and Breesy Hill and Pettigo Plateau) and one of the SPAs (Pettigo Plateau) are listed within the zone of influence of the Plan for both Ballyshannon and Donegal Town. One of the SPAs (Donegal Bay) is listed within the zone of influence of the Plan for both Ballyshannon and Killybegs.

Table 5.3: List of Natura 2000 sites within Ballyshannon and a 15km buffer

Site Type	Site Code	Site Name	Located within the town	Located within a 15km radius of the town
Co. Donegal				
SAC	000115	Ballintra	No	Yes
SAC	000133	Donegal Bay (Murvagh)	No	Yes
SAC	000138	Durnesh Lough	No	Yes
SAC	000428	Lough Melvin	No	Yes
SAC	001992	Tamur Bay	No	Yes
SAC	002164	Lough Golagh and Breesy Hill	No	Yes
SAC	002303	Dunmuckrum Turloughs	Yes	Yes
SPA	004151	Donegal Bay	Yes	Yes
Leitrim				
SAC	000428	Lough Melvin	No	Yes
SAC	000623	Ben Bulben, Gleniff and Glenade Complex	No	Yes
SAC	001403	Aroo Mountain	No	Yes
SPA	004187	Sligo/Leitrim Uplands	No	Yes
Sligo				
SAC	000625	Bunduff Lough and Machair/ Trawalua/ Mullaghmore	No	Yes
SAC	000623	Ben Bulben, Gleniff and Glenade Complex	No	Yes
SPA	004187	Sligo/Leitrim Uplands	No	Yes
Northern Ireland				
SAC	UK0016607	Pettigo Plateau	No	Yes
SAC	UK0030047	Lough Melvin	No	Yes
SPA	UK9020051	Pettigo Plateau	No	Yes

Bridgend

There are a total of 7 Natura 2000 sites within the zone of influence of the Plan for Bridgend as listed in Table 5.4 and illustrated on Figure 5.6. These Natura 2000 sites comprise two SACs and two SPAs, all located within Co. Donegal. A further two SACs and one SPA are located within the 15km buffer area within Northern Ireland.

The 15km buffer for Bridgend and Carndonagh overlap and as a result one of the SPAs (Lough Foyle) is located within the zone of influence of the Plan for both towns.

Table 5.4: List of Natura 2000 sites within Bridgend and a 15km buffer

Site Type	Site Code	Site Name	Located within the town	Located within a 15km radius of the town
Co. Donegal				
SAC	002287	Lough Swilly	No	Yes
SAC	002301	River Finn	No	Yes
SPA	004075	Lough Swilly	No	Yes
SPA	004087	Lough Foyle	No	Yes
Northern Ireland				
SAC	UK0030320	River Foyle & Tributaries	No	Yes
SAC	UK0030361	River Faughan & Tributaries	No	Yes
SPA	UK9020031	Lough Foyle	No	Yes

Figure 5.3: Natura 2000 sites within An Clochán Liath (Dungloe) and a 15km buffer

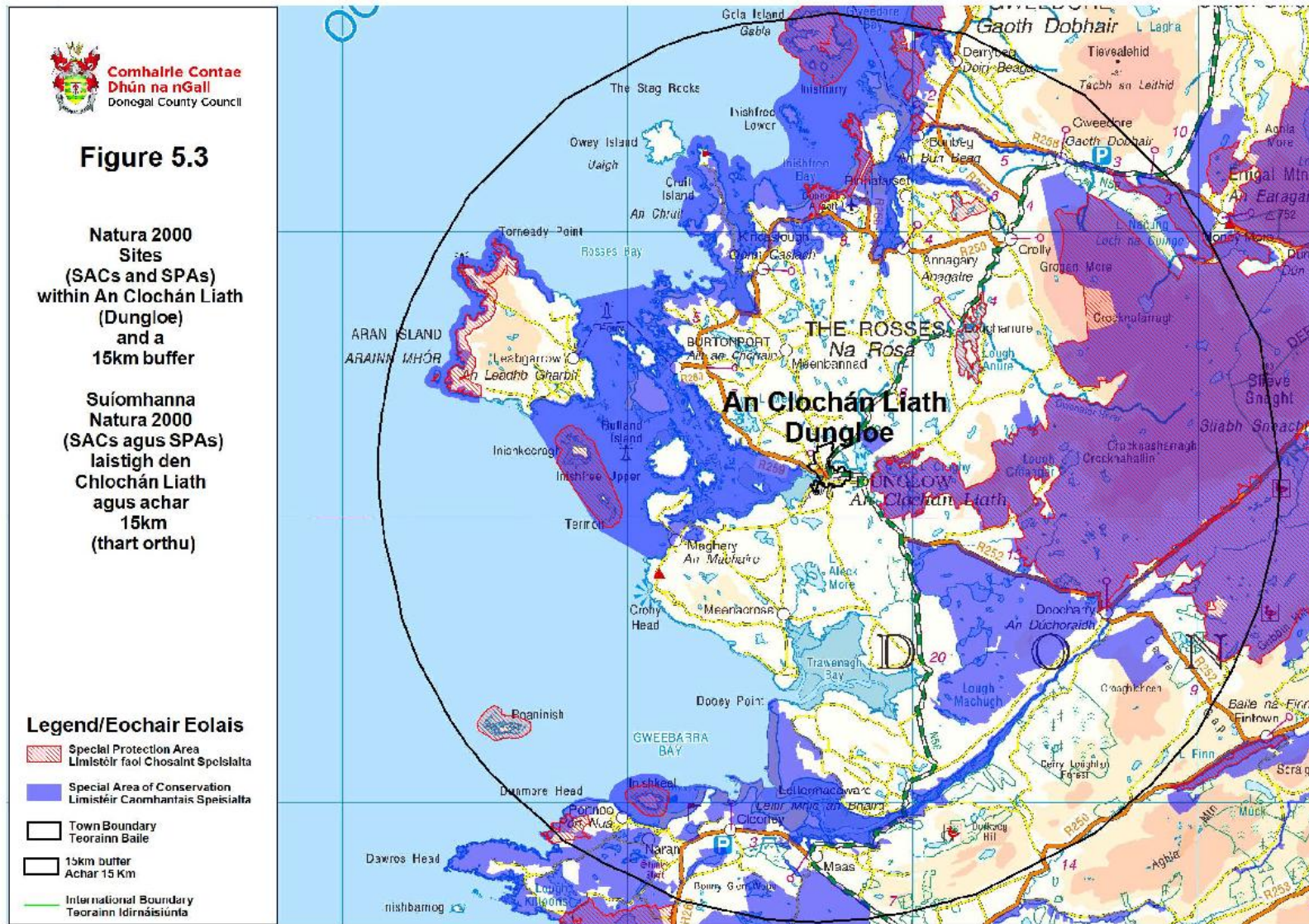


Figure 5.4: Natura 2000 sites within Ballybofey-Stranorlar and a 15km buffer

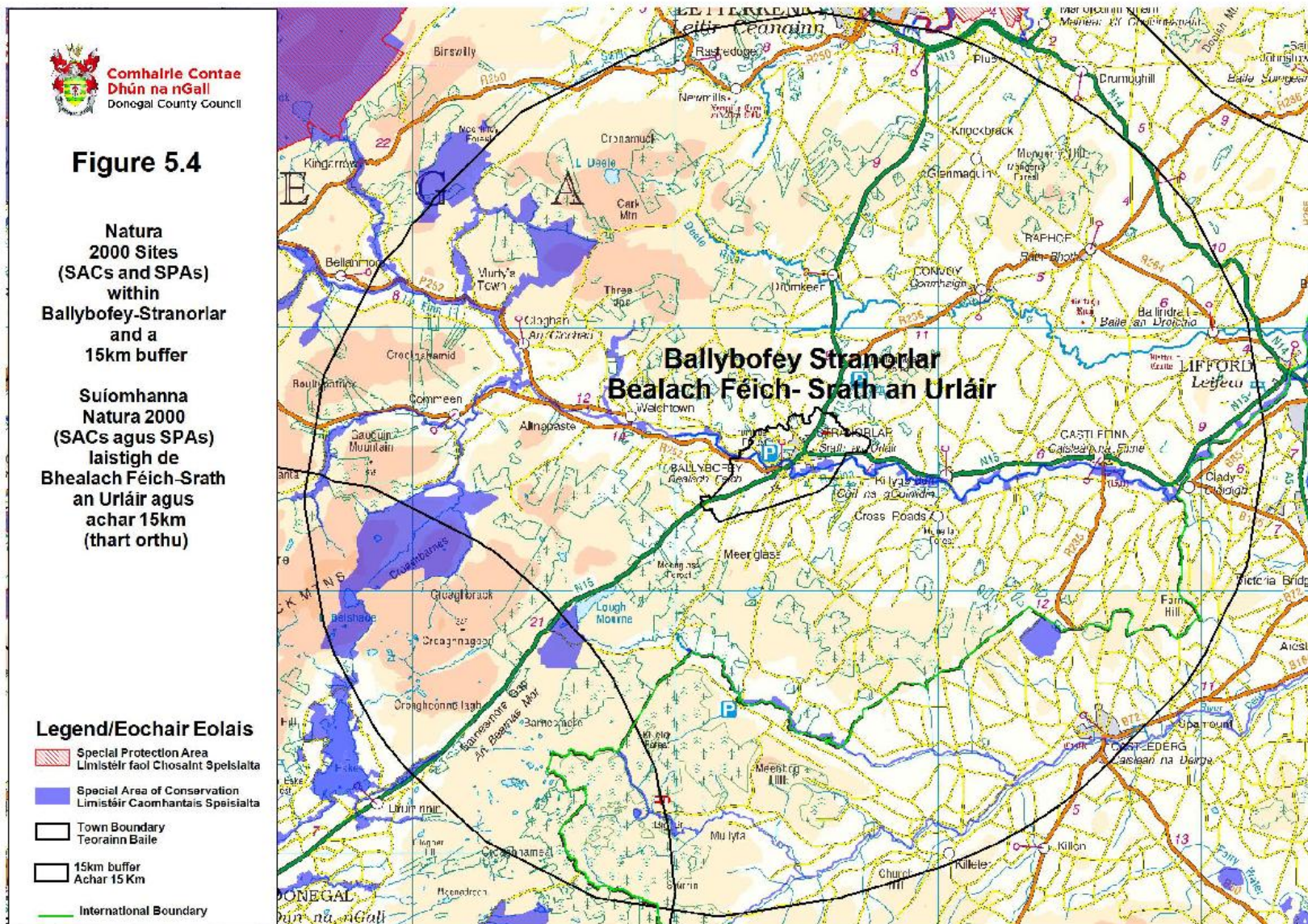


Figure 5.5: Natura 2000 sites within Ballyshannon and a 15km buffer

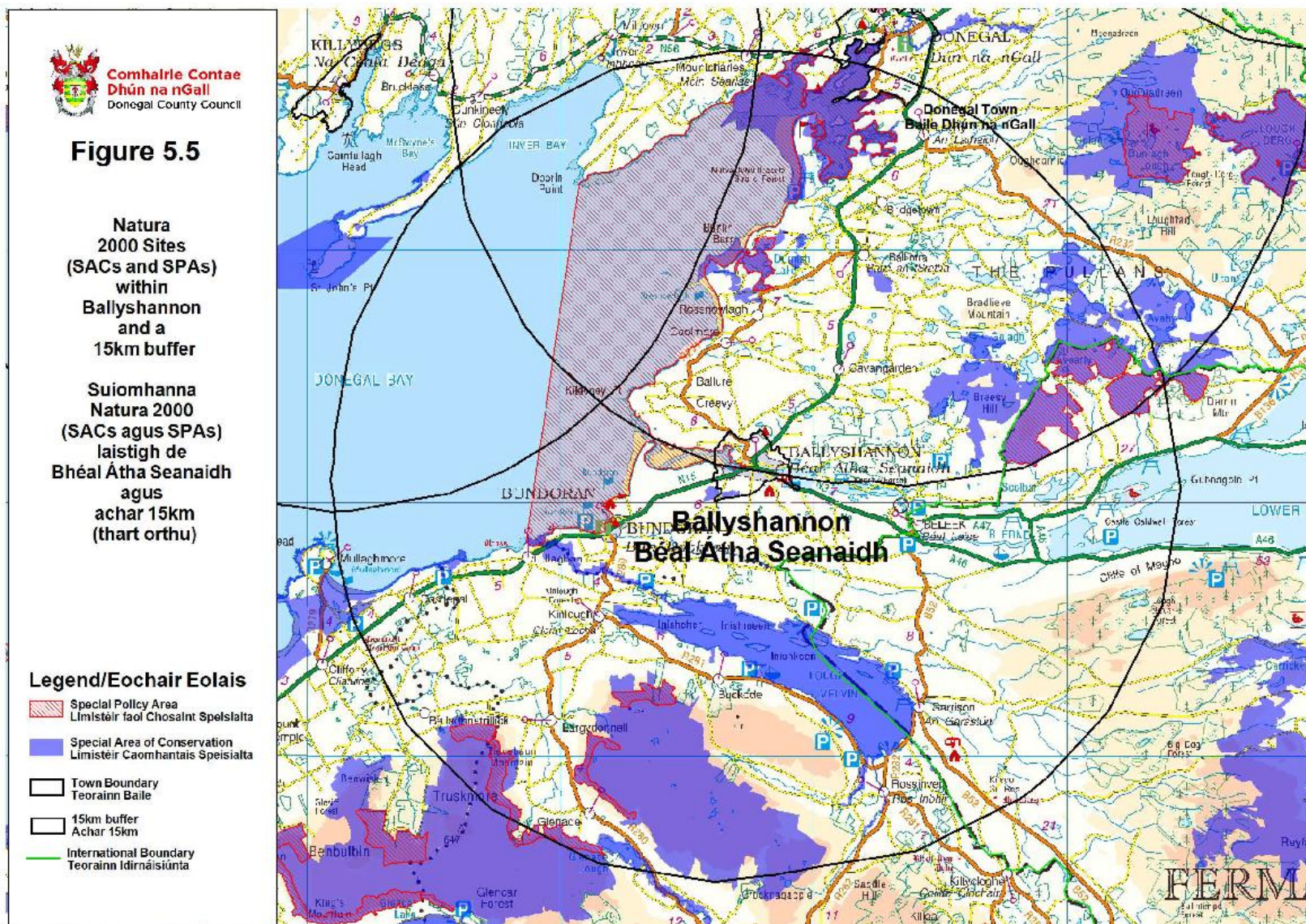
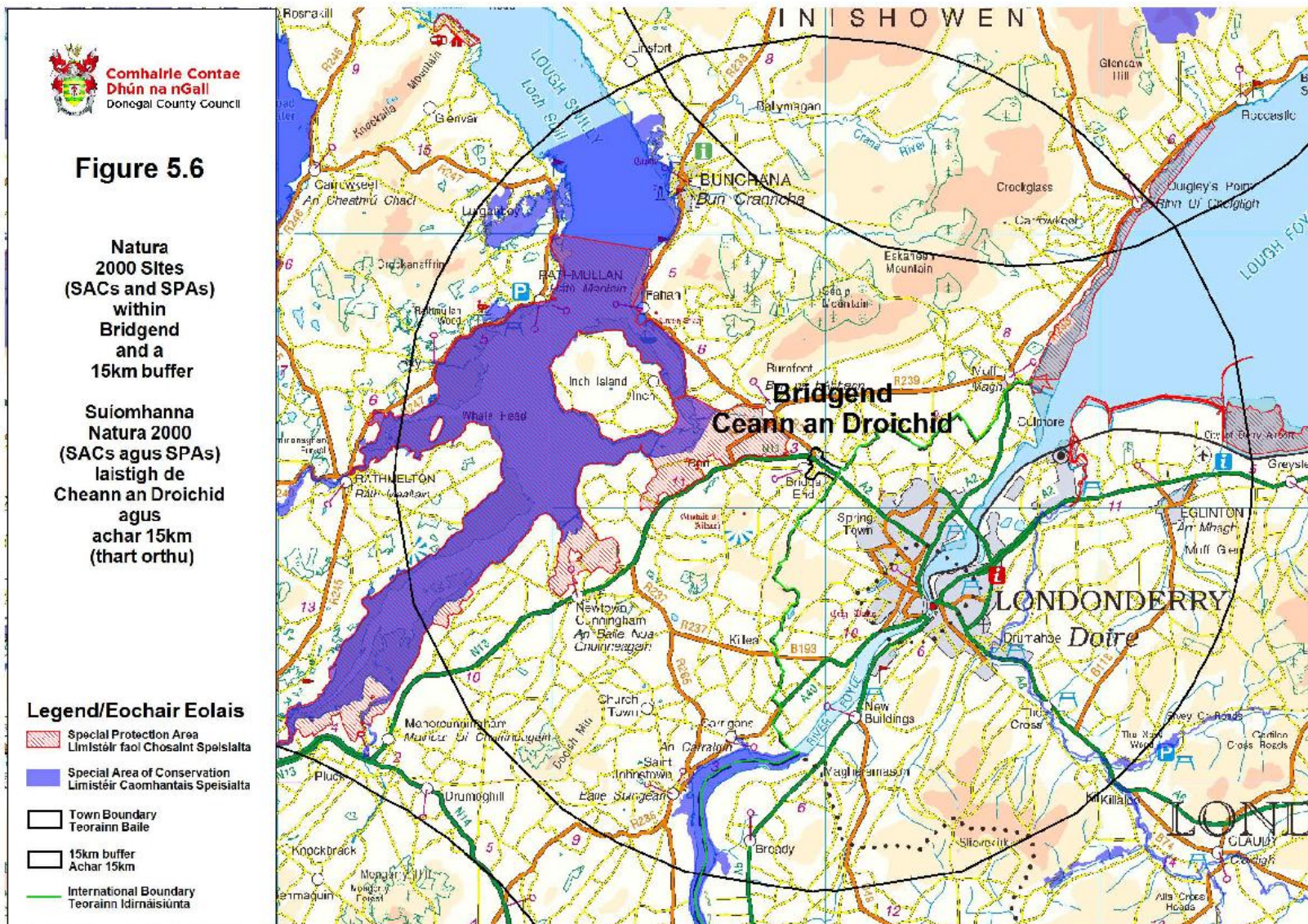


Figure 5.6: Natura 2000 sites within Bridgend and a 15km buffer



Carndonagh

There are a total of 5 Natura 2000 sites within the zone of influence of the Plan for Carndonagh as listed in Table 5.5 and illustrated on Figure 5.7. While there are no Natura 2000 sites within the town boundary there are two SACs and three SPAs located within a 15km radius of the town within Co. Donegal. In addition, a large aquifer extends from the northern part of the town to Trawbreaga Bay SPA, which is also designated shellfish water.

The 15km buffer for Carndonagh and Bridgend overlap and as a result one of the SPAs (Lough Foyle) is located within the zone of influence of the Plan for both towns.

Table 5.5: List of Natura 2000 sites within Carndonagh and a 15km buffer

Site Type	Site Code	Site Name	Located within the town	Located within a 15km radius of the town
Co. Donegal				
SAC	000168	Magheradrumman Bog	No	Yes
SAC	002012	North Inishowen Coast	No	Yes
SPA	004034	Trawbreaga Bay	No	Yes
SPA	004087	Lough Foyle	No	Yes
SPA	004146	Malin Head	No	Yes

Donegal Town

There are a total of 18 Natura 2000 sites located within the zone of influence of the Plan for Donegal Town as listed in Table 5.6 and illustrated on Figure 5.7. These Natura 2000 sites comprise twelve SACs and four SPAs located in Co. Donegal; two of the SACs and one of the SPAs are located within the town boundary (Donegal Bay (Murvagh) SAC, Lough Eske & Ardnamona Wood SAC and Donegal Bay SPA) and the remaining ten SACs and three SPAs are located within a 15km radius of the town. There is also one SAC and one SPA located within the 15km buffer area within Northern Ireland.

Donegal Bay (Murvagh) SAC is located in the inner part of Donegal Bay, immediately to the south-west of Donegal Town. It contains the estuary of the River Eske which flows through Donegal Town. Most of the site consists of intertidal habitats, notably mud-and sandflats, sea inlets and bays, tidal rivers, estuarine channels and sandy beaches with extensive beds of shellfish in parts of the Bay. The SAC includes several important habitats listed on Annex I of the EU Habitats Directive, an important seal colony and supports a number of important species as listed on Annex II of the Directive.

The Lough Eske & Ardnamona Wood SAC includes Lough Eske a large lowland oligotrophic lake which is located approximately 5km north-east of Donegal Town and the River Eske which flows through the town. The SAC includes several important habitats listed on Annex I of the EU Habitats Directive and supports a number of important species as listed on Annex II of the Directive including Atlantic Salmon and Freshwater Pearl Mussel.

Donegal Bay SPA is a very large, marine-dominated, site which extends from Doorin Point, to the west of Donegal Town, to Tullaghan Point in County Leitrim. The site includes the River Eske, which flows through Donegal Town and westwards to the sea into Donegal Bay SPA which is partly located within the Plan boundary. This sheltered estuary is partially enclosed by a large sand dune system at its mouth. Intertidal sand flats are the dominant estuarine habitat while the sand extends as a beach south to Bundoran. Donegal Bay is a site of high ornithological importance with special conservation interest for Wetland and Waterbirds; five of the regularly occurring species are listed on Annex I of the EU Birds Directive.

The 15km buffer for Donegal Town overlaps with the 15km buffer for the three towns of Ballybofey-Stranorlar, Ballyshannon and Killybegs. As a result six of the SACs (Ballintra, Donegal Bay (Murvagh), Durnesh Lough, Tamur Bay, Lough Golagh and Breesy Hill and Pettigo Plateau) and one of the SPAs (Pettigo Plateau) is located within the zone of influence of the Plan for both Donegal Town and Ballyshannon. Two of the SACs (Croaghonagh Bog and River Finn) are located within the zone of influence of the Plan for both Donegal Town and Ballybofey-Stranorlar. Two of the SPAs (Lough Nillan Bog and Donegal Bay) are located within the zone of influence of the Plan for both Donegal Town and Killybegs, while one of the SPAs (Donegal Bay) is located within the zone of influence of the Plan for Donegal Town and Ballyshannon.

Table 5.6: List of Natura 2000 sites within Donegal Town and a 15km buffer

Site Type	Site Code	Site Name	Located within the town	Located within a 15km radius of the town
Co. Donegal				
SAC	000115	Ballintra	No	Yes
SAC	000129	Croaghonagh Bog	No	Yes
SAC	000133	Donegal Bay (Murvagh)	Yes	Yes
SAC	000138	Durnesh Lough	No	Yes
SAC	000163	Lough Eske & Ardnamona Wood	Yes	Yes
SAC	000165	Lough Nillan Bog (Carrickatlieve)	No	Yes
SAC	000172	Meenaguse/Ardbane Bog	No	Yes
SAC	001125	Dunragh Loughs/ Pettigo Plateau	No	Yes
SAC	001880	Meenagruse Scragh	No	Yes
SAC	001992	Tamur Bog	No	Yes
SAC	002164	Lough Golagh & Breesy Hill	No	Yes
SAC	002301	River Finn	No	Yes
SPA	004057	Lough Derg (Donegal)	No	Yes
SPA	004099	Pettigo Plateau Nature Reserve	No	Yes
SPA	004110	Lough Nillan Bog	No	Yes
SPA	004151	Donegal Bay	Yes	Yes
Northern Ireland				
SAC	UK0016607	Pettigo Plateau	No	Yes
SPA	UK9020051	Pettigo Plateau	No	Yes

Figure 5.7: Natura 2000 sites within Carndonagh and a 15km buffer

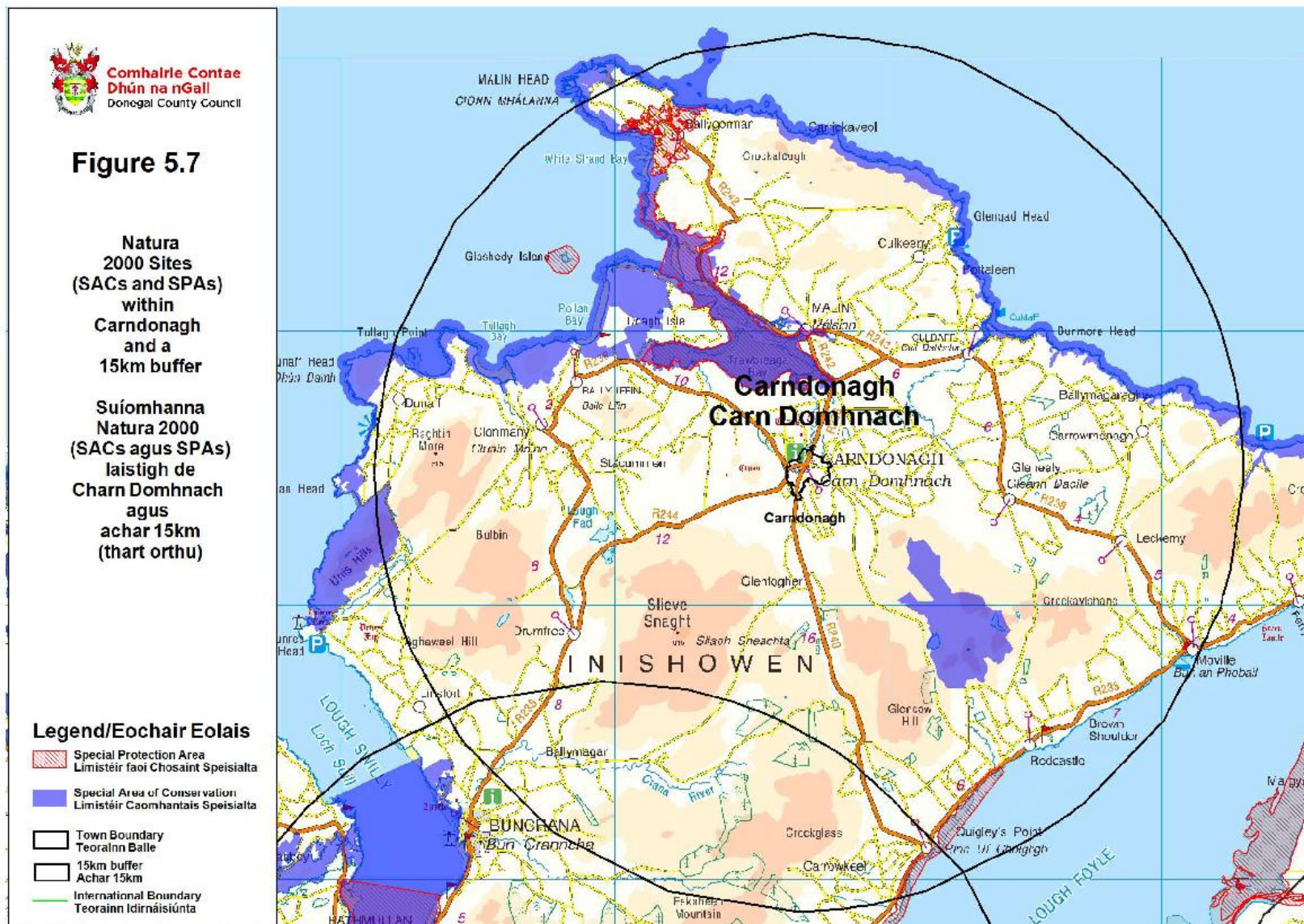


Figure 5.8: Natura 2000 sites within Donegal Town and a 15km buffer

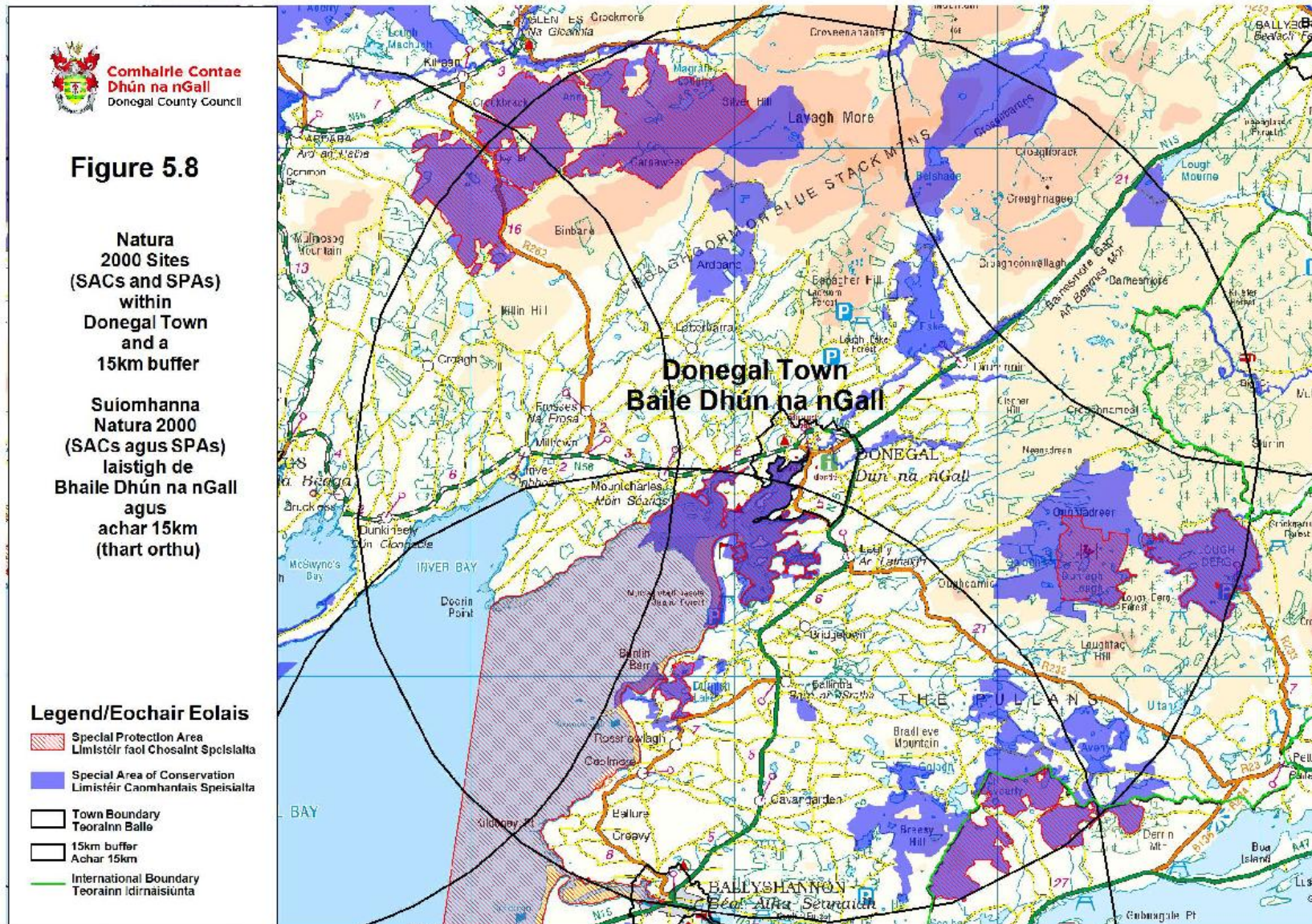
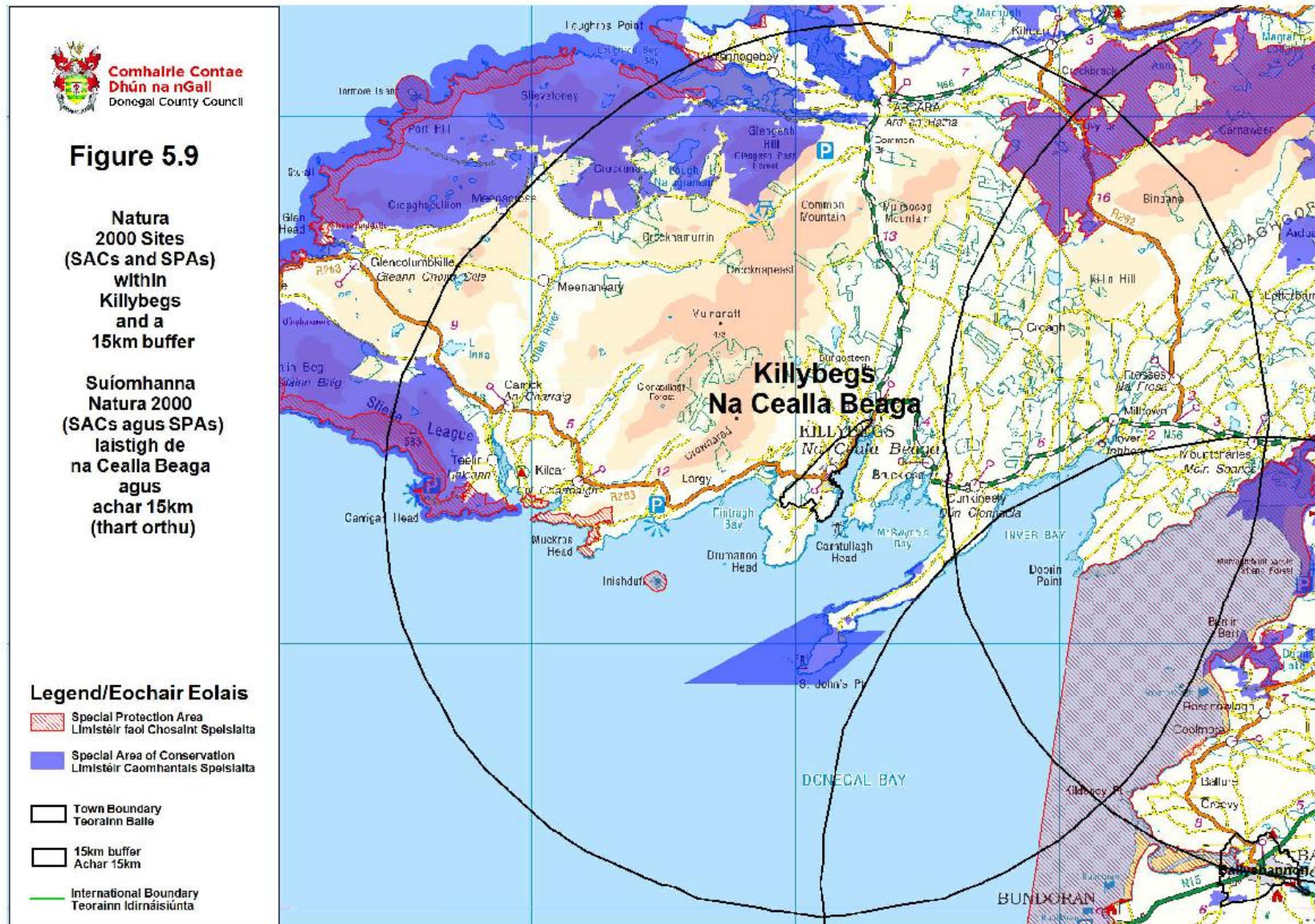


Figure 5.9: Natura 2000 sites within Killybegs and a 15km buffer



Killybegs

There are a total of 9 Natura 2000 sites within a 15km radius of the LAP town boundary for Killybegs as listed in Table 5.7 and illustrated on Figure 5.9. These Natura 2000 sites comprise five SACs and four SPAs, all located within Co. Donegal.

The 15km buffer for the three towns of Killybegs, Donegal Town and Ballyshannon all overlap. As a result, one of the SACs (Lough Nillan Bog) and two of the SPAs (Lough Nillan Bog and Donegal Bay) are located within the zone of influence of the Plan for both Killybegs and Donegal Town. One of the SPAs (Donegal Bay) is located within the zone of influence of the Plan for the three towns of Killybegs, Donegal Town and Ballyshannon.

Table 5.7: List of Natura 2000 sites within Killybegs and a 15km buffer

Site Type	Site Code	Site Name	Located within the town	Located within a 15km radius of the town
Co. Donegal				
SAC	000165	Lough Nillan Bog (Carrickatlieve)	No	Yes
SAC	000189	Slieve League	No	Yes
SAC	000190	Slieve Tooney/ Tormore Island/ Loughros Beg Bay	No	Yes
SAC	000191	St John's Point	No	Yes
SAC	000197	West of Ardara/Mass Road	No	Yes
SPA	004110	Lough Nillan Bog	No	Yes
SPA	004115	Inishduff	No	Yes
SPA	004150	West Donegal Coast	No	Yes
SPA	004151	Donegal Bay	No	Yes

5.1.2 Natural Heritage Areas

The Wildlife (Amendment) Act 2000 provides the legal basis for the establishment of a national network of sites known as Natural Heritage Areas (NHAs). NHAs aim to conserve and protect nationally important plant and animal species, and their habitats. NHAs are also designated to conserve and protect nationally important landforms, geological or geomorphological features. Planning Authorities are obliged by law to ensure that these sites are protected and conserved.

There are 14 NHAs and 78 proposed Natural Heritage Areas (pNHAs) within Co. Donegal of which 13 NHAs and 45 pNHAs are located within the Plan area. Given the geographical location of the seven towns there is some overlap of the 15km buffers around the towns resulting in some NHAs and pNHAs being located within the zone of influence of the Plan for more than one town. These sites are illustrated on Figure 5.10 and listed in Tables 5.8-5.14 for each of the seven towns.

An Clochán Liath (Dungloe)

There are two NHAs and fourteen pNHAs located within the zone of influence of the Plan for An Clochán Liath (Dungloe) as listed in Table 5.8.

While the 15km buffer around An Clochán Liath (Dungloe) does not overlap with any of the other towns, given its geographical in the west of the County and its proximity to the town of Killybegs, one of the pNHAs (West of Ardara/Maas Road 000197) is located within the zone of influence of the Plan for both towns.

Table 5.8: NHAs and pNHAs within An Clochán Liath (Dungloe) and a 15km buffer

Area	Natural Heritage Area (NHA)	Proposed Natural Heritage Area (pNHA)
Roaninish	000184	
Meenmore West Bog	002453	
Aran Island (Donegal) Cliffs		000111
Derkmore Wood Nature Reserve		000131
Fawnboy Bog/Lough Nacung		000140
Gannivegil Bog		000142
Illancrone		000148
Inishkeeragh		000152
West Of Ardara/Maas Road		000197
Crolly Bridge Woods		001102
Coolvoy Bog		001107
Galwolie Bog		001132
Gweedore Bay and Islands		001141
Cronaguiggy Bog		001176
Termon Strand		001195
Cloghernagore Bog and Glenveagh National Park		002047

Ballybofey-Stranorlar

There are four NHAs and four pNHAs located within the zone of influence of the Plan for Ballybofey-Stranorlar as listed in Table 5.9.

The 15km buffer for Ballybofey-Stranorlar and Donegal Town overlap and as a result two of the NHAs (Cashelnavean Bog 000122 and Barnesmore Bog 002375) and one of the pNHAs (Owendoo and Cloghervaddy Bogs 002046) are located within the zone of influence of the Plan for both towns.

Table 5.9: NHAs and pNHAs within Ballybofey-Stranorlar and a 15km buffer

Area	Natural Heritage Area (NHA)	Proposed Natural Heritage Area (pNHA)
Cashelnavean Bog	000122	
Barnesmore Bog	002375	
Meenagarranroe Bog	002437	
Lough Hill Bog	002452	
Croaghonagh Bog		000129
Tullytresna Bog		001870
River Swilly Valley Woods		002011
Owendoo and Cloghervaddy Bogs		002046

Ballyshannon

While there are no NHAs located within Ballyshannon or within a 15km radius of the town there is one pNHA (Erne Estuary/Finner Dunes 000129) located within the town and a further six pNHAs located within the zone of influence of the Plan for the town, as listed in Table 5.10.

The 15km buffer for the three towns of Ballyshannon, Donegal Town and Killybegs all overlap. As a result, there are five pNHAs (Ballintra 000115, Donegal Bay (Murvagh) 0001333, Durnesh Lough

000138, Tamur Bog 001992 and Carricknahorna Lough and Lough Gorman 002068) located within the zone of influence of the Plan for Ballyshannon and Donegal Town.

Table 5.10: NHAs and pNHAs within Ballyshannon and a 15km buffer

Area	Natural Heritage Area (NHA)	Proposed Natural Heritage Area (pNHA)
Ballintra		000115
Donegal Bay (Murvagh)		000133
Durnesh Lough		000138
Erne Estuary/Finner Dunes		000139
Lough Melvin		000428
Tamur Bog		001992
Carricknahorna Lough and Lough Gorman		002068

Bridgend

There are three NHAs and three pNHAs located within the zone of influence of the Plan for Bridgend as listed in Table 5.11.

The 15km buffer for Bridgend and Carndonagh overlap and as a result three of the NHAs (Illies Hill Bog 001127, Camowen River Bog 002405 and Umrycam Bog 002406) are located within the zone of influence of the Plan for both towns.

Table 5.11: NHAs and pNHAs within Bridgend and a 15km buffer

Area	Natural Heritage Area (NHA)	Proposed Natural Heritage Area (pNHA)
Illies Hill Bog	001127	
Camowen River Bog	002405	
Umrycam Bog	002406	
Lough Swilly Including Big Isle, Blanket Nook & Inch Lake		000166
Port Lough		000180
River Foyle, Mongavlin To Carrigans		002067

Carndonagh

There are four NHAs and six pNHAs located within the zone of influence of the Plan for Carndonagh as listed in Table 5.12.

The 15km buffer for Carndonagh and Bridgend overlap and as a result three of the NHAs (Illies Hill Bog 001127, Camowen River Bog 002405 and Umrycam Bog 002406) are located within the zone of influence of the Plan for both towns.

Table 5.12: NHAs and pNHAs within Carndonagh and a 15km buffer

Area	Natural Heritage Area (NHA)	Proposed Natural Heritage Area (pNHA)
Illies Hill Bog	001127	
Slieve Snaght Bogs	002322	
Camowen River Bog	002405	
Umrycam Bog	002406	
Bulbin Mountain		000120

Magheradrumman Bog		000168
Carndonagh Wood		001098
Glashedy Island		001135
Lough Fad West		001161
North Inishowen Coast		002012

Donegal Town

There is one pNHA located within Donegal Town (Donegal Bay(Murvagh) 000133)and a further three NHAs and twelve pNHAs located within the zone of influence of the Plan for the town as listed in Table 5.13.

The 15km buffer for Donegal Town overlaps with the 15km buffer for the three towns of Ballybofey-Stranorlar, Ballyshannon and Killybegs.

As a result, two of the NHAs (Cashelnavean Bog 000122 and Barnesmore Bog 002375) and one of the pNHAs (Owendoo and Cloghervaddy Bogs 002046) are located within the zone of influence of the Plan for Donegal Town and Ballybofey-Stranorlar.

Five of the pNHAs (Ballintra 000115, Donegal Bay (Murvagh) 0001333, Durnesh Lough 000138, Tamur Bog 001992 and Carricknahorna Lough and Lough Gorman 002068) are located within the zone of influence of the Plan for Donegal Town and Ballyshannon.

Two of the pNHAs (Lough Nillan Bog (Carrickatlieve) 000165 and Meenybraddan Bog 001177) are located within the zone of influence of the Plan for Donegal Town and Killybegs.

Table 5.13: NHAs and pNHAs within Donegal Town and a 15km buffer

Area	Natural Heritage Area (NHA)	Proposed Natural Heritage Area (pNHA)
Cashelnavean Bog	000122	
Lough Fad Bog	001159	
Barnesmore Bog	002375	
Ballintra		000115
Donegal Bay (Murvagh)		000133
Durnesh Lough		000138
Lough Derg (Donegal)		000162
Lough Eske And Ardnamona Wood		000163
Lough Nillan Bog (Carrickatlieve)		000165
Meenaguse/Ardbane Bog		000172
Dunragh Loughs/Pettigo Plateau		001125
Meenybraddan Bog		001177
Meenaguse Scragh		001880
Tamur Bog		001992
Owendoo And Cloghervaddy Bogs		002046
Carricknahorna Lough And Lough Gorman		002068

Killybegs

There are two NHAs and eight pNHAs located within the zone of influence of the Plan for Killybegs as listed in Table 5.14.

The 15km buffer for the three towns of Killybegs, Donegal Town and Ballyshannon all overlap. As a result, two of the pNHAs (Lough Nillan Bog (Carrickatlieve) 000165 and Meenybraddan Bog 001177) are located within the zone of influence of the Plan for Killybegs and Donegal Town.

While the 15km buffer for Killybegs does not overlap with the buffer around An Clochán Liath (Dungloe), given its proximity to An Clochán Liath (Dungloe), one of the pNHAs (West of Ardara/Maas Road 000197) is located within the zone of influence of the Plan both towns.

Table 5.14: NHAs and pNHAs within Killybegs and a 15km buffer

Area	Natural Heritage Area (NHA)	Proposed Natural Heritage Area (pNHA)
Inishduff Bog	000151	
Crocknamurrin Mountain Bog	001878	
Lough Nillan Bog (Carrickatlieve)		000165
Lough Unna/Lough Unshagh Bogs		000167
Slieve League		000189
Slieve Tooley/Tormore Island/Loughros Beg Bay		000190
St. John's Point		000191
West Of Ardara/Maas Road		000197
Meenybraddan Bog		001177
Coguish Bog		001938

SACs and SPAs are afforded protection at a European and National level whereas NHA's are protected at a National level only. Habitats outside these designated areas are also key stepping stone habitats or ecological corridors linking sites of prime conservation value (e.g. waterways, woodlands and hedgerows). In December 2007, the first baseline assessments of conservation status for all 59 habitats and c. 100 species listed for protection by the EU in Ireland was prepared by the National Parks and Wildlife Service (NPWS) and published in a report entitled 'Status of EU Protected Habitats & Species in Ireland' (2008). Many habitats associated with water were considered to be in bad condition at that time. Guidelines for assessing the conservation status of habitats and species were updated in 2011 by the European Topic Centre on Biological Diversity (ETC/BD) in conjunction with the Member States represented on the Expert Reporting Group under the Nature Directives³.

Having regard to the 2011 Guidelines, the NPWS published the second Irish report on the 'Status of EU Protected Habitats & Species in Ireland' (2013). In 2007, the mapping for many habitats was derived using expert judgement assisted by geology, soils, land use mapping and OS maps. Many large scale habitat surveys have been undertaken in the intervening years. As such, the 2013 maps are more refined than those produced in 2007. The 2013 Report concluded that while many Irish habitats are in unfavourable status and still declining, a range of positive actions are underway. The 2013 Report found that the "*main pressures to habitats are ecologically unsuitable grazing levels – which can be undergrazing (or even abandonment) as well as some continued overgrazing; pollution of freshwaters, drainage/and or cutting of Peatlands and wetlands; invasive species; and recreational pressures from urbanisation, fertiliser use and road-building have reduced since the first reporting period (2001-2006)*" (pg.148). The NPWS acknowledge that there are many challenges to address ahead of the next report on the status of protected habitats & species due in 2019.

³ http://bd.eionet.europa.eu/activities/Reporting/Article_17/reference_portal

Site Synopses for SPAs, cSACs and NHAs are available from the NPWS at www.npws.ie. The Appropriate Assessment (AA) (Natura Impact Report), which accompanies this Environmental Report, outlines details of Natura 2000 sites within the Plan area and those within a 15km radius of each of the seven towns. The AA report includes the location of the site, site code/name, qualifying interest's conservation objectives and threats to site integrity, and is summarised in Section 3 of this Environmental Report.

The full extent of the County's natural heritage of wild species, geological features and landforms, and natural and semi-natural habitats, extend to more than just those sites which benefit from statutory protection. Under Article 10 of the EU Habitats Directive it states that Member States shall endeavour, where they consider it necessary, in their land use planning and development policies to encourage the management of features of the landscape which are of major importance for wild fauna and flora. Such features are those, which by virtue of their linear and continuous structures such as rivers, or their functions as stepping stones such as ponds and small woods, are essential for the migration, dispersal and genetic exchange of wild species. The features will vary from area to area and include hedgerows, canals, ponds, lakes, ditches and banks, linear tree belts/shelter belts, larger semi-natural or ancient woodlands, river corridors and other locally important habitats. The management of the habitats of the Glencaveagh National Park are of significant importance.

The need to conserve biodiversity generally is underlined in the National Biodiversity Plan and Convention on Biological Diversity which Ireland has signed and ratified. This diversity is often understood in terms of the wide variety of plants, animals and micro-organisms which have been impacted upon by human beings over time. Ireland's National Biodiversity Plan, 'Actions for Biodiversity 2011-2016', includes objectives, targets and actions to protect Ireland's biodiversity and to control the spread of invasion alien species. A new National Biodiversity Plan 2017-2021 is due later this year.

As evidenced in the Corine Land Cover Figure 5.16 of this Report, natural land cover throughout the Plan area remains relatively low; however, the constant encroachment on natural habitats will undoubtedly have an impact on natural flora, fauna and biodiversity. Clearing of vegetation has resulted in the replacement of natural habitats with semi-natural habitats. The intensification of agriculture, which took place in the second half of the last century, increased the removal of hedgerows and woodland. In recent years the development of many one-off greenfield sites in the Plan area has also given rise to a sharp increase in the removal of hedgerows. Hedgerows constitute an important natural and historic resource given both their role as wildlife corridors between habitats, their value in terms of visual amenity and their historic significance as townland and field boundaries.

Recent policy and guideline documents from the Department of Housing, Planning, Community and Local Government emphasise strongly the need for an improved quality of housing within sustainable and well-planned neighbourhoods. The holistic and integrated approach to planning, which the Department is recommending, should incorporate biodiversity protection and enhancement as a core objective.

The number of protected sites (including candidate designated areas and proposed natural heritage areas) within the zone of Influence of the Draft LAP in Ireland is set out in Table 5.15. Throughout the island of Ireland there has been a decline in many of the native species through habitat loss, competition, development and agriculture. Legislation from Ireland, Northern Ireland and Europe protect some of these species (see the EPA website for further details <http://www.epa.ie/>).

Table 5.15: Protected Ecological Sites within the Zone of Influence of the Plan in Donegal

Protected Sites		Number within County Donegal
Natura 2000 sites	SACs	38
	SPAs	20
Ramsar Sites		4
NHA		13
pNHAs		45
Nature Reserves	Designated	4
	Un-designated	0
National Parks		1

Landscape, biodiversity and ecology represent significant resources that each generation is charged with conserving and safeguarding for future generations. Mixed species in forestry plantations, with an emphasis on native hardwoods, will enhance the natural landscape, promote biodiversity and absorb toxins from the atmosphere; and local authorities and the forestry service need to enforce such best practice going forward. The preservation of boglands is important not just from a landscape and cultural heritage perspective, but also because they represent very significant carbon sinks, and have therefore a vital role to play in redressing climate change. County Donegal contains Ireland's largest tracts of both Atlantic Blanket Bog and Mountain Blanket Bog.

5.2 Designated Shellfish Waters

The aim of the Shellfish Waters Directive 2006/113/EC is to protect or improve shellfish waters in order to support shellfish life and growth. It is designed to protect the aquatic habitat of bivalve and gastropod molluscs, which include oysters, mussels, cockles, scallops and clams. The Directive requires Member States to designate waters that need protection in order to support shellfish life and growth. The Directive sets physical, chemical and microbiological requirements that designated shellfish waters must either comply with or endeavour to improve.

The Directive is implemented in Ireland by the European Communities (Quality of Shellfish Waters) Regulations 2006 (S.I. 268 of 2006 as amended by S.I. 55 and S.I. 464 of 2009). There are 12 'Shellfish Waters' within County Donegal designated pursuant to Article 4 of the Shellfish Regulations (as amended), of which 9 are located within the Plan area (see Table 5.17). Each designated Shellfish Water and area within the County has a 'Pollution Reduction Programme' established by the Department of Housing, Planning, Community and Local Government, details of which can be found at www.housing.gov.ie. Pressure on shellfish growing areas can come from any source which discharges into water. Table 5.16 indicates the wide variety of potential threats to these areas.

Table 5.16: Potential Threats to Shellfish Growing Areas

Pressures arising from structural changes	Point source pressures	Diffuse source pressures	Environmental Pressures
Channelisation and dredging	Discharges from waste water treatment plants	Drainage from urban areas, grassland and arable areas (including from dairy farming, cattle farming and the growing of crops)	
Flood Protection and embankments	Discharges licensed by the EPA	Drainage from roads and railways	

Dams, Locks and weirs	Discharges licensed by local authorities	Forestry	
Intensive land use (land drainage)	Overflows from sewerage systems that by-pass treatment plants, caused by rain storms, usually referred to as combined sewer overflows (CSOs)	Septic tanks	
Built structures e.g. ports and harbours	Discharges from water treatment plants	Activities which use dangerous substances (forestry and agriculture)	
Deposition of dredge Spoil			
Coastal defences			

Annex II species such as freshwater pearl mussel (*Margaritifera*) and salmon are particularly sensitive to pollution. *Margaritifera* requires extremely oligotrophic conditions, preferably rivers with a biotic quality index of Q5 (Ireland) or a GQS value of A (Northern Ireland). The EPA and NIEA use these Q5 and A values, respectively, to indicate the highest quality status categories. There has been a considerable decline in freshwater pearl mussel species distribution and numbers. Salmon need very good water quality typical of that found in upland streams. The species needs pool, glide and riffle. They require rivers where dredging is not on-going and where there are no abrupt changes, such as those that might occur through physical modifications.

Given the geographical location of the seven towns and their 15km buffers within the Plan area, and the defined boundaries of the designated Shellfish Waters, there is some overlap resulting in some of the designated waters occurring within the zone of influence of the Plan for a number of the towns within the LAP. The location of the designated Shellfish Waters within the Plan area are illustrated on Figure 5.11. The list of Shellfish Waters and the associated water bodies, and the LAP town catchment within which the designated waters are located, are listed in Table 5.17 and described below (based on information available on www.housing.gov.ie and the EPA Catchment Assessments, March 2017).

Table 5.17: Designated Shellfish Waters within the Plan area

Designated Shellfish Waters in Co. Donegal	LAP Town(s) Catchment	Objective Met?		Comment
		Yes	No	
Donegal Bay	Ballyshannon, Donegal Town		✓	Based on the Shellfish Pollution Reduction Programme Mounthcharles WWTP and septic tanks are the significant pressures
Dunglow	An Clochán Liath (Dungloe)	✓		
Gweebarra Bay	An Clochán Liath (Dungloe)	✓		
Gweedore Bay	An Clochán Liath (Dungloe)	✓		
Inver Bay	Ballyshannon, Donegal Town and Killybegs	✓		
Lough Swilly	Bridgend	✓		

Mc Swynes Bay	Killybegs		✓	Based on the WFD characterisation, agriculture is the significant pressure
Trawbreaga Bay	Carndonagh	✓		
Trawenagh Bay	An Clochán Liath (Dungloe)	✓		
Mulroy Bay	N/A			
Loughras Beg	N/A			
Sheephaven Bay	N/A			

Source: EPA Catchment Assessments (March 2017)

An Clochán Liath (Dungloe)

There are four designated Shellfish Waters in the zone of influence of the Plan for An Clochán Liath (Dungloe) namely, Dunglow, Gweebarra Bay, Gweedore Bay and Trawenagh Bay. An Clochán Liath (Dungloe) is the main urban centre in the Dunglow, Gweebarra Bay and Trawenagh Bay shellfish area catchments. An Bun Beg-Doirí Beaga (Bunbeg-Derrybeg) is the main town in the Gweedore Bay shellfish area catchment.

Dunglow Shellfish Area: The designated shellfish area within the bay is 5.9km² in area. It stretches from Toberkeen to Inishfree Upper down to Terman and back along the coastline. The contributing catchment of the shellfish area is over 70km² in area which includes the Dunglow River.

Gweebarra Bay Shellfish Area: The designated shellfish area within the bay is 3.5km² in area. It encompasses the Gweebarra Estuary within an area defined by the channel at Cor point and Roshin point and the channel at the mouth to Gweebarra Bay. The contributing catchment of the shellfish area is 166.3 km² in area which includes the Gweebarra River.

Gweedore Bay Shellfish Area: The designated shellfish area within the bay is 5.7km² in area. The contributing catchment of the shellfish area is 236.6km² in area which includes the Crolly (Gweedore) River and the Clady River.

Trawenagh Bay Shellfish Area: The designated shellfish area within the bay is 8.04km² in area. It extends across the channel from Dooley Point to Murraghmullan. The contributing catchment of the shellfish area is 68.9km² in area which includes two small rivers, the Owenaleck and the Owenamarve.

All four shellfish areas are compliant with the relevant standards and there are no water quality issues of concern.

Ballybofey-Stranorlar

There are no designated Shellfish Waters in the zone of influence of the Plan for Ballybofey-Stranorlar.

Ballyshannon

There are two designated Shellfish Waters in the zone of influence of the Plan for Ballyshannon namely, Donegal Bay and Inver Bay. These shellfish areas are also located within the 15km buffer around Donegal Town and Killybegs. Donegal Town is the main urban centre in the Donegal Bay shellfish area catchment. Dunkineelly is the main village in the Inver Bay catchment.

Donegal Bay Shellfish Area: The designated shellfish area within the bay is 12.6km² in area and covers the inner portion of the bay. It is a series of interlocking bays interspersed with a number of uninhabited (and one inhabited) island which is linked to the mainland via a causeway. The contributing catchment of the shellfish area is 286.3km² in area which is drained by five main water courses flowing into the inner bay, namely the Eske, Eany, Ballintra, Laghy and Bridgetown rivers.

Inver Bay Shellfish Area: The designated shellfish area within the bay is 24.7km² in area and extends from St. Johns Point across to Doorin Point. The contributing catchment of the shellfish area is almost 207.9km² in area which includes the River Eanny.

Donegal Bay shellfish area failed microbial compliance in 2015 as the percentage compliance with E.coli was less than 75%. The Waste Water Treatment Plant and associated septic tanks at Mountcharles is identified as a significant pressure for this designated Shellfish Water. Inver Bay shellfish area is compliant with the relevant standards and there are no water quality issues of concern.

Bridgend

There is one designated Shellfish Water in the zone of influence of the Plan for Bridgend namely, Lough Swilly.

Lough Swilly Shellfish Area: The designated shellfish area within Lough Swilly is 113.5km² in area and extends southwards from Dunaff Head and Fanad Head to Moneyhaughy and Greenhill, excluding the coastal areas between Colpaghs Rocks and Rinnaraw point, the Inch Island (An Inis) embankment, Drumboy embankment and the Ramelton channel upstream of point acre. The contributing catchment of the shellfish area is 949.7km² in area and includes a number of rivers including the Swilly and the Lennan.

This shellfish area is compliant with the relevant standards and there are no water quality issues of concern.

Carndonagh

There is one designated Shellfish Water in the zone of influence of the Plan for Carndonagh namely, Trawbreaga Bay. Carndonagh is the main urban centre in this shellfish area catchment.

Trawbreaga Bay Shellfish Area: The designated shellfish area is 4.3km² and stretches from Moanrealtagh Point to Duaghmore Point and around Fergal Point. The contributing catchment of the shellfish area is c. 144km² in area and includes a number of small rivers and streams including the Ballyboe, Donagh and Glennagannon rivers.

This shellfish area is compliant with the relevant standards and there are no water quality issues of concern.

Donegal Town

There are two designated Shellfish Waters in the zone of influence of the Plan for Donegal Town namely, Donegal Bay and Inver Bay as described above. Donegal Town is the main urban centre in the Donegal Bay shellfish area catchment.

As noted above Donegal Bay shellfish area failed microbial compliance in 2015, however Inver Bay is compliant with the relevant standards.

Killybegs

There are three designated Shellfish Waters in the zone of influence of the Plan for Killybegs namely, Donegal Bay, Inver Bay and Mc Swynes Bay.

Mc Swynes Bay Shellfish Area: The designated shellfish area within the bay is 2.7km² in area. It covers all of McSwynes Bay within a line south-east from Multins and west from Kiln Port. The contributing catchment of the shellfish area is almost 112.6km² in area and is drained by one river, the Oily which enters the bay at Ballyloughan. Dunkineelly is the main village in the Mc Swynes Bay catchment.

Mc Swynes Bay shellfish area failed microbial compliance in 2015 as the percentage compliance with E.coli was less than 75%. Based on the Water Framework Directive (WFD) characterisation, agriculture is the significant pressure for this designated Shellfish Water. As noted above Donegal Bay shellfish area failed microbial compliance in 2015 while Inver Bay is compliant with the relevant standards and there are no water quality issues of concern.

5.3 Freshwater Pearl Mussel

The pearl mussel *Margaritifera margaritifera* has attracted a lot of interest in recent years due to its interesting ecology, life cycle, ability to produce pearls and, most importantly, its decline which has left the species in danger of extinction. The species is in very serious decline throughout its range and is listed in the IUCN red data book as endangered worldwide. As the name suggests, this mussel produces freshwater pearls and, because of historic exploitation, the species is protected under the Wildlife Acts, 1976-2014 and Annex V of the Habitats Directive. Figure 5.11 shows the location of Freshwater Pearl Mussel relating to the Plan area. The overall status is assessed as bad and declining; however the prospects may improve for this species⁴. The species' current severe decline is not, however, the result of exploitation, rather it is because of sedimentation and enrichment of its habitat⁵.

There are six Freshwater Pearl Mussel catchments in County Donegal, three of which are located in the Plan area (see Table 5.18).

Table 5.18: Freshwater Pearl Mussel Catchments within the Plan area

Freshwater Pearl Mussel Catchments in Co. Donegal	LAP Town(s)
Clady	An Clochán Liath (Dungloe)
Eske	Donegal Town, Bally-bofey-Stranorlar
Owenea	An Clochán Liath (Dungloe), Donegal Town
Leannan	N/A
Glaskellean	N/A
Owencarrow	N/A

Source:

Freshwater Pearl Mussel Sub-Basin Management Plans have been produced for each of the Freshwater Pearl Mussel catchments in the County and sit alongside the River Basin Management Plans to provide a detailed programme of measures to improve the habitat of the freshwater pearl mussel so that it can attain favourable conservation status. The Freshwater Sub-Basin Management Plans within the Plan area are:

- Clady Sub-Basin Management Plan
- Eske Sub-Basin Management Plan
- Owenea Sub-Basin Management Plan

A number of factors are combining to provide a very serious threat to the remaining breeding populations of Pearl Mussels. Three are of particular concern. Firstly, agricultural land that was not intensively managed historically has been repeatedly fertilised and is becoming saturated with phosphorus. Secondly, forestry units are now reaching maturity and, particularly in upland peat areas, have the potential of felling to release large quantities of phosphate into these rivers. Thirdly, the recent intensification of development, with associated land clearance, pressure on sewerage schemes and inappropriate locating of on-site systems for one-off housing near the rivers, is adding to the nutrient and sediment load. The third phase of damage to the pearl mussel habitat in these rivers has manifested itself since the Habitats Directive came into force and serious declines have occurred in some rivers following their designation as SACs, although some of the causes of the decline were in place before their designation.

⁴ www.npws.ie/sites/default/files/publications/pdf/Art17-Vol1-web.pdf

⁵ www.npws.ie/sites/default/files/publications/pdf/Art17-Vol1-web.pdf

Table 5.19 indicates the conservation objectives and threats in respect to sites listed on Schedule 1 of the European Communities Environmental Objectives (Freshwater Pearl Mussel) Regulations 2009 within the Plan area.

Table 5.19: Freshwater Pearl Mussel Objectives and Threats

LAP Town(s) Catchment	SAC site code site name	Freshwater Pearl Mussel (margaritifera margaritifera) Population name	Conservation objectives	Threats to site integrity
An Clochán Liath (Dungloe)	000140 Fawnboy Bog/Lough Nacung SAC	Clady	To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status: Northern Atlantic wet heaths with <i>Erica tetralix</i> ; Blanket bog; Depressions on peat substrates of the Rhynchosporion. To maintain the Annex II species for which the cSAC has been selected at favourable conservation status: <i>Margaritifera margaritifera</i> .	Changes in local hydrology including drainage; peat extraction; overgrazing; forestry; burning; direct loss of habitat to development; arterial drainage/water abstraction/lowering of the regional water table; agricultural reclamation. Introduction of alien invasive species. Illegal Dumping.
Donegal Town and Ballybofey-Stranorlar	000163 Lough Eske and Ardnamona Wood	Eske	To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status: Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>); Petrifying springs with tufa formation(<i>Cratoneurion</i>); Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in British Isles. To maintain the Annex II species for which the cSAC has been selected at favourable conservation status: <i>Margaritifera margaritifera</i> ; <i>Salmo salar</i> ; <i>Trichomanes speciosum</i> .	Direct loss of habitat to development; amenity/recreation use; invasive species; lack of/inappropriate woodland development; overgrazing (deer). Introduction of alien invasive species. Illegal Dumping. Increased pollution/reduction in water quality. Potential threats to Freshwater Pearl Mussel.
An Clochán Liath (Dungloe) and	000197 West of Ardara /	Owenea	To maintain the Annex II species for which the cSAC has been selected at favourable	Agricultural improvements/reclamation; drainage /changes in local hydrology; water

Donegal Town	Maas Road		conservation status: <i>Vertigo geyeri</i> Slender Naiad, Freshwater Pearl Mussel, Marsh Fritillary, Petalwort, Atlantic Salmon, Common Seal, whorl snail and Otter.	quality/pollution (including groundwater); agricultural abandonment; overgrazing/undergrazing; direct loss of habitat to development; bracken & scrub encroachment; turf/peat extraction in fens; impacts to local geology/geomorphology. Introduction of alien invasive species. Illegal Dumping. Burning. Increased pollution/reduction in water quality. Persecution (Poisoning).
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Clady Catchment

The Clady catchment is located within the zone of influence of the Plan for An Clochán Liath (Dungloe). The Clady River is the outflow from Lough Nacung, flowing for approximately 5km in an east to west direction before entering the sea at Gweedore Bay. It runs through the towns of Gweedore (about 2km below Lough Nacung) and Bunbeg (about 1km upstream of the sea). The Clady catchment contains two major lakes: Lough Nacung and Dunlewy Lough, both of which have been enlarged as a result of impoundments. The lakes are deep and large and have low alkalinities. Nacung is currently classed at moderate status and Dunlewy is at good status under the WFD and are reported to have good populations of Arctic char and brown trout.

The key improvements needed for the Clady Catchment are to restore juvenile habitats to appropriate condition by simultaneously reducing nutrient and silt inputs to the river. (Source: Clady Sub-Basin Management Plan 2010.epa.ie).

Eske Catchment

The Eske catchment is partly located within the zone of influence of the Plan for Ballybofey-Stranorlar and Donegal Town. The Eske freshwater pearl mussel study in 2006 found mussels to be absent and occasional (less than 20 per 100m) in the ponded areas of the upper stretches of the Eske River near and into the lake, abundant (over 250 per 100m) between Drumnacarry and the confluence with Limestone Brook, and occasional and frequent to common (20–250 per 100m) in parts of the stretch above Thrushbank Bridge. Below this bridge, the mussels are mainly occasional, with a few good riffle runs with more frequent to common densities down as far as the N56 bridge. Apart from some gaps in habitat below the bridge, the mussels are generally abundant in most areas between the N56 bridge and the Drummenny confluence. Below this, densities are frequent to common as far as the estuarine influence in the area of the town bridge, below which the mussels do not occur.

The pearl mussel population of the Eske River is important, particularly because it is spread from the lake through the entire river to its estuarine limit. Thus, the potential habitat for the species covers a large distance and area. However, the population is in very unfavourable condition and is in danger of rapid extinction if catchment pressures that have led to its decline are not reversed.

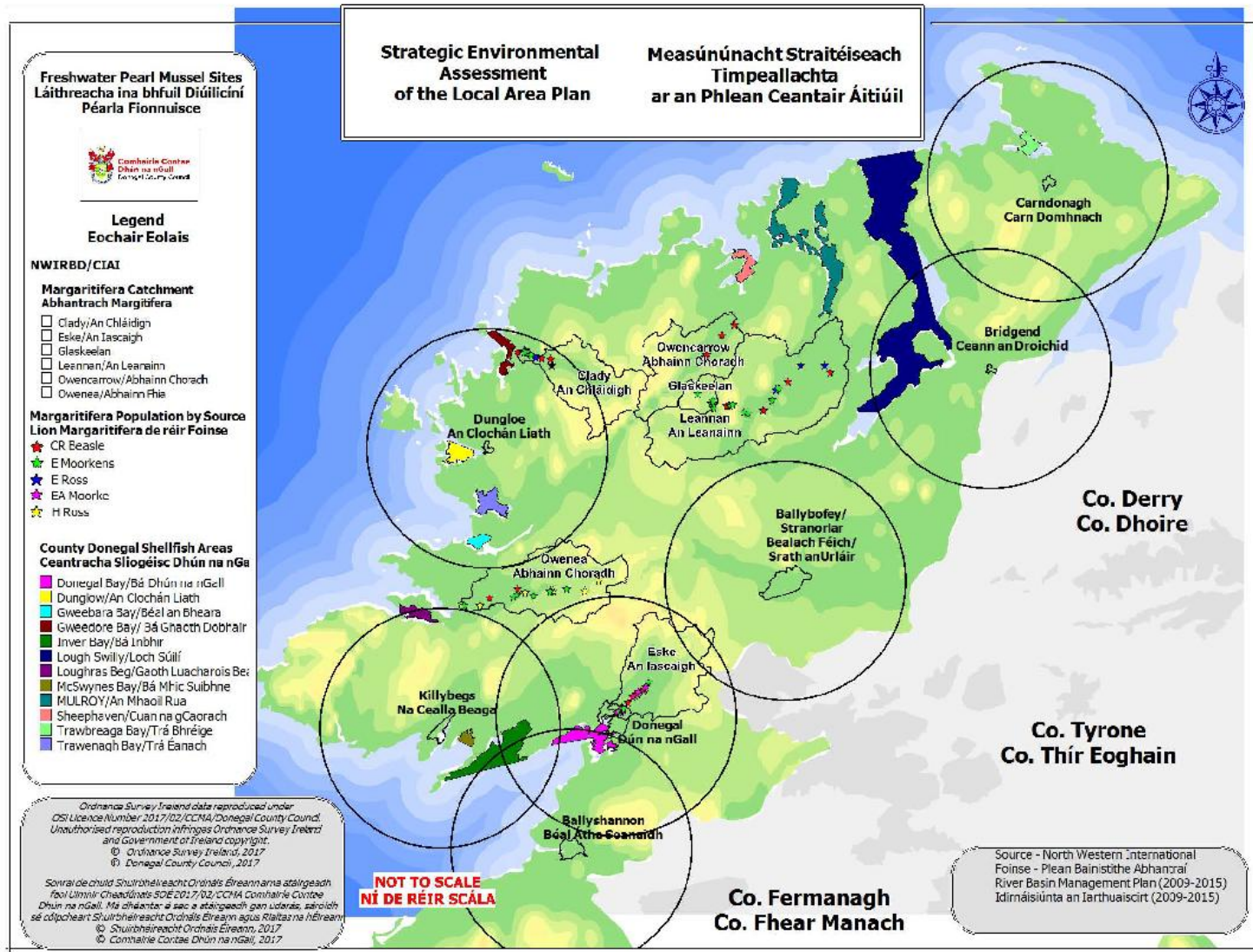
The key improvements needed for the Eske Catchment are to restore juvenile habitats to appropriate condition by simultaneously reducing nutrient and silt inputs to the river. (Source: Eske Sub-Basin Management Plan 2010.epa.ie).

Owenea Catchment

The Owenea catchment is located within the zone of influence of the Plan for An Clochán Liath (Dungloe) and Donegal Town. The catchment is c. 126.08km², lies in West Donegal and runs from the Blue Stack Mountains in the east to the sea at Ardara. It includes the Owenea, Shallogan and Owengaarve rivers. The Owenea river runs for 13 miles draining Lough Ea in the west of Croaghs, into Loughrosmore Bay at Ardara. Parts of the Ardara/Mass Road SAC and the Lough Nillan Bog SAC are within the Owenea catchment that also includes a number of lakes. Glenties is within the catchment and Ardara and Mass are just outside.

Surveys were carried out in 1988, 1992, 1996, 2005 and 2007. A rapid assessment carried out in 2007 found that the population had continued to decline in terms of both numbers and geographical extent. (Source: Owenea Sub-Basin Management Plan 2010.epa.ie).

Figure 5.11: Freshwater Pearl Mussel catchments and sites and Designated Shellfish Waters within the Town Boundaries and a 15km buffer



5.4 Ramsar Sites

The Convention of Wetlands of International Importance, especially as Water Fowl Habitat, was established at Ramsar in 1971 and ratified by Ireland in 1984. The main aim of the Convention is to secure the designation by each contracting state of wetlands in its territory for inclusion in a list of wetlands of international importance for waterfowl. This entails the commitment of each contracting state to a policy of protection and management of the designated wetlands, and of formulating and implementing planning so as to promote the conservation of designated wetlands and, as far as possible, the wise use of wetlands in its territory.

There are four Ramsar sites designated within County Donegal. Three of the Ramsar sites within the County are located within the Plan area for the following towns: An Clochán Liath (Dungloe), Carndonagh and Donegal Town and the remaining site is located just outside the 15km buffer for An Clochán Liath (Dungloe). In addition, one Northern Ireland Ramsar site is located within the zone of influence of the Plan for Bridgend. There are no Ramsar sites located either within the LAP town boundary or within a 15km radius of the towns of Ballybofey-Stranorlar, Ballyshannon or Killybegs. The Ramsar sites within the Plan area are listed in Table 5.20 and illustrated on Figure 5.12. Details in respect to each site is summarised below and may be viewed at www.irishwetlands.ie.

Table 5.20 Ramsar Sites within the Plan area

Location	Site Code	Area (Ha)	Co-ordinates	Date Designated
Pettigo Plateau	Code 331	c. 900	54°37'N 007°57'W	31/07/86
Lough Barra Bog	Code 373	c. 176	54°57'N 008°07'W	01/06/87
Meenachullion Bog	Code 475	c. 194	54°54'N 008°07'W	30/05/90
Trawbreaga Bay	Code 841	c. 1,003	55°17'N 007°15'W	11/06/96
Lough Foyle (NI)	Code 974	c. 2204	55°24'N 07°37'W	02/02/99

An Clochán Liath (Dungloe)

There are no Ramsar sites located within the LAP town boundary for An Clochán Liath (Dungloe). One of the sites, Lough Barra Bog (code 373), is partly located just within a 15km radius of the town, albeit predominantly outside the buffer. In addition, Meenachullion Bog (Code 475) is also located just outside (but in close proximity to) the 15km buffer to the east of the town and immediately south of Lough Barra Bog.

Lough Barra Bog: The site is part of the most extensive and intact area of lowland blanket bog in north-west Ireland. The site includes numerous small pool complexes and flushes and remnants of native deciduous woodland dominated by *Quercus petraea*. Breeding birds include *Falco columbarius* and *Pluvialis apricaria*, and a wintering flock of the globally vulnerable goose *Anser albifrons flavirostris*.

Meenachullion Bog: The site includes an area of lowland blanket bog and part of the headwaters of a major tributary of the Gweebarra River. The blanket bog grades into wet grassy heath and includes fenland and several small pool and lake complexes. Various breeding birds use the site and a small flock of the globally vulnerable goose *Anser albifrons flavirostris* occurs in winter.

Bridgend

There are no Ramsar sites located within Ireland, either within the LAP town boundary for Bridgend or within a 15km radius of the village. However, there is one Ramsar site, Lough Foyle (code 974), within the zone of influence of the Plan located in Northern Ireland.

Lough Foyle: Lough Foyle lies on the north-west coast of Northern Ireland and straddles the international border with Ireland. The site comprises a large, shallow sea lough that includes the estuaries of the rivers Foyle, Faughan and Roe. The site contains extensive intertidal mud-flats and sand-flats (with Mussel *Mytilus edulis* beds), saltmarsh and associated brackish ditches. The coastal

habitats support a number of waterbirds during the migration periods, and in winter including swans, geese, ducks and waders. The lough is especially notable in supporting a high proportion of the international population of Canada/Ireland Light-bellied Brent Goose *Banta bernicla hrota*.

Carndonagh

While there are no Ramsar sites located within the LAP town boundary for Carndonagh there is one site located within the 15m buffer to the north of the town, Trawbreaga Bay (code 841).

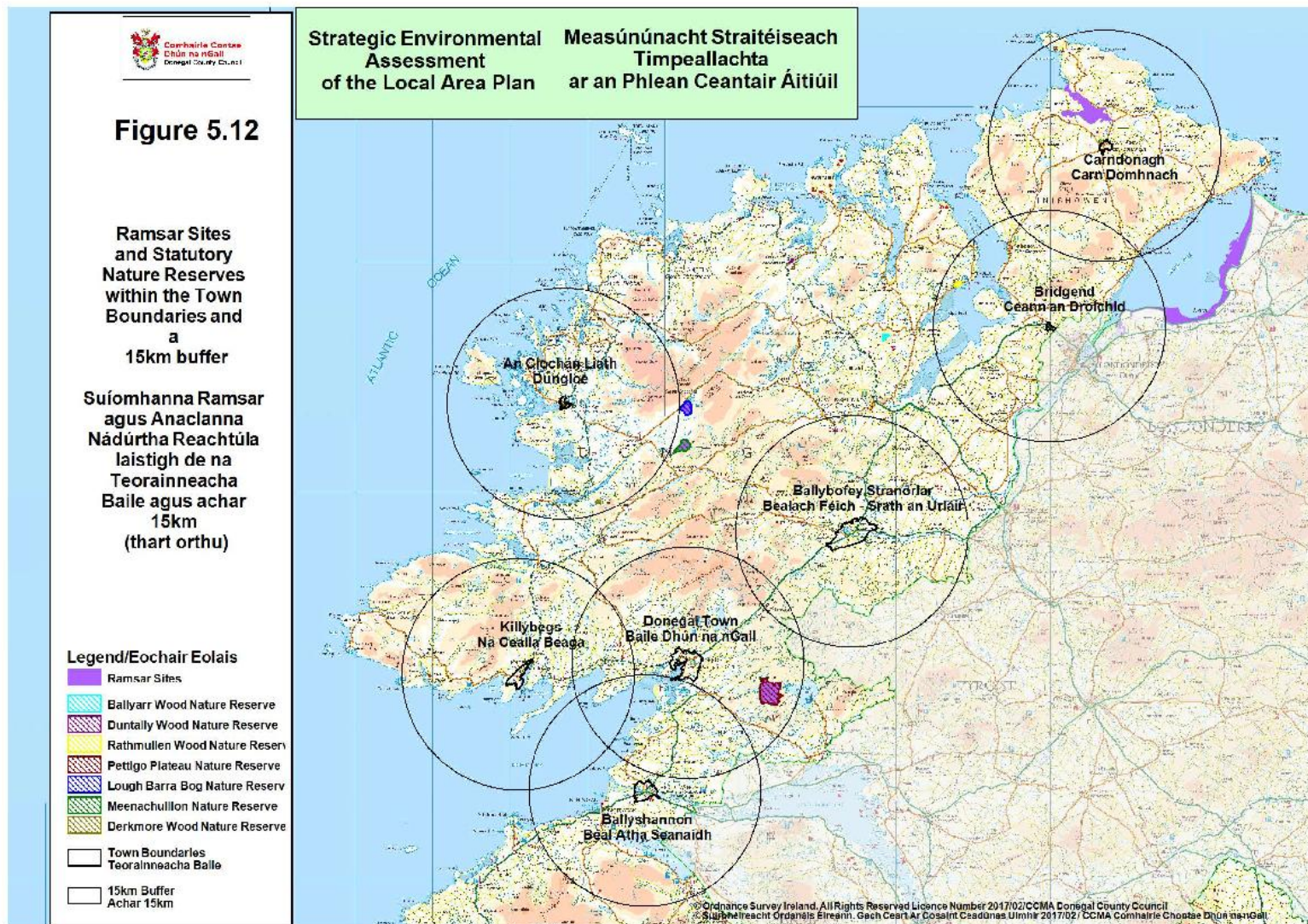
Trawbreaga Bay: A sheltered sea bay with no large rivers entering it. The sandy mud supports relatively small numbers of birds but there is a large variety in species including Barnacle geese *Branta leucopsis*, Brent geese *B. bernicla hrota*, and *Charadrius hiaticula*.

Donegal Town

There are no Ramsar sites located within the LAP town boundary for Donegal Town; however there is one site located within the 15km buffer area, to the south-east of the town, Pettigo Plateau (code 331).

Pettigo Plateau: An excellent example of highland blanket bog, a nationally rare bog type, covering low hills and broad basins and containing numerous nutrient poor and acidic lakes and pools. The site is a traditional feeding and roosting site for a wintering flock of the globally vulnerable goose *Anser albifrons flavirostris* and a breeding site for *Pluvialis apricaria*. Summer sheep grazing is controlled

Figure 5.12: Ramsar Sites and Statutory Nature Reserves within the Town Boundaries and a 15km buffer



5.5 Ecological Networks

Article 10 of the Habitats Directive recognises the importance of ecological networks as corridors and stepping stones for wildlife, including for migration, dispersal and genetic exchange of species of flora and fauna. The Directive requires that ecological connectivity and areas of ecological value outside the Natura 2000 network of designated ecological sites are maintained and it recognises the need for the management of these areas through land use planning and development policies. Ecological networks are important in connecting areas of local biodiversity with each other and with nearby designated sites so as to prevent islands of habitat from being isolated entities. Ecological networks are composed of linear features, such as treelines, hedgerows, rivers and streams, which provide corridors or stepping stones for wildlife species moving within their normal range. They are particularly important for mammals, especially for bats and small birds.

Important ecological corridors within the Plan area include the following water bodies (including their tributaries and lakes where relevant) the list is not exhaustive and their inclusion is not an indication that they fall within the remit of Article 10 of the Habitats Directive:

- Drowes River/Lough Melvin System
- Bradoge River
- River Erne
- Abbey River
- Ballintra River (Blackwater River)
- Laghy River System
- River Eske System
- Eany Water
- Bunlacky River
- Oily River
- Bungosteen River
- Glenaddragh River
- Glen River
- Owenwee River
- Bracky River
- Owentocker River
- Owennea River
- Gweebarra River System
- Owennamarve River System
- River Crollly
- Gweedore River
- Clady River
- Owencronahulla/Corveen River
- Yellow & Glen Rivers
- Owentully
- Mill River
- Crana River
- Clonmany River
- Donagh River
- Gleannagannon River
- Ballboe River
- Culoort River
- Culdaff River
- Long Glen River
- Bredagh River
- Drung River
- Cabry River
- River Foyle/River Finn System
- Skeoge River

5.6 Statutory Nature Reserves

Statutory Nature Reserves are state-owned land, inland waters or foreshore areas forming the habitat of a species or community of flora and fauna of scientific interest or forming part of an ecosystem of scientific interest, which would benefit from protection measures, established under the Wildlife Act, 1976 and the Wildlife (Amendment) Act, 2000 and are protected under Ministerial Order.

There are seven designated Nature Reserves in Donegal, four of which are located within the Plan area as listed in Table 5.21 and illustrated on Figure 5.12. In addition there are also three Nature Reserves which have never been officially designated: Ardnamona Nature Reserve, Inch Levels Wildfowl Reserve and Sheskinmore Nature Reserve, two of which are located within the Plan area.

Table 5.21: Statutory Nature Reserves within or adjacent to the Plan area

Location	Area (Ha)	Date Designated
Derkmore Wood Nature Reserve	9.82	Established 1988
Lough Barra Bog Nature Reserve	175.18	Established 1987
Meenachullion Nature Reserve Area	191.15	Established 1990
Pettigo Plateau Nature Reserve Area	693.46	Established 1984
Rathmullan Wood Nature Reserve Area	33.64	Established 1986

Source: NPWS, DAHRRG

Four of the designated Nature Reserves within the County are located within the Plan area for the following towns: An Clochán Liath (Dungloe), Bridgend and Donegal Town. One of the designated Nature Reserve is located just outside the 15km buffer for the town of An Clochán Liath (Dungloe). Two of the un-designated Nature Reserves are also located within the zone of influence of the Plan for the towns of Bridgend and Donegal Town. In addition, one Northern Ireland Ramsar site is located within the zone of influence of the Plan for Bridgend.

There are no designated Nature Reserves located either within the LAP town boundary or within the 15km buffer for the towns of Ballybofey-Stranorlar, Ballyshannon, Carndonagh or Killybegs. Details in respect to each of the designated Nature Reserves is summarised below. Further Information on Nature Reserves can be found at <https://data.gov.ie/dataset/nature-reserves-points-of-interest>.

An Clochán Liath (Dungloe)

While there are no designated Nature Reserves located within the LAP town boundary for An Clochán Liath (Dungloe), Derkmore Wood Nature Reserve is located within the 15km buffer area, to the south of the town. Lough Barra Bog Nature Reserve is also partly located just within the 15km buffer area around the town, albeit predominantly outside the buffer zone. In addition, Meenachullion Bog Nature Reserve is located just outside (but in close proximity to) the 15km buffer to the east of the town and immediately south of Lough Barra Bog.

Derkmore Wood Nature Reserve is situated in Gweebarra Forest on exposed undulating ground on the southern flank of Cleengort Hill to the south of An Clochán Liath (Dungloe). It includes an area of oak scrub with well developed bryophyte and lichen flora.

Lough Barra Bog Nature Reserve is situated in the upper part of the Gweebarra River Valley to the east of An Clochán Liath (Dungloe). The Nature Reserve is part of the most extensive and intact area of lowland blanket bog in north-west Ireland. The site includes numerous small pool complexes and flushes and remnants of native deciduous woodland dominated by *Quercus petraea*. It is also the habitat of three species of birds given special protection under the EU Birds Directive - Greenland White-fronted Goose, Merlin and Golden Plover.

Meenachullion Nature Reserve is situated on the southern edge of the Lough Barra blanket bog complex north of Gubben Hill to the south-east of An Clochán Liath (Dungloe). The Nature Reserve includes an area of lowland blanket bog and part of the headwaters of a major tributary of the Gweebarra River. It includes an area of lowland blanket bog vegetation grading into wet grassy heath on the slopes of Gubben Hill and with small but eroded areas of highland blanket bog on the flat top of Gubben Hill.

Bridgend

While there are no designated Nature Reserves located within the LAP town boundary for Bridgend, Rathmullan Wood Nature Reserve is located within the 15km buffer area, to the north-west of the town. Inch Levels Wildfowl Reserve un-designated Nature Reserve is also located within the 15km buffer area, to the west of the town .

Rathmullan Wood Nature Reserve (and cSAC) is located on the Fanad Peninsula on the western shores of Lough Swilly in the north of the County. It is an excellent example of an old oak woodland. The other main tree species are holly, hazel and downy birch and non-native beech trees. Ground flora is varied throughout the woodland and changes with soil and habitat type, common species include woodrush, bilberry, hard fern, wild garlic, bugle and bluebell.

Inch Wildfowl Reserve (and SPA) is situated to the west of Bridgend and to the east of Lough Swilly. It is recognised as one of Ireland's premier wetland sites due to the combination of extensive feeding areas and safe resting and roosting sites in the north-west of the Country for wintering waterfowl. It supports a wide diversity of wintering waterfowl, notably swans and geese, as well as breeding terns, gulls and duck. It is an important link in the overall Lough Swilly wetland system, which includes Blanket Nook and Big Isle to the south. Three of these species occur in nationally important numbers (Greenland White-fronted Goose, Sandwich Tern and Common Tern) and one of these in internationally important numbers (Whooper Swan). In addition, it also supports internationally important numbers of the migratory species Greylag Goose.

Donegal Town

There are no designated Nature Reserves located within the LAP town boundary for Donegal Town however Pettigo Plateau Nature Reserve is located within the 15km buffer area, to the south-east of the town.

Pettigo Plateau Nature Reserve is located on the western shores of Lough Derg located some 10km south-east of Donegal Town. It is one of the few remaining extensive intact bogs in Co. Donegal and the quality of habitat has led to its designation as an SAC and SPA. The site comprises a mosaic of active blanket bog, lakes and wet heaths and is largely undisturbed. The site is a traditional feeding and roosting site for a wintering flock of the globally vulnerable goose *Anser albifrons flavirostris* and a breeding site for *Pluvialis apricaria*. Summer sheep grazing is controlled.

5.7 Invasive Species

Invasive species represent one of the greatest threats to biodiversity, second only to that caused by direct habitat destruction. They do this by competitively excluding or out-competing our less robust native species, by preying on native species or by altering the natural aquatic or riparian habitat in which they reside.

A number of invasive, non native species of both flora and fauna are present throughout the Plan area. Invasive species are defined as plants or animals which did not originally occur in Ireland, before human colonisation of the country and which are also expanding their numbers and distribution so as to cause a competitive threat to such native fauna and flora.

Table 5.22 provides a summary of the threats to the integrity of various categories of habitats found within the Plan area (Note: the list of threats is not exhaustive). A full list of invasive species can be sourced at <http://www.invasivespeciesireland.com> and www.biodiversityireland.ie.

Table 5.22: Summary of the threats to the integrity of various categories of habitats (the list of threats is not exhaustive)

Habitats	Threats
Raised Bogs Blanket Bog Wet Heath Dry Heaths	Changes in local hydrology including drainage Peat Extraction Overgrazing Forestry Burning Direct loss of habitat to development Arterial drainage/water abstraction/lowering of the regional water table Agricultural Reclamation
Lakes and ponds Watercourses/Rivers	Water quality/pollution Changes in flow rates Arterial drainage/water abstraction/lowering of the regional water table Siltation Loss of fringe vegetation Changes in seasonal water levels/fluctuations Direct loss of habitat to development Loading from effluents (WWTP) Recreation/Amenity Use Developments – marinas Presence of impassable barriers – mostly poorly designed culverts
Marine Habitats Bays/Inlets/Estuaries Brackish Waters Open sea	Water quality/pollution Development of marinas and ports Disturbance to marine mammals Dumping at sea Direct loss of habitat to development Recreational/Amenity Use
Woodland/Scrub	Direct loss of habitat to development Amenity/Recreational Use Invasive species Lack of/inappropriate woodland management Overgrazing (deer)
Semi-natural grasslands Limestone pavement	Agricultural Improvements/Reclamation Agricultural abandonment Overgrazing/Undergrazing Direct loss of habitat to development Quarrying on esker ridges and limestone pavement Bracken & scrub encroachment
Marshes Swamps Fens	Agricultural Improvements/Reclamation Drainage/Changes in local hydrology Water quality/pollution (including groundwater)

Turloughs	Agricultural abandonment Overgrazing/Undergrazing Direct loss of habitat to development Bracken & scrub encroachment Turf/Peat extraction in fens Impacts to local geology/geomorphology e.g. quarrying/rock blasting, for turloughs & groundwater fed fens
Sand Dune Systems Salt Marshes	Agricultural Improvements/Reclamation Drainage/Changes in local hydrology including water abstraction Erosion (natural and anthropogenic) Water quality/pollution Agricultural abandonment Overgrazing/Undergrazing Direct loss of habitat to development Bracken and scrub encroachment Amenity/Recreational Use Tourism related development
SPAs	Direct & indirect impacts to the habitats of the bird species of conservation interests (loss of habitat) Direct loss of habitat to development Water quality/pollution Disturbance including recreation/amenity use.

Further information on biodiversity, flora and fauna in Ireland may be obtained from the National Parks and Wildlife Service (NPWS) database. In Northern Ireland further information may be obtained from the Centre for Environmental Data and Recording (CEDaR). The Appropriate Assessment process will integrate with the Environmental Report and inform the preparation of the Draft LAP in respect to the management of the biodiversity, flora and fauna of the Natura 2000 sites within and adjoining the Plan area.

5.8 Population

5.8.1 Population Trends

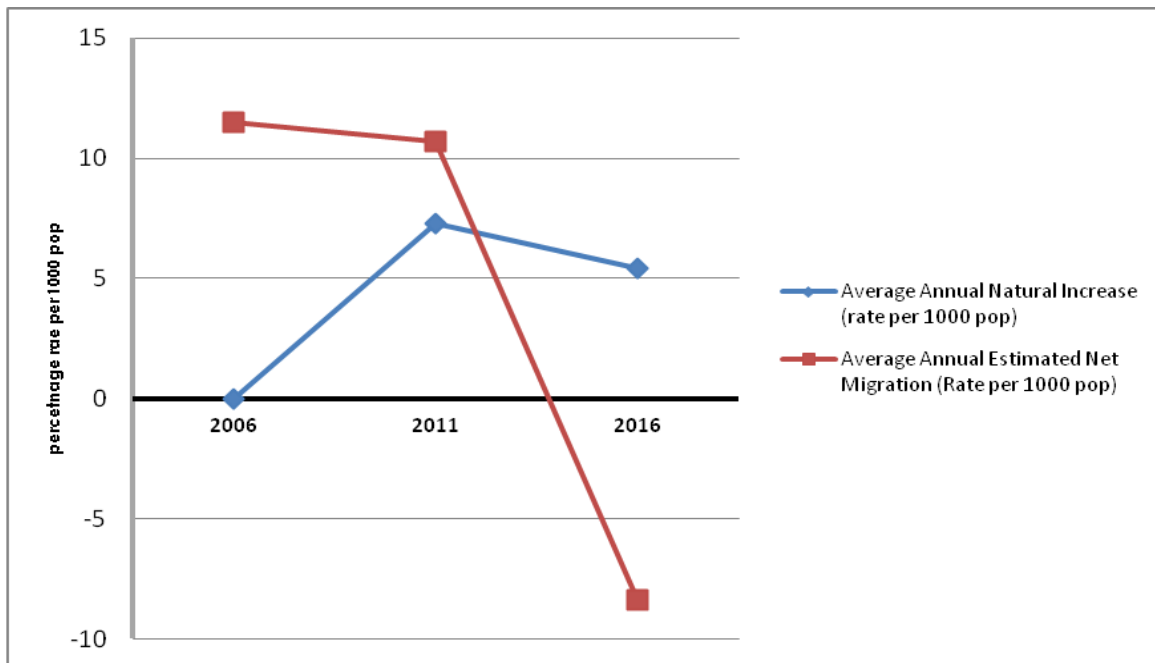
Donegal has a population of 159,192 persons as recorded in the 2016 Census. Although the population decreased by -1.2% (1,945 persons) over the period 2011–2016, it grew by 8.1% (11,928 persons) over the last 10 years.

Figure 5.13 shows the components of population change, whereby, during the census period 2011–2016, both the rate of natural increase and the rate of net migration fell. However, Figure 5.13 also shows that the decrease in the rate of net migration in County Donegal is more notable in its trend than the decrease in Natural Increase therefore indicating the predominance of migration patterns as a factor of County Donegal's population decline. This trend responds to the comparatively high levels of in migration experienced over the period 2006–2011. In the context of the State, County Donegal experienced the most significant outflows of migration followed by Counties Limerick, Mayo and Galway and South Dublin. Although the rate of natural Increase in County Donegal (5.4) in 2016 is lower than the state average (8.5), it does not mirror the rate of net migration (which is the lowest in the Country)

but rather it tabulates as the seventh lowest in the State over the census period 2011- 2016. These trends in terms of the components of population change are relevant in terms of understanding the drivers of County Donegal population and informing population projections.

Having regard to the pronounced nature of population change over the period 2011-2016 coinciding with economic downturn and recession, it is reasonable to consider population change trends over a longer term period across three census periods 2006, 2011 and 2016 in order to enable a more informed consideration of potential for growth.

Figure 5.13: Components of Population Change in County Donegal 2006- 2016



Having regard therefore, to the longer term trends, although decline is recorded during the period 2011-2016, the population of County Donegal grew by 11,928 persons across the longer period of 2006-2016, equivalent to 8.1% increase over 10 years or 0.81% average annual increase. This represents a slower rate of growth than for the 2006-2011 period and provides a methodology to level out to a more sustainable level of growth going forward.

Table 5.23 sets out the population change for the seven strategic towns of An Clochán Liath (Dungloe), Ballybofey-Stranorlar, Ballyshannon, Bridgend, Carndonagh, Donegal Town and Killybegs during the period 2011-2016.

Table 5.23: Population Change in the Seven Towns 2011-2016

Town	Population (No. of Persons) Census 2011	Population (No. of Persons) Census 2016	Change in Population (No. of Persons)	Change in Population (%)
An Clochán Liath (Dungloe)	1,183	1,164	-19	-1.6%
Ballybofey-Stranorlar	4,852	4,852	0	0%
Ballyshannon*	2,503	2,299	-204	-8.2%
Bridgend	497	454	-43	-8.7%
Carndonagh	2,534	2,471	-63	-2.5%
Donegal Town	2,607	2,618	11	0.4%
Killybegs	1,297	1,236	-61	-4.7%

*Note: 80 legal towns were abolished under the Local Government Reform Act 2014. Census towns which previously combined legal towns and their environs, including Ballyshannon, have been newly defined using the standard census town criteria. For some towns, including Ballyshannon, the impact of this has been to lose area and population, compared with previous census figures.

Source: www.cso.ie

5.8.2 Population Projections

The Core Strategy of the County Development Plan is required to be consistent with the Regional Planning Guidelines 2010 (RPG's) and set out a settlement hierarchy for County Donegal along with population and housing targets for all towns, villages and the open countryside. Local Area Plans are required to be consistent with the Core Strategy of the County Development Plan. The Core Strategy of the Draft County Development Plan 2018-2024 is set out in Chapter 2 of Part A of the Draft CDP.

In addition a background Demography Paper entitled 'Population Projections in Respect of the Core Strategy of the Draft County Development Plan 2018-2024' (December 2016) (Draft CDP) has been prepared as part of the CDP process that presents a more detailed spatial analysis of population trends within the County, and this data has been used to inform the population targets and distribution of this population as set out in the Draft CDP.

The Draft CDP sets out an ambitious vision for the future growth and development of the County over the 6 year life of the Plan (to 2024) and beyond to a 20 year timeframe (2038). It identifies the potential for the County to reach upwards of 200,000 people by 2038 over a two phase approach to the development of the County.

Phase 1 will provide for an average annual growth rate of 1.1% over the life of the Draft CDP (2018-2024) thus sustaining existing levels of land supply for housing purposes, providing for a slow positive return to growth in the County. Phase 2 will provide for an accelerated average annual growth rate of 1.5% over the period 2024 to 2038.

This will result in a projected population increase for the County of 13,968 people by 2024, and a total population of 172,723. A further potential increase of 36,271 people could be realised by 2038 with a resultant population of 208,994.

The settlement structure in the Draft CDP is made up of three component parts that are described as 'layers' namely:

- **Layer 1:** Letterkenny
- **Layer 2:** Strategic Towns, made up of 2 parts:
 - **2A** (8 no. towns): Strategic towns in the context of housing land supply and due to their 'Special Economic Function' and;
 - **2B** (15 no. towns): Strategic Towns predominantly due to their 'Special Economic Function'.
- **Layer 3** (38 no. towns): Rural Towns and open countryside.

The Draft LAP comprises seven Layer 2 Strategic Towns: An Clochán Liath (Dungloe), Ballybofey-Stranorlar, Ballyshannon, Carndonagh, Donegal Town and Killybegs are identified as Layer 2A towns while Bridgend is identified as a Layer 2B town.

The Draft CDP envisages that 30% of the population uplift would be provided for in Letterkenny, 34% in the strategic towns and 36% in rural towns and countryside. The Core Strategy population allocation for all of the Layer 2 Strategic Towns (including 2a and 2B towns) over the lifetime of the Draft CDP (to 2024) is 4,789 (see Table 2.6, Chapter 2, Part A of the Draft CDP).

The Draft CDP sets out population projections having regard to the population ambition of the Plan, in respect of (a) individual projections for each town of a population of 1,500 or more in 2011 census and; (b) aggregate population projections for the remainder (see Table 2.5, Part A of the Draft CDP). Notwithstanding the fact that three of the seven towns are below the 1,500 threshold it is noted that the decision as to whether to prepare a LAP in a sub-threshold context or to include specific objectives in a development plan is a matter for the planning authority. In this regard, it is noted that it is an objective of the Draft CDP to prepare a LAP for, *inter alia*, six of the seven towns the subject of the Draft LAP namely An Clochán Liath (Dungloe), Ballybofey-Stranorlar, Ballyshannon, Carndonagh, Donegal Town and Killybegs (see Objective CS-O-15, Chapter 2 of Part A of the Draft CDP). In addition, the Council has identified Bridgend as a settlement that would also benefit from the preparation of a LAP, particularly having regard to its proximity to the border with Northern Ireland and associated cross border context.

Table 5.24 sets out population projections for An Clochán Liath (Dungloe), Ballybofey-Stranorlar, Ballyshannon, Carndonagh, Donegal Town and Killybegs over the 6 year life of the Draft LAP (to 2024) having regard to the population ambition set out in Core Strategy in the Draft CDP. The Draft CDP identifies an aggregate population projection of 559 persons for all 15 Layer 2B towns, including Bridgend, up to 2024. There are no prescribed residential zonings across Layer 2B towns in order to provide robustness and flexibility in the approach. It is considered that the policies of the CDP will guide the sustainable and incremental growth of towns identified as Layer 2B, including Bridgend.

Table 5.24: Population Projections for the Draft LAP

LAP Towns	Population Census 2011	Estimated Population 2016*	Population Census 2016	Core Strategy Population Allocation to 2024*	Projected Population by 2024*
	No. of Persons				
An Clochán Liath (Dungloe)	1,183	1,165	1,164	210	1,375
Ballybofey-Stranorlar	4,852	4,781	4,852	838	5,619
Ballyshannon	2,503	2,467	2,299	419	2,886
Carndonagh	2,534	2,495	454	460	2,955
Donegal Town	2,607	2,568	2,471	461	3,029
Killybegs	1,297	1,279	2,618	210	1,489

Source: Core Strategy, Chapter 2 of Part A of the Draft CDP 2018-2024

* The Draft CDP 2018-2024 contains estimated population projections for the seven towns as town level data for the 2016 Census was not available at the time of making the Draft CDP. This accounts for the differential between the estimated and actual population figures as presented in Tables 5.21 and 5.22.

5.9 Human Health

The state of the environment directly and indirectly affects human health and is inextricably linked to the physical and mental wellbeing of people. The significant natural, built and cultural heritage of the Plan area contributes positively to human health and these positive environmental elements include, *inter alia*, good air quality, high water quality, scenic landscapes, a plethora of protected structures, vernacular architecture, settlement patterns and language; as set out in Section 5 of this Report.

The EPA report entitled 'Air Quality in Ireland 2015' provides information in relation to the link between air pollution and human health. The 2014 report by the European Environment Agency (EEA) states that air pollution is the single largest environmental health risk in Europe. In 2014 the World Health Organisation (WHO) reported that cardiovascular complications like heart disease and stroke are the main causes of premature death attributed to air pollution. The 2014 EEA report by the European estimates that around 1,200 deaths in Ireland in 2012 were directly linked to air pollution, while for Europe the figure was approximately 400,000 deaths. In 2016 the Organisation for Economic Co-operation and Development (OECD) reported that the negative impact of air pollution on human health also has considerable negative impact on European member state economies, with working days lost, reduced productivity and increased medical costs.⁶

2011 CSO data showed that overall the perception of general health within County Donegal was very good, and good⁷ and is an interesting indicator on the positive human health of the population; statistics from the 2016 census are not yet available

Although physically the environment contributes positively to human health, there is evidence of relative social deprivation. The Haase Pratschke Relative Deprivation score attributed to County Donegal in 2011 was -6.25, the second most deprived county in Ireland after Limerick; the key drivers of the low deprivation score being a low educational attainment and high male unemployment.⁸ Spatial representation of this data is available on <http://airo.maynoothuniversity.ie/mapping-resources/airo-census-mapping/national-viewers/atlas-island-ireland>.

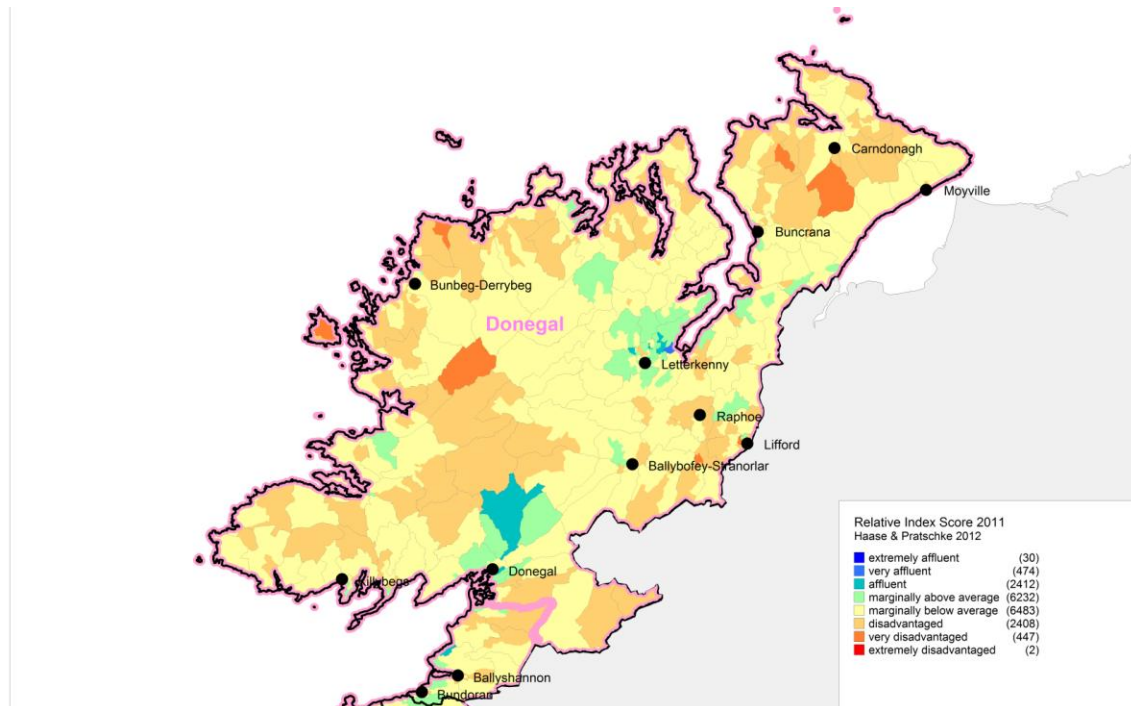
As with all counties, there is a degree of variation of deprivation within Donegal but overall the County contains extensive areas of significant deprivation. Figure 5.14 shows the relative affluence and deprivation in the County as illustrated in the Haase Pratschke 2011 profile for County Donegal. According to the Haase Pratschke Relative Index 2011, of the 149 EDs in County Donegal, more than two-thirds of EDs (104) are 'marginally below average', another 35 EDs are in the 'disadvantaged' category and two EDs are 'very disadvantaged'. Only eight EDs, just over 5% of the County are above the national average; of which seven are 'marginally above average' while one ED falls into the 'affluent' category. Geographically, the only two slightly affluent areas are to the North of Donegal town, and the wider environs of Letterkenny, but in each case excluding the towns themselves. The most disadvantaged areas are the area to the North of Glenties, as well as the North-Western seaboard and the Inishowen peninsula⁹.

⁶ Air Quality in Ireland, EPA 2015

⁷ The Atlas of Ireland, Mapping Social and Economic Patterns, 2015

⁸ The Donegal Local Economic and Community Plan 2016-2022, Appendix 1, The Profile of the County.

⁹ <http://trutzhaase.eu/deprivation-index/area-profiles/>

Figure 5.14: Relative Affluence and Deprivation in County Donegal

Source: Haase Pratschke, 2012

An Clochán Liath (Dungloe)

The area within and adjacent to the LAP town boundary for An Clochán Liath (Dungloe) is predominantly categorised as 'disadvantaged' with large areas within the 15km buffer categorised as 'marginally below average'. In addition there is a large area to the north-east of the town, within the zone of influence of the Plan, which falls within the 'very disadvantaged' category.

Ballybofey-Stranorlar

The area within and adjacent to the LAP town boundary for Ballybofey-Stranorlar is predominantly categorised as 'marginally below average' with a large area categorised as 'disadvantaged' to the north-east of the town and an area categorised as 'marginally above average' to the north-west of the town. The area within the zone of influence of the Plan for Ballybofey-Stranorlar is predominantly categorised as 'marginally below average' with pockets of 'disadvantaged' areas.

Ballyshannon

The area within the LAP town boundary for Ballyshannon is generally categorised as 'marginally below average' with small areas categorised as 'disadvantaged'. To the west of the town within the 15km buffer there are small pockets categorised as 'marginally above average' and 'affluent'. Generally the area within the zone of influence of the Plan for Ballyshannon is predominantly categorised as 'marginally below average' with pockets of 'disadvantaged' areas.

Bridgend

The area within, and immediately adjoining, the LAP town boundary for Bridgend is categorised as 'marginally above average' with a small pocket categorised as 'disadvantaged' to the north-west of the village. Generally the area within the zone of influence of the Plan for Bridgend is predominantly categorised as 'marginally below average' with pockets of 'marginally above average' areas.

Carndonagh

The area within the LAP town boundary for Carndonagh is generally categorised as 'marginally below average' and 'disadvantaged'. Large areas of land adjacent to the town are categorised either as

'disadvantaged' or 'very disadvantaged'. The area within the zone of influence of the Plan for Carndonagh is predominantly categorised as 'disadvantaged' interspersed with large areas of 'marginally below average' and pockets of 'very disadvantaged' areas.

Donegal Town

The area within the LAP town boundary for Donegal Town is predominantly categorised as 'marginally above average' with a small area of 'marginally below average'. There is a large area to the north of the town categorised as 'affluent', the largest such area in the County. Generally, the land within the 15km buffer around the town is categorised as 'marginally above average' and 'affluent' with areas categorised as 'marginally below average' and 'disadvantaged' the further you move away from the town.

Killybegs

The area within the LAP town boundary for Killybegs is generally categorised as 'marginally below average' with a small area categorised as 'marginally above average'. The land within the 15km buffer around the town is a mixture of large pockets of 'marginally below average' and 'disadvantaged' areas generally to the north-west of the town.

5.10 Soil and Geology

EU have published the 'Seventh Environmental Action Programme' that considers the issue of soil degradation and the protection and sustainable use of soil. Ireland's maritime climate, predominance of permanent grassland, sustainable land management practices and a lack of historic industrialisation has contributed to the maintenance and protection of soil quality across the Country. The general consensus is that soil quality in Ireland is good; however, this is based on limited information and therefore the degree of certainty is low. The ultimate purpose of knowing and assessing soil quality and potential threats is not to achieve, for example, high soil aggregate stability, biological activity, or some other soil property; rather the purpose is to protect and improve long-term agricultural and forestry productivity, water and air quality, and the habitats of all living organisms and humans¹⁰

County Donegal is one of the most complex geological areas in Ireland. Its key geological features are the Gweebarra fault that continues under the Atlantic and also forms another diagonal rift through the Scottish Highlands and which was formed through granite rock by glacial erosion. Igneous rock is the predominant rock type in Donegal with glass-like quartz, feldspars and black mica evidenced in the Granite. The County also includes large areas of metamorphic rocks including schists and gneisses and Quartzite as evidenced on Errigal. These contrast to the lower gentler lands around Donegal Bay that consist of softer shales, sandstones and limestones, and were also an area of ice age deposition with drumlins and tills blanketing the area, and the fertile Laggan area in east Inishowen that is lower lying and covered in deposits of glacial till. Lough Swilly is the longest of several glaciated inlets (fjords) along the long and indented coastline of Donegal and contrasts to Lough Foyle, a broad basin with a history of subsidence and a thick fill of sedimentary rocks and recent sediments¹¹. The geology of the seven towns within the Plan area is illustrated on Figure 5.15 and summarised below.

An Clochán Liath (Dungloe)

The underlying geology in and around An Clochán Liath (Dungloe) generally consists of granite with small localised quartzite and limestone areas on the southern coast within the 15km buffer.

Ballybofey-Stranorlar

The geology in and around Ballybofey-Stranorlar generally consists of quartzite but with small peripheral areas of schist and limestone within the 15km buffer.

¹⁰ The Donegal Local Economic and Community Plan 2016-2022, Appendix 1, The Profile of the County

¹⁰ www.ec.europa.eu/soil

¹¹ Landscape Character Assessment of County Donegal, Donegal county Council, May 2016

Ballyshannon

The land around the town consists of 'Ballyshannon Limestone formation' with a narrow band of gneiss along the north-eastern boundary of the buffer area and punctuated with pockets of sandstone and shale along the west coast.

Bridgend

Grianan Mountain is one of a series of high hills to the west of Bridgend that dominate over this otherwise gently undulating landscape of primarily schist geology.

Carndonagh

The land in and around Carndonagh consists of an underlying and varied tapestry of geology comprising of schist, quartzite, limestone and shale bedrock informing a generally undulating and rolling landscape.

Donegal Town

The land in and around Donegal Town comprises a soft underlying geology of limestone with small pockets of sandstone further inland from the coast and large peat covered uplands with a schist geology at the foot of the Bluestacks to the north of the town.

Killybegs

This area around Killybegs has an amalgamation of underlying geology orientated in bands along a northeast-southwest axis that extend to sea along four southern peninsulas. The geology to the north of the town is mostly quartzite with bands of schist and a large band of sandstone. A limestone area extends west towards Muckros head and south as St. Johns point, which has a sandstone tip. Projections to Drumano Head and Carntullagh head are schist.

Geology is recognised as a fundamental component of natural heritage and as such the conservation of geological heritage features is considered an important aspect of conserving the natural heritage. In 1998, the Geological Survey of Ireland (GSI) established the Irish Geological Heritage (IGH) Programme, which is a partnership between The Geological Survey of Ireland (GSI) and the National Parks and Wildlife Service (NPWS). Under the IGH Programme important sites that are capable of being conserved as Natural Heritage Areas (NHA) are being identified. Those not selected for NHA designation by GSI are being promoted as County Geological Sites (CGS). The IGH Programme has identified about 114 sites of interest as CGS (including those to be designated as geological NHAs) in the County, of which approximately 75 of the sites are located within or adjacent to the Plan area as set out in Table 5.25.

Table 5.25: List of County Geological Sites¹² within the Plan area

Site Name	Townland(s)/district	Description
Aghlem Bridge	Aghlem, Leghawny	Evaporites on the south east side of Lough Eske.
Ballycramsey	Drung (Ed Malin), Ballycramsy /Malin Head, Inishowen	Deformed schist which contains beach cobbles, indicating ice limits.
Ballyshannon	Knader /Ballyshannon	Small quarry with stratigraphical unconformity
Barnesmore Gap	Friarsbush, Tawnawully Mountains and West side of Belshade Lough	secondary Uranium minerals, lateral moraines and other structures related to igneous intrusions

¹² www.gsi.ie

Site Name	Townland(s)/district	Description
Bloody Foreland	Knockfola /Altnapeaste, Meenlagha, Bloody Foreland	Bloody Foreland presents numerous geological characteristics: chemical weathering on granite, a gravel beach from the Holocene period (10.000y) and series of moraines and boulders which record successive ice blocks.
Breesy Hill	Carricknahorna /Breesy Hill	Spectacular example of migmatised metabasite of the Sliswood Division
Bundoran Bay	Magheracar, Drumacrin, Finner /Bundoran	Abundant fossils in the Bundoran Shale formation (4km coastal stretch) and exposure of the top of Ballyshannon Limestone
Burnfoot Spread	Inch Level (Ed Burt, Ed Inch Island, Ed Fahan) /Burnfoot, Inch Level	A pristine example of a large bay fjord head delta complex sited on the eastern margin of Lough Swilly, covering about 4-5 Km ² .
Carndonagh	Carndonagh /Inishowen	Fan and erosional meltwater channels linked to the ice withdrawal from the Ballycramsey ice limit in Trawbreaga bay. There is also an infiltration gallery on the raised beach north of Carndonagh.
Clooney	Cashelgolan /Clooney, Portnoo	The site comprises Ardara granite and represents the main outer contact and northern aureole
Corvish	North of Carndonagh	The site illustrates marine muds with glacial advances in between. The site is important as it provided age information
Crohy [talc]	Crohy /Crohy Head (South of Maghery Bay)	The cliff face has shown steatite veins (talc) in Dalradian black schists. It was mined intermittently from late 19th - mid 20th Century.
Doagh Isle	Lagacurry	Argyll Group Dalradian rocks with exceptional preservation of tectonic features in Greenschist facies metamorphic rocks
Donegal Bay	Donegal	Cliffs, drowned drumlins, dunes, salt marshes
Doorin Point to Mountcharles	Raneely, Point, Tullinlagan, Rock, Drumaneary, Salthill Demesne, Hall Demesne /Doorin Point, Mountcharles	Low cliffs, platforms, erosion features
Dunmore Breccia Pipe	Portnoo	Appinite and breccia pipe
Edergole	Edergole	A unique site at the north end of Lough Eske presenting an alluvial fan in an extensional basin (Ivorian age: 353.8-349.5Ma)
Errigal Mountain	Gweedore	Physical weathering, mass wasting; fossil rock glaciers and talus foot debris complexes on mountain flanks down to 150m
Fahan Pier	Figary, Inishowen	Excellent teaching outcrop at which structure and deformation can be demonstrated in Fahan slates.

Site Name	Townland(s)/district	Description
Fairies Bridge	Bundoran	Sea-arches exposed north of Aughrus Point, just north of Bundoran.
Five Finger Strand	Culoort	Sand and gravel beach, sand cliffs, parabolic dunes
Glencrow Delta	Glencrow	Icd pushed delta complex
Glentogher [Pb, Ag, Au]	Inishowen, near Carndonagh	Stratabound mineralisation in quartzite (Galena contains silver, pyrite contains gold). Mined in the 19th Century.
Inishfree Bay		Storm beaches, longshore drift
Inver Dyke/Parkmore Dyke	Inver	Large xenoliths - windows into the upper mantle of the Earth
Kildoney Point	Kildowey Glebe	Interesting and clearly visible deltaic sedimentary structures in Upper Calp sandstones.
Kilkenny Breccia Pipe	Kilkenny, Gortnasillagh	An intrusive dyke exposed at the surface. Explosion breccia.
Kilrean	Kilrean	Minerals of the Ardara Appanite suite: asbestos; chrysotile.
Kiltyfannad Lough	Lougheraherk	This area represents one of the best exposed sections through the Port Askaig Tillite and forms the reference locality for Donegal, important for stratigraphy.
Kinnoge Bay (Armada Bay)	Kinnagoe	Beach and Dune System
Knader Lough		Precambrian metagabbro (c. 580Ma) with well preserved igneous texture
Knocknafolla (Bloody Foreland)	Knockfolla /Meenlagha, Bloody Foreland	deep chemical weathering of rotted granite
Lagh Hill	Culdaff	This site contains excellent examples of conglomerates within the Southern Highland Group. Important information on provenance.
Laghy Quarries	Laghy	Basal Ballyshannon Limestone
Largymore Coastal section	Killybegs	Trace fossils and other fossils (macro and microfauna)
Lough Boyle (formerly Ballykillowen Hill)	Meenacaragh	The site includes the contact zone (Lough Derg Slide) between the Lough Derg Inlier of the Sliswood Division to the South and Dalradian rocks
Lough Columbkille	Cashelard	Minerals: potash feldspar; perthite, actinolite
Lough Eske	Burns Mountain, Friary, Tawnyvorgal	Lower Carboniferous section
Lough Finn		Areally scoured landscape.
Lough Finn Lateral Moraine		Lateral moraines. Scientifically important because it records a late phase of ice sheet decay as the Donegal ice cap decayed.
Lough Keel	Gweedore	fan
Lough Lareen	Doobally	Schist
Lough Nacung, Dunlewy	Gweedore	Paternoster lakes (Dunlewy Lough, Lough Nacung Upper and Lough Nacung Lower)
Lough Swilly		Long wide fjord

Site Name	Townland(s)/district	Description
Loughros More Bay		estuarine environment
Maghera Strand		inwashed sandflat, sill, quartzites
Malin Bay/Skelpoonagh Bay	Malin Beg, Malin More, Gleann Cholm Cille (Glencolmcille), Beefan	This area provides exceptional exposures through a fold system within the Dalradian supergroup.
Malin Flat	North of Malin	The Malin Flat records former higher postglacial sea levels and exhibits isolated fossil sea stacks and intervening swash gullies.
Malin Head	Malin Head, northern coast	Malin Head is a peninsula of quartzite and volcanic rocks that has been strongly glaciated.
Malin Head	Ardmalin	Raised beach deposits, cobbles, high energy wave climates
Mountcharles, Mountcharles Sandstone Mines, Mountcharles Sandstone quarry		Hand pump. Cream coloured dimension stone good for ornamental sculpture. Also Carboniferous Sandstone, with old stone mines and active extraction of stone in quarries.
Moville to Inishowen Head	Moville	The exposures of Southern Highland Group Dalradian rocks on the foreshore at Moville and for 2km to the NE provide exceptional preservation of sedimentary and tectonic features in low grade (Greenschist) metamorphic rocks. Valuable educational resource.
Muckros Head-Fintragh Bay	Largysillagh, Ballymoon	A coastal cliff and intertidal exposure of a wide range of rock types and sedimentary structures typical of many depositional environments are visible.
Mullagh Derg	Mullaghderg	Orbicular granite
Naran Hill		appinite
North margin of Donegal Bay		Drumlin landscapes.
Oughtdarnid		High-pressure metamorphism illustration
Owenator River	Gweedore	boulder beds, fan, glacial mountain erosional inheritance
Poisoned Glen	Gweedore, Dunlewy Far	meanders, glacial mountain erosional inheritance
Pollan Bay [Pb, Zn, Ba]		Mineralisation (lead, zinc, barium)
Pollnapaste	Kincrum	karst and cave
Quigley's Point	Carrowkeel	alluvial gold
Quigley's Point (Lough Foyle)	Quigley's Point, Carrowkeel	There are several delta-like lobes at stream mouths along the coast, as at Quigley's Point
River Finn		paleo-terraces
Shalweg/Shalwy Moraine		Moraines on north margin of Donegal Bay.
Sheshkinarone	Ailt an Chorráin (Burtonport)	Quartz-muscovite-beryl greisen zone in Rosses Granite. Outcrop near road damaged by blasting and irresponsible collecting of beryl.
Slieve League	Ballymore /Gleann Cholm Cille (Glencolmcille)	quartzite megacliff, mass wasting and Carboniferous sandstone

Site Name	Townland(s)/district	Description
Slievetooley		Slievetooley is mountainous cliffy coast (N facing cliff about 200 m), extending to the precipitous cliff of quartzite on Glen Head.
South Donegal	Numerous	Ribbed moraines
St John's Point, St. John's Peninsula, St. John's Point (McSwynes Bay to tip)	Ballysaggart, Dunkineely, Point	The north coast is partly an escarpment cliff. The Point is cut in Lower Carboniferous Limestone and shows weathering features. A large wave moved boulder may be the result of a tsunami. Also Ballyshannon formation, Limestone pavement and Tertiary dyke
The Pullauns	Brownhall Demense	shallow developed river cave
The Rosses		Cnoc and Lochan landscape
Trabane, Malin Beg	Malin Beg	Glaciomarine sediments on NW coast, exposed in a stream cutting leading into the bay.
Trawbreaga Bay		Estuary formed by submergence of a lowland.
Tremone Bay	Culdaff	Port Askaig Tillite

Figure 5.15: Geology within the Town Boundaries and a 15km buffer

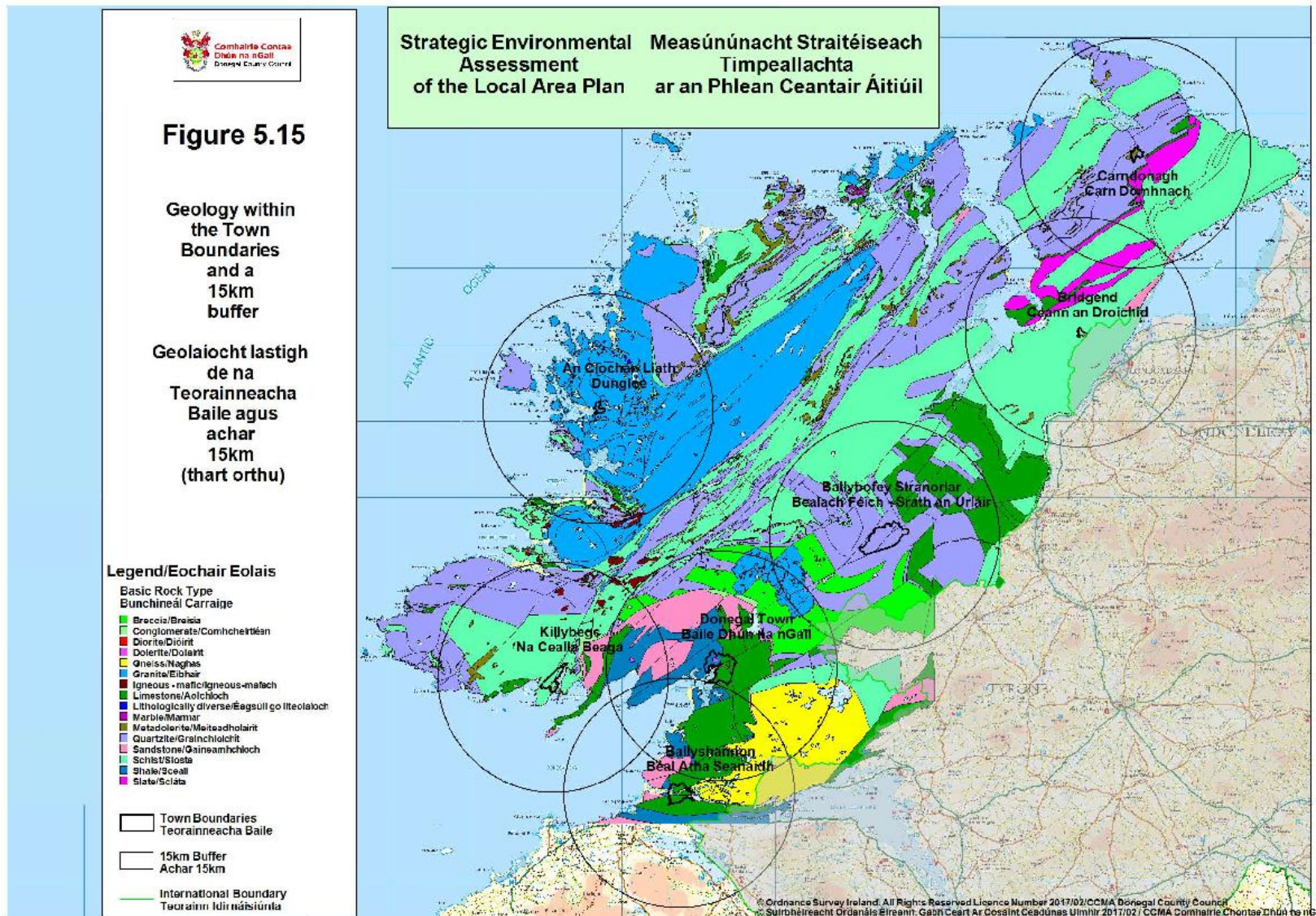
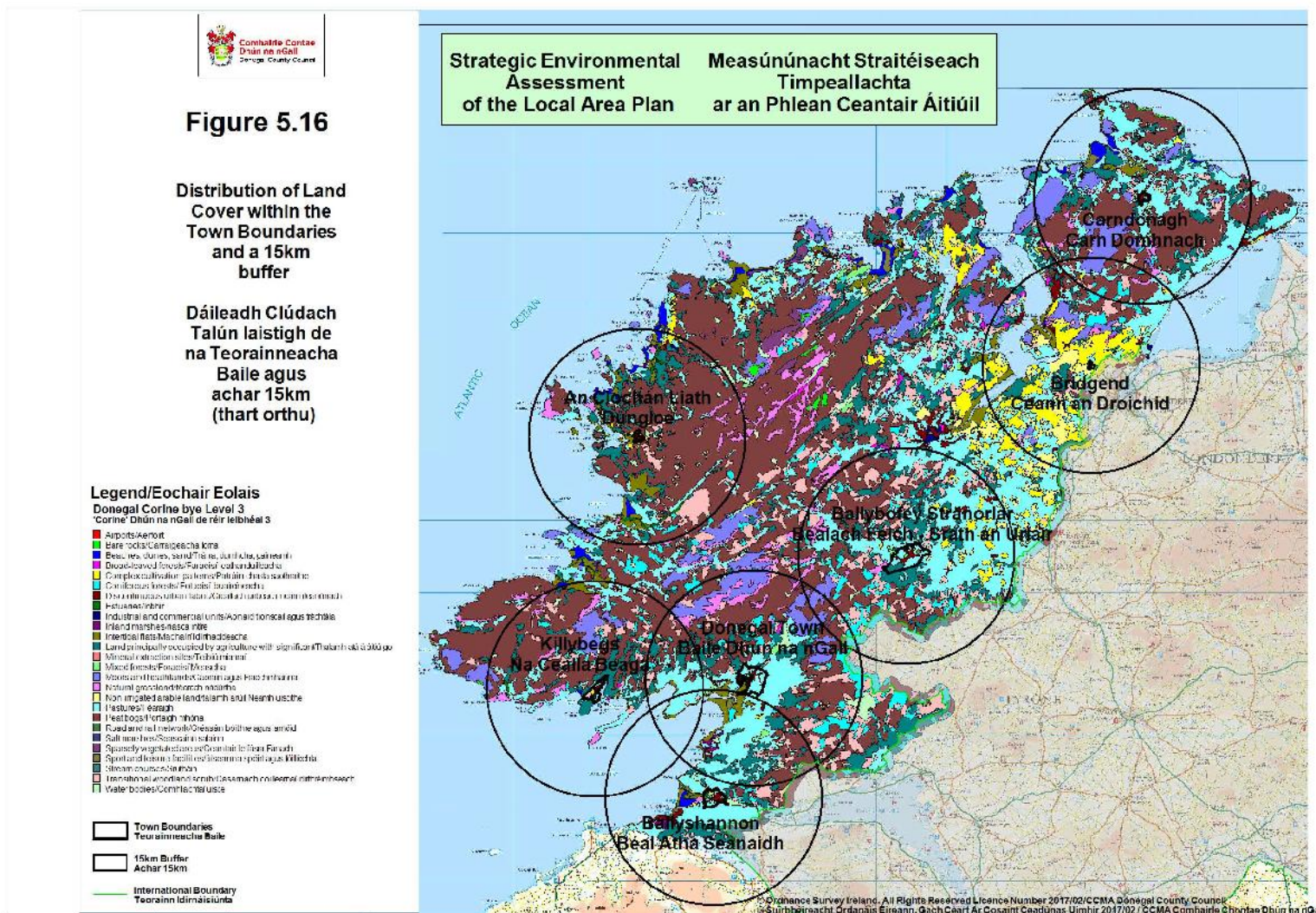


Figure 5.16: Distribution of Land cover within the Town Boundaries and a 15km buffer



5.11 Land Cover

Land cover includes vegetation, man-made structures and surface water features. Agriculture is a significant land use within the County Donegal in terms of land cover, occupying approximately 38% of the County. Of this, some 23% is in use as pastures. Peat bog covers approximately 34%. Forests cover approximately 3.8% of the County, with 3.58% of this comprised of coniferous forests as opposed to approximately 0.25% broadleaf. A wide variety of uses including commercial, industrial and residential, exist in the urban areas of the County.

The data on land cover is based on the CORINE Land Cover Maps. These are maps of the European environmental landscape based on interpretation of satellite images. The European Environment Agency, in conjunction with the European Space Agency, the European Commission and member countries is currently updating the CORINE land cover database.

The distribution of land cover for each of the seven towns is shown on Figure 5.16 and summarised below.

An Clochán Liath (Dungloe)

An Clochán Liath (Dungloe) is set within an undulating bog and lake landscape, interrupted by isolated occurrences of more fertile landscapes dotted near lakes, along rivers' and along the coastline, with areas of planted forest.

Ballybofey-Stranorlar

Ballybofey-Stranorlar is located, in the heart of the Finn Valley, in a fertile agricultural plain alongside the river within a wider gently undulating agricultural landscape of large square fields.

Ballyshannon

The landscape in and around Ballyshannon comprises a low lying gently undulating drumlin landscape with deciduous hedgerow and tree bound regular rectilinear fields with areas of rundale system still evident south of the town. The coastal area to the west of the town comprises a large peninsular sand dune system and beach.

Bridgend

The area around the village of Bridgend comprises low-lying fertile agricultural lands and reclaimed flat lands of primarily agricultural use, with complex cultivation patterns. Large pockets of deciduous woodland and clumps of deciduous trees are characteristic of the lower slopes of Grianan Mountain to the west of the town. The coastal area consists of predominantly low-lying silty edges with areas of salt marsh and salt meadows.

Carndonagh

The land around Carndonagh comprises fertile agricultural land containing a variety of farm types set within a predominantly bog landscape with large pockets of moors and heathlands and pockets of coniferous planting.

Donegal Town

Donegal Town is set in a large distinctive drumlin belt flowing from the Bluestacks and Pettigo Plateau, part of the wider 'Drumlin Belt' along the south of Ulster that stretches east into Northern Ireland towards County Down on the east coast. It consists of a fertile agricultural landscape of geometric shaped fields informed by the drumlins and loughs, generally bound by deciduous trees and hedgerow.

Killybegs

Killybegs is located within a coastal agricultural landscape of wide fertile river valleys between higher bog covered uplands orientated along a northeast-south-west axis, with a long indented coastline of peninsulas and inlets that face south onto Donegal Bay.

5.12 Water

European and national legislation, policies and Directives provide a broad corporate framework for control on the utilisation of natural waters and activities affecting water bodies. These provisions include the Water Framework Directive (2000/60/EC as amended¹³), the Urban Waste Water Treatment Directive (91/271/EC), the Drinking Water Directive (98/83/EC) and the Waste Framework Directive (2008/98/EC).

5.12.1 River Basin Districts and Water Bodies

Since 2000, the WFD has directed water management in the EU, which applies to rivers, lakes, groundwater, estuaries and coastal waters and establishes an integrated approach to the sustainable use of these water resources. The purpose of the WFD is to maintain the 'high status' of waters where it exists, prevent deterioration in existing status of waters and achieve at least 'good status' in relation to the majority of waters originally targeted for 2015 or at the latest by 2027. The Directive is implemented through River Basin Management Plans (RBMPs). The RBMPs include a Programme of Measures which set out the objectives for our waters and proposes the actions that are needed to achieve these objectives. Eight River Basin Districts (RBDs) were identified for the Island of Ireland comprising a total of 46 large catchments, 583 sub-catchments and 4,829 smaller waterbodies. First cycle RBMPs were prepared for the eight RBDs in Ireland and Northern Ireland. These plans covered the period 2009-2015.

The North Western International River Basin District (NWIRBD) is a cross border area comprising c. 7,400km in the Republic of Ireland and 4,900km in Northern Ireland¹⁴. The NWIRBD takes in all of County Donegal, along with large parts of Fermanagh, Cavan, Derry, Monaghan and Tyrone, significant areas of Leitrim and Longford and a small portion of Sligo with a total of 6 sub-catchments as set out in Table 5.26.

The North Western International River Basin Management Plan (NWIRBMP) 2009-2015, which covers County Donegal and beyond, was prepared as part of the first cycle of RBMPs. A key part of the NWIRBMP was the identification and evaluation of protected areas; these are waters protected under existing national or European legislation and they require protection due to their sensitivity to pollution or their particular economic, social or environmental importance. Protected areas include drinking water sources, shellfish waters, bathing waters, nutrient sensitive areas, Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

Table 5.26: North Western International River Basin District Sub-catchments

Sub-catchments	CODE	Area Sq.km.
Erne	Code 36	3440.52
Donegal Bay	Code 37	805.36
Foyle	Code 01	1105.9
Gweebarra-Sheephaven	Code 38	1453.70
Lough Swilly	Code 39	960.76
Donagh/Moville	Code 40	511.69

Source: www.catchments.ie/maps

¹³ The following EU Directives have been subsumed into the Water Framework Directive: Drinking Water Abstraction Directive; Sampling Drinking Water Directive; Exchange of Information on Quality of Surface Freshwater Directive; Shellfish Directive; Freshwater Fish Directive; Groundwater (Dangerous Substances) Directive; and Dangerous Substances Directive.

¹⁴ <http://www.epa.ie/pubs/reports/water/waterqua/northwest/IWQ%20NW%20NBRB%20Print.pdf>

Preparation of the second cycle RBMP is now underway. In February 2017 the EPA issued a draft 'River Basin Management Plan for Ireland (2018-2021)' setting out objectives to be achieved by 2021. The second cycle draft RBMP represents a new approach to river basin management planning which adopts a single river basin district approach for Ireland. The 'Irish River Basin District' covers an area of 70,273km² with 46 catchment management units, consisting of 583 sub-catchments with 4,832 water bodies. Public consultation on the draft RBMP 2018-2021 closed at the end of August 2017, with the intent to publish the final RBMP by December 2017. It is acknowledged that some gains were made under the first cycle of RBMPs, notwithstanding this, further work is required if 'good status' is to be achieved across the board by 2027.

The Minister for the Department of Environment, Community and Local Government (DECLG) has put in place new government and management structures for the implementation of the second cycle RBMP which will serve to better deliver the requirements of the WFD. The new governance structure involves three tiers as set out in Table 5.27.

Table 5.27: Three Tier Governance Structure for the 2nd Cycle RBMP for Ireland

Tier 1: National Management and Oversight	<ul style="list-style-type: none"> ▪ Led by DECLG ▪ Policy, regulations and resources ▪ Sign-off of River Basin Management Plans
Tier 2: National Technical Implementation and Reporting	<ul style="list-style-type: none"> ▪ Led by EPA ▪ Monitoring, assessment and reporting ▪ Evaluation and implementation of measures ▪ Template for River Basin Management Plans ▪ Monitoring of enforcement tasks and environmental outcomes
Tier 3: Regional Implementation via Water Networks	<ul style="list-style-type: none"> ▪ Led by lead Coordinating Authority ▪ Local Authority monitoring, licensing and enforcement actions ▪ Detailed River Basin Management Plans ▪ Implementation of Programmes of Measures by Relevant public bodies, tracking and reporting in consultation with EPA

Source: www.epa.ie

Three key learning's emerged from a review of the first cycle RBMPs and through the public consultation process for developing the second cycle RBMP:

1. The structure of multiple RBDs did not prove effective, either in terms of efficiency of developing the plans or in terms of implementation of the plans;
2. The governance and delivery structures in place for the first cycle RBMP were not as effective as expected; and
3. The targets set were too ambitious and not sufficiently evidence based.

Having regard to the above, it is apparent that the second cycle requires effective and efficient national, regional and local structures to ensure effective co-ordination of the development and implementation of the RBMP. In addition it is acknowledged the targets set in the plan must be evidence based but must also be achievable. Implementation structures have been strengthened to ensure more effective and coordinated delivery of measures.

The stated Environmental Objectives and Priorities for the second cycle RBMP are as follows:

- Ensure compliance with relevant EU legislation;
- Prevent deterioration;
- Meeting the objectives for designated protected areas;
- Protect high status waters; and
- Implement targeted actions and pilot schemes in focus sub-catchments aimed at:
 - i. targeting water bodies close to meeting their objective; and
 - ii. addressing more complex issues which will build knowledge for the third cycle.

The draft RBMP for Ireland 2018-2021 provides details on water quality status and catchment characterisation for the Country for the period 2013-2015¹⁵. The findings of that assessment are summarised as follows:

- 55% of river water bodies, 46% of lakes, 32% of transitional waters and 76% of coastal waters are achieving good or high status.
- For groundwater, 91% of water bodies are at 'good' status.
- The number of monitored river water bodies and lakes at 'good' or 'high' status declined by 3% since the assessment period of 2007-2009.
- 93% of bathing waters met the required standards in 2015.
- 75% of shellfish waters met the microbiological guide value in 2015.
- For SACs with water dependency 60% of river water bodies and almost 70% of lakes achieved the required standards of good status.
- For SACs in transitional waters only 37% met the required standards of 'good' status.
- 1,945 water bodies classified as 'not at risk'.
- 1,515 water bodies classified as 'at risk'.

For the river and water bodies 'at risk' of not meeting their objectives the significant pressures impacting on them include agriculture (64%), urban waste water (22%), hydromorphology (19%), forestry (16%), domestic waste water (12%), peat extractive industry (10%) and urban run-off (10%). The findings also show that 47% of the 'at risk' river and water bodies were impacted by a single significant pressure while the remaining 57% were impacted by more than one significant pressure.

In 2014 the EPA published the 'Integrated Water Quality Assessment 2013, North Western & Neagh Bann River Basin'¹⁶ (IWQ Assessment 2013). The assessment presents the latest monitoring data, an assessment of that data and details on the key issues that affect water quality in the North Western and Neagh Bann International River Basin Districts (NWIRBD and NBIRBD). The assessment of water quality was considered using four key indicators: physico-chemical quality; biological quality; pressures and overall quality with a focus on sites of special interest, where quality issues need to be addressed. The findings of the EPA assessment show that nutrient enrichment is the main cause of water pollution in both the NWIRBD and NBIRBD albeit with some regional variations for example Donegal has a much better level of compliance with the ortho-phosphosphate concentration levels than the remainder of the RBDs. In relation to biological quality the EPA assessment recorded a more even spread of river stations at less than 'good' status which indicates that there are additional factors which are impacting on water quality in Donegal such as the use of agricultural pesticides. The results of the EPA's physico-chemical assessment of rivers in the NWIRBD within the Plan area are presented in Table 5.28 and illustrated on Figure 5.17.

Table 5.28: Physico-chemical assessment of Rivers in NWIRBD 2007–2013 within the Plan area

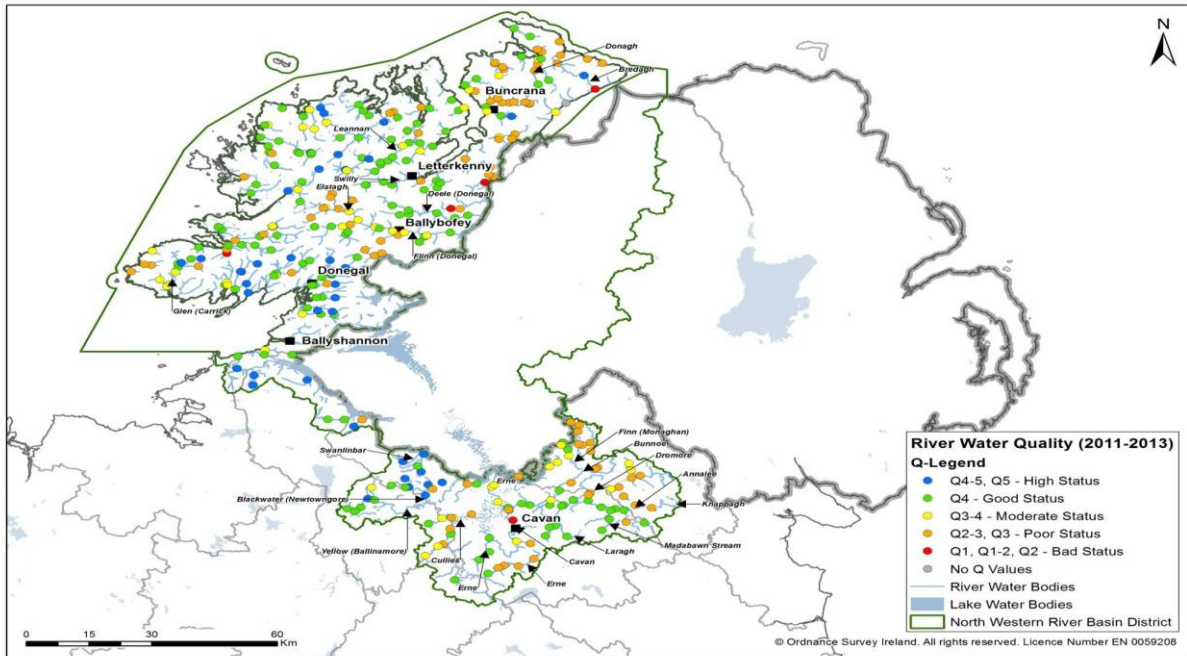
LAP Town Catchment	River	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013
An Clochán Liath (Dungloe)	Clady	Pass	Pass	Pass	Pass	Pass
	CRONANIV BURN	Pass	Pass	Pass	Pass	Pass
Ballybofey-Stranorlar	Mourne Beg	Pass	Pass	Pass	Pass	Pass
Carndonagh	Bredagh	Fail	Fail	Fail	Fail	Pass
Donegal Town /Killybegs	Eany Water	Pass	Pass	Pass	Pass	Pass
Killybegs	Owentocker	Pass	Pass	Pass	Pass	Pass

Source: Integrated Water Quality Assessment 2013, & Neagh North Western Bann River Basin' (2013), Table 1, pg. 12

¹⁵ http://www.housing.gov.ie/sites/default/files/public-consultation/files/draft_river_basin_management_plan_1.pdf

¹⁶ <http://www.epa.ie/pubs/reports/water/waterqua/northwest/IWQ%20NW%20NBRB%20Print.pdf>

Figure 5.17: Biological classification of rivers in the NWIRBD 2011–2013



Source: Integrated Water Quality Assessment 2013, & Neagh North Western Bann River Basin’ (2013), Map 11, pg. 37

Agriculture remains the single largest pressure on water quality in both RBDs with the use of agricultural pesticides a considered a significant pressure in Donegal. Considerable threats from municipal wastewater, urbanisation and forestry remain a significant environmental issue within the County. The main pressure impacting on the water quality of lakes are inputs of nutrients, namely phosphorous and nitrogen, at concentrations in excess of natural levels, resulting in over-enrichment and eutrophication. This process commonly results in increased planktonic algal and higher plant biomass creating an undesirable disturbance to the balance of organisms in lakes and thus to its water quality. The results of the EPAs physico-chemical assessment of lakes in the NWIRBD, within the Plan, area are presented in Table 5.29.

Table 5.29: Physico-chemical status of lakes within the Plan area in 2007-2013

LAP Town Catchment	Lake Name	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013
An Clochán Liath (Dungloe)	Lough Anure	High	High	High	High	High
	Lough Barra	High	High	High	High	High
	Birroe Lough	Good				
	Dunglow Lough	High	High	High	Good	Good
	Lough Keel (No. 576)	Good	High	High	High	High
	Lough Keel (No. 75)	Good	Good	Good	Good	Good
	Lough Nasnanida	High	High	High	High	High
Ballybofey-Stranorlar / Donegal Town	Lough Mourne	Good	High	High	High	High
Ballyshannon	Lough Melvin	Good	Good	Good	Good	Moderate
Ballyshannon / Donegal Town	Lough Golagh	Good	Good	Good	Good	High
	Lough Gorman			Good	Good	Good
	Tullynasiddagh Lough	Good	Good	Good	Good	Good

	Unshin Lough	Good	Good	Good	Good	Good
	Lough Vearty	Good	Good	High	High	High
Carndonagh	Lough Fad	Good	Good	High	High	High
Donegal Town	Lough Derg	Good	Good	Good	Good	High
	Lough Eske	Good	Good	High	High	High

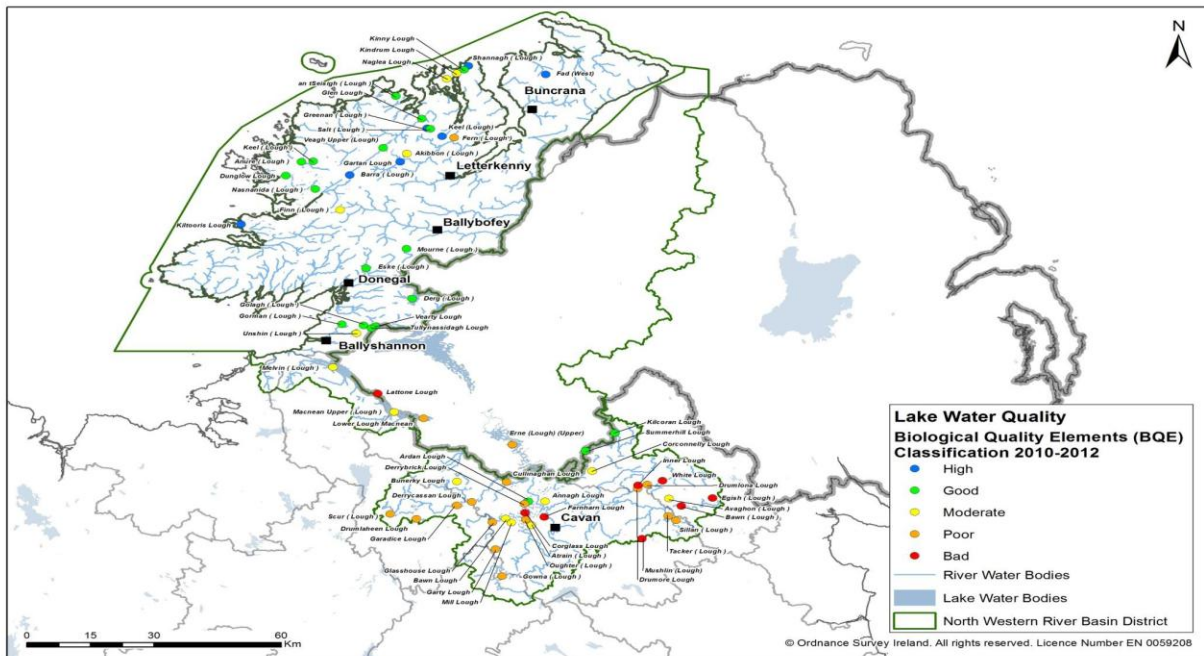
Source: Integrated Water Quality Assessment 2013, & Neagh North Western Bann River Basin' (2013), Table 2, pg. 21

The biological classification of lakes in the NWIRBD, within the Plan area, are presented in Table 5.30 and illustrated on Figure 5.18.

Table 5.30: Biological status of lakes within the Plan area in 2007-2013

LAP Town Catchment	Lake Name	Overall Status for BQE 2010-2012
An Clochán Liath (Dungloe)	Lough Anure	Good
	Lough Barra	High
	Dunglow Lough	Good
	Lough Keel (No. 576)	Good
	Lough Keel (No. 75)	High
	Lough Nasnanida	Good
Ballybofey-Stranorlar / Donegal Town	Lough Mourne	Good
Ballyshannon	Lough Melvin	Moderate
Ballyshannon / Donegal Town	Lough Golagh	Good
	Lough Gorman	Good
	Tullynasiddagh Lough	Good
	Unshin Lough	Moderate
	Lough Vearty	Good
Carndonagh	Lough Fad	High
Donegal Town	Lough Derg	Good
	Lough Eske	Good

Source: Integrated Water Quality Assessment 2013, & Neagh North Western Bann River Basin' (2013), Table 6, pg. 44

Figure 5.18: Biological status of lakes in the NWIRBD 2007–2013

Source: Integrated Water Quality Assessment 2013, & Neagh North Western Bann River Basin' (2013), Map 14, pg. 47

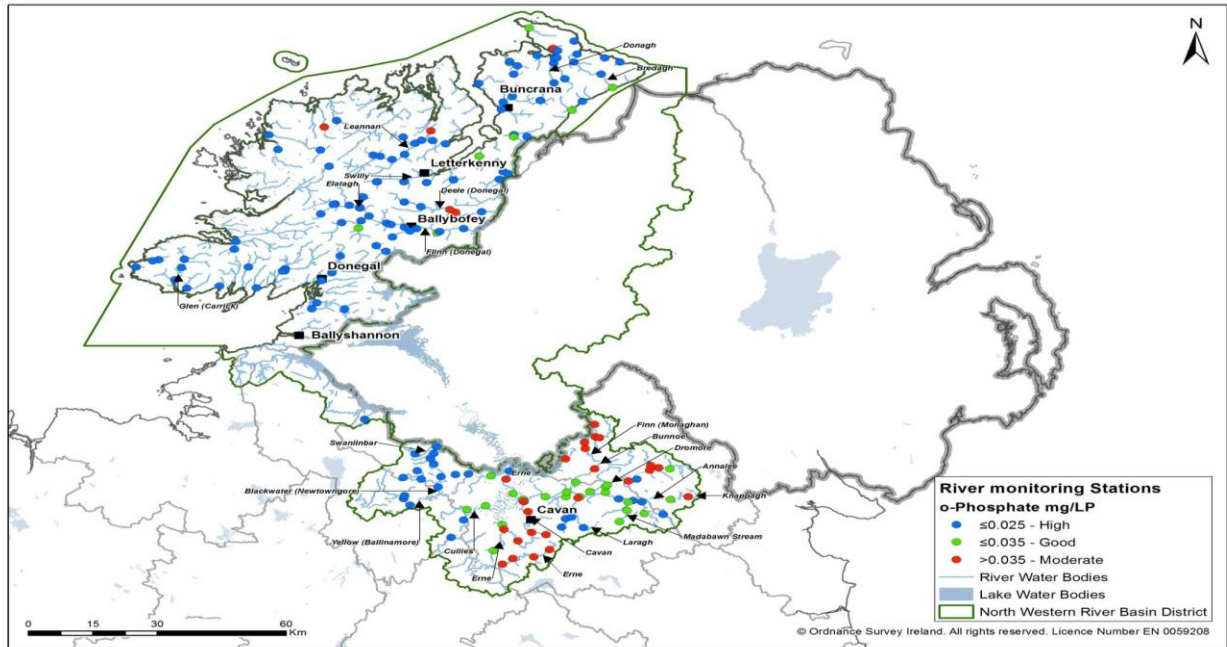
Waters within County Donegal support a rich diversity of marine life. The extensive offshore areas are generally not affected by pollution, while inshore, water quality in most estuarine and coastal waters remains high. Levels of contaminants in fish and shellfish are very low and overall quality of Irish seafood produce remains high. The quality of bathing waters is high, and while the bacteriological quality of shellfish in shellfish-growing waters is reasonably good, it is likely that additional measures will be required to prevent further deterioration in certain areas.

The 2013 IWQ groundwater monitoring programme for the NWIRBD and NBIRBD included 15 monitoring locations, 7 of which were in the NWIRBD. The sites were monitored for a variety of physico-chemical and microbiological parameters including nitrate and ortho-phosphate pollutant levels. Figure 5.19 shows the average ortho-phosphate in NWIRBD Rivers in 2013.

The findings of the IWQ Assessment show that average ortho-phosphate concentration at groundwater monitoring locations in the NWIRBD has been relatively steady over the period 2007–2013 with all monitoring locations displaying average concentrations below the national WFD threshold. In addition there were no groundwater bodies classified at 'poor' status for the first WFD reporting cycle in the NWIRBD.

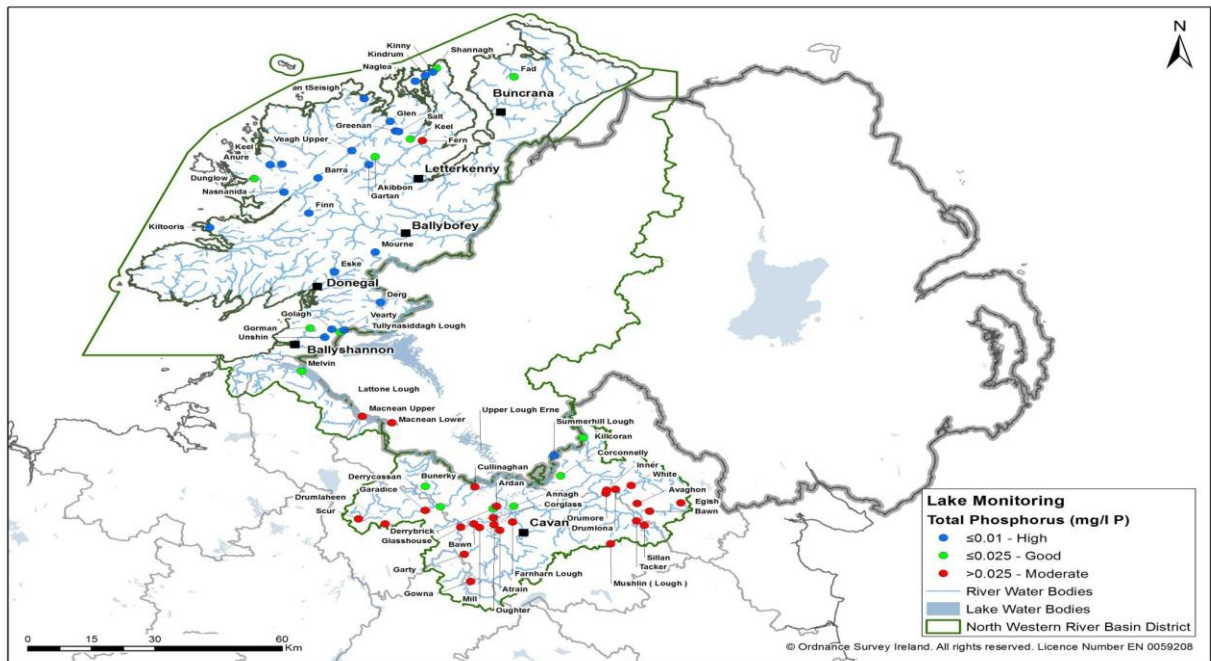
In relation to the assessment of nitrate in groundwater the findings of the monitoring programme show that the average nitrate concentration at groundwater monitoring locations in the NWIRBD has decreased over the period 2007–2013. Furthermore, the findings show that for 2013 the national WFD threshold value was not exceeded at any of the monitoring locations. It is acknowledged that the noticeable decrease in the average nitrate concentration over the period 2007–2013 could be attributed to the above average rainfall in 2008–2009 and the resultant increase in dilution of the pollutants. The report also lists a number of other factors which may have influenced the reduction in the average nitrate concentration during this period including: reductions in inorganic fertiliser applications, improvements in storage for organic fertiliser and the implementation of land spreading restrictions as part of the Good Agricultural Practice Regulations.

Figure 5.19: Average ortho-phosphate in NWIRBD Rivers in 2013



Source: Integrated Water Quality Assessment 2013, & Neagh North Western Bann River Basin' (2013), Map 1, pg. 5

Figure 5.20: Average total phosphorus in NWIRBD Lakes in 2013



Source: Integrated Water Quality Assessment 2013, & Neagh North Western Bann River Basin' (2013), Map 3, pg.15

5.12.2 Water Environment in the Plan area

The EPA recently published the latest 'Water Quality in Ireland 2010-2015' (August 2017). This report provides an update on the status and trends of Irish waters (groundwater, rivers, lakes, canals, transitional waters and coastal waters) following the completion of the first six-year cycle of the Water Framework Directive (2010–2015)¹⁷. Over the past three years the EPA in conjunction with local authorities and other public bodies have undertaken a substantial characterisation of the physical water environment and the impact of human activities on it, which is nearing completion. This information is available through www.catchments.ie and will inform the new National River Basin Management Plan (due to be published in December 2017).

Following consultations held by the EPA in 2016 with various stakeholders the latest Water Quality Report has a stronger focus on the provision of data and summary assessments of the 46 catchments identified for characterisation in Ireland (40) and Northern Ireland (6); of which five are located in County Donegal and one is cross border, located in Donegal/Sligo/Leitrim as listed below. As a result, the latest Water Quality Report is much shorter and should be read in conjunction with the information available on www.catchments.ie.

- Donegal:
 - Catchment 1: Foyle
 - Catchment 37: Donegal Bay North
 - Catchment 38: Gweebarra-Sheephaven
 - Catchment 39: Lough Swilly
 - Catchment 40: Donagh-Moville
- Donegal/Sligo/Leitrim:
 - Catchment 36: Erne

Detailed information in relation to the catchments and sub catchments within which the seven towns are located is available on the EPA website www.epa.ie and www.catchments.ie, a summary of which is provided below and illustrated in Table 5.31.

Table 5.31: EPA Catchment and Sub-catchments within the LAP area

LAP Town	Catchment	Sub-catchment
An Clochán Liath (Dungloe)	Gweebarra-Sheephaven	An Céideadh
Ballybofey-Stranorlar	Foyle	Finn
Ballyshannon	Erne	Erne
Bridgend	Lough Swilly	Burnfoot
Carndonagh	Donagh-Moville	Glennagannon
Donegal Town	Donegal Bay North	Eske
Killybegs	Donegal Bay North	Stragar

Source: www.catchments.ie

An Clochán Liath (Dungloe)

An Clochán Liath (Dungloe) is located in Catchment 38: Gweebarra-Sheephaven which includes the area drained by all streams entering tidal water in Gweebarra River, Sheephaven Bay and between Rossan Point and Fanad Head in Co. Donegal. The Gweebarra-Sheephaven catchment consists of nine sub-catchments including An Céideadh in which the town is located. The largest urban centre in the catchment is Falcarragh with An Clochán Liath (Dungloe) listed as one of the other main urban centres.

¹⁷ <http://www.epa.ie/pubs/reports/water/waterqua/Water%20Quality%20in%20Ireland%202010-2015.pdf>

Ballybofey-Stranorlar

Ballybofey-Stranorlar is located in Catchment 1: Foyle which includes the area drained by the River Foyle and by all streams entering tidal water between Culmore Point and Coolkeeragh in Co. Derry. This catchment comprises nine sub-catchments including the 'Finn' in which the twin towns are located. Ballybofey-Stranorlar is listed as the largest urban centre in this catchment.

Ballyshannon

Ballyshannon is located in Catchment 36: Erne which includes the area drained by the River Erne and all streams entering tidal water between Aughrus Point and Kildoney Point in Co. Donegal. The Erne catchment comprises 28 sub-catchments one of which is the 'Erne' in which Ballyshannon is located. This is a cross border catchment with a surface area of 4,415km² of which 2,512km² is located in Ireland. The largest urban centre in the catchment is Cavan Town with Ballyshannon listed as one of the other main urban centres.

Bridgend

Bridgend is located within Catchment 39: Lough Swilly which includes the area drained by all streams entering tidal water in Lough Swilly between Fanad Head and Dunaff Head in Co. Donegal. The Lough Swilly catchment comprises seven sub-catchments including Burnfoot in which the village is located. The largest urban centre in the catchment is Letterkenny.

Carndonagh

Carndonagh is located within Catchment 40: Donagh-Moville which includes the area drained by the River Donagh and all streams entering tidal water between Dunaff Head and Culmore Point in Co. Derry. The Donagh-Moville catchment comprises six sub-catchments including Glennagannon in which the town is located. Carndonagh is listed as the largest urban centre in this catchment.

Donegal Town and Killybegs

Donegal Town and Killybegs are located within Catchment 37: Donegal Bay North which includes the area drained by all streams entering tidal water between Kildoney Point and Rossan Point in Co. Donegal. The Donegal Bay North catchment comprises five sub-catchments; Donegal Town is located in Eske sub-catchment and Killybegs is located in Stragar sub-catchment. The largest urban centre in the catchment is Donegal Town with Killybegs listed as the other main urban centre.

5.12.3 Ground Water Status

Groundwater is considered an important natural resource in Ireland. It originates from rain that soaks into the ground and is stored in bedrock and sand and gravel deposits. Historically the focus on groundwater was for its use as drinking water, however under the Water Framework Directive (WFD) there is an increased emphasis on the environmental quality of groundwater, as well as its value as a potable water supply¹⁸. It is acknowledged that ground water plays a vital role in maintaining river levels and surface water ecosystems and can have a major impact on the quality of rivers.

Article 8 of the WFD requires the establishment of programmes to monitor groundwater. The groundwater monitoring programmes primarily focus on providing information that can be used to assess the environmental status of groundwater bodies and provide information to assess whether the environmental objectives of Article 4 of the WFD are being met, thereby supporting the overall environmental and management objectives within a River Basin District (RBD).

The EPA's 2017 Water Quality in includes an assessment of groundwater including chemical and quantitative status of each groundwater body in Ireland based on representative monitoring points selected in accordance with the criteria set out in the WFD. The European Communities Environmental Objectives (Groundwater) Regulations, 2010 (S.I. 9 of 2010) define the criteria for ground water body classification scheme which includes five classes: high, good, moderate, poor and bad. The

¹⁸ <http://www.epa.ie/pubs/reports/water/waterqua/northwest/IWQ%20NW%20NBRB%20Print.pdf>

classification process also considered the ecological needs of the relevant rivers and terrestrial ecosystems that depend on contributions from groundwater and the assessment of the impact of pollution on the uses (or potential uses) of the groundwater body, e.g. for water supply.

For the first WFD cycle the groundwater assessment was based on a greater number of water bodies i.e. 757. The overall number of water bodies for this reporting period has been reduced to 513 as a result of a risk assessment analysis carried out which determined that many of the water bodies were not at risk of failing the WFD status objective. The groundwater monitoring network in the latest EPA report consists of 336 monitoring sites.

The EPA's assessment for the period 2010-2015 found that out of a total of 513 groundwater bodies at National level, 468 met their good chemical and good quantitative status objectives; this equates to 99% of the country by area (c. 70,899km²). Consequently only 45 water bodies were classified as poor-status, of which 44 were due to failures to meet the chemical status objective and one was due to failure to meet the quantitative status objective. The 2017 EPA Report acknowledges that these poor chemical status groundwater bodies are generally small and the significant pressures typically relate to largely historic contamination from point sources including mines, landfills and industry. Similarly, the poor quantitative status groundwater body was associated with historical regional and local drainage schemes.

Table 5.32 illustrates the groundwater status results for the LAP area. It is notable that all groundwater bodies in the Plan area met their good chemical and good quantitative status objectives during the period 2010-2015.

Table 5.32: Groundwater Status Results in the LAP area during the period 2010-2015

LAP Town	Catchment	WFD Status Objective
An Clochán Liath (Dungloe)	Gweebarra-Sheephaven	Good
Ballybofey-Stranorlar	Foyle	Good
Ballyshannon	Erne	Good
Bridgend	Lough Swilly	Good
Carndonagh	Donagh-Moville	Good
Donegal Town / Killybegs	Donegal Bay North	Good

Source: www.catchments.ie

Detailed information in relation to the groundwater status for each of the catchments and sub-catchments within the LAP area is available on the EPA website www.epa.ie and www.catchments.ie, a summary of which is provided below (based on the EPA Catchment Assessments, March 2017) and presented in Table 5.33.

An Clochán Liath (Dungloe)

There are 5 groundwater bodies in the Gweebarra-Sheephaven catchment all of which were at 'Good' status in 2015. There were no changes in groundwater status between the two reporting periods 2007-2009 and 2010-2015. None of the groundwater bodies in this catchment are 'At Risk' and therefore no additional investigative assessment or measures other than those already in place are required.

Ballybofey-Stranorlar

There are 14 groundwater bodies in the Foyle catchment area, of which 13 (93%) were at 'Good' status and 1 (7%) was at 'Poor' status in 2015. 13 of the groundwater bodies in this catchment are 'Not At Risk' and therefore no additional investigative assessment or measures other than those already in place are required.

Ballyshannon

There are 66 groundwater bodies in the Erne catchment of which 65 (98%) were at 'Good' status and 1 (2%) was at 'Poor' status in 2015. It is noted that 49 of the groundwater bodies in this catchment are

shared with other catchments. 51 of the groundwater bodies in this catchment are 'Not At Risk' and therefore no additional investigative assessment or measures other than those already in place are required. 15 groundwater bodies in this catchment are in 'Review' because they are hydrologically linked to surface waters that are not meeting their water quality objectives.

Bridgend

There are 8 groundwater bodies in the Lough-Swilly catchment all of which were at 'Good' status in 2015. There were no changes in groundwater status since the last EPA monitoring period. None of the groundwater bodies in this catchment are 'At Risk' and therefore no additional investigative assessment or measures other than those already in place are required.

Carndonagh

There are 4 groundwater bodies in the Donagh-Moville catchment all of which at 'Good' status in 2015. There were no changes in groundwater status in this catchment since the last EPA monitoring period. None of the groundwater bodies in this catchment are 'At Risk' and therefore no additional investigative assessment or measures other than those already in place are required.

Donegal Town and Killybegs

There are 13 groundwater bodies in the Donegal Bay North catchment area, of which 12 (92%) were at 'Good' status and 1 (8%) was at 'Poor' status in 2015. 12 of the groundwater bodies in this catchment are 'Not At Risk' and therefore no additional investigative assessment or measures other than those already in place are required. There is one groundwater body in this catchment which is 'At Risk' of not meeting its water quality objectives due to the presence of a waste facility. Measures will need to be implemented in this water body to improve the water quality.

Table 5.33: Summary of Groundwater Status and Risk for Groundwaters in the LAP area

LAP Town	EPA Catchment	No. of Water Bodies	2010-2015		Risk		
			Good	Poor	Not at Risk	Review	At Risk
An Clochán Liath (Dungloe)	Gweebarra-Sheephaven	5	5	0	5	0	0
Ballybofey-Stranorlar	Foyle	14	13	1	13	0	1
Ballyshannon	Erne	66	65	1	51	15	0
Bridgend	Lough Swilly	8	8	0	8	0	0
Carndonagh	Donagh-Moville	4	4	0	4	0	0
Donegal Town / Killybegs	Donegal Bay North	13	12	1	12	0	1

Source: EPA Catchment Assessments, March 2017

In 2014 the EPA carried out a screening analysis for various hazardous substances and pesticides. The results of this assessment and previous assessments carried out in 2010 indicate that these substances are not a significant issue in the water environment in Ireland. Notwithstanding the fact that there is no evidence of pesticides contributing to groundwater water quality problems, it is acknowledged that local scale issues may still exist. The 2017 EPA report notes that the National Pesticide and Drinking Water Action Group are preparing active management strategies for the sustainable use of plant protection products to try and minimise the risk to drinking water supplies and the general water environment.

5.12.4 Surface Water Status

In accordance with the Water Framework Directive (WFD) requirements, surface water status is determined by its chemical and ecological status, and is defined by whichever of these is lower. Ecological status is based on a range of biological quality elements and supporting physico-chemical

quality elements. The hydromorphological condition of high status river sites is also considered in assigning status. In each case status is assigned to high, good, moderate, poor or bad status depending on the available information.

The Surface Water Regulations (S.I. 272 of 2009) and Groundwater Regulations (S.I. 9 of 2010) introduced water quality requirements that triggered a review of existing industrial and waste licence conditions. These reviews have been the primary mechanism for addressing the water quality issues associated with these activities, and pollution issues will be addressed through licence conditions.

In accordance with the WFD the overall aim for surface waters, which include rivers, lakes, transitional (estuaries and lagoons) and coastal waters, is to achieve at least 'good' ecological status' and 'good chemical status', as well as preventing deterioration in those waters that have been classified as 'high' or 'good'.

The 2017 EPA report states that the quality of our surface waters has remained relatively static since 2007–2009 and improvements, planned for under the first river basin management cycle, have not been achieved. The EPA's assessment for the period 2010-2015 found that 57% of rivers, 46% of lakes, 31% of transitional (estuarine) waters and 79% of coastal waters are achieving either good or high status under the WFD. It is acknowledged that while the national results have remained quite stable there are some water bodies which have deteriorated and the EPA is currently investigating the reasons for these changes. The primary objective is to prevent further deterioration in surface water status. Table 5.34 shows the summary of WFD water status at national level for surface waters during 2010-2015.

Table 5.34: Summary of WFD Water Status at National Level for Surface Waters during 2010-2015

Status of Irish Waters (2010-2015)	High	Good	Moderate	Poor	Bad
Rivers (% water bodies)	10.4	46.3	25.5	17.5	0
Lakes (% water bodies)	11	35	33	13	8
Transitional (% area)	10	15	39	12	4
Coastal (% area)	10	24	7	2	0

Source: EPA 'Water Quality in Ireland 2010-2015' (August 2017)

Overall there has been a reduction in the level of seriously polluted waters with only six water bodies assigned this status compared to nineteen in the previous reporting period. Notwithstanding this, there has also been a reduction in the number of river water bodies' assigned high status, from 287 to 245, over the two reporting periods. In addition, there has been an increase in the number of reported fish kills, with 97 reported between 2013 and 2015, an increase of 27 on the number reported between 2007 and 2009. The reason for this increase is unclear, but it may be a result of extended dry spells and/or flooding events, rather than a return to an increase in the number of serious pollution spills that would have been the main cause of fish kills in the past.

Elevated nutrient concentrations continue to be the most widespread water quality problem in Ireland arising primarily from human activities, such as agriculture and wastewater discharges to water from human settlements, including towns, villages and rural houses. The level of pollution from hazardous substances is low.

5.12.4.1 Rivers and Lakes

The EPA's 2017 Water Quality Report includes an assessment of ecological status of water bodies (rivers and lakes) during the period 2010-2015. The EPA's monitoring programme also provides information on the changes in river water body status between the two survey periods 2007-2009 and 2010-2015 and identifies those water bodies which are at risk of not meeting the WFD water quality objectives. Detailed information in relation to the surface water status for each of the catchments and sub-catchments within the Plan area is available at www.epa.ie and www.catchments.ie, a summary of which is provided below (based on the EPA Catchment Assessments, March 2017) and presented in Tables 5.35 and 5.36.

An Clochán Liath (Dungloe)

The Gweebarra-Sheephaven catchment comprises nine sub-catchments with 88 river water bodies and 883 lakes. There were 32 (36%) river water bodies and 12 (14%) lakes at 'Good' or 'High' status, and 21 (24%) river water bodies and 4 (5%) lakes at less than 'Good' status in the catchment in 2015. There were 35 (40%) un-monitored rivers and 67 (81%) un-monitored lakes in the catchment. Status has remained stable in the majority of water bodies in this catchment since 2007-2009 when WFD monitoring began. However, 12 water bodies have improved and 16 have deteriorated with 35 showing no change in status.

There are 39 river water bodies and 70 lakes in this catchment classified as 'Not at Risk' and therefore no additional investigative assessment or measures other than those already in place are required. There are 28 river water bodies and 6 lakes in 'Review'; of which more information is required in relation to 13 of these water bodies and the results of measures implemented in relation to a further 21 water bodies has not been realised yet. There are 28 water bodies in this catchment 'At Risk' of not meeting their water quality objectives. Measures will be needed in these water bodies to improve the water quality.

There are three designated heavily modified water bodies in the catchment, Nacung (Upper) and Dunlewy due to power generation and Salt due to a drinking water abstraction. Nacung (Upper) and Dunlewy were classified as 'Unassigned' while 'Salt' was classified as having Good Ecological potential in 2010-2015.

Ballybofey-Stranorlar

The Foyle catchment comprises nine sub-catchments with 41 river water bodies and 5 lakes. There were 7 (17%) river water bodies and 3 (60%) lakes at 'Good' or 'High' status, and 21 (51%) river water bodies and no lakes at less than 'Good' status in the catchment in 2015. There were 13 (32%) un-monitored rivers and 2 (40%) un-monitored lakes in the catchment in 2015. Status has remained stable in the majority of water bodies in this catchment since 2007-2009 when WFD monitoring began. However, 9 water bodies have improved and 7 have deteriorated.

There are 7 river water bodies and 3 lakes classified as 'Not At risk' and therefore no additional investigative assessment or measures other than those already in place are required. A further 13 river water bodies and 2 lakes are in 'Review' where more information is required in relation to 9 rivers and 2 lakes and the results of measures implemented in relation to 7 rivers has yet to be realised. There are 20 river water bodies 'At Risk' of not meeting their water quality objectives. Measures will be needed in these water bodies to improve the water quality.

Ballyshannon

The Erne catchment comprises 28 sub-catchments with 129 river water bodies and 132 lakes. There were 42 (33%) river water bodies and 5 (4%) lakes at 'Good' or 'High' status, and 48 (37%) river water bodies and 37 (c. 28%) lakes at less than 'Good' status in the catchment in 2015. There were 39 (30%) un-monitored rivers and 30 (23%) in the catchment in 2015. The status of the water bodies in this catchment have changed since 2007-2009; 23 river water bodies and 3 lakes have improved and 15 river water bodies and 11 lakes have deteriorated.

There are 41 river water bodies and 8 lakes in this catchment classified as 'Not At Risk' and therefore no additional investigative assessment or measures other than those already in place are required. There are 28 river water bodies and 85 lakes in 'Review' where more data and information is required in relation to 24 river water bodies and 65 lakes and the results of measures implemented in relation to 4 rivers and 20 lakes has yet to be realised. There are 6 river water bodies and 39 lakes in the catchment 'At Risk' of not meeting their water quality objectives. Measures will be needed in these water bodies to improve the water quality.

Bridgend

The Lough Swilly catchment comprises 7 sub-catchments with 51 river water bodies and 9 lakes. There were 22 (43%) river water bodies and 2 (22%) lakes at 'Good' or 'High' status and 17 (33%) river water bodies and 1 (11%) lake at less than 'Good' status in the catchment in 2015. There were 12

(24%) un-monitored rivers and 6 (67%) un-monitored lakes in the catchment in 2015. Status has remained stable in the majority of water bodies in this catchment since 2007-2009 when WFD monitoring began. However, 10 river water bodies and 2 lakes have improved and 6 river water bodies have deteriorated.

There are 21 river water bodies and 5 lakes classified as 'not At Risk' and therefore no additional investigative assessment or measures other than those already in place are required. A further 9 river water bodies and 3 lakes are in 'Review' where more information is required in relation to 8 river water bodies and the results of measures implemented in relation to one river has yet to be realised. There are 21 river water bodies and 1 lake in this catchment 'At Risk' of not meeting their water quality objectives. Measures will be needed in these water bodies to improve the water quality.

Carndonagh

The Donagh-Moville catchment comprises 6 sub-catchments with 36 river water bodies and one lake. There were 7 (19 %) river water bodies and 1 (100%) lake at 'Good' or 'High' status and 16 (44%) river water bodies and no lakes at less than 'Good' status in the catchment in 2015. There were 13 (81%) un-monitored rivers and no un-monitored lakes in the catchment in 2015. The status of the river water bodies in this catchment has changed since 2007-2009; 3 river water bodies have improved and 7 river water bodies have deteriorated. There was no change in the status of lakes.

There are 5 river water bodies and 1 lake classified as 'not At Risk' and therefore no additional investigative assessment or measures other than those already in place are required. A further 9 river water bodies are in 'Review' where additional information is required in relation to 6 of the rivers water bodies and the results of measures implemented in relation to 3 rivers has yet to be realised. There are 22 river water bodies in the catchment 'At Risk' of not meeting their water quality objectives. Measures will be needed in these water bodies to improve the water quality.

Donegal Town and Killybegs

The Donegal Bay North catchment comprises 5 sub-catchments with 49 river bodies and 12 lakes. There were 19 (39%) river water bodies and no lakes at 'Good' or 'High' status and 18 (37%) river water bodies and 1 (8%) lake at less than 'Good' status in the catchment in 2015. There were 12 (24%) un-monitored rivers and 11 (92%) un-monitored lakes in the catchment in 2015. Status has remained stable in the majority of water bodies in this catchment since 2007-2009 when WFD monitoring began. However, 5 river water bodies have improved and 15 river water bodies and 1 lake have deteriorated.

In 2015 there were 18 river water bodies and 9 lakes classed as 'Not At Risk' and therefore no additional investigative assessment or measures other than those already in place are required. A further 7 river water bodies and one lake are in 'Review' where additional information is required for 8 river water bodies and one lake and the results of measures implemented in relation to another lake has yet to be realised. There are 24 river water bodies and one lake in the catchment 'At Risk' of not meeting their water quality objectives. Measures will be needed in these water bodies to improve the water quality.

Killybegs is identified as a heavily modified water body in the catchment due to port facilities. It was also classified as having Moderate Ecological Potential in 2010-2015.

Table 5.35: Summary of River Status and Risk for Rivers in the LAP area

LAP Town	EPA Catchment	No. of Rivers	2010-2015						Risk		
			High	Good	Moderate	Poor	Bad	Un-monitored	Not at Risk	Review	At Risk
An Clochán Liath (Dungloe)	Gweebarra-Sheephaven	88	8	24	10	11	0	35	39	28	21
Ballybofey-Stranorlar	Foyle	41	0	7	9	12	0	13	7	13	21
Ballyshannon	Erne	129	8	34	19	29	-	39	41	28	60
Bridgend	Lough Swilly	51	3	19	6	11	0	12	21	9	21
Carndonagh	Donagh-Moville	36	0	7	1	14	1	13	5	9	22
Donegal Town / Killybegs	Donegal Bay North	49	4	15	8	10	0	12	18	7	24

Source: EPA Catchment Assessments, March 2017

Table 5.36: Summary of Lake Status and Risk for Lakes in the LAP area

LAP Town	EPA Catchment	No. of Lakes	2010-2015						Risk		
			High	Good	Moderate	Poor	Bad	Un-monitored	Not at Risk	Review	At Risk
An Clochán Liath (Dungloe)	Gweebarra-Sheephaven	83	2	10	4	0	0	67	70	6	7
Ballybofey-Stranorlar	Foyle	5	0	3	0	0	0	2	3	2	0
Ballyshannon	Erne	132	-	5	18	10	9	30	8	85	39
Bridgend	Lough Swilly	9	1	1	0	1	0	6	5	3	1
Carndonagh	Donagh-Moville	1	1	0	0	0	0	0	1	0	0
Donegal Town / Killybegs	Donegal Bay North	12	0	0	1	0	0	11	9	2	1

Source: EPA Catchment Assessments, March 2017

5.12.4.2 Transitional and Coastal Waters

Transitional and coastal water bodies comprise a wide variety of types, such as lagoons, estuaries, large coastal bays and exposed coastal stretches. Given that these waters are located at the interface between land and seas they are exposed to a wide range of human pressures including discharges from industrial and municipal wastewater treatment plants, inputs from diffuse agricultural sources, morphological alterations associated with harbour and port activities, and discharges from marine vessels. Coastal waters are important for tourism, for use as bathing locations and for supporting marine wildlife. Detailed information in relation to the transitional and coastal waters status and risk of not meeting the WFD water quality objectives for each of the catchments and sub-catchments within the Plan area is available on www.epa.ie and www.catchments.ie, a summary of which is provided below (based on the EPA Catchment Assessments, March 2017) and presented in Tables 5.37.

An Clochán Liath (Dungloe)

The Gweebarra-Sheephaven catchment includes 24 transitional and coastal water bodies, two of which are shared with another catchment. There are 4 (17%) classified at 'Good' and 'High' status, 1 (4%) at less than good status and 19 (79%) un-monitored transitional and coastal water bodies in this catchment.

There are 18 (75%) transitional and coastal water bodies 'Not At Risk' and therefore no additional investigative assessment or measures other than those already in place are required. A further 5 (21%) transitional and coastal water bodies are under 'Review' and 1 (4%) is 'At Risk' of not meeting its water quality objectives. Measures will need to be implemented in this water body to improve the water quality.

Ballybofey-Stranorlar

The Foyle catchment includes one transitional water body and no coastal water bodies. The Foyle and Faughan estuaries transitional water body remained at 'Moderate' status for the monitoring periods 2007-2009 and 2010-2015, but was unmonitored in 2010-2015. In 2015, this transitional water body was classified 'At Risk' of not meeting its water quality objectives. Measures will need to be implemented in this water body to improve the water quality.

Ballyshannon

The Erne catchment includes five transitional and coastal water bodies of which one is classified as 'moderate' status and the remaining four were un-monitored. One of the coastal water bodies in this catchment, Donegal Bay (Erne), is shared with two neighbouring catchments.

There are two transitional and coastal water bodies in this catchment classed as 'Not at Risk' and therefore no additional investigative assessment or measures other than those already in place are required. There are a further two transitional and coastal water bodies in 'Review' where more data and information is required. One of the water bodies in this catchment is 'At Risk' of not meeting its water quality objectives. Measures will be needed in these water bodies to improve the water quality.

Bridgend

The Lough Swilly catchment includes seven transitional and coastal water bodies, three of which are common to other catchments. Of the seven transitional and coastal water bodies in the catchment, 2 (29%) were at 'High' status, 2 (29%) were less than good status in 2015 and the remaining 3 (42%) were un-monitored.

There are four transitional and coastal water bodies classed as 'Not At Risk' and therefore no additional investigative assessment or measures other than those already in place are required. One of the water bodies, the Crana Estuary, is in 'Review' due to the presence of a designated bathing water that is not reaching its water quality objective and as is deemed to be vulnerable to pollution. There are two of the transitional and coastal water bodies in this catchment 'At Risk' of not meeting their water quality objectives. Measures will be needed in these water bodies to improve the water quality.

Carndonagh

The Donagh-Moville catchment includes six transitional and coastal water bodies, three of which are common to other catchments. Of the six transitional and coastal water bodies in the catchment, 1 (17%) was classified at 'High' status in 2015 and the remaining 5 (83%) were un-monitored.

There are 5 (83%) transitional and coastal water bodies classified as 'Not At Risk' and therefore no additional investigative assessment or measures other than those already in place are required. One of the water bodies in this catchment is 'At Risk' of not meeting its water quality objectives. Measures will be needed in these water bodies to improve the water quality.

Donegal Town and Killybegs

The Donegal Bay North catchment includes ten transitional and coastal water bodies, of which 3 (30%) were at 'Good or High' status and 2 (20%) were at less than good status in 2015. .

There are 7 (70%) transitional and coastal water bodies classified as 'Not At Risk' and therefore no additional investigative assessment or measures other than those already in place are required. There is one water body in 'Review', McSwines Bay, which is at 'Good' ecological status but revised to review due to the presence of pressures, including a number of fish farms. There are two of the transitional and coastal water bodies in this catchment 'At Risk' of not meeting their water quality objectives. Measures will be needed in these water bodies to improve the water quality.

Table 5.37: Summary of Transitional and Coastal Waters Status and Risk in the LAP area

LAP Town	EPA Catchment	No. of Water bodies	2010-2015						Risk		
			High	Good	Moderate	Poor	Bad	Un-monitored	Not at Risk	Review	At Risk
An Clochán Liath (Dungloe)	Gweebarra-Sheephaven	24	2	2	1	0	0	19	18	5	1
Ballybofey-Stranorlar	Foyle	1	0	0	0	0	0	1	0	0	1
Ballyshannon	Erne	5	0	0	1	0	0	4	2	2	1
Bridgend	Lough Swilly	7	2	0	1	1	0	3	4	1	2
Carndonagh	Donagh-Moville	6	1	0	0	0	0	5	5	0	1
Donegal Town / Killybegs	Donegal Bay North	10	1	2	1	1	0	5	7	1	2

Source: EPA Catchment Assessments, March 2017

5.13 Wastewater

Irish Water has taken over responsibility to provide water and wastewater services in Ireland from the Local Authorities. This includes managing approximately 856 water treatment plants and approximately 1,000 wastewater treatment plants. In terms of investment, Irish Water is now the primary capital investment authority in the Country and in 2015 Irish Water published Ireland's first integrated national plan for the delivery of water services 'Water Services Strategic Plan (WSSP)' which addresses six key themes:

- Customer Service
- Clean safe drinking water
- Effective management of wastewater
- Protect and enhance the environment
- Supporting social and economic growth
- Investing in our future

The WSSP sets out strategic objectives for the delivery of water services over the next 25 years up to 2040. This timeframe dovetails effectively with the long-term vision and timescale of this Plan. It details current and future challenges which affect the provision of water services and identifies the priorities to be tackled in the short and medium term. The WSSP will be reviewed on at least a five yearly basis to ensure that it continues to be up to date with current and future needs. An interim review is also planned to ensure consistency with emerging new policy in the National Planning Framework, the new Regional Spatial and Economic Strategies which will be developed in the next few years and the River Basin Management Plan for Ireland 2018-2021, a draft of which is currently the subject of a public consultation process.

The WSSP outlines a number of key objectives including the effective management of wastewater. The strategic aims and objectives of the WSSP in relation to wastewater are to:

- *“Manage the operation of wastewater facilities in a manner that protects environmental quality.*
- *Manage the availability and resilience of wastewater services now and into the future.*
- *Manage wastewater services in an efficient and economic manner”.* (WSSP, 42)

Wastewater must be collected and treated to an acceptable standard before it is discharged back into the environment in accordance with the standards set by the EU Urban Waste Water Treatment (UWWT) Directive (91/271/EEC). Irish Water acknowledged that a number of waste water treatment plants do not currently meet this requirement. A number of actions have been identified in the WSSP to tackle these issues including to:

- *Prepare and implement a Wastewater Compliance Strategy to improve the management of the wastewater systems. This will seek to address unacceptable discharge quality through improvements to treatment and remediate problems associated with combined sewers, where feasible.*
- *Prepare and implement national Standard Operating Procedures to ensure that all of our wastewater treatment plants and networks are operated correctly, safely and efficiently.*
- *Progressively meet the requirements of the UWWTD and the EPA Discharge Licences and Certificates. Identify and record properties at risk of flooding from combined sewers and implement measures to reduce and mitigate this risk.*
- *Plan and deliver measures to reduce the pollution impact from combined sewer overflows.*
- *Adopt an asset management approach to maintenance and capital investment, as for our water supply services, utilising the capabilities and systems established in Irish Water.*

Key targets in relation to providing effective management of wastewater by the end of 2021, 2027 and 2040 include;

- *Compliance with UWWT Directive – increase the percentage of the population equivalent served by wastewater treatment plants that are compliant with the requirements of the UWWT Directive from the current baseline of approximately 39% to 90% by the end of 2021, to 99% by 2027 and to 100% by 2040.*
- *Pollution Incidents caused by Irish Water’s Waste Water Treatment Plants – deliver a reduction in the number of Class 2 pollution incidents (localised pollution) from a current baseline of 168 incidents to 75 incidents by the end of 2021, to 20 incidents by 2027 and maintain this level.*

Irish Water acknowledge that providing an effective wastewater management system for the collection and treatment of effluent is essential to protect the environment and public health. Irish Water’s Capital Investment Plan (CIP) 2014-2016 focused on additional water resources, leakage reduction and improved resilience through investment in treatment capacity networks. Irish Water is currently preparing the next Capital Investment Plan to cover the period 2017-2021 (known as IP2). As part of this, a review of all water and wastewater infrastructure in County Donegal was undertaken. The results of this review will feed into the final IP2 2017-2021. The IP2 and WSSP must be informed by national, regional and local planning policy.

The IP2 formed part of Irish Water’s submission to the Commission for Energy Regulation (CER) for the investment period 2017–2021. The CER has decided that a second interim revenue control (known as IRC2), will be put in place for the period 1st January 2017 to 31st December 2018. Irish Water deemed the IRC2 period too short for optimal investment planning, and has therefore developed an Investment Plan based on a five year period from 2017 to 2021, which aligns with their WSSP and seven year Business Plan, 2014-2021.

The document ‘Interim Revenue Control 2017-2018 for Investment Plan 2017-2021’ was published in August 2016 which identifies 39 water/wastewater capital projects for Donegal with a total budget of c. €150 million (€81m on wastewater and €68m on water). This list is subject to CER approval. This investment is key to supporting continued social and economic development across the County. Irish Water, working with Donegal County Council has developed and prioritised a major programme of work which will address the serious deficiencies that exist across the water supply scheme. The Water Services Investment Programme under the Draft IP2 2017-2021 includes the upgrading of wastewater infrastructure in the LAP area as outlined in Table 5.38 (note: this list is subject to CER approval).

Table 5.38: Irish Water Investment Plan 2017-2021 (IP2) Wastewater Projects in the Plan area

Project Name	Estimated Completion
Ballybofey/Stranorlar WW Network	Q2 2020
Ballybofey-Stranorlar WWTP	2020
Bridgend WWTP	2021
Donegal (Group B) Sewerage Schemes Wastewater Treatment Plants	Q1 2018

Source: Interim Revenue Control 2017-2018 for Investment Plan 2017-2021, Irish Water 2016

The new plants will ensure treated effluent meets EPA standards and will also allow for future population growth and economic development in the areas. It is envisaged that these projects will ensure compliance with EU Directives and will provide wastewater treatment capacity in these areas supporting growth and economic development. Existing Wastewater treatment availability in each of the seven towns is described below.

An Clochán Liath (Dungloe)

The new Wastewater Treatment Plant at An Clochán Liath (Dungloe) is complete and commissioning underway. This €7.2 million investment replaced the old septic tank systems in An Clochán Liath (Dungloe) and Glenties with modern wastewater treatment plants that will serve over 1,000 households. The new WWTP has a design capacity of 1,600p.e. which will allow for future population growth and economic development in the town.

Ballybofey-Stranorlar

The existing WWTP serving Ballybofey-Stranorlar which was commissioned in 1999 and designed for a p.e. of 4,000 is currently overloaded. Capacity issues will be addressed through the Ballybofey-Stranorlar Wastewater Network and WWTP projects as included on the Irish Water Investment Plan 2017-2021. Irish Water is investing c. €5.2 million in this project as part of the Donegal Towns and Villages Sewerage Schemes project. The proposed new works will provide for the expansion of capacity to 12,200p.e. for primary and sludge treatment and 9,200p.e. for secondary treatment. This project will ensure compliance with EU Directives and will provide wastewater treatment capacity in Ballybofey-Stranorlar supporting population growth and economic development. Estimated date for completion of the project is Q2 2020.

Ballyshannon

Capacity and treatment is available in the existing WWTP which was upgraded as part of the Donegal Group A Sewerage Scheme. Irish water invested c. €24 million in this project forming part of the overall capital investment in the wastewater infrastructure in Donegal. The Donegal Group A Sewerage Scheme comprises wastewater treatment facilities at Ballyshannon, Donegal Town and Rossnowlagh. The WWTP in Ballyshannon has two pump stations with capacity for 6,100 p.e. which is adequate to support

Bridgend

There is no capacity available in the existing WWTP in Bridgend which has a design capacity of 652 p.e. Irish Water is due to undertake a study for the upgrade of Bridgend WWTP which is expected to commence in 2017.

Carndonagh

Capacity and treatment is available in the existing WWTP which was officially opened in February 2005 and designed for a period of 20 years for the projected domestic, commercial and industrial population in Carndonagh. The WWTP is also designed to serve a population of 750 from neighbouring Malin Town. The design capacity of the plant being is for 5,833 p.e. which indicates adequate treatment capacity to support population growth and economic development in Carndonagh.

Donegal Town

Capacity and treatment is available in the existing WWTP which was upgraded as part of the Donegal Group A Sewerage Scheme. Irish water invested c. €24 million in this project forming part of the

overall capital investment in the wastewater infrastructure in Donegal. The Donegal Group A Sewerage Scheme comprises wastewater treatment facilities at Donegal Town, Ballyshannon and Rossnowlagh including main lift pump stations, rising main, outfalls and Sludge thermal drier. The WWTP in Donegal Town has capacity for 12,000 p.e. with storm storage facility and extensive odour treatment. It includes a sludge treatment centre with a sludge thermal drier capacity for 1,670 tonnes of dry solids per annum.

Killybegs

Capacity issues in Killybegs will be resolved through the Donegal Group B Sewerage Scheme as included on the Irish Water Investment Plan 2017-2021. Irish water is investing c. €18.4 million in this project forming part of the overall capital investment in the wastewater infrastructure in Donegal. The Donegal Group B project includes the development of new sewerage schemes in Killybegs, Bundoran, Gleann Cholm Cille (Glencolmcille) and Convoy. The proposed new works in Killybegs will provide for a capacity of 4,200 p.e. This project will ensure compliance with EU Directives and will provide wastewater treatment capacity in Killybegs supporting population growth and economic development. Estimated date for completion of the project is spring 2018.

5.14 Wastewater Treatment

The legislative context for provision and licensing of appropriate wastewater treatment infrastructure in Ireland is governed by the Urban Wastewater Treatment (UWWT) Regulations 2001 (as amended) and the Wastewater Discharge (Authorisation) Regulations 2007 (as amended). The UWWT Regulations transpose the EU Urban Wastewater Treatment (UWWT) Directive 91/271/EEC into Irish law.

The UWWT Directive outlines permissible concentration in effluent discharges for a number of parameters, including nutrients (nitrogen and phosphorus) where effluent is discharged to designated sensitive waters. Achieving the permissible discharge concentrations set by the Directive forms one of the measures set by the Environmental Protection Agency (EPA) for the implementation of programmes of measures under the Water Framework Directive (WFD).

The Wastewater Discharge Regulations require that all discharges from wastewater collection systems and treatment plants in Ireland which serve a population in excess of 500 PE (population equivalent) are issued with a Wastewater Discharge Licence from the EPA. All discharges from wastewater collection systems and treatment plants which serve a population of less than 500 PE are issued with a Wastewater Discharge Certificate from the EPA. The discharge licence/certificate sets the allowable Emission Limit Value for a discharge based on the status of the receiving water body, including its conservation status in relation to the Birds and Habitats Directives.

The EPA reports on the performance of urban waste water treatment plants on an annual basis. The most recent report 'Urban Waste Water Treatment in 2015' was published in 2016. Table 5.39 shows the waste wastewater treatment compliance levels in the LAP area in 2015.

The EPA 2015 report records Donegal is one of three counties that collectively account for 45% of the area that are non-compliant with the effluent quality standards. It identifies 124 urban areas in Ireland where improvements are required to resolve priority issues, 18 of which are located in County Donegal and two are located in the LAP area namely, Ballybofey-Stranorlar and Killybegs. The EPA report states the priorities to be addressed to protect our environment from the adverse effects of waste water discharges are:

- *"Ensure that waste water from our urban areas is collected and treated to a satisfactory standard, as set out in the Urban Waste Water Treatment Directive.*
- *Eliminate discharges of untreated waste water to our rivers, estuaries and coastal waters.*
- *Prevent pollution of rivers and bathing waters by inadequately treated waste water and restore affected waters to good quality.*
- *Protect freshwater pearl mussels and shellfish at risk from urban waste water."* (pg. iii)

The EPA report states that Killybegs failed to meet the mandatory effluent quality standards specified in the 1991 UWWT Directive. This was a result of secondary treatment and more stringent treatment (i.e. nutrient reduction) required by the Directive not being provided and therefore effluent could not meet the mandatory BOD/COD and nutrient quality standards. The estimated date of compliance is 2018.

Table 5.39: Wastewater Treatment Compliance Levels in the LAP area 2015

Urban Area	BOD & COD compliance ¹	Reason for failure	Urban area (p.e) ³	WWTP (p.e.) ⁴	Level of treatment provided	Receiving water
		Persistent Failures No. ²				
Large urban areas subject to the EU Directive's requirements to provide secondary treatment and meet BOD and COD effluent quality standards						
Ballybofey-Stranorlar	Pass		6,251	4000	Secondary	River
Ballyshannon	Pass		2,104	6,100	Secondary	Estuarine
Carndonagh	Pass		5,424	5,833	Secondary & UV	River
Donegal Town	Pass		5,489	12,000	Secondary	Estuarine
Killybegs	No secondary ⁵		12,000		No treatment	Coastal
Smaller urban areas below the threshold for mandatory compliance with the EU Directive's effluent quality standards. Standards used as a guide to assess plant performance						
An Clochán Liath (Dungloe)	No secondary		2,007	1,200	Primary	Coastal
Bridgend	Fail	Quality 2				

Source: Urban Waste Water Treatment in 2015', EPA (2016), County Donegal Report table pages 29-30

¹ Effluent monitoring results reported to the EPA that did not meet the quality standards set out in the Directive for biochemical oxygen demand (BOD) or chemical oxygen demand (COD).

² Persistent failures indicate that at least half of the effluent samples from a plant with secondary treatment did not achieve the relevant quality standards. This is indicative of poor plant performance or overloading of the treatment plant.

³ The wastewater load (recorded as population equivalent) generated within the area and entering the urban waste water works, i.e. a measurement of the size of the urban area.

⁴ The organic biodegradable load (recorded as population equivalent) that the waste water treatment plant was designed and constructed to deal with. For some plants this figure is not available, therefore the number of plants to which the figure relates is in brackets.

⁵ Wastewater received no treatment or a basic level of treatment (i.e. preliminary treatment or primary treatment) prior to discharge and consequently the effluent could not achieve the quality standards specified in the Directive.

The most widespread water quality problem in Ireland continues to be elevated concentrations of nutrients, which can lead to eutrophication. The main nutrients of concern are phosphorus, which tends to drive eutrophication in freshwaters, and nitrogen which tends to drive eutrophication in coastal waters. Waste water discharges are a key source of such nutrients. The UWWT Directive requires a stringent level of wastewater treatment for certain discharges. In 2015 the EPA carried out a review of effluent quality standards for nutrients in waste water discharged directly to sensitive areas from towns and cities with a population equivalent of over 10,000p.e. Killybegs is the only town within the LAP area which failed as a result of recorded elevated phosphorus and nitrogen levels; however it is noted that this is pending a determination by the EPA on the appropriate nutrient parameter(s) that shall apply a precautionary approach is taken whereby both are assumed to apply on a provisional basis.

The EPA also carried out an 'impact and risk assessment' in relation to areas where wastewater works with discharges are linked, with a high degree of probability, to polluted river stations. In relation to the Plan area, the River Finn in Ballybofey-Stranorlar was recorded as moderate status under the WFD classification.

In 2016 Irish Water published its first 'National Wastewater Sludge Management Plan' (NWSMP) outlining its strategy for managing wastewater sludge over the next 25 years. The NWSMP covers the period up to 2021 after which it will be reviewed every 5 years. The NWSMP sets out a nationwide

standardised approach to ensure that treated wastewater sludge across the Country is effectively management, stored, transported and re-used or disposed of in a sustainable way, to the benefit of the public and the environment¹⁹. The wastewater treatment process generates sludge, which requires further treatment prior to its reuse or disposal. In this regard the NWSMP outlines sustainable proposals for the investment in future treatment, transport and reuse or disposal of sludge in accordance with the following objectives:

- *"To avoid endangering human health or harming the environment;*
- *To maximise the benefits of wastewater sludge as a soil conditioner and source of nutrients;*
- *To ensure that all regulatory and legislative controls are met, and due regard is given to non-statutory Codes of Practice and industry guidance;*
- *To establish long term, secure and sustainable reuse/disposal methods;*
- *To ensure cost-effective and efficient treatment and reuse/disposal techniques;*
- *To reduce potential for disruption from sludge transport and sludge facilities;*
- *To extract energy and other resources where economically feasible; and*
- *To drive operational efficiencies, e.g. through the use of Sludge Hub Centres."* (NWSMP, pg. i-ii)

The NWSMP estimates that the quantity of wastewater sludge generated is expected to increase by more than 80% by 2040 as new and upgraded plants are completed to treat wastewater. Table 5.40 outlines the predicted sludge load for county Donegal up to 2040.

Table 5.40: Predicted Sludge Load for County Donegal up to 2040*

	TDS/a (2015)	TDS/a (2020)	TDS/a (2030)	TDS/a (2040)
Donegal	1,768	1,848	2,021	2,212

Note: *Predicted sludge loads are estimated based on sludge loads with full wastewater compliance and standard sludge production values. Actual sludge loads generated will be lower than the predicted sludge load until full compliance with final effluent standards is achieved at all wastewater treatment plants. A detailed assessment of sludge loads will be undertaken on a case by case basis where new infrastructure is proposed.

Source: NWSMP, page 9-10

The NWSMP includes an assessment of existing sludge hub centres in Ireland by Local Authority Area. The report notes that there are currently two sludge hubs in operation in County Donegal; one in Donegal Town and Letterkenny; both of which have liquid and cake import facilities and thermal drying facilities. Table 5.41 outlines the current sludge treatment capacity (PE) for each of the sludge hubs in Donegal. In addition the Letterkenny centre has a facility for anaerobic digestion; however this is currently not in use.

Table 5.41: Current Sludge Treatment Capacity for Donegal

Local Authority	Agglomeration	Sludge Treatment Process	Current Sludge Treatment Capacity (PE)*
Donegal	Letterkenny	Thermal Drying	120,000
Donegal	Donegal Town	Thermal Drying	83,000

Note: *The current sludge treatment capacity has been estimated based on available information. Population equivalent has been estimated based on sludge production of 55g/PE/day

Source: NWSMP, Table 7.1, page 46

The NWSMP notes that the sludge hub centres in Donegal were both constructed in the last 10 years and are considered to have sufficient capacity for the foreseeable future. The wastewater treatment plant at Buncrana acts as a satellite sludge hub centre and while it currently accepts imports of liquid sludge however it does not have adequate facilities to allow efficient sludge acceptance. Having regard to this, the NWSMP suggests that improved sludge facilities are recommended at the Buncrana treatment plant in order to facilitate the efficient management and treatment of sludge at this facility.

¹⁹ www.water.ie/projects/plans

The NWSMP assessment concludes that no additional sludge satellites are considered to be required in Donegal.

5.15 Waste Water Treatment Systems Serving Single Houses

Wastewater treatment systems serving single houses has been highlighted as a significant issue within the County in terms of pollution control and public health. Circular letter PSSP 1/10 issued by the Department of Environment, Heritage and Local Government on 5th Jan 2010 refers to the European Court of Justice ruling against Ireland in relation to wastewater treatment systems (ref. Case C-188/08) serving single houses in un-serviced areas. The court found that Ireland had failed to comply with the requirements of Articles 4 and 8 of the Council Directive 75/422/EEC (as amended) (Cavan County Council being the only exception).

The Circular relies heavily on the implementation of the EPA 'Code of Practice for Wastewater Treatment Systems for Single Houses' (2009). The EPA Code of Practice establishes an overall framework of best practice in relation to the development of wastewater treatment and disposal systems, unsewered rural areas, for protection of our environment and in particular water quality. Figure 5.21 illustrates the number of unsewered properties in the Plan area.

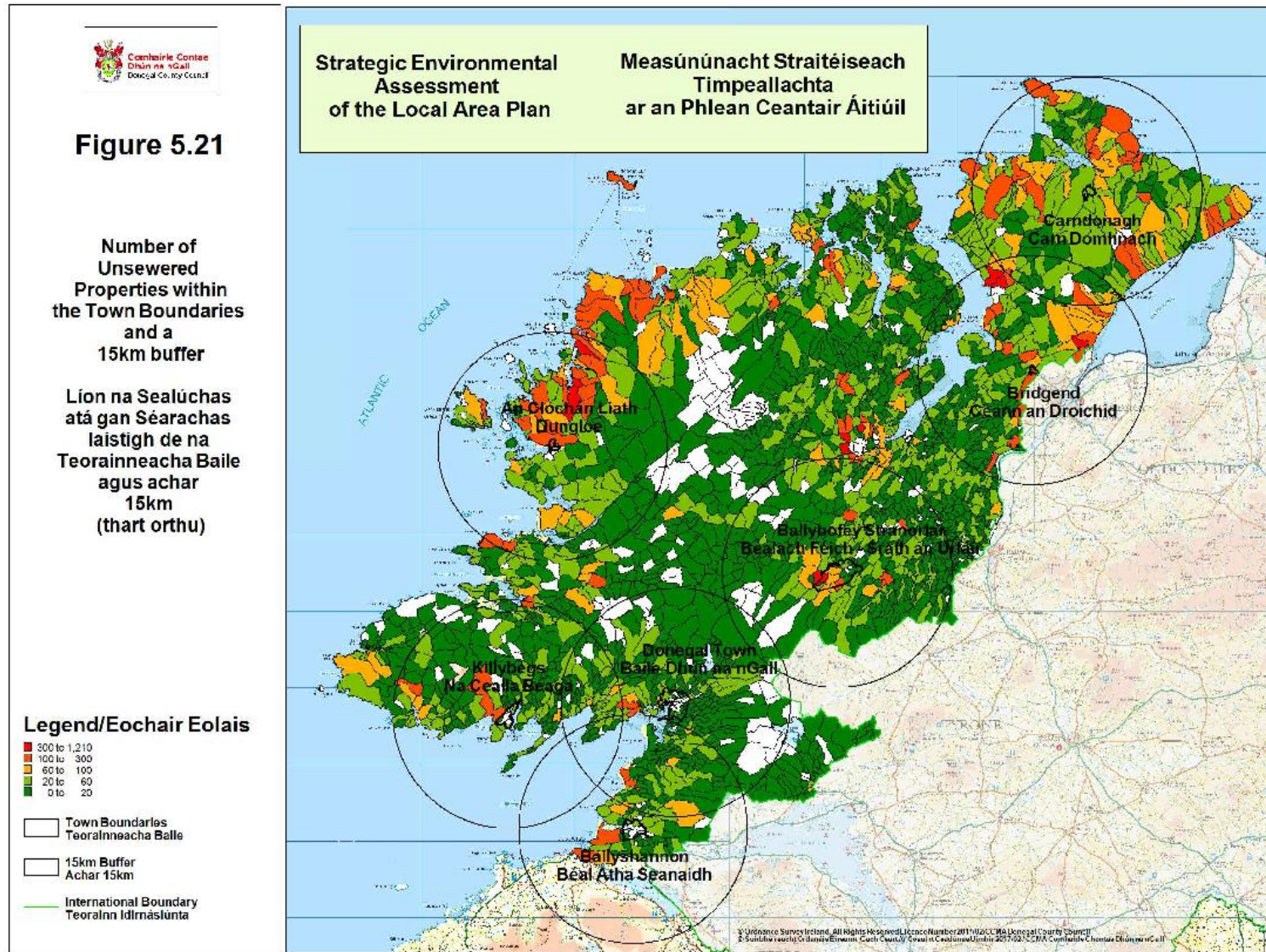
In 2015 the EPA published its second 'National Inspection Plan 2015-2017' (NIP) for waste water treatment systems. The NIP addresses the requirements of Articles 4 and 8 of the Council Directive on Waste 75/422/ECC (C-188/08); in particular through the provision of regular checks and inspections of domestic wastewater treatment systems. It is also considered to address the requirements of the Water Framework Directive (WFD), to achieve 'good status' for all waters through enhanced protection of all water bodies (surface, ground and coastal waters).

The aim of the NIP is to protect human health and water from the risks posed by domestic wastewater treatment systems with inspections to be carried out nationwide by Local Authority Inspectors (appointed by the EPA). The NIP adopts a two stand approach based on engagement strategies and site inspections. It is the goal of the NIP *"that all rural homeowners with domestic waste water treatment systems will know what to do to ensure their systems are well operated and maintained and act voluntarily to achieve this."* (NIP, Pg. 1)

The stated aims and objectives of the NIP are to ensure that:

- *"Appropriate treatment of domestic waste water is in place;*
- *Treatment systems are adequately operated and maintained;*
- *Risks to human health and the environment are identified and managed;*
- *Public awareness is raised; and*
- *Information is available to owners of domestic waste water treatment systems regarding their responsibilities and how to operate and maintain their systems."* (NIP, Pg. 1)

Figure 5.21: Number of Unsewered Properties within the Town Boundaries and a 15km buffer



It is envisaged that a minimum of 285 no. inspections will be carried out in the Donegal County Council administrative area up to the end of 2017 as set out in Table 5.42.

Table 5.42: Number of Inspections to be carried out in County Donegal during the period 2015-2017

Local Authority Area	Minimum number of inspections 2015-2017	2015	2016	2017
Donegal County Council	285	95	95	95

Source: NIP 2015-2017, Table 1, pg. 14

The NIP states that an environmental risk-based methodology is used to identify the sites for inspections in each Local Authority area. A summary of factors taken into consideration for the EPAs risk assessment methodology are illustrated in Table 5.43.

Table 5.43: Summary of Factors Taken into Consideration for Risk Assessment Methodology

Local Authority Area	Total Area	Minimum number of inspections per Local Authority Area	% of Local Authority Area at Very High Risk	% of Local Authority Area with extreme GW Vulnerability	% of LA Area with V. high likelihood of Inadequate percolation	% of Local Authority Area within catchment of sensitive receptors	DWWTs density ¹⁵ (number of systems per km ²)
Donegal County Council	4742	95	22	74	15	63	12

Source: NIP 2015-2017, Table A.1, pg. 24

A significant number of the sites for inspection are located adjacent to sensitive waters as illustrated in Table 5.44. In addition shellfish protected areas are now included in the NIP for the first time.

Table 5.44: Extent of Donegal County Council in Each Risk Category and No. of Site Inspections

	Extent of Donegal County Council in each Risk Category	Number of Inspections for Donegal County Council per risk Category 2015-2017
TOTAL	4,742km²	285 no. Inspections
	Total Risk Category Area (%)	Outside Catchment Areas of Sensitive Receptors
Zone 1A Low	24	12
Zone 2A Moderate	3	6
Zone 3A High	2	6
Zone 4A Very High	7	33
	Catchment Area of Sensitive Receptors (%)	Inside Catchment Areas of Sensitive Receptors
Zone 1B Low	36	36
Zone 2B Moderate	6	18
Zone 3B High	5	27
Zone 4B Very High	15	147

Source: NIP 2015-2017, Table A.2 and A.3, pg. 25-26

In 2016 the EPA published the 'National Inspection Plan Domestic Waste Water Treatment Systems: Fourth Implementation Report 1st January – 31st December 2015' (Implementation Plan). This is the first implementation report on the 2015-2017 NIP and covers the period 1st January to 31st December

2015. Table 5.45 shows the progress of Donegal County Council towards meeting the inspection targets and the failure rate at the time of inspection.

Table 5.45: Results of Inspection Targets and Failure Rates for County Donegal to End of 2015

Local Authority Area	Target No. of Inspections	Inspection Shortfall in 2014	Total Submitted Inspections	Total No. Systems Passed Inspection	Total No. Systems Failed Inspection
Donegal County Council	95	N/A	93	60	33

Source: NIP 2015-2017 4th Implementation Table 1, pg. 6

Table 5.46 outlines the number of inspections by risk zone in the Donegal County Council area for the period from 1st January to 31st December 2015.

Table 5.46: Number of Inspections by Risk Zone for County Donegal in 2015

Risk Zone	Total No. Submitted Inspections	Total No. Compliant Inspections	Total No. Non-Compliant Inspections	Total No. Open Advisory Notices	Total no. Closed Advisory Notices
1a Low	0	0	0	0	0
1n Low and in ASI	10	6	4	3	1
2a Moderate	1	1	0	0	0
2b Moderate and in ASI	8	5	3	3	0
3a High	8	3	5	2	3
3a High and in ASI	9	5	4	0	4
4a Very High	16	13	3	1	2
4b Very High and in ASI	39	25	14	8	6
RNC risk not calculated	0	0	0	0	0
Unknown	2	2	0	0	0
TOTAL	93	60	33	17	16

Source: NIP 2015-2017 4th Implementation Table A.2, pg. A.6

Table 5.47 outlines the reasons for non-compliance as a result of inspections carried out by Donegal County Council from 1st January to 31st December 2015.

Table 5.47: Advisory Notices and Reasons for non-compliance as a result of inspections carried out by Donegal County Council from 1st January to 31st December 2015

Advisory Notices and Reasons for Non-Compliance	No.
Total No. of Inspections	93
Total No. of Advisory Notices	33
Leakage from the system	12
Unlicensed discharge to SW or inadequate subsoil thickness	25
Surface Ponding	7
Roof water or SW entering the system	12
Operation and Maintenance	21
Desludging	10
Risk to human health or the environment	25

Source: NIP 2015-2017 4th Implementation Table A.3, pg. A.20

Table 5.48 shows the status of advisory notices issued by Donegal County Council for the period 1st January to 31st December 2015 (as of 10th August 2016).

Table 5.48: Status of Advisory Notices issued by Donegal County Council from 1st January to 31st December 2015

Status of Advisory Notices	No.
Total No. of Advisory Notices Submitted	33
Total No. of Open Advisory Notices	17
Total No. of Closed Advisory Notices	16
Total No. Extensions Decision Granted	1
Total No. Extensions Decision Refused	0
Total No. Confirmed Advisory Notices	0
Total No. Cancelled Advisory Notices	0
Total No. Open-Prosecution Pending	0
Total No. Open-Court Appeals	0

Source: NIP 2015-2017 4th Implementation Table A.6, pg. A.23

In regard to Donegal County Council the EPA's Implementation Plan found that in 2015 there was a minor shortfall of 2% as a result of two occasions where the inspectors failed to find the owners at home when they arrived to do the inspections. The Local Authority has agreed to make up the shortfall. The EPA findings show that the overall non-compliance rate is decreasing which is considered encouraging and the number of compliant systems is increasing as works are being carried out by homeowners to rectify problems identified during inspections. It was also found that where failure rates persist simple actions by homeowners are required to rectify matters rather than structural change to wastewater treatment systems. The EPA in its supervisory role will continue to monitor the results of the inspections carried out by Donegal County Council and in particular the actions in relation to closing out advisory notices. In addition the EPA will continue to carry out audits via its statutory performance functions to ensure that the system is robust.

5.16 Drinking Water

Since 1st January 2014 Irish Water is responsible for the production, distribution and monitoring of drinking water from 962 public water supplies, serving 83% of Ireland's population. The remainder of the population is supplied by group water schemes (c. 6%), small private supplies (c. 1 %) and private wells (c. 11%). Responsibility for the water quality rests with the manager/operator of the supply. Irish Water is responsible for the monitoring of public water supplies and the local authorities are responsible for monitoring of group water schemes and regulated small private supplies. The Environmental Protection Agency (EPA) produces annual reports on these monitoring results. Since 2015, the EPA produces a separate Public Supply Drinking Water Report and Private Supply Drinking Water Report; previously a single report was produced outlining drinking water quality in both public and private supplies.

New drinking water regulations came into force in 2014 'European Communities (Drinking Water) Regulations 2014 (S.I. 122 of 2014)'. These regulations provide the EPA with supervisory powers for public water supplies; essentially the EPA can direct Irish Water to improve the management or quality of a public water supply. Local Authorities have a similar supervisory role in relation to group water schemes and private supplies. Under the regulations Irish Water must notify the EPA of drinking water non-compliances or risk to public health from a public water supply.

5.16.1 Public Water Supplies

The core principle of the EPA's regulation of public drinking water supplies is to ensure supplies are safe and secure through on-going monitoring/testing and management of systems to ensure a constant and

reliable supply of drinking water. In 2016 the EPA published its 'Drinking Water Report for Public Water Supplies 2015'. This report provides an overview of the Quality of drinking water in public supplies in Ireland during 2015. Table 5.49 summarizes the findings of the EPA monitoring programme for public water supplies for the period 2012-2015.

Table 5.49: Summary of EPA's Monitoring Programme for Public Water Supplies from 2012-2015

Donegal Public Water Supplies		2012	2013	2014	2015
Public Supplies ¹	Number	34	33	32	32
	Population affected	136, 579	136, 294	135, 794	135, 794
Parameter Compliance (%) ²	Microbiological	100	100	100	100
	Chemical	99.1	99.1	99.2	97.8
Chemical Non-Compliance	Number of Public Supplies	28	26	21	n/a
Boil Notices ³	Number	0	0	0	0
	Population affected	0	0	0	0
Water Restrictions ³	Number	0	0	0	1
	Population affected	0	0	0	6,000
Remedial Action List ⁴	Number of Supplies	14	10	10	11
	Population affected	49, 808	39, 508	39, 508	39, 508
Directions ⁴	Number Issued	8	8	9	1
Audits ⁵	Number	2	2	3	n/a

Source: Drinking Water Report for Public Water Supplies, EPA

Notes:

1. Full list of public water supplies (PWS) available at: <http://www.epa.ie/pubs/advice/drinkingwater/publicdrinkingwatersupplies>
2. Drinking Water Monitoring results and water supply details for each year since 2000 for each county is available at <http://erc.epa.ie/safer/resourcelisting.jsp?oID=10206&username=EPA%20Drinking%20Water>
3. Boil notice and water restriction numbers included above refer to notices that were the responsibility of either Irish Water or both Irish Water and the property owner to resolve. Further notices may have been in place in certain areas which were the responsibility of the property owner only
4. The RAL is a list of PWSs where remedial action is required to ensure compliance with the requirements of the Drinking Water Regulations. 'The Remedial Action List for public drinking water supplies focuses attention on resolving the most serious deficiencies in public water supplies.' Current RAL list is available at <http://www.epa.ie/pubs/reports/water/drinking/>.
5. Audit reports available at <http://www.epa.ie/pubs/advice/drinkingwater/audits/>

The findings of the EPA 2015 Drinking Water Report show that overall compliance of microbiological and chemical parameters in Donegal's public water supply in 2015 remains consistent with 2014 figures. While there was one additional public water supply on the EPA remedial action list in 2015 the number of people affected remains the same as 2014. In 2017, the EPA published an updated list of Irish Water Public Drinking Water Supplies on the EPA's remedial action list for Q2 of 2017. None of the seven towns in the LAP area are included on the EPA's current remedial action list.

One of the strategic objectives of Irish Waters 'Water Services Strategic Plan (WSSP), 2015' is to ensure a safe and reliable water supply; the aims under this objective are to:

- *Manage the sustainability and quality of drinking water from source to tap to protect human health.*
- *Manage the availability, sustainability and reliability of water supply now and into the future.*
- *Manage water supplies in an efficient and economic manner". (WSSP, pg V)*

Irish Water recognise that safe and reliable water supplies are essential to public health, social and economic growth. It is acknowledged in the WSSP that water quality from some of the public water supplies do not meet the current Drinking Water Quality Regulations due to microbiological contamination or exceedances of other water quality parameters. Irish Water has identified a set of actions to address the challenges in relation to water quality supply issues including:

- *Prepare and implement a National Water Resources Plan for the strategic development of water supplies that comply with the water quality standards and build in security of supply through the interconnection, where practicable, of our current water supply networks and the development of new, larger and more secure water sources serving regional schemes.*
- *Prepare and implement Drinking Water Safety Plans to protect our water supplies in accordance with international best practice, eliminating Boil Water Notices other than from short term extreme events.*
- *Implement a Lead in Drinking Water Mitigation Plan to reduce the potential for water to dissolve lead from pipework and to replace our public lead water mains over a ten year period.*
- *Implement a national set of Standard Operating Procedures in our water treatment plants and networks to ensure their correct, efficient and safe operation.*
- *Manage all our water abstractions to minimise their impact on the environment.*
- *Implement regional water conservation strategies to reduce leakage from our water mains by over 50% in the period of the WSSP.*
- *Adopt an asset management approach to maintenance and investment in our infrastructure and equipment so that we maximise the lifespan of our assets for consistent levels of service at least cost, utilising the capabilities and systems established in Irish Water.*

Key targets in relation to ensuring a safe and reliable water supply by the end of 2021, 2027 and 2040 include;

- Drinking Water Microbiological Standards – increase the percentage of samples complying with water quality standards from the current baseline of 99.82% to 99.99% by the end of 2021 and maintain that compliance rate.
- Leakage of Treated Water – reduce the current leakage rate of approximately 49% to less than 38% by the end of 2021, to 30% by 2027 and to an economic level of leakage by 2040.

Irish Water's Draft Capital Investment Plan 2017-2021 (IP2) identifies c. €150 million investment in Projects and Programmes in County Donegal over the next 4 years in accordance with the provisions of the Water Services Investment Programme; c. €68 million of which is allocated for drinking water (note: this is subject to CER approval). Separately, a €13.8 million project known as the Donegal Countywide Water Mains Rehabilitation Project is also planned to replace and rehabilitate approximately 45km of old watermains across the County. This will involve the replacement of 15 priority sections of watermain spread over seven water supply schemes, including Ballyshannon. Once completed, over 30,000 customers on these supply schemes will benefit from improved service and water quality. Proposed drinking water projects for each of the seven towns are described below.

An Clochán Liath (Dungloe)

Improvements to the Crolly Water Treatment Plant and works to identify additional water resources will be undertaken by Irish Water over the next investment period (2017-2021). Additional works include the replacement of pipework within the Rosses Regional WSS network as part of the Countywide Water Main Rehabilitation Project and intensification of find and fix activities to reduce existing leakage levels. The Countywide Water Main Rehabilitation Project includes a section of watermain to be replaced along Quay Road in Dungloe.

Ballybofey-Stranorlar

Irish Water is currently undertaking the Ballybofey Watermains Rehab Project. This €1 million investment in the water network in Ballybofey is part of the Donegal Countywide Water Main Rehabilitation Project. Upon completion, this project will result in significant improvements in network performance and levels of customer service in terms of efficiency and security of supply. It will also benefit customers by reducing disruptions in supply and improving water quality. Estimated date for completion of the project is Autumn 2017.

Ballyshannon

Irish Water intends to invest c. €17.5 million in the Ballyshannon Regional Water Supply Scheme. The demand area for the scheme consists of a large part of the southern region of Donegal and includes the towns of Ballyshannon, Rosstown, Bundoran and the rural areas southwest of Donegal Town including Ballymagroarty, Cashelard, and Rath/Lisminton. The project includes a new treatment plant at Knadar, Ballyshannon and extension of the network to facilitate connection of other supply schemes to the new plant. Once completed the existing plant at Ballyshannon will be decommissioned. The new plant at Ballyshannon will serve over 9,000 customers across this region.

Bridgend

Bridgend is currently fed by Pollam Dam and there is a proposed extension of Pollam Dam towards Carndonagh. At present water treatment capacity and water availability are adequate in Bridgend.

Carndonagh

Carndonagh is currently fed from the Inishowen West Scheme and the intention is to change this to the Pollam Dam over the next 5 years therefore this is in the 2017- 2021 Plan. As part of this project, it is intended to rationalise some of the smaller plants also to reduce operational costs

Donegal Town

At present water treatment capacity and water availability are adequate in Donegal Town.

Killybegs

Irish Water intends to invest c. €9 million in the Killybegs Regional Water Supply Scheme over the next investment period (2017-2021) to increase the water processing capacity of the existing Killybegs treatment plant will over the next investment period (2017-2021). The project will increase the water processing capacity of the existing Killybegs treatment plant from 6 to c. 11.85 million litres per day along with new reservoir storage. This will ensure adequate supply to the 5,000 customers served by this scheme, particularly during peak times. This project is particularly important for the fish processing industry in this region.

5.16.2 Public Water Supplies – Recommendations

The recommendations made in relation to public water supplies are based on the EPA's findings on drinking water quality during 2015 and findings of the EPA audits in the 'Drinking Water Report 2015'. The EPAs recommended priority actions for public water supplies are listed in Table 5.50:

Table 5.50: EPAs Recommended Priority Actions for Public Water Supplies

Eliminate Long-Term Boil Water Notices	<ul style="list-style-type: none"> ▪ Ensure the Capital Investment Plan provides investment to address all boil water notices. ▪ Implement the 'National Disinfection Strategy' to reduce the risk of long-term boil water notices and improve the safety and security of supply. ▪ Fast track the necessary improvement works ahead of the 'National Disinfection Strategy'. <ul style="list-style-type: none"> ➢ Provide <i>Cryptosporidium</i> barriers on all surface water or surface water-influenced groundwater supplies. ➢ Meet the minimum disinfection criteria as published by the EPA. ▪ Monitor all supplies for <i>E.Coli</i>. ▪ Provide comprehensive and timely information to the EPA on investigations into exceedances of microbiological. ▪ Implement raw water monitoring programmes to inform treatment system design, operation and management. ▪ Deliver resilient treatment plants able to cope with severe weather and changes in the nature of the raw water source. ▪
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Implement Action programmes for Improved THM Treatment	<ul style="list-style-type: none"> ▪ Develop and implement a National Trihalomethanes (THMs) Strategy to reduce THM exceedances. ▪ Implement an optimisation programme for chemical dosing and review/upgrade chemical dosing processes in supplies in order to reduce THMs and aluminium exceedances. ▪ Assess disinfection dosing under the national disinfection programme. ▪ Implement adequate out of hours response backed up by suitable, real-time monitoring process parameters and response to alarms. ▪ Deliver resilient treatment plants able to cope with severe weather and changes in the nature of the raw water sources. ▪ Publish comprehensive programmes, with timeframes for key milestones, for EPA RAL supplies. ▪ Provide comprehensive and timely information to the EPA on progress made with supplies on the RAL. ▪ Develop and implement a national mains cleaning and maintenance programme.
Implement the National Lead Strategy	<ul style="list-style-type: none"> ▪ Engage with all stakeholders to continue to finalise and implement Irish Water's Lead in Drinking Water Mitigation Plan – Issues Paper. ▪ Issue advice letters to properties with lead connections as they are identified. ▪ Implement the expanded monitoring programme for lead. ▪ Identify public buildings with internal lead plumbing which require action under the National Lead Strategy. ▪ Encourage increased replacement of private side lead under the National Lead Strategy.
Progress Action Programmes for all RAL Schemes	<ul style="list-style-type: none"> ▪ Ensure the Capital Investment Programme provides investment to all supplies on the RAL. ▪ Publish comprehensive action programmes, with timeframes for key milestones, for EPA RAL supplies. ▪ Provide comprehensive and timely information to the EPA on progress made with supplies on the RAL and on investigations into exceedances of the parametric values.
Protect Sources and Abstraction Points	<ul style="list-style-type: none"> ▪ Engage with stakeholders and develop catchment-based measures (including water safety plans) aims at improving the quality of drinking water sources including specific measures to address the risk from pesticide use and excess nitrate run-off in drinking water catchments. ▪ Develop and implement a National Pesticides Strategy. ▪ Implement raw water monitoring programmes to inform treatment system, design, operation and management.
Develop Drinking Water Safety Plans	<ul style="list-style-type: none"> ▪ Implement the Water Safety Plan approach in all supplies and as a guide to future capital investment. ▪ Develop resilient treatment plants able to cope with future expansion and predicted risks in the supply. ▪ Protect sources from contamination. ▪ Develop a structure for minimum qualification, training and experience standards for water service employees in key operations positions (for example supervisors and plant operators).

Source: Drinking Water Report for Public Water Supplies, EPA 2015, Section 4.2, pg. 28-29

Having regard to the EPA's priority actions the following recommendations are suggested for public water supplies in the LAP area:

Irish Water should ensure that all failures to meet the microbiological, chemical and indicator parametric values are investigated to ensure that the cause of the failure is identified and the appropriate corrective action is taken. Lessons learnt and corrective measures should be implemented in other supplies in the County.

Irish Water should ensure that all disinfection systems are operated in such a way that undisinfected water does not enter the distribution mains at any time. Irish Water should meet the minimum disinfection criteria as published by the EPA and should optimise the disinfection system to minimise trihalomethanes (THMs) formation.

Irish Water should review the management of chlorine monitors and alarms and ensure that such monitors are managed correctly (i.e. in the correct location and with an appropriate alarm setting) and that documented response protocols are in place for dealing with activations of the alarm.

Irish Water should implement the World Health Organisation (WHO) Water Safety Plan approach to the management of water supplies.

Irish Water should prioritise improvement works on supplies with a boil water or water restriction notice in place on all or part of the supply in order to have the required works completed as a matter of urgency. Following completion of the works, Irish Water must liaise with the Health Service Executive in order to determine whether the completed works allow the removal of the boil water notice or restriction.

In relation to public water supplies without a *Cryptosporidium* treatment barrier in place and those that are using surface water or water influenced by surface water as their source, Irish Water should implement an appropriate improvement plan without delay which may involve upgrading, replacing or closing the plant.

Irish Water should implement the lead mitigation options identified in its Draft Lead in Drinking Water mitigation Plan' in order to reduce exposure to lead in drinking water. Irish Water will identify and prioritise public water supply areas and target properties at risk of failing to meet the lead standards in order to reduce the potential to human health.

5.16.3 Private Water Supplies

In 2017 the EPA published a report entitled 'Focus on Private Water Supplies'. The Report notes that almost 20% of people in Ireland, generally in rural areas, get their drinking water from private supplies. The EPA identifies four categories of private water supplies as follows:

- **"Public Group Schemes** are supplies where the abstraction and treatment of the water is managed by Irish Water and the distribution of treated water to the users is managed by a local community group.
- **Private Group Schemes** are supplies where the abstraction, treatment and distribution of treated water are all managed by a local community group.
- **Small Private Supplies** are supplies serving a commercial or public activity, and the abstraction, treatment and distribution of treated water are managed by the commercial or public entity. Examples of commercial or public activities served by small private supplies include pubs and restaurants, crèches and national schools.
- **Household Wells** are supplies that supply a volume of water less than 10 cubic metres a day or serve fewer than 50 people, and do not supply a commercial or public activity. Many private households in rural Ireland are supplied by household wells and the responsibility for managing the supply lies with the householder." (Focus on Private Water Supplies', EPA, pg. 2)

Private water suppliers are responsible for providing clean and safe drinking water to consumers. Local Authorities have a responsibility to help private water suppliers achieve this aim, in conjunction with the

Department of Housing, Planning, Community and Local Government, the EPA and the Health Service Executive (HSE). Local Authorities are also responsible for the monitoring of private supplies to ensure they meet the requirements of the 2014 Drinking Water Regulations by:

- Sampling private water supplies to check their water quality
- Investigating where water quality standards are breached
- Assisting private supply owners with advice and guidance to improve their water quality.
- Taking enforcement action of private water supplies are not taking steps to improve water quality supplies that fail to meet the standards.

The EPA Report acknowledges that water quality in private water supplies is consistently poorer than public water supplies. As such it is recognised that private water supplies should be monitored on a regular basis to assess the quality of drinking water being delivered to consumers in order to reduce the potential to human health. Private water supplies serving 50 or more people must be sampled twice a year at the very minimum. In addition the EPA recommends that all water supplies are monitored at least once a year for *E. coli* as its presence can cause serious illness to water users, particularly vulnerable users such as children, older people and those with low immunity or underlying medical conditions. Table 5.51 lists the water quality information for private water supplies in Donegal in 2015.

Table 5.51: Water Quality Information for Private Water Supplies in Donegal in 2015

Donegal Private Water Supplies		2015
Public Group Schemes	Number	7
	Population	3,140
Private Group Schemes	Number	6
	Population	754
Small Private Supplies	Number	27
	Population	1,402
Boil Notices	Number	n/a
	Population Affected	n/a
Directions	Numbers Issued	n/a
Audits	Number	n/a

Source: 'Focus on Private Water Supplies', EPA, 2017, Appendix 4 pg. 19

5.16.4 Private Water Supplies – Recommendations

The recommendations made in relation to private water supplies are based on the EPA's findings in the 'Focus on Private Water Supplies' published in 2017. The EPAs recommended priority actions for private water supplies are listed in Table 5.52.

Table 5.52: EPAs Recommended Priority Actions for Private Water Supplies

All Water Supplies	<ul style="list-style-type: none"> ▪ Monitor all supplies serving a population greater than or equal to 50 people or supplying a volume of water greater than or equal to 10m³/day, at least twice a year. ▪ Monitor all supplies for <i>E. coli</i> at least once a year, regardless of the size of the supply. ▪ Construct wellheads above ground level and seal and cap the wellhead. ▪ Fence off around the well and surface water abstraction points to prevent animal access. ▪ Be aware of set-back distances for landspreading close to wells or surface water
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	<p>abstraction points and ensure that any local landowners falling within these set-back distances are aware of them.</p> <ul style="list-style-type: none"> ▪ Do not use pesticides or other chemicals around a well of surface water abstraction point. ▪ Visually inspect abstraction points for contamination on a regular basis.
Public and Private Group Water Schemes	<ul style="list-style-type: none"> ▪ Ensure disinfection is in place at all surface water supplies or those influenced by surface water and, where chlorine is used, ensure that a minimum chlorine residual of 0.1 mg/l can be detected at the last customer on the network. ▪ When using chlorine as a primary disinfectant ensure a minimum contact time of 15 mg.min/l with the treated water before the water reaches the first customer on the network. ▪ Ensure that adequate controls and management tools are in place for treatment systems. Chemicals should be fit for drinking water purposes and in date and a user guide should be available. ▪ Implement the guidance developed by the National Federation of Group Water Schemes on Quality Assurance (HACCP) System by Group Water Schemes.
Household Well Owners	<ul style="list-style-type: none"> ▪ Monitor all household wells for E. coli at least once a year. ▪ Use the EPA Protect Your Well application to assess your well for contamination at least once a year. ▪ Disinfect boreholes and household wells if any microbiological failures, particularly E. coli are identified.
Local Authorities	<ul style="list-style-type: none"> ▪ Inform private supplies of their monitoring results as soon as they become available. ▪ Use the enforcement powers available to local authorities to drive water quality improvements. Prioritise supplies that have serious water quality issues or slow to implement local authority recommendations. ▪ Investigate all failures to meet water quality parametric values in private water supplies to ensure the cause of the failure is identified and appropriate corrective action is taken. Particular focus should be given to parameters that can impact human health such as E. coli.

Source: 'Focus on Private Water Supplies', EPA, 2017, Section 4, pgs. 12-14

Donegal County Council is responsible for ensuring that public and private group schemes and small private supplies are adequately monitored throughout the year. Where monitoring shows poor water quality Donegal County Council is responsible for ensuring action is taken to rectify water quality issues.

Donegal County Council should ensure that all failures to meet the microbiological, chemical and indicator parametric values in private water supplies are investigated to ensure that the cause of the failure is identified and the appropriate corrective action is taken. Donegal County Council should take the appropriate enforcement action where there is evidence that such investigations and actions are not being undertaken.

Where a group water scheme has not prepared a corrective action programme in accordance with the requirements of the Drinking Water Regulations and where there is little evidence of action being taken to improve the quality of the water supply, the local authority should use enforcement powers under the Regulations to bring the supply into compliance.

Donegal County Council should ensure that operators of public group water schemes clean and maintain the distribution networks regularly so that the quality of the water supplied by the local authority does not deteriorate in the group water schemes distribution network.

5.17 Bathing Water Quality

In 2002 the European Commission (EC) undertook a major review of health information relating to bathing waters and in 2006 issued the Bathing Water Directive 2006/7/EC. Its objective is to improve the protection of bather's health and introduced stricter standards for water quality and a new method of assessment. The Directive was subsequently transposed into Irish legislation as the Bathing Water Quality Regulations 2008 (S.I. No. 79 of 2008 as amended by S.I. 351 of 2011). The Bathing Water Regulations came fully into effect on the 31st December 2014.

The primary objectives of the Bathing Water Regulations are:

- To improve health protection for bathers by introducing stricter standards for water quality and a new method of assessment.
- To establish a more pro-active approach to the assessment of possible pollution risks and the management of bathing waters.
- To promote increased public involvement and improved dissemination of information on bathing water quality to the general public.

Local authorities are responsible for the management and monitoring of bathing waters and for the implementation of management measures to reduce or eliminate sources of pollution. Local authorities provide the EPA with details of their planned sampling programme prior to the start of each bathing season. An initial 'pre-season' sample is taken in late May, followed by a minimum of monthly sampling in accordance with the requirements of the Bathing Water Regulations. Sampling is undertaken within 4 days of the planned date to allow for contingencies such as stormy conditions which would render sampling unsafe or where, especially for those island bathing waters, air or ferry transport schedules are disrupted by bad weather.

The EPA's role, as regulator, is to ensure that local authorities carry out their responsibilities in accordance with the Bathing Water Regulations. The EPA, in turn, collate the monitored data collected by the local authorities, undertake water quality assessments and review actions taken by local authorities (if any) in relation to bathing water pollution incidents; this data is then reported to the European Commission in December of each year. It is intended to launch an updated bathing water portal 'beaches.ie' in 2017. The new site is designed to be accessed from mobile devices.

The EPA produce annual reports on Bathing Water Quality in Ireland. The findings of the 'Report on Bathing Water Quality 2016' published in 2017, reports that all of the designated bathing areas in the Plan area have again achieved good water quality status (compliant with EU guide and mandatory values). Water quality assessments undertaken by the EPA for all EU identified waters in Donegal for the period 2014-2016 are presented in Table 5.53.

Table 5.53: Results of EPA Water Quality Assessments for the Plan Area for the period 2014-2016

2014-2016 Status Assessment	2014	2015	2016	Change from 2015	Comments
Bundoran	Excellent	Excellent	Excellent	No change	These waters continue to be of extremely high quality with few pollution sources or events identified
Carrickfinn	Excellent	Excellent	Excellent	No change	
Culdaff	Excellent	Excellent	Excellent	No change	
Fintra	Excellent	Excellent	Excellent	No change	
Lisfannon	Excellent	Excellent	Good	Deteriorated	Lisfannon just exceeded the threshold for Excellent quality due to Enterococci counts
Murvagh	Excellent	Excellent	Excellent	No change	These waters continue to be of extremely high quality with few pollution sources or events identified
Naran	Excellent	Excellent	Excellent	No change	
Portahur, Derrybeg ????	Excellent	Excellent	Excellent	No change	
Rathmullan	Good	Good	Good	No change	Rathmullan showed consistently poorer

					water quality in 2016 than in previous years for E.coli in particular
Rossnowlagh	Excellent	Excellent	Excellent	No change	These waters continue to be of extremely high quality with few pollution sources or events identified
Dooley	n/a	n/a	New	n/a	This beach was newly identified in 2015 and currently have insufficient samples for full classification but would appear to be likely to meet Excellent quality in 2017 given current performance

Source: Report on Bathing Water Quality 2015', EPA, Section 5, pg. 26

5.17.1 Blue Flag Beaches

The Blue Flag is an international award for beach excellence which is operated in Ireland by An Taisce, on behalf of the Foundation for Environmental Education (FEE). The Blue Flag programme is funded in Ireland by the Department of the Environment, Community and Local Government. The award is presented to beaches and marinas which have excellent water quality, and which achieve high standards across a wide range of other criteria including environmental education, management of the environment, safety and other services.

In 2017 County Donegal was awarded twelve Blue Flags for its beaches, down from a total of thirteen in 2016. Lisfannon Beach, to the north-west of Bridgend, did not retain its Blue Flag status for 2017 as a result of the annual bathing water classification being downgraded from Excellent to Good status based on samples taken over the previous 4 bathing seasons. Seven of the County's Blue Flag beaches are located within the Plan area as illustrated on Figure 5.22. Information in relation to the beaches is summarised below from information obtained on the Blue Flag Ireland website www.blueflagireland.org.

An Clochán Liath (Dungloe)

There are two Blue Flag Beaches located within the zone of influence of the Plan for An Clochán Liath (Dungloe), Naran/Portnoo and Carrickfinn.

Naran/Portnoo Beach is located to the south of An Clochán Liath (Dungloe) at the southern boundary of the 15km buffer facing Gweebarra Bay. The beach can be reached by travelling north on the R261 Regional Road from Ardara heading towards the village of Nairn. It is an extensive sandy beach set in a rural environment with a vast sand dune system. The coastal area here is a designated Special Area of Conservation (SAC), Special Protection Area (SPA) and a proposed Natural Heritage Area (pNHA) which exhibits a highly diverse range of both coastal and terrestrial habitats.

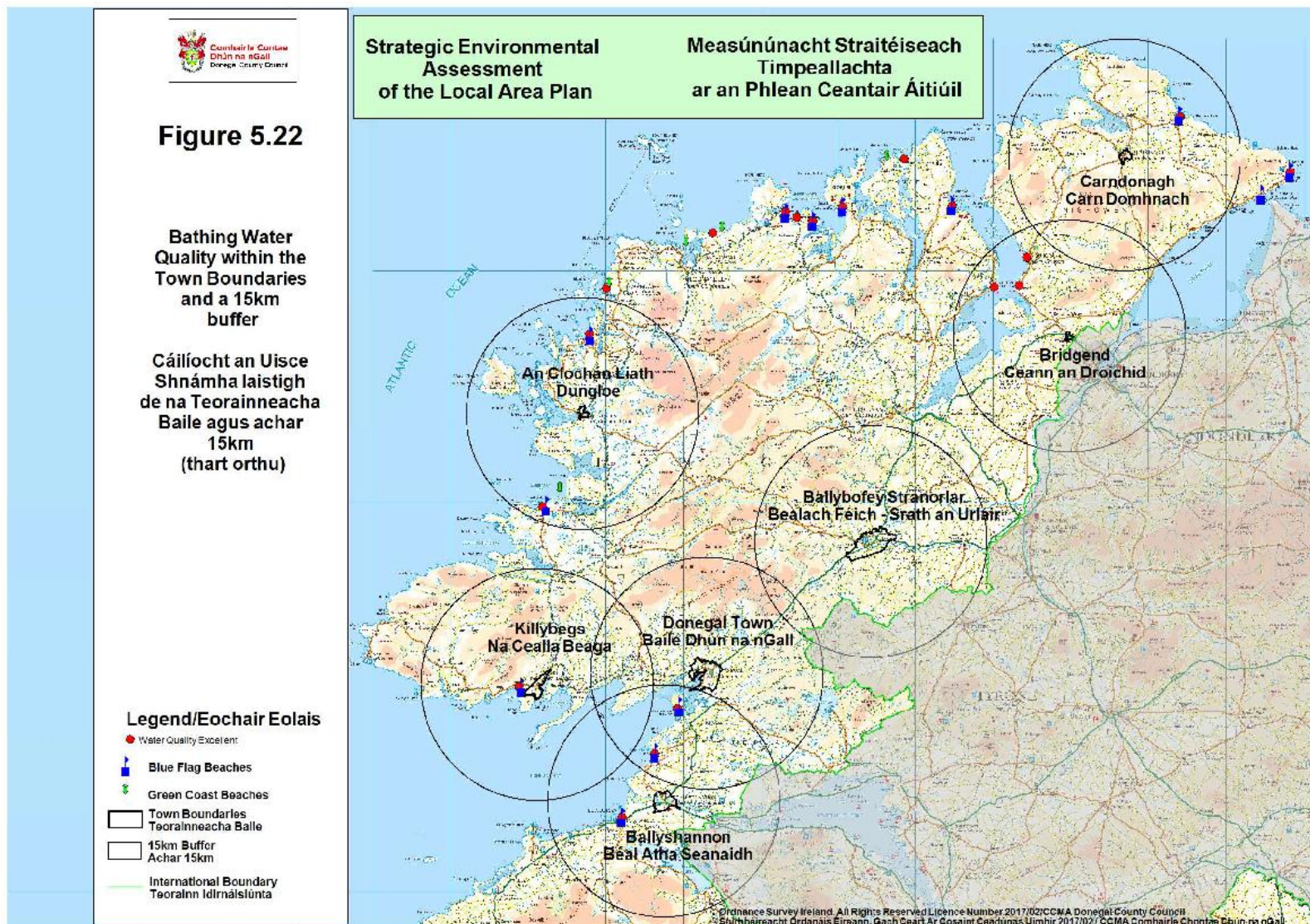
Carrickfinn Beach is located to the north of An Clochán Liath (Dungloe), adjacent to Carrickfinn Airport, facing Inishfree Bay and Gweedore Bay. The beach is reached by travelling north on the R266 Regional Road from the town of Annagary. It is an extensive sandy beach with a good dune system. The coastal area here is a designated SAC, SPA and a pNHA with many varied coastal habitats. In addition there are extensive machair grasslands and the area is noted for the presence of rare plant species.

Ballyshannon

There are two Blue Flag Beaches located within the zone of influence of the Plan for Ballyshannon, Bundoran and Rossnowlagh.

Bundoran Beach is located to the south-west of Ballyshannon facing Donegal Bay and the Atlantic Ocean. The beach is accessed via the N15 National Primary Road connecting Sligo to county Donegal. It is bounded to the north and south by rocks and on the east by a promenade roadway. It is a popular destination with surfers. The coastal area here is a designated SPA and a pNHA. In particular, Donegal Bay is a site of high ornithological importance with special conservation interest for Wetland and Waterbirds.

Figure 5.22: Bathing Water Quality within the Town Boundaries and a 15km buffer



Belalt Strand at Rossnowlagh is located to the north-west of Ballyshannon, also facing Donegal Bay and the Atlantic Ocean. The beach is accessed by taking the R231 Regional Road from Ballyshannon. The beach extends to the north for approximately 2km from the cliffs at Coolmore in the south to the intertidal rock outcrop at Carrickfad. The beach is an extensive sandy beach which is popular with local residents and day trippers and is renowned as one of Ireland's main surfing beaches. The coastal area here is a designated SAC, SPA and a pNHA which exhibits a highly diverse range of both coastal and terrestrial habitats.

Carndonagh

There is one Blue Flag Beach within the zone of influence of the Plan for Carndonagh, Culdaff Beach.

Culdaff Beach is located to the north-west of Carndonagh facing the Atlantic Ocean. The beach is accessed off the R243 Regional Road from the town of Malin. It is a sandy beach located on the north-eastern shores of the Inishowen peninsula. The beach is divided into two distinct sections by the rocky headlands of Black Rock, Bucker's Rock and Lady's Rock. Beach use is concentrated primarily to the east between Carratra and the central access points and in the rock coves between Lady's Port and Black pool. The coastal area is a designated SAC and a pNHA with areas of extensive machair grasslands.

Donegal Town

There are two Blue Flag Beaches located within the zone of influence of the Plan for Donegal Town, Rossnowlagh and Murvagh.

Belalt Strand at Rossnowlagh, as described above, is located to the south-west of Donegal Town facing the Atlantic Ocean. It can be accessed by travelling south from the town on the N15 National Primary Road and then westwards on the R231 Regional Road.

Murvagh Beach is located to the south-west of Donegal Town facing Donegal Bay and the Atlantic Ocean. It is accessed off the N15 National Primary Road via Murvagh Village. It is an extensive, well sheltered, sandy beach with a vast dune system. The coastal area here is a designated SAC, SPA and a pNHA which exhibits a highly diverse range of both coastal and terrestrial habitats. As previously noted, Donegal Bay is a site of high ornithological importance with special conservation interest for Wetland and Waterbirds.

Killybegs

There are two Blue Flag Beaches located within the zone of influence of the Plan for Killybegs, Rossnowlagh and Fintra.

Belalt Strand at Rossnowlagh, as described above, is located to the south-east of Killybegs across Donegal Bay. It is reached by travelling east from Killybegs on the N56 National Primary Road towards Donegal Town, before heading south towards Rossnowlagh.

Fintra Beach is located on the outskirts of Killybegs to the west of the town boundary facing Fintragh Bay. It is accessed via the R263 Regional Road from the town. It is a long sandy beach which is sheltered by an extensive dune system. The beach is very popular with locals and also receives a large number of day-trippers to the area in the summer months.

5.17.2 Green Coast Awards

The Green Coast Awards scheme is a symbol of excellence which recognizes excellent water quality, high environmental status, and good management and community involvement. County Donegal was awarded five Green Coast Awards in 2017, one of which is located in the Plan area, as illustrated on Figure 5.19. One of the beaches is located adjacent to the Plan area, just beyond the 15km buffer of one of the towns.

An Clochán Liath (Dungloe).

Dooey Beach is located within the 15km buffer around An Clochán Liath (Dungloe). It is situated approximately 13km south of the town facing Gweebarra Bay. It is accessed via the N56 National

Primary Road from An Clochán Liath (Dungloe). It is an extensive sandy beach which is popular with surfers.

In addition, Port Arthur is located just outside the northern boundary of the 15km buffer around An Clochán Liath (Dungloe) facing Gweedore Bay. The coastal area here is a designated SAC, and a proposed pNHA which exhibits a highly diverse range of both coastal and terrestrial habitats

5.18 Climate Change and Air Quality

Climate change is recognised as a potential threat to the future sustenance of the planet with potential negative impacts on landforms and peoples arising from a warming of the climate and resultant changes in weather patterns, rise in sea levels, loss of habitats, species and ecosystems and other natural occurrences.

Ireland is a signatory to the Kyoto Protocol (1997) and under this had committed to carbon emissions from the domestic economy being no more than 13% above the 1990 levels, the second commitment period under the Kyoto Protocol 2013-2020 to achieving at least a 20% reduction of greenhouse gas emissions by 2020, compared to 1990 levels has been agreed by the EU Council of Ministers. The EU Energy Directive 2009 establishes an overall policy for the production and promotion of energy from renewable sources in the EU and requires the EU to fulfil at least 20% of its total energy needs with renewables by 2020—to be achieved through the attainment of individual national targets. Subsequent to this, the Department of Communications, Energy and Natural Resources published 'The Strategy for Renewable Energy 2012-2020' to inform Ireland's obligations under the aforementioned EU Energy Directive.

The Paris Agreement of December 2015 was made under the UN Framework Convention on Climate Change and Kyoto Protocol. It legally bound the 195 Participating Parties to take the necessary measures designed to restrict global temperature rise to 1.5–2% above pre industrial levels and to achieve net zero global emissions by the second half of the century. A key element of the Agreement is that each of the Parties will commit to what are termed Nationally Determined Contributions (NDCs) designed to achieve the Agreement's goals. These NDCs will be reviewed every five years to assess their effectiveness and will increase in ambition over time. The EU, on behalf of all Member States, has committed to reducing greenhouse gas emissions by at least 40% by 2030 compared to 1990 levels.

The Climate Action and Low Carbon Development Act was published in 2015 (the Climate Act), Ireland's first ever climate change law that provides for the making of:

- 5 year National Mitigation Plans to specify the policy measures to reduce greenhouse gas emissions.
- A National Adaptation Framework to specify the national strategy for the application of adaptation measures in different sectors and by local authorities to reduce the vulnerability of the State to the negative effects of climate change.

The Department of Communications, Climate Change and Environment (DCCAE) published Ireland's first 'National Mitigation Plan' in July 2017. It is envisaged that the measures implemented through the first Plan will lay the foundations for transitioning Ireland to a low carbon, climate resilient and environmentally sustainable economy by 2050 and meeting the Country's targets in accordance with the requirements of the Paris Agreement. Under the 2015 Climate Act, each National Mitigation Plan must specify the policy measures that Government consider are required to manage greenhouse gas emissions and the removal of emissions at a level that is appropriate for furthering the national transition objective set out in that Act²⁰.

²⁰ <http://www.dccae.gov.ie/documents/National%20Mitigation%20Plan%202017.pdf>

The National Mitigation Plan provides a framework for action and accountability for progress as follows:

- 106 distinct actions are included in the final Plan to be implemented across Government in order to advance the national transition agenda;
- Implementation and oversight through a National Mitigation Plan High Level Steering Group which will be chaired by the Minister for Communications, Climate Action and Environment;
- Accountability for progress through the statutory Annual Transition Statement delivered to the Oireachtas which will incorporate a National Mitigation Plan Progress Report;
- A commitment to more integration of climate change into the annual estimates processes and into the Government's Public Spending Code; and
- The Climate Change Advisory Council to review annual progress in line with its statutory mandate.

The National Mitigation Plan lists 60 specific measures already in place in the four sectors concerned to reduce greenhouse gas emissions namely, electricity generation, the built environment, transport and agriculture, forest and land use sectors. Where available, the Plan also provides information on the costs and emissions reduction impact of individual measures. The Plan also lists 17 separate proposals for new measures under development by the Government. Many of the emissions reduction measures and actions set out in the Plan are aligned with and build upon commitments made in the Department of Communications, Energy and Natural Resources (DCENR) White Paper 'Ireland's Transition to a Low Carbon Energy Future, 2015-2030 (the White Paper).

Donegal County Council is currently involved in a process of developing an adaptation paper as part of a National Adaptation Framework (NAF) which is due to be published for statutory consultation by September 2017. The NAF will set out Ireland's first statutory strategy for the application of adaptation measures in different Government sectors, including the local authority sector to reduce the vulnerability of the State to the negative effects of climate change but also to avail of any positive effects that may occur. A primary objective of the NAF will be to bring a clear and strong focus to both the challenges and the opportunities of transitioning to a climate resilient future, and the importance of a positively focussed and cost-effective national transition agenda²¹.

The DCENR's White Paper sets out a framework to guide energy policy between now and 2030, with the aim to improve Ireland's renewable energy target and reduce carbon emissions in accordance with the EU objective of a low carbon society by 2050. The vision is to reduce greenhouse gas emissions from the energy sector by between 80% and 95% compared to 1990 levels by 2050, while ensuring that secure supplies of competitive and affordable energy remain available to our citizens and businesses. The objectives and policies for Renewable Energy developments in the Draft CDP 2018-2024, were drafted in the context of international, European and national directives and legislation including the climate change targets, objectives and policies as detailed in the 'National Renewable Energy Action Plan, 2010', the 'Strategy for Renewable Energy 2012 – 2020' and the 'White Paper on Energy Policy – Ireland's Transition to a Low Carbon Energy Future 2015 – 2030'.

Subsequently, in July 2017, the Department of Housing Planning and Local Government, issued new Planning Guidelines under Section 28 of the Planning and Development Act 2000-2017 (P&D Acts), entitled 'Interim Guidelines for Planning Authorities on Statutory Plans, Renewable Energy and Climate Change'²². The Interim Guidelines clearly state that it is a specific planning policy requirement under Section 28(1C) of the P&D Acts that in making a development plan with policies or objectives that relate to wind energy developments that a Planning Authority must:

- Ensure that overall national renewable energy policy and targets are acknowledged and documented;

²¹<http://www.dcae.gov.ie/en-ie/climate-action/topics/adapting-to-climate-change/national-adaptation-framework/Pages/default.aspx>

²²http://www.housing.gov.ie/sites/default/files/publications/files/interim_guidelines-statutory_plans_renewable_energy_climate_change.pdf

- The CDP must indicate how its implementation over its effective period will contribute to realising overall national targets on renewable energy and climate change mitigation in particular regard to wind energy production and potential wind resource, and
- Demonstrate detailed compliance with the above and ensure that all required associated assessments take account of climate change factors.

The recent guidance from the Department effectively reinforces and clarifies the fact that it is incumbent on Planning Authorities to implement national climate change policies through their development plan processes, and emphasises that the need to combat climate change is to the fore in considering all planning policies and objectives contained within a County Development Plan. It is also a clear indication of continued national support for on-shore wind energy as an appropriate and effective means of achieving national climate change targets. It is acknowledged that 28% of the Country's electricity was generated by renewable energy in 2016, however, in order to meet our climate change targets this needs to be at 40% plus. Therefore, while a significant amount of capacity has been installed this needs to be greatly increased. The National Mitigation Plan notes the following in this regard:

"To date, wind energy has been the largest driver of growth in renewable electricity. The total amount of renewable generation connected to the grid at December 2016 was 3,120MW, of which wind generation was approximately 2,796MW, hydro was 238MW and biomass was 86MW¹⁹. Eirgrid estimates that a total of between 3,900MW and 4,300MW of onshore renewable generation capacity will be required to allow Ireland to achieve 40% renewable electricity by 2020. This leaves a further requirement of between 780MW and 1,180MW to be installed by 2020 if the 2020 electricity target is to be reached, requiring an increased rate of installation."

The EPA report entitled 'Air Quality in Ireland 2015' provides the most up to date key indicators of ambient air quality in Ireland. The Clean Air for Europe (CAFE) Directive (EP & CEU, 2008) and the Fourth Daughter Directive (EP & CEU, 2004) contain the current EU standards for air quality, and also include rules on how member states should monitor, assess and manage ambient air quality. The CAFE Directive is an amalgamation of the Air Quality Framework Directive and its subsequent First, Second and Third Daughter Directives. The CAFE Directive was transposed into Irish legislation by the Air Quality Standards Regulations 2011 (S.I. No. 180 of 2011). The 4th Daughter Directive was transposed by the Arsenic, Cadmium, Mercury, Nickel and Polycyclic Aromatic Hydrocarbons in Ambient Air Regulations 2009 (S.I. No. 58 of 2009).

The EPA is the designated competent authority for the implementation of Irish and EU ambient air quality legislation. They co-ordinate and manage the monitoring programme including a nationwide network of 31 monitoring stations that measure level of pollutants in designated zones and deliver this information in real time at www.airquality.epa.ie. Letterkenny is located within zone C and the remainder of the County is located within zone D. Data for Letterkenny (at 12pm on 31/08/17) is 2-Good and for the remainder of the County (at 12pm on 31/08/17) is 1-Good. No levels above the EU limit value were recorded at any of the ambient air quality network monitoring sites in Ireland in 2015.²³

The EPA are developing a National Ambient Air Quality Programme and published a consultation paper entitled 'National Ambient Air Quality Monitoring Programme 2017-2022, October 2022' requesting comments before 25th November 2016 and it is expected to be published early 2017. The programme will include a review of the monitoring network against current and future legal requirements and explore potential areas for further development and communication of ambient air monitoring in Ireland. The proposed national air monitoring programme is built around three key pillars: national monitoring network, modelling and forecasting and citizen engagement. In Donegal there will be a full monitoring station in Letterkenny and Malin with an indicative monitoring site located at Ballyshannon.

²³ Environmental Protection Agency Air Quality in Ireland 2015

In addition to the forthcoming EPA Monitoring Programme, the DCCAE are in the process of developing a 'Clean Air Strategy' for Ireland with the aim of promoting clean air policies to enhance and protect the quality of the air we breathe. The DCCAE invited submissions in relation to the proposed Clean Air Strategy and prepared a paper to aid discussion. The questions in the paper were posed only as an aid to the consultation process, which closed on at 5.30pm on Friday 28th April 2017. Participants were also invited to comment on other aspects of the proposed approach.

The Clean Air Strategy will provide the strategic policy framework necessary to identify and promote the integrated measures across government policy that are required to reduce air pollution and promote cleaner air while delivering on wider national objectives²⁴. Some examples of potential policy solutions in the DCCAE Clean Air Strategy would be – a continued promotion of the shift from solid fuel as a method of home heating to cleaner alternatives. This is the key issue regarding particulate matter levels in Ireland and the area where there is the greatest scope for improvements in air quality²⁵. Regulation of fuels and government incentives for private home owners to switch to cleaner energy alternatives will play a key role in this which in turn will lead to reductions in emissions.

The European Commission held its first ever Clean Air Dialogue with Ireland on 1-2 March 2017, to promote actions to improve air quality and contribute to Ireland's implementation of EU clean air legislation. The results of this dialogue will also feed in to the consultation process for the DCCAE Clean Air Strategy.

Northern Ireland has a network of 19 air quality monitoring sites and four of these are near the Donegal border and close to the LAP area, 2 in Derry, 1 in Strabane and 1 in Lough Navar; all of these readings were low at 1pm on 31/08/17 and readings are updated daily on www.airqualityni.co.uk. The Department of Agriculture, Environment and Rural Affairs www.daera-ni.gov.uk publish annual reports on air pollution the most recent entitled 'Air Pollution in Northern Ireland 2015', published on 22/11/16, gives an overview of Northern Ireland making no reference to County Donegal.

Other significant occurrences outside Ireland can affect the ambient air quality and in recent years the following two episodes in particular affected north-western Europe and Ireland:

- The Bardarbunga volcanic eruption in Iceland, September 2014 and
- A particulate matter pollution episode that originated in Eastern Europe, April 2014

The EPA Office of Radiological Protection was established in August 2014 when the Radiological Protection Institute of Ireland (RPII) merged with the EPA. The most recent report on Radioactivity in Ireland entitled 'Radioactivity Monitoring of the Irish environment 2012-2013', published by the EPA presents the results of an environmental radioactivity monitoring programme carried out by the then RDII during 2012 and 2013. The data contained therein confirms that whilst there are detectable levels of artificial radionuclides in the environment, they are low.²⁶ There is no data available specific to County Donegal.

Levels of radioactivity in Ireland have been routinely monitored since 1982 and in general the levels measured in 2012-2013 remain fairly constant and broadly consistent with levels reported previously (with the exception of the short-term rise in levels detected during March to May 2011 following the Fukushima accident).

Radon contributes to 55.1% of measured radioactivity in Ireland²⁷ and the EPA Radon Map of Ireland available at www.epa.ie illustrates the 'estimates of the radon levels' throughout the Country. Radon in

²⁴ <http://www.dccae.gov.ie/en-ie/environment/consultations/Pages/National-Clean-Air-Strategy-Consultation.aspx>

²⁵ Environmental Protection Agency Air Quality in Ireland 2015

²⁶ <http://www.epa.ie>

²⁷ Environmental Protection Agency | Radioactivity Monitoring of the Irish Environment 2012-2013

Donegal is estimated at mostly less than 10% with some areas between 10 and 20% in eastern parts of the county and one small area estimated at over 20% on the shores of Lough Foyle.²⁸

The EPA's Guidance note entitled 'Integrating Climate Change into Strategic Environmental Assessment in Ireland', 2015, presents information on the causes and consequences of climate change and how this should be addressed through the plan making process.

Table 5.54 below is extracted from the aforementioned guidance note and is a summary of the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report Findings (IPCC 2013) that reiterates "warming of the climate system is unequivocal."

Table 5.54: Summary of the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report Findings (IPCC 2013)

Climate Aspect	Summary of findings
Observed Changes in the Climate System	Warming in climate system is unequivocal.
Atmosphere	Each of the past three decades has been successively warmer at the Earth's surface than any preceding decade since 1850.
Oceans	"Virtually certain" that upper ocean (0–700 m) has warmed from 1971 to 2010.
Sea Level	Rate of sea level rise since mid-19th century higher than mean rate during the previous two millennia (high confidence). Over period 1901–2010, global mean sea level rose by 0.19 (0.17–0.21) m. Global sea level rise of between 0.26 m and 0.82 m is likely, depending on the effectiveness of global efforts to reduce emissions.
Carbon and Other Biogeochemical Cycles	Atmospheric concentrations of CO ₂ , methane and nitrous oxide have increased to levels unprecedented in 800,000+ years. CO ₂ concentrations have increased by 40% since pre-industrial times, primarily from fossil fuel emissions and secondarily from net land use change. Oceans have absorbed about 30% of the emitted anthropogenic CO ₂ , causing ocean acidification.
Water Cycle	Contrast between wet and dry regions and between wet and dry seasons expected to increase (with regional exceptions possible). Oceans will continue to warm during 21st century. Heat will penetrate from the surface to deep ocean and affect circulation.
Detection and Attribution of Climate Change	It is extremely likely that human influence has been the dominant cause of the observed warming since the mid- 20th century.

Source: Table 1.1, Integrating Climate Change into Strategic Environmental Assessment in Ireland, EPA (2015)

The guidance notes suggest that high-level commitments may include ensuring the obligations of the National Climate Change Adaptation Framework (NCCAF) are met, and that the plan should seek to restrict zoning of lands outside flood plains, promote energy and water conservation measures.²⁹

5.19 Marine and Coastal Management

HARNESSING OUR OCEAN WEALTH, An Integrated Plan for Ireland, 2012, was prepared by an Inter-Departmental Marine Coordination Group (MCG) on behalf of the Government, and set out a road map for the Government's vision of High Level Goals and integrated actions across policy, governance and business to enable Ireland's marine potential to be harnessed. The Plan set out the following three high level goals:

²⁸ <http://www.epa.ie>

²⁹ <http://www.epa.ie/pubs/advice/ea/Climate-Change-SEA-Ireland-Guide-Note.pdf>

- Focuses on a thriving marine economy, whereby Ireland harnesses the market opportunities to achieve economic recovery and socially inclusive, sustainable growth,
- Sets out to achieve healthy ecosystems that provide monetary and non-monetary goods and services (e.g. food, climate, health and well-being)
- Aims to increase our engagement with the sea. Building on our rich maritime heritage, our goal is to strengthen our maritime identity and increase our awareness of the value (market and non-market), opportunities and social benefits of engaging with the sea.

The achievement of these high level goals is reflected in the Draft County Donegal Development Plan 2018-2024 (the Draft CDP), Chapter 10: The Marine Resource and Coastal Management, which includes an aim:

"To facilitate the sustainable development of Donegal's marine resource and coastline in a manner which, maximises the socio-economic potential whilst protecting its fundamental environmental resource."

The objectives and policies of the Draft CDP support this aim to achieve the targets set by the government to increase value of the ocean wealth through the development of Donegal's substantial coastal asset, in the context of meeting the requirements of the EU Habitats Directive, the EU Birds Directive, the EU Marine Strategy Framework Directive and other pertinent policies and guidelines.

Donegal has an extensive coastline of c. 1,132km along the Atlantic Ocean to the north and west. Four of the towns within the Plan area are located adjacent to the coast as described below:

An Clochán Liath (Dungloe)

An Clochán Liath is located on a shallow silty bay at the mouth of Dungloe river, the town is at the centre of the Rosses fishery, and the section of the river flowing towards the shore has a notable run of sea trout during the summer³⁰. The Main Street and traditional town centre have little visual connection to the shore however more recently a play park and recreational area have been developed with views over the bay. Tourism has been identified as a potential area of economic growth in the town based on its location along the Wild Atlantic Way and utilising its coastal location.

Ballyshannon

Historically Ballyshannon developed along the banks of the River Erne that flows from Lough Erne through the town and onwards to the coast, and thereby creating an interface between land and sea. There is a large concentration of archaeological monuments dating from as far back as Neolithic times, owing to the strategically important location close to the sea and on the River Erne; and records indicate the continued settlement of this area from that time. Nearby Assaroe Falls was an important link between Lough Erne and the sea and provided an important transport node for military control, trade and commerce, and the town was for a time, a thriving mercantile port. The rich maritime heritage of the town is recognised in part, through its designation as a Historic Town for General Protection (by DEHLG) and as a Heritage Town by Donegal County Council. The significant historic and heritage assets of the town coupled with its location near the coast and along the route of the Wild Atlantic Way contribute significantly to potential growth in the tourist sector and associated economic returns.

Donegal Town

The town is situated on a strategic coastal location at the mouth of the River Eske where it flows into an estuary of Donegal Bay. Archaeological evidence indicates that this area was settled from Neolithic times and 'The Annals of the Tirconnel' record Vikings in the area in the early 800's arriving through the navigable waters of Donegal Bay. The rich heritage of the town is recognised through its designation as a Historic Town for General Protection (by DEHLG) and as a Heritage Town by Donegal County Council. The considerable historic and heritage assets of the town coupled with its location on Donegal Bay, along the route of the Wild Atlantic Way contribute significantly to its tourism offer. Donegal town

30 www.fishinginireland.info

has embraced its association with the coast offering boat tours of the bay and an annual food festival as examples.

Killybegs

Killybegs is a coastal settlement synonymous with marine development; it is a natural deepwater port located on the sheltered edge of a deep fjord adjacent to the major fishing grounds of the North Atlantic, and records show that the town has been a seafaring harbour dating back to at least the post-medieval period.³¹ Killybegs is one of Ireland's leading fishing ports, which has in turn enabled boat and fish related industries to prosper creating steady employment and economic growth in the town. It has been announced earlier this year that the government will be spending €6.2 million on upgrading works to the harbour including the Smooth Point pier extension, harbour electrics upgrade and completion of a small crafts harbour. Killybegs has a growing market as a cruise ship destination with 19 vessels confirmed for next year, 2018, and is on the Wild Atlantic Way strengthening the growth of the town as a tourism destination.

5.20 Material Assets

Material assets include a wide range of natural and man made assets including infrastructural services and facilities, cultural heritage, built heritage, landscape, towns and villages, quarries, coastal and water resources and coastal defences among others. Developments and activities can often impact on material assets as can the abandonment of use and subsequent vacancy and often dereliction of buildings, sites and landscapes.

In 2016, Donegal had the second highest vacancy rate in the State at 27.4% with 22,991 permanent dwellings of the County's total housing stock vacant³². This constitutes only a marginal decrease in Donegal's vacancy rate which stood at 28.6% in 2011. The corresponding vacancy for the State was 12.3% in 2016 and 14.5% in 2011. The vacancy rate, excluding holiday homes, tends to be highest in rural settlements where the population is lower than 3,000 people.

The total number of vacant commercial units or premises recorded in County Donegal is 13% according to the third GeoView quarterly report on Commercial Vacancy Rates, published jointly by GeoDirectory and DKM Economic Consultants which examined commercial vacancy rates in 79 towns across the Country. The report includes the commercial vacancy rates for two of the towns within the Plan area, namely, Ballybofey (28.2%) and Donegal Town (12.5%).

5.21 Cultural, Archaeological and Architectural Heritage

The built environment refers to all features built by man in the environment including buildings and other structures such as bridges, archaeological sites and field boundaries. These structures have been influenced by the particular physical, climatic, technological, cultural and socio-economic circumstances of their creators and are a record of man's continuous interaction with his environment. Non-structural elements, such as historic gardens, stone walls, ditches and street furniture also, make a significant contribution to our built heritage. Stone walls and hedgerow in particular are an integral part of our rural/demesne landscape, often providing significant historic reference of landownership and farming patterns, and contributing to the character of areas. They can be vulnerable to needless damage or destruction during development, as well as inappropriate and poor reconstruction. While not every structure is of sufficient importance to warrant the rigours of special protection, the conservation of good examples of the cultural and built heritage is vital if a sense of continuity with the past is to be maintained.

³¹ AEGS Archaeology Reports 2, Excavation of a Post-Medieval settlement at Rough Point, Killybegs 2004

³² www.cso.ie

The County has a rich and diverse architectural, environmental, built, archaeological cultural and built heritage that informs our identity, teaches us lessons from the past and brings economic and social benefits to the region through its scenic landscapes, vernacular architecture and historic monuments. Retaining a wide diversity and quality of heritage resources can also be seen as a measure of success and competitiveness. The County contains a stock of architectural heritage including many large country houses and their associated demesne landscapes, ecclesiastical sites and other sites of industrial and vernacular heritage.

The Planning and Development Act 2000-2017 (P&D Acts) sets out the requirements of County Development Plans to protect architectural, historical, archaeological, artistic, cultural, scientific and technical structures of special interest. There are 467 Protected Structures in County Donegal of which 129 are located within the seven towns in the Plan area and a further 57 Protected Structures are located within the zone of influence of the Plan (i.e. within a 15km radius of the towns). In addition, 2277 structures of architectural heritage value have been identified on the National Inventory of Architectural Heritage (NIAH) survey for County Donegal. [Note: The NIAH survey includes those structures on the RPS list].

The archaeological heritage of the County is a unique resource, and archaeological remains of special interest are included in the 'Record of Monuments and Places'. The National Monuments Acts 1930-1994 provide for protection of our archaeological heritage. The Department of Arts, Heritage and the Gaeltacht National Monuments Section has a specific role in relation to the protection of the archaeological heritage. There are 21 Archaeological Complexes and 2679 National monuments protected under the National Monuments Acts 1930-1994 within the County and 13 of these are in State care.

The County's archaeological heritage is not confined to sites and areas listed on the Record of Monuments and Places, but also includes archaeological structures, artefacts and sites not yet discovered as set out in The National Monuments (Amendments) Act 1994.

An Clochán Liath (Dungloe)

The town of An Clochán Liath (Dungloe), which can be translated as 'the grey stepping-stone', is intersected by Dungloe River and bridge serving the town which was constructed in 1762. The town has a traditional linear form, with a strong streetscape and a clear core. The layout of An Clochán Liath (Dungloe) is characterised by the main street which runs in a north-south direction but which backs onto and is parallel to the Atlantic waterfront view. The other primary streets run perpendicular to this in an east-west direction, which link the town to the surrounding areas and beyond. Main Street remains the commercial centre of An Clochán Liath (Dungloe), with other retail centres east of this commercial core and within walking distance of each other.

There are no structures on the Record of Protected Structures within An Clochán Liath (Dungloe). However, there are 12 structures on the National Inventory of Architectural Heritage (NIAH) list for the town.

Ballybofey-Stranorlar

Ballybofey-Stranorlar acts as the key retail, commercial, social and recreational centre for the Finn Valley and wider area. The towns grew rapidly in the 19th and 20th centuries. The town centre is predominantly arranged in a linear form along the main street of both towns. The towns contain a significant quantum of retail floor space, prominent sports facilities, and significant social and cultural venues including three primary and two secondary level schools. There is some residential development along, and in close proximity to, the main streets of Ballybofey-Stranorlar, however the majority of housing is located on the outskirts of both towns. In addition the towns benefit from key environmental assets such as the River Finn and its associated flood plain and the woodlands situated around Drumboe and Dunwiley.

There are 19 structures on the Record of Protected Structures within Ballybofey-Stranorlar and 54 structures on the NIAH list (including those on the RPS). In addition, there are 12 National Monuments located within the towns.

Ballyshannon

The Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs has identified Ballyshannon as one of seven 'Historic Towns', within the County, for general protection. Furthermore, in 2000, Donegal County Council designated five 'Heritage Towns' including Ballyshannon. This designation reflects its historic background, built form and strong architectural character. Ballyshannon is one of the oldest towns in Ireland, having developed along the banks of the River Erne, with evidence of human settlement and ritual activity within the town and wider hinterlands, dating back to the Neolithic Period (4000-2500BC). The historic streetscape of Ballyshannon includes Main Street, Upper Main Street, Market Street, Castle Street including Chapel Street, College Street, Church Lane, Bishops Street and The Mall. Today the town centre remains the commercial and retail centre providing a wide variety of services and facilities concentrated around Main Street, Market Street and Castle Street.

There are 63 structures on the Record of Protected Structures within Ballyshannon. In addition, there are 102 structures identified on the NIAH list for the town (including those on the RPS). It is also the location of an extensive Archaeological Complex (c. 75 cares) and 33 National Monuments.

Bridgend

There are no structures on the Record of Protected Structures within Bridgend. There is a terraced four bay two storey house built c.1860, within the village, listed on NIAH list for the village. In addition there is a recorded monument located in a Green area within the Bun Na Mine housing development. Given that most development in Bridgend has occurred in recent decades, there are few examples of vernacular architecture within Bridgend.

Carndonagh

The town's historic associations date from pre-Christian times and Carndonagh is noted for its magnificent St. Patrick's Cross, dating from the 7th century. Centrally located in north Inishowen, Carndonagh developed as a major market and service town for an extensive rural hinterland during the 19th Century. The town is laid out around a central square, or Diamond, and is dominated by its large and imposing Catholic Church that sits in an elevated position in the town centre. Carndonagh effectively radiates out from the Diamond Area along four thoroughfares; Bridge Street to the west, Malin Street to the north, Pound Street to the east and Chapel Street to the south. The Diamond area remains the commercial heart of the town, and the increasing density of development in and around this area over the years is evident when examining historical maps and photographs of the area.

There are 11 structures on the Record of Protected Structures within Carndonagh and 20 structures on the NIAH list (including those on the RPS). In addition, there are 11 National Monuments located within the town.

Donegal Town

The Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs has identified Donegal Town as one of seven 'Historic Towns', within the County, for general protection. There is archaeological evidence of settlements around the town dating to prehistoric times, including the remains of ringforts and other defensive earthworks. Until the 17th Century, Donegal Town was the capital of Tír Chonaill (Tyrconnell) a Gaelic kingdom in west Ulster run by the O'Donnell Dynasty for centuries. The town itself contains Donegal Castle, on the banks of the River Eske, and the remains of Donegal Abbey a Franciscan Abbey which dates back to the 15th century on the southern shore of the Bay. The current plan of the town, including an attractive town square know as The Diamond, was laid out in the 17th century. Donegal Town centre displays a strong built form and high quality streetscape centred on the historical 'diamond' area. It acts as the key retail, commercial, social and recreational centre for the southern part of the County and in particular attracts a significant number of tourists on a seasonal basis.

There are 29 structures on the Council's Record of Protected Structures within Donegal Town and 57 structures on the NIAH list (including those on the RPS). In addition, there are 19 National Monuments located within the town and an extensive Archaeological Complex (c. 40 cares).

Killybegs

In recognition of its rich historical background the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs has identified Killybegs as one of seven 'Historic Towns', within the County, for general protection. Christianity arrived in the region around the 4th Century with the arrival of St. Colmcille and the town has become associated with St. Catherine, a 4th Century martyr from Egypt. The medieval area of the town, which contains a Holy Well, St. Catherine's Church and 'Cat's' Castle and is, along with the town centre, an area of archaeological importance, shows the importance in which St. Catherine was held at that time. Killybegs was granted borough status by King James and became a plantation town in 1616. Aside from the 17th Century Church and a cross slab, most developments in the town stem from the 19th and 20th Centuries, yet this built form hides a much earlier settlement. The historic centre of Killybegs retains its original character and recent years have witnessed significant infrastructural and industrial investment, in the main supporting fishing and port activities.

There are 15 structures on the Record of Protected Structures within Killybegs and 25 structures on the NIAH list (including those on the RPS). In addition, there are two extensive Archaeological Complexes in the town (c. 39 acres and c. 40 acres) and 11 National Monuments.

5.22 Landscape and Visual Impacts

5.22.1 Landscape Character Assessment

A Landscape Character Assessment (LCA) for Donegal was prepared and endorsed by the members of Donegal County Council in May 2016 and identified both Landscape Types (LCT) and Landscape Character Areas (LCAs). A summary of the LCAs and LCTs for each of the seven towns is provided below; full documents and associated interactive mapping is available on Donegal County Council's website www.donegalcoco.ie enabling examination in more detail of the defined LCAs and their key spatial components. The LCA process was an analysis, characterisation and narrative of the component parts of the landscape of County Donegal.

44 individual LCAs were identified and include a description summarising the components and characteristics within each area that make it unique and contribute to its character. Given the geographical location of the seven towns, and the defined boundaries of the LCAs, there is some overlap resulting in some of the towns and their buffers spanning across more than one LCA.

23 LCTs were identified throughout the County; (6 types of agricultural) agricultural arable and pasture, agricultural riverine, agricultural coastal, agricultural drumlin and agricultural estuarine. Natural grassland, forestry/woodland, 3 types of bog, Atlantic, mountainous and highland blanket bog, urban fabric, golf courses, dunes and beach, inter-tidal flats, inland marsh, salt marsh, mountain peaks, bare rock, sparsely vegetated, heath, upland heath and moorland and water bodies.

An Clochán Liath (Dungloe)

An Clochán Liath (Dungloe), and part of the 15km buffer around the town, is located in LCA 28 'The Rosses Knock & Lochan, Islands & Coast' in the west of the County. The buffer area around the town also includes parts of LCA 27 'Bloody Foreland Uplands, Coast & Gaeltacht'; LCA 25 'Derryveagh Mountains Gaeltacht'; LCA 29 'Finntown Valley An Gaeltacht;' and LCA 30 'Ardara Bays & Coast An Gaeltacht'.

LCA 28 has a long indented shoreline and includes the offshore islands to the west of An Clochán Liath (Dungloe) including: Inishfree Lower, Owey, Cruit, Inishkeeragh, Rutland, Inishfree Upper and Donegal's largest inhabited island, Arranmore. The mainland area has a distinctive 'Knock and Lochan' landscape, and is known locally as 'The Rosses'. The landscape comprises undulating glacial landscape of bog covered hills and eroded hollows containing small lakes with distinctive rock outcrops, contained and framed by the Derryveagh Mountains to the east of the town within the 15km buffer. The landscape within this LCA is predominantly bog, interrupted by isolated occurrences of more fertile landscapes dotted near lakes, along rivers' and along the coastline, with areas of planted forestry. A

low rocky coastal edge extends to sea in parts and is interspersed with soft sandy beaches and large tidal estuaries at Carrickfinn, Kincasslough, Cruit Island, Travenagh Bay and south of Lettermacaward extending into Gweebarra Bay.

Ballybofey-Stranorlar

Ballybofey-Stranorlar, and part of the 15km buffer around the town, is located in LCA 14 'Finn Valley' in the east of the County and borders Northern Ireland. The buffer area also includes parts of LCA 16 Carik Mountain Uplands; LCA 12 Laggan Valley; LCA 13 Foyle Valley; and LCA 40 Croaghnameal Border & Uplands.

LCA 14 is dominated by the River Finn, its tributaries and associated valleys carved from the surrounding uplands. The LCA has 3 distinct areas within that change from west to east following the meandering River Finn through this LCA. In the west of this LCA the Rivers Finn and Reelan cut through highland bog areas creating two steep narrow river valleys. These smaller rivers converge as the River Finn close to Cloghan into a notably broader and more level valley of larger square agricultural fields overlooked by mountainous areas of upland bog. The landscape around Ballybofey-Stranorlar and eastwards towards Castlefinn is a fertile agricultural plain alongside the river within a wider gently undulating agricultural landscape of large square fields similar to the adjoining Laggan Valley (12) and Foyle Valley (13) LCAs. The eastern edge of this LCA borders Northern Ireland and the Northern Ireland LCAs, Foyle Valley and Derg Valley, which have a similar landscape to that of the Finn Valley, namely good quality agricultural riverine lands.

Ballyshannon

Ballyshannon, and part of the 15km buffer around the town, is located in LCA 44 'River Erne Lowlands' in the southernmost part of the County which borders both County Leitrim and Northern Ireland. The buffer area also includes parts of LCA 31 'Donegal Bay and Drumlins' and LCA 42 'Lough Derg Uplands'.

LCA 44 is a low lying gently undulating drumlin landscape patterned with deciduous hedgerow and tree bound regular rectilinear fields framed by Tievebaun Mountains in Sligo to the south and the Cliffs of Magher and uplands in Fermanagh to the east. Outside the main towns, the rural landscape is depicted by dispersed scattering of one off houses. The coastal area to the west of the town comprises a large peninsular sand dune system and beach, Tullagh Strand, which extends north from the N15 road narrowing the estuarine mouth of the Erne River. The southeast of this LCA borders two LCAs in Northern Ireland, Lower Lough Erne and The Garrison Lowlands; and borders two LCAs in adjoining County Leitrim to the south-west, Tullaghan Coast Character Area and Lough Melvin Lowlands Character Area. The hydroelectric power station and dam, at Ballyshannon, is a prominent and dominant element in the landscape within the north of this LCA.

Bridgend

Bridgend, and part of the 15km buffer around the village, is located in LCA 11 'Grianan Slopes and Lowlands' in the north-east of the County which borders Northern Ireland. The buffer area also includes parts of LCA 5 'Slieve Sneacht'; LCA7 'Lough Foyle Coast'; LCA 8 'Buncrana Coast'; LCA 9 'Scalp Mountain'; LCA 10 'South Inishowen Farmland'; LCA 12 'Laggan Valley'; LCA 13 'Foyle Valley'; LCA 19 'Ramelton Swilly Coast'; and LCA 20 'South Fanad Uplands & Coast'.

LCA 11 is a fertile green agricultural landscape of great environmental, historical and archaeological importance, with an extensive boundary along the border with Northern Ireland to the east and along the shores of Lough Swilly to the west. The higher lands within the centre of this LCA slope downwards on all sides to an undulating lower agricultural landform affording extensive and panoramic views out over the surrounding landscape and Lough Swilly, and conversely this area is highly visible from a wide area of Donegal and adjoining County Derry in Northern Ireland. A large swathe of low lying lands on the edge of Lough Swilly in the northwest of this area are of especially high ornithological value and these feeding and wintering grounds form part of Inch Wildlife reserve, an area designated as a SPA.

Carndonagh

Carndonagh, and part of the 15km buffer around the town, is located in LCA 3 'North Inishowen Farmland and Coast' in the north-east of the County. The buffer area also includes parts of LCA 1

'Malin Coast'; LCA 2 'Dunaff Coast'; LCA 4 'Urris'; LCA 5 'Slieve Sneacht'; LCA 6 'East Inishowen Mountains and Valleys'; and LCA 7 'Lough Foyle Coast'.

LCA 3 is a diverse and varied landscape area that extends west from the northeast Atlantic coast of Inishowen towards the sheltered estuary of Trawbreaga Bay to the north-west of Carndonagh. It comprises fertile agricultural land containing a variety of farm types and features, historic stone bound field patterns along the coast, surviving clachans, and easily accessible and diverse coastline.

Donegal Town

Donegal Town, and part of the 15km buffer around the town, is located in LCA 37 'Donegal Bay Drumlins'. The buffer area also includes parts of LCA 35 'Ardara Bogland An Gaeltacht'; LCA 36 'South Donegal Lowlands'; LCA 38 'Bluestack An Gaeltacht'; LCA 39 'Lough Eske'; LCA 41 'Croaghnameal Border & Uplands'; and LCA 42 'Lough Derg Uplands and Lakelands'.

LCA 37 consists of a large distinctive drumlin belt that flow along a northeast-southwest axis from the Blue Stack Mountains and the Pettigo Plateau east towards Donegal Bay. This LCA is framed by the Bluestack Mountains to the north, the bog covered uplands to the east, and the meandering coastal edge curled around the mouth of Donegal Bay, with Donegal Town in the centre. The drumlin formation is more prominent in the north converging at the head of Donegal Bay becoming less prominent and obvious towards the south. The drumlins are draped in a patchwork of fertile agricultural fields of various sizes bound by deciduous hedgerow and trees that are interspersed with patches of woodlands and conifer plantations. Loughs are a common feature amongst the drumlins and a large number of streams and rivers rise in higher lands to the north and east and course along valleys through the drumlins towards the sea.

Killybegs

Killybegs, and part of the 15km buffer around the town, is located in LCA 36 'South Donegal Lowlands'. The 15km buffer also includes parts of LCA 30 'Ardara Bys & Coast An Gaeltacht'; LCA 32 'Glencolmille Mountains, Bogs, Valleys and Gaeltacht'; LCA 34 'Tawney Bay Farmland and Coast An Gaeltacht'; LCA 35 'Ardara Bogland An Gaeltacht'; LCA 37 'Donegal Bay Drumlins and LCA 38 'Bluestack An Gaeltacht'.

LCA 36 is a rolling coastal agricultural landscape of wide fertile river valleys between higher bog covered uplands orientated along a northeast-south-west axis, with a long indented coastline of peninsulas and inlets that face south onto Donegal Bay. The town of Killybegs is situated in McSwyne's Bay, a sheltered deep fjord-like inlet of deep water, and is a thriving and bustling harbour town. Fintragh Beach, located to the west of Killybegs at the mouth of Fintragh Bay has a substantial dune system and a long sandy beach. St John's Point, a narrow low-lying peninsula of mostly limestone agricultural land extends into Donegal Bay, south of Killybegs, and informs the seaward view from a large section of the coast.

5.22.2 Visual Impact

The County Development plan 2018-2024 provides a policy context building on the evidential approach of the LCA. The landscape of the County has been categorised into three layers of value and are illustrated on Figure 5.23 below. These three layers of value have been classified as areas of 'Especially High Scenic Amenity', areas of 'High Scenic Amenity' and areas of 'Moderate Scenic Amenity', none of the landscapes of County Donegal have been classified as Low Value. The definitions for each of the areas of landscape value and classification are as detailed below:

Areas of Especially High Scenic Amenity (EHSA)

Areas of **Especially High Scenic Amenity** are sublime natural landscapes of the highest quality that are synonymous with the identity of County Donegal. These areas have extremely limited capacity to assimilate additional development.

Areas of High Scenic Amenity (HSA)

Areas of **High Scenic Amenity** are landscapes of significant aesthetic, cultural, heritage and environmental quality that are unique to their locality and are a fundamental element of the landscape and identity of County Donegal. These areas have the capacity to absorb sensitively located

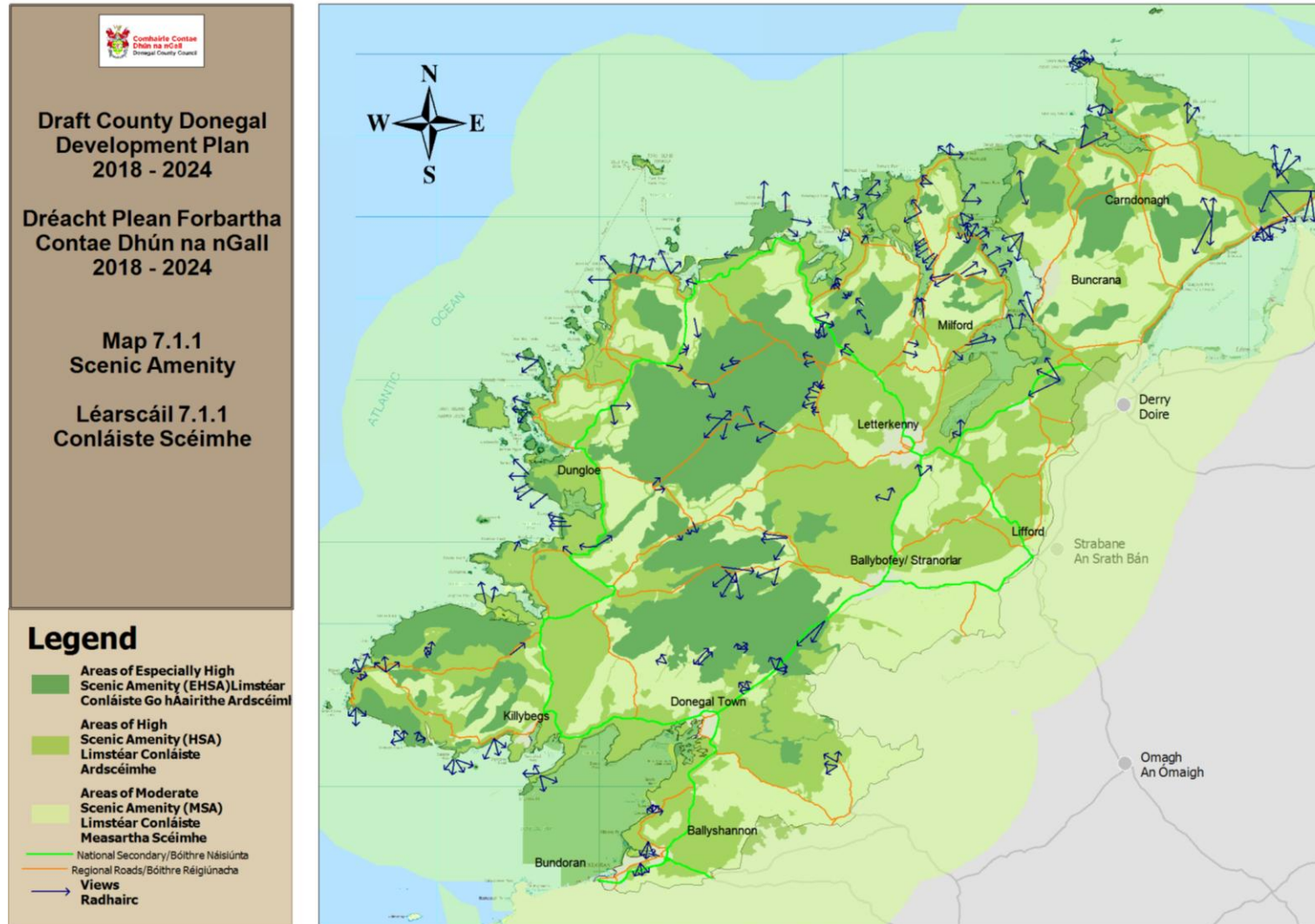
development of scale, design and use that will enable assimilation into the receiving landscape and which does not detract from the quality of the landscape, subject to compliance with all other objectives and policies of the plan.

Areas of Moderate Scenic Amenity (MSC)

Areas of **Moderate Scenic Amenity** are primarily landscapes outside Local Area Plan Boundaries and Settlement framework boundaries that have a unique, rural and generally agricultural quality. These areas have the capacity to absorb additional development that is suitably located, sited and designed subject to compliance with all other objectives and policies of the Plan.

Figure 5.23 also identifies views and prospects of special amenity, value and interest that in combination with the scenic amenity areas are a material consideration of any development proposal within the County.

Figure 5.23: Scenic Amenity Map – extract From Part B of Draft County Development Plan




Draft County Donegal Development Plan 2018 - 2024
Dréacht Plean Forbartha Contae Dhún na nGall 2018 - 2024
Map 7.1.1 Scenic Amenity
Léarscáil 7.1.1 Conláiste Scéimhe

- Legend**
- Areas of Especially High Scenic Amenity (EHSA) **Limistéar Conláiste Go hAairithe Ardscéimh**
 - Areas of High Scenic Amenity (HSA) **Limistéar Conláiste Ardscéimhe**
 - Areas of Moderate Scenic Amenity (MSA) **Limistéar Conláiste Measartha Scéimhe**
 - National Secondary/Bóithre Náisiúnta
 - Regional Roads/Bóithre Réigiúnacha
 - Views Radhairc

Source - Donegal County Council
 Foinse - Comhairle Chontae Dhún na nGall

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 General de réigiún na hÉireann agus aibíocht físiúil: Cheadúnas SOE 201702CCMA/Comhairle Contae Dhún na nGall. Níl ábairt é seo a aibíocht gairneála, dáilte nó aibíocht Shuidhneacht Oideolaí Éireann agus Ní Éireann. Shuidhneacht Oideolaí Éireann, 2017.
 Comhairle Contae Dhún na nGall, 2017.
 To be read in conjunction with relevant accompanying text contained in the front section of this appendix as well as other relevant objectives & policies of the CDP.
 Le léamh i gcomhar leis an tseánáil seo i dtuilleog seo, seiceáil an t-ábairt chomh maith le tuilleog agus bairnéil ábairte eile sa CDP.

5.23 Inter-Relationship between Environmental Topics

The inter-relationship between SEA environmental topics is an important consideration for environmental assessment. Table 5.55 shows a matrix of key inter-relationships identified in this SEA. The level of interaction between the various topics will vary greatly; however, the matrix allows the interactions to be recognised and considered as part of the SEA.

Of particular note are the primary relationships between water quality and biodiversity, flora and fauna and human health. Flora and Fauna, including protected species and habitats, rely directly on the aquatic environment as a habitat and as a food source. The quality of the habitat has a direct relationship on the quality of the drinking water and on the quality of foodstuffs (e.g. fish and shellfish), which in turn have direct impacts on human health.

Another key relationship is between water and climate. Greenhouse gasses associated with transport, industry and other sources have potential to negatively impact on climate change. This can lead to increased and more intense flooding and drought conditions which can affect housing, infrastructure, and biodiversity through changes in water quality and the water environment.

Table 5.55: Inter-relationships of Environmental Topics

Population / Human Health	✓							
Soil	✓	✓						
Water	✓	✓	✓					
Climatic Factors	✓	✓	✓	✓				
Marine / Coastal Resource	✓	✓	✓	✓	✓			
Material Assets	✓	✓	✓	✓	✓	✓		
Cultural Heritage	✓	✓	✓	✓	✓	✓	✓	
Landscape	✓	✓	✓	✓	✓	✓	✓	✓
	Biodiversity, Flora and Fauna	Population / Human Health	Soil	Water	Climatic Factors	Marine / Coastal Resource	Material Assets	Cultural Heritage

6 Significant Environmental Pressures

The Draft LAP sets out an overall strategy for the proper planning and sustainable development of the seven towns in the context of the Draft County Donegal Development Plan 2018-2024 (the Draft CDP) and the Border Regional Authority's Regional Planning Guidelines 2010-2022 (RPGs). The Core Strategy of the County Development Plan (as set out in Chapter 2 of Part A of the Draft CDP) is required to be consistent with the RPGs and set out a settlement hierarchy for County Donegal along with population and housing targets for all towns, villages and the open countryside. The Draft CDP sets out an ambitious vision for the future growth and development of the County over the 6 year life of the Plan (to 2024) and beyond to a 20 year timeframe (2038). It identifies the potential for the County to reach upwards of 200,000 people by 2038 over a two phase approach to the development of the County.

The future development of the County to facilitate the target population has the potential to impact on the environment at a trans-boundary, regional, county and local level. New development brings with it a need for supporting infrastructure and key environmental issues that may arise include water supply, treatment of waste water, flooding, transportation and the capacity of the natural resource to cope with development proposals. Increased population growth in the seven towns in the Plan area is likely to give rise to an increase in car use, particularly where public transport is not readily available. This can lead to negative impacts in terms of carbon emissions, air quality and human health.

The more significant environmental issues identified during the SEA process include settlement patterns, water quality, biodiversity, landscape and cultural heritage, built heritage, transportation, agriculture, tourism, afforestation, energy resources, greenhouse gas emissions, climate change, flood risk, waste management and coastal management. Achieving a good quality of life for the people who live, work or visit the Plan area is considered to be a key objective of the SEA process and environmental pressures highlighted must be considered through the objectives and policies of the Plan. Securing economic development, population growth and associated investment in housing, water services, transport, communications, energy, health and education infrastructure together with preserving and enhancing the urban and rural character of the Plan area, are closely associated with environmental issues.

To date, air quality and noise pollution have not been raised as significant environmental issues, however they have been scoped-in, due to potential indirect environmental impacts.

A list of the significant environmental issues that were 'scoped in' during the scoping exercise is given in Table 6.1. The environmental impacts mentioned under the various topics listed in the table can act across a number of topic areas and the impacts can vary in scale and extent, some are short term and reversible, others are more long-term and may be permanent. Also, whereas individual impacts may be minor, the cumulative impacts, particularly when viewed over the longer term can be significant.

Table 6.1: Scoping of SEA Topics

SEA Scoped	Topics	in	Indicative list of environmental impacts that have been considered, either directly or indirectly, in the Environmental Report .
Biodiversity, Fauna and Flora		in	<p>Impacts on protected areas: European Sites (SACs SPAs, Ramsar sites)</p> <p>Impacts on National Protected sites, (pNHAs, NHAS and nature reserves)</p> <p>Impacts on flora and fauna and habitats including coastal and marine habitats, floodplains, wetlands, watercourses, peatlands and woodlands</p> <p>Impacts on Freshwater Pearl Mussel protected areas</p> <p>Impacts on other sensitive habitats and species, including ecological networks and corridors protected fish species</p> <p>Impacts of invasive species</p> <p>Interaction with Environmental Protection Objectives of relevant International, National, local and transboundary Directives, Regulations, Guidelines, and Acts as detailed in Table 1.4 of this report</p> <p>Impact on designated shellfish waters</p>
Population		in	<p>Impacts of change/increase in population profile.</p> <p>Impacts of change in settlement patterns car use - Road Safety</p> <p>Efficient use of infrastructural and community services</p> <p>Impacts on environmentally sensitive areas as a result of increased demand for provision of infrastructural services as a result of targeted population growth.</p>
Human Health		in	<p>Impacts on water quality including drinking water and bathing water</p> <p>Impacts on air quality</p> <p>Impacts arising from increased noise pollution</p> <p>Impacts associated with flooding</p> <p>Generally impacts mentioned elsewhere tend to act either directly or indirectly and to varying extents on human health and wellbeing</p>
Soil		in	<p>Impacts of land use activities including, urban and rural development, windfarms, waste disposal, afforestation, recreation and agricultural activities</p>
Water		in	<p>Impacts of development and activities on water quality including drinking water and bathing water</p> <p>Impacts of urban and rural development including, wastewater and surface water disposal, agricultural activity, water recreational activities, mariculture, aquaculture and afforestation</p>
Coast/Marine resource		in	<p>Impact of inappropriate development near /on the coast</p> <p>Consideration of the dynamic needs of the coast (coastal squeeze)</p> <p>Impact of flood risk on coastal defences</p> <p>Tourism impacts and sustainable management e.g. Sensitive dune systems and beach access points</p> <p>Impact of litter disposal and public services (e.g. toilets)</p> <p>Impact of leisure and commercial activities in the water</p> <p>Consideration of coastal /marine spatial planning</p>
Air		in	<p>Impacts on air pollution associated with transport and industrial emissions</p>
Climatic Factors		in	<p>Impacts of greenhouse gas emissions and flooding</p> <p>Impacts of energy generation and consumption</p> <p>Impacts of energy use and need for conservation</p> <p>Impact on water pollution as a result of flooding and algal blooms due to rises in temperature, stresses on species and habitats</p> <p>Impact of an increase in storm events</p>

SEA Scoped	Topics	in	Indicative list of environmental impacts that have been considered, either directly or indirectly, in the Environmental Report .
			Consideration of a potential increase in precipitation (Perhaps less frequent but more severe)
Renewable Energy		in	Onshore and offshore opportunities and implications including: Onshore scenic amenity access roads loss of biodiversity Offshore impact on birds & marine mammals deployment issues grid connection locations
Material Assets		in	Impacts of development on infrastructure, utilities and amenities including road, water supply, wastewater treatment facilities, amenities and cultural heritage. Also included are impacts on economic assets such as quarries, agricultural lands, coastal and water resources which support fisheries and the tourism industry
Cultural heritage, including Architectural and Archaeological		in	Impacts on items and features of heritage value including items of landscape, architectural, archaeological and historical importance, including shipwrecks, and cultural value including the Gaeltacht and the Irish language
Landscape		in	Impact of development on visually sensitive areas including scenic landscapes and seascapes Impact of development on the agricultural landscape and the rural character Impact of development of the vitality and vibrancy of towns, villages and small settlements/clachans
Interrelationship between the above topics		in	Cumulative impacts and interaction of above mentioned items. The impacts and interactions vary in extent and nature.

6.1 Biodiversity, Flora and Fauna

It is of paramount importance that the impact of development on habitats and species is minimal; in particular the EU protected Natura 2000 sites (SPAs and SACs) as well as Nationally protected sites, NHAs, pNHAs, and other habitats of ecological and biodiversity importance.

The most recent report on the status of EU protected habitats and species published by the Department of Arts, Heritage and the Gaeltacht in 2013, entitled 'The Status of EU Protected HABITATS AND SPECIES in Ireland' concludes that many Irish habitats are in unfavourable status or declining. This reflects the national picture and there are no County level datasets to draw on, however the County, as well as at a national level must strive to conserve EU identified habitats and species.

Developments associated with agricultural activities, windfarms, afforestation, urban development, ports and airports and a wide range of infrastructural works (including road works, water abstraction, wastewater disposal) within or close to the areas of ecologically sensitive sites must be carefully planned and managed so as not to compromise the integrity of these sites.

Wastewater discharges, runoff from agriculture, leachate from landfills and contaminated sites and nutrient input from forestry can all have detrimental effects on water quality resulting in subsequent impacts to biodiversity. Annex II species such as freshwater pearl mussel and salmon are particularly sensitive to pollution. The protection of shellfish growing areas from pollution is also an issue of significant environmental concern within the Plan area.

Certain development works on shorelines and floodplains and the associated infilling of wetlands is a potential environmental problem within the Plan area. Invasive non-native plant and animal species are one of the threats to biodiversity in the Plan area.

The development of ports and associated works at Killybegs have the potential to have significant environmental impacts, particularly in relation to biodiversity, flora and fauna, despite having no Natura 2000 designations in the immediate vicinity, the further development of the airport in Donegal also has the potential to have significant environmental impacts. It is therefore incumbent that such large scale strategic developments for new build or extension be accompanied by requisite environmental reports and where required, will be subject to an Appropriate Assessment.

Climate change may impact on the rich biodiversity, flora and fauna of the Plan area in terms of changes in precipitation patterns and temperature variations.

In terms of the potential for significant environmental effects in relation to biodiversity, the Plan will guide new development within the towns, prioritising locations that do not interfere with protected sites. However, it is possible that there will be interaction between new development and protected sites with potential for effects arising as a result of:

- Encroachment of development resulting in reduction of habitat area
- Fragmentation of habitat
- Disturbance of species
- Impact on water quality, on which protected species rely

Reduction of Habitat Area

There is a potential for the reduction of habitat area within the Plan area due to the fact that three of the town plans namely, Ballybofey-Stranorlar, Ballyshannon and Donegal Town have Natura 2000 sites located within their town boundaries. In this respect Ballybofey-Stranorlar has the River Finn running through the town centre which then feeds into various tributaries to the west. Ballyshannon is located adjacent to the large Donegal Bay SPA to the west and part of this SPA is located within the town boundary as the estuary enters the town and joins the River Erne.

The remaining towns, although they do not have Natura 2000 sites within their town boundaries, all have SACs and SPAs in close proximity. Bridgend is located adjacent a large SPA and SAC to the west and there are water courses running through the settlement which would run into these Natura 2000 sites. The Carndonagh Plan Area has a SAC and a SPA located a short distance to the north. The Donegal Plan area abuts a SAC and SPA and the River Eske flows westwards towards Donegal Bay into these Natura 2000 sites. There are multiple other SACs and SPAs within a 15km radius of the town boundary. The Dungloe Plan Area is adjacent a SAC and SPA and the Owennamarve River runs through the Plan Area into Trawenagh Bay Natura 2000 sites and there are also multiple SAC's and SPA's within 15km of the plan area. There are no SACs or SPAs in close proximity to the Killybegs town boundary although there are SPAs and SACs within 15km of the town.

Direct loss of habitat is caused where there is complete removal of a habitat type. Habitat loss can also occur through the reduction of habitat quality and a loss of important habitat functions. It can arise from the introduction of invasive species, toxic contamination or physical alteration.

There is the potential that the designated sites that have been highlighted within the towns may be adversely affected in terms of reduction of habitat area through the implementation of the LAP. This includes development such as residential, commercial or industrial development which is inappropriately located in isolation or in combination with other developments within the boundaries of a designated site. Habitat loss can also occur through draining of development lands adjacent to or hydro-

geologically linked to designated sites that support surface or ground water dependant habitats such as bogs, fens, turloughs and other wetlands.

The Draft LAP will allow for additional land to be zoned for development as well as supporting the development of infrastructural projects such as waste and water and telecommunications and flood defence works that may lead to loss of habitat within designated sites.

Fragmentation

Habitat and species fragmentation can occur through the breaking up or loss of habitats resulting in interference with existing ecological units. Fragmentation can also result from impediments to the natural movement of species. This is relevant where important corridors for movement or mitigation are likely to be disrupted such as along river corridors when construction introduces a barrier to the free movement of species from one area of habitat to another.

Installation of linear infrastructure e.g. roads and other transportation links, waste and wastewater pipelines, electricity supply lines, can have a negative impact over a wide distance where such infrastructure crosses designated sites. Impacts can include habitat or species fragmentation where, for example, electricity supply lines or wind turbines may interrupt the flight paths of birds or newly installed bridges disturbs the mitigation of salmon. Disturbance impacts to birds may also lead to the fragmentation of bird populations. All SPAs identified in Tables 5.1-5.7 of this Report are vulnerable to such impacts. Other European sites that could potentially be affected by fragmentation include those Sites listed in Tables 5.8-5.14 of this Report are designated for terrestrial and freshwater habitats and species.

Appropriate mitigation measures are required within the Plan to ensure that developments facilitated by the implementation of the Plan and the distance from the nearest European site does not cause any habitat or species fragmentation.

Disturbance to Species

Disturbance to species supported by a European Site is likely to increase where there is an increase in activity levels from recreation and amenity or from developments within or adjacent to designated areas. Sources of disturbance include noise, vibration, light, construction and operation activities or other sources of disturbance arising from recreation or amenity or from the inappropriate timing of works.

The Draft Plan supports the development of infra-structural development and the promotion of tourism and recreation. These projects have the potential to cause disturbance and impacts to key species if located in proximity to relevant European sites.

Water Quality

The key indicators of conservation value for the majority of the Natural 2000 sites in the Draft Plan are surface water and groundwater quality and quantity. Impacts may occur where there are hydrological connections between the sites and development areas. Implementation of the Draft Plan may result in alterations to the hydrological regime or physical environment of sites through water abstraction, drainage, and discharges to watercourses, coastal waters or groundwater resources. Of particular importance will be the provision of water supplies and the disposal of wastewater.

Within the towns there are a number of different wastewater supplies, from public schemes, individual septic tanks and individual treatment systems. In the absence of adequate treatment, discharges from plants can potentially increase the nutrient loading on receiving waters with direct, long-term and adverse consequences for the aquatic environment.

The European sites potentially affected include those that are surface water dependant. These sites are vulnerable as wastewater within a number of settlements is discharged into rivers which ultimately drain into designated lakes and coastal waters. Cumulative impacts through wastewater discharges from surrounding counties may also affect these sites, as well as indirectly affecting sites further downstream.

The abstraction of water for public and group schemes supply has the potential to affect European sites where hydrological pressures arise. Abstraction of both surface and ground water contributes to the supply of drinking water to the County.

Development located in proximity to groundwater dependant habitats may interfere with the hydro geological regime that supports groundwater-dependant qualifying features such as bogs and turloughs. Drainage in and around bogs will increase flow from the bog are and may cause drying out, in turn reducing the extent and quality of habitat. The European sites potentially affected include all of those sites that are designated for habitats and species which are dependent on surface or ground water.

Other factors that may impact on biodiversity of the Plan area include;

- Loss of environmentally sensitive 'greenfield sites' to development works
- Changes in hydrology including drainage and flooding and infilling of wetlands
- Peat/Turf extraction
- Overgrazing/undergrazing
- Damage arising from intensive recreation/amenity use
- Damage arising from quarrying activities
- Loss of hedgerows
- Loss of local biodiversity pockets
- Damage arising from wildfires

6.2 Population and Human Health

An increase in population has the potential to impact on biodiversity, water quality, landscape, built heritage, natural heritage, cultural heritage and air quality. Individual and cumulative changes in the quality of the environment at local, regional and national level has the potential to impact to varying degrees on human health and wellbeing.

There are obvious social and economic benefits and opportunities resulting from development by increasing access to local services, work and housing while enforcing environmental and housing standards, the planning system can contribute towards improving air quality, levels of physical activity, mental health and opportunities for healthy diets.

Conversely there is potential for a less positive effect on the population as a result of development and in this respect the following areas have been identified as being potential environmental pressures on population and human health:

- Waste discharges from municipal wastewater treatment plants and certain agricultural activities particularly slurry spreading and afforestation is a significant pressure on water quality and hence public health.
- The cumulative impact of one-off housing in the countryside and rural housing clusters that are served by wastewater treatment systems, are a significant risk to water quality. An increase in rural housing, has an associated threat of water pollution from a proliferation of wastewater treatment plants. This is of particular concern where ground conditions are poor and where rural housing is located within environmentally sensitive areas.
- Development permitted in flood risk areas, has the potential to result in health and safety concerns for residents if flooding occurs and these incidents may increase as the impacts of climate change are experienced more frequently.
- An increase in traffic volumes and certain types of industrial agricultural activity can have a localised effect on air quality that could potentially have an adverse effect on population and human health.
- An increase in traffic/pedestrian movement can give rise to an increased risk in terms of road safety. Road Safety is a key priority in national government policy and Ireland's Road Safety Strategy (2013–2020) has a target of reduction of road collision fatalities on Irish roads to 25 per million population or less by 2020, that means reducing deaths from 162 in 2012 to 124 or fewer by 2020. A provisional target for the reduction of serious injuries by 30% from 472 (2011) or fewer to

330 by 2020 or 61 per million population has also been set³³ as an objective of radically and sustainably improving safety on Irish roads.

- High levels of radon in buildings pose a risk to human health within certain areas of the County. This is of particular concern in the case of buildings erected prior to the change in the Building Regulations in 1998 where radon levels are relatively high and where radon control measures have not been undertaken.
- Noise pollution has not been raised as a significant concern at a County level.

6.3 Soil

Precipitation changes, predicted as one of the climate change impacts on Ireland, could have significant implications for slope stability and landslides and their resultant impacts on water management activities. Eroded soil washed into rivers during heavy rainfall contains a high nutrient content, which can damage the balance of nutrient poor aquatic ecosystems by shifting their species composition, supporting species that are better adapted to the nutrient rich environment. This can lead to the eutrophication of rivers and lakes. As water temperatures rise due to climate change some of the symptoms of eutrophication are likely to be exacerbated.

Mismanaged extraction activities can also result in pressures on water quality and peat cutting can be damaging to vegetation, hydrology and landscape as well as destroying vital carbon sinks. The emergence of climate change as a key environmental issue has brought a new impetus to the need to preserve remaining functional peatlands and to restore damaged peatlands where possible.

Single rural housing and suburban growth can both have potential adverse impacts on soils and thus need to be carefully managed. Between 2006 and 2012 the rates of urbanisation decreased significantly (coinciding with the economic downturn); however, the rate of urbanisation is expected to increase as the economic recovery progresses. In terms of one-off housing (and in addition to the direct physical impacts of construction), excessive concentrations of individual wastewater treatment systems, or indeed poorly maintained or incorrectly installed systems, have the potential to result in pollution discharges to soils.

Forests have many beneficial environmental attributes, including carbon sequestration and storage, water regulation and support for biodiversity; and since 1990 Ireland has had one of the highest rates of increase in forest expansion in the EU. However, a rapid increase in forest cover also has the potential to give rise to environmental pressures and as such requires sensitive management. Specifically, afforestation and harvesting may adversely affect natural vegetation, soils, biodiversity and landscape resources and can contribute to the acidification of soils. The challenge therefore, is to establish and maintain a sustainable level of broadleaf planting to protect environmental sensitivities whilst still providing for an economically viable forestry resource.

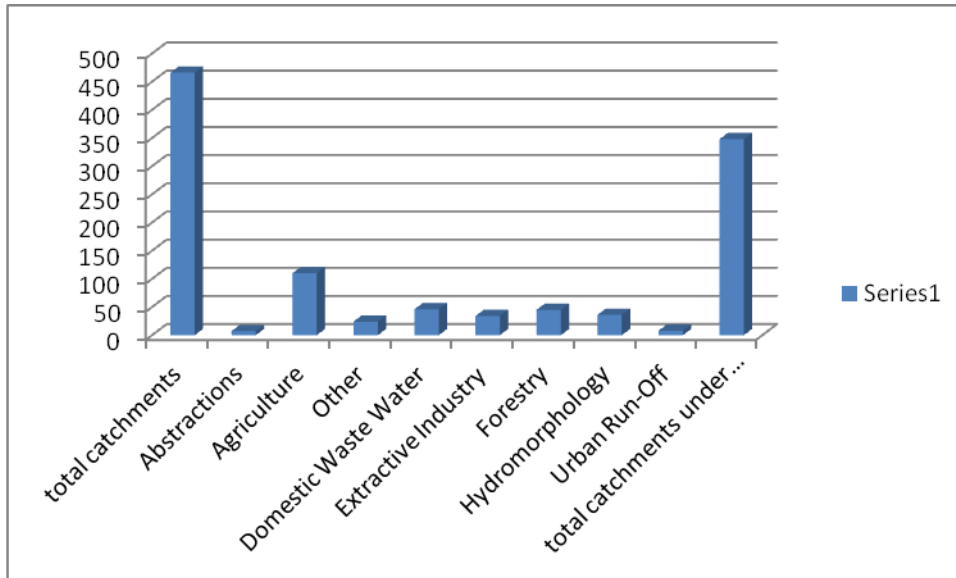
6.4 Water

The Plan area includes numerous freshwater lakes and rivers and many estuaries including larger river basin systems such as the Finn/Foyle, and large tidal estuaries such as Lough Swilly and Lough Foyle. In addition four of the towns within the Plan area are located adjacent to the coast. These water bodies not only act as environmental habitats for flora and fauna, but also provide a source of drinking water and a recreational resource for human populations. Groundwaters are also locally important sources of drinking water supply. The protection of such water bodies is therefore a major environmental concern and a priority for the LAP.

³³ Road Safety Strategy 2013-2020, Road Safety Authority.

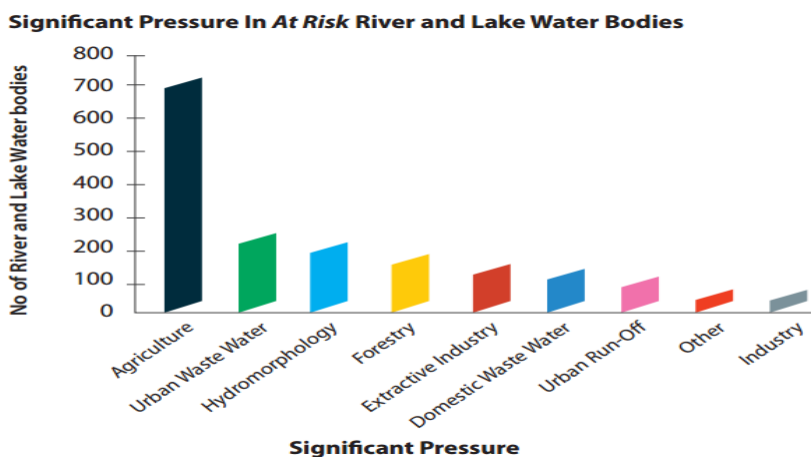
These water bodies are subject to a range of environmental pressures including: pollution from; agriculture (e.g. farmyard wastes and land spreading of fertilisers), deficient municipal wastewater treatment plants, domestic wastewater treatment systems, urban runoff, forestry, the extractive industry, industrial discharges, and waste, hydromorphology (i.e. physical modification to rivers banks and shorelines), and water abstraction as illustrated in Figure 6.1.

Figure 6.1: Significant Pressure in At Risk River and Lake Water Bodies in County Donegal



The Draft River Basin Management Plan for Ireland 2018-2021 has identified the numbers of 'At Risk' River and Lake Water Bodies which are under threat from specific environmental pressures (See Figure 6.2). Furthermore the EPA classifies agriculture (53%) and municipal sources (34%) as being the most significant causes of water pollution nationally. (Source: www.epa.ie/irelandsenvironment/water/).

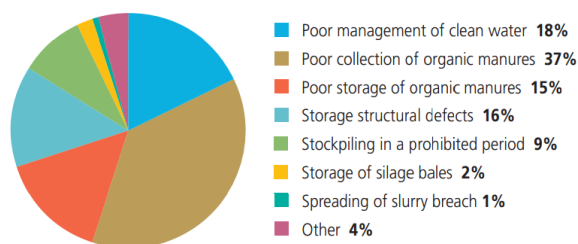
Figure 6.2: Significant Pressure in At Risk River and Lake Water Bodies Nationally



In terms of **agriculture** the EPA Report 'Ireland's Environment – an Assessment 2016' identifies *inter alia* poor collection of organic manures and poor management of clean waters as key causes of agricultural pollution, (see Figure 6.3) and highlights the expansion of agricultural production as a threat to water quality.

Figure 6.3: Expansion of Agricultural Production as a Threat to Water Quality Nationally

Figure 5.11 Reasons for Breaches of The Good Agricultural Practices Regulations in 2014
(Source: Agricultural Inspections Working Group)



In relation to **municipal wastewater discharges** the EPA Urban Wastewater Report 2015 indicated that in Donegal; there are 18 urban areas where improvements are required to the urban wastewater treatment infrastructure to resolve priority issues, there are 4 urban areas which were non-compliant with the mandatory BOD, COD, or nutrient standards in the EU Water Framework Directive.

The abovementioned 2016 EPA report highlighted a number of issues identified by the National Inspection Plan of **domestic wastewater treatment systems** including; the lack of general routine maintenance of systems, the low level of de-sludging of tank, issues surrounding the operation and maintenance of systems, unlicensed discharges to surface water, and inadequate soil thickness to attenuating pollutants.

With regard to **forestry** the abovementioned river basin management plan indicates that this environmental pressure is largely associated with clearfelling, drainage, planting and establishment and is predominately located on catchment headwaters and often on catchment boundaries.

In relation to the specific impacts of water pollution the abovementioned 2016 EPA report highlights **eutrophication** (i.e. the enrichment of a water body with nutrients such as nitrogen and phosphates) which leads to accelerated growth of algae and plants and an associated reduced oxygen levels and loss of sensitive aquatic species, as being a major ecological threat. In addition water bodies that depend on a small catchment are particularly vulnerable to pollution.

The Draft River Basin Management Plan 2018-2021 highlights a number of objectives and measures in relation to improving water quality. The integration of these objectives and measures into the Plan and implementation of the related policies within the Plan will in turn be vital in securing good water quality status and in turn improving the ecological health of aquatic habitats.

Detailed information in relation to the significant pressures on water bodies for each of the catchments and sub-catchments within the Plan area is located is available on the EPA website www.epa.ie and www.catchments.ie, a summary of which is provided below (based on the EPA Catchment Assessments, March 2017) :

An Clochán Liath (Dungloe)

An Clochán Liath (Dungloe) is located in Catchment 38: Gweebarra-Sheephaven which includes the area drained by all streams entering tidal water in Gweebarra River, Sheephaven Bay and between Rossan Point and Fanad Head in Co. Donegal. The EPA acknowledges that the limited chemistry monitoring data in this catchment makes it difficult to fully assess the level and possible impacts of nutrients on the water bodies. Notwithstanding this, the significant pressure affecting the greatest number of rivers and lakes in this catchment are identified as agriculture, followed by domestic waste water, extractive industry (mines and quarries) forestry, hydromorphology and urban wastewaters.

In addition to the nutrient and organic loads found in rivers and lakes in the Gweebarra-Sheephaven catchment, the associated significant pressures include: agriculture mainly in areas where the soils are susceptible to nutrient transfer via surface pathway; domestic wastewater treatment systems and urban wastewater treatment plants.

The significant pressures affecting the surface water bodies in the catchment include hydromorphological pressures from activities such as channelization, land drainage, clearfelling, peat drainage and extraction overgrazing and embankments, and chemical issues from agriculture (sheep dip and pesticides) and diffuse urban and water treatments discharges,.

The significant pressure affecting transitional and coastal water in this catchment is considered to be from aquaculture activities in coastal water bodies.

Ballybofey-Stranorlar

Ballybofey-Stranorlar is located in Catchment 1: Foyle which includes the area drained by the River Foyle and by all streams entering tidal water between Culmore Point and Coolkeeragh in Co. Derry. The dominant significant issue in this catchment is excess phosphorus leading to eutrophication predominantly caused by diffuse agriculture and urban wastewater. Poor habitat quality is significant in the catchment due to excess fine sediment, channelization, land drainage, clearfelling, turf cutting, overgrazing and embankments.

The significant pressure affecting the greatest number of rivers and lakes in this catchment is agriculture, followed by forestry, peat, urban wastewater and hydromorphology and urban wastewater. There are no significant pressures for lake bodies in the Foyle catchment.

Ballyshannon

Ballyshannon is located in Catchment 36: Erne which includes the area drained by the River Erne and all streams entering tidal water between Aughrus Point and Kildoney Point in Co. Donegal.

The significant pressure affecting the greatest number of rivers in this catchment is agriculture, followed by urban wastewater, diffuse urban, hydromorphology, domestic wastewater, industry forestry, and peat drainage and extraction.

The significant pressure affecting the greatest number of lakes in this catchment is also agriculture, followed by forestry, urban wastewater, diffuse urban domestic wastewater, peat drainage and extraction, hydromorphology and industry.

Bridgend

Bridgend is located within Catchment 39: Lough Swilly which includes the area drained by all streams entering tidal water in Lough Swilly between Fanad Head and Dunaff Head in Co. Donegal.

The significant pressure affecting the greatest number of rivers and lakes in this catchment is agriculture, followed by urban wastewater, hydromorphology, domestic wastewater, forestry, peat and extractive industry including mines and quarries.

The Swilly estuary transitional body is at risk due to its moderate ecological status caused by excess nutrients (both phosphorus and nitrogen) in the estuary.

Carndonagh

Carndonagh is located within Catchment 40: Donagh-Moville which includes the area drained by the River Donagh and all streams entering tidal water between Dunaff Head and Culmore Point in Co. Derry.

The significant pressures affecting the greatest number of water bodies in this catchment is agriculture, followed by domestic wastewater, urban waste water, hydromorphology, diffuse urban and peat extraction. Excess nutrients, mainly phosphorus, are the dominant issues in rivers in the catchment leading to eutrophication primarily from wastewater sources and agriculture sources.

Donegal Town and Killybegs

Donegal Town and Killybegs are located within Catchment 37: Donegal Bay North which includes the area drained by all streams entering tidal water between Kildoney Point and Rossan Point in Co. Donegal.

The significant pressures affecting the greatest number of water bodies in this catchment is forestry and agriculture, followed by urban wastewater, domestic wastewater, mine and quarries, hydromorphology, industry and other. Chemical toxicity associated with sheep dipping is also an issue in this catchment.

The significant pressures affecting the Killybegs Harbour are industry from fish processing and urban wastewater. Killybegs Harbour is at Moderate status due to oxygenation issues. There is also brown algae present which is evidence of excess phosphorus in the estuarine system. The source of nutrient is a combination of inputs from the freshwater environment and direct inputs from urban wastewater treatment and an IPC licensed facility,

6.5 Climate Change and Air Quality

A dispersed settlement pattern can give rise to a high dependency on the use of the car particularly where there are limited public transport options. This in turn gives rise to an increase in greenhouse gasses as well as other environmental problems such as unsustainable demand on non-renewal resources, air pollution, traffic congestion, road safety, increased travel times and associated quality of life issues.

Currently there are no significant concerns with regard to air quality at County level and consequently in none within the Plan area either.

Climate change is a cross cutting issue which impacts on habitats, species, fisheries, aquaculture, tourism, water quality, water safety, flood risk and people. Of increasing concern is the issue of flooding of rivers and flooding at the coast, as well as impacts such as eutrophication which can have devastating impacts on water quality, fish stocks, and human health. Mitigation and adaptation measures should be developed to increase the capacity to manage the impacts of climate change which are far reaching but uncertain in magnitude.

6.6 Marine and Coastal Resource

Donegal has 1,132km of North Atlantic coastline which provides not only home to the flora and fauna of the County but acts as a social and economic resource. The coast is and always has been a sought after location to live and develop. Environmental issues around the coast include the impact of increased visitors to the coast, the risks of living in a coastal location (e.g. erosion, storm/flood risk, wastewater, services etc.) and demand for coastal development.

Erosion is a necessary and vital part of any healthy functioning beach and dune system. Change is both inevitable and necessary (McKenna et al, 2000). Coastal development and resultant shoreline defences can be disastrous [to a beach] with a risk that the entire beach will be lost due to wave reflection and scouring. The loss of a dynamic environment will eventually lead to loss of the habitats that support birdlife, wetlands and the very reason coastal sites are sought after may be lost.

Marine environments have experienced pressure from increasing populations along the coast with infrastructural and recreational development within coastal areas, the necessary building of flood defences causing a coastal squeeze on marine habitats, the effects of climate change (flooding, increases in invasive species and a reduction in ocean salinity) and pollution from land side agricultural and industrial activities.

6.7 Material Assets

Changes to material assets including items and features of cultural and heritage value, water quality, residential and commercial developments, a wide range of community services and facilities and infrastructural services and facilities may have environmental impacts.

Increased development including residential, commercial and infrastructural works have put pressure on existing water sources with regards to quantity as well as on the treatment facilities used to treat both drinking water and wastewater. In addition, existing water quality issues are resulting in pressures on commercial shellfish and aquaculture activities along with fisheries used for recreational purposes in Donegal.

6.8 Cultural, Archaeological and Architectural Heritage

Development of infrastructure, in addition to development resulting from economic growth and increasing population, can potentially impact on sites or features of architectural, archaeological, geological or cultural heritage interest. In particular certain developments on or near sites of heritage value have the potential to have a negative impact on the integrity of these sites.

The pace and scale of urban development has placed pressure on the urban form and character of many centres throughout the Plan area. Inappropriate urban design and layout including residential and commercial developments have impacted on the heritage and character of towns and villages. Urban sprawl has had a significant adverse impact on the urban form and character of many urban centres, including smaller scale towns and villages within the Plan area. Such a pattern of development also gives rise to excessive and inefficient demand on rural infrastructural services and facilities, which has a negative impact on the vitality and viability of urban centres and leads to unsustainable patterns of travel.

6.9 Landscape and Visual Impacts

Existing pressures on landscape are related to impacts on the natural, built and cultural environment including impacts on the aesthetic landscape and sensitive views, resulting from the cumulative impacts arising from inappropriate typology, use, siting and design of developments. Throughout the Plan area there is inconsistency in the pattern, siting and design of buildings within the countryside. The cumulative impact of insensitive development on the landscape has a significant impact on its natural, cultural and visual amenity and its intrinsic character. Pressures on the landscape mainly come from the following developments types:

- One-off housing in the countryside
- Wind farms
- Afforestation
- Quarrying
- Major infrastructural projects including road works
- Agricultural activities, including changes in agricultural practices, and in some cases, the abandonment of farming

6.10 Inter-County and Transboundary Issues

Many of the environmental issues raised in the section above have an inter-county, and cross border (transboundary) dimension. Accordingly, responding to such issues require a coordinated and targeted approach by the many agencies involved in the management of the environment. Of particular note in terms of inter-county and cross border issues include; sensitive landscapes and sites of ecological importance, items and places of cultural heritage, sites of geological interest, water quality, marine and

coastal management, waste disposal, transportation, energy supply and telecommunications. There is a requirement for co-operation at a catchment level as evidenced in the current 'North Western International River Basin Management Plan 2009-2015' and the 'Draft River Basin Management Plan for Ireland 2018-2021' (due to be published in December 2017).

6.11 Summary of Main Environmental Pressures in the Plan area

The following table presents a summary of the main environmental pressures within the Plan area and the items presented in the table are not exhaustive.

Table 6.2: Summary of Main Environmental Pressures within the Plan area

Topic	Environmental Issue/Pressures
Biodiversity, Fauna and Flora	Certain developments and activities associated with agricultural activities, forestry, urban developments, windfarms, quarries, tourism, peat extraction, commercial fishing, ports and airports and a wide range of infrastructural works (including road works, water abstraction, wastewater disposal) that are located within or close to ecologically sensitive sites can give rise to significant environmental pressures. The protection of shellfish growing areas, freshwater pearl mussel and salmon have been highlighted as of particular importance. There are a relatively high number of Natura 2000 sites (SACs and SPAs) and Natural Heritage Sites located within the Plan area. These sites are particularly sensitive to certain development works and activities. Invasive non-native plant and animal species are a major threat to the biodiversity of the region.
Population and Human Health	Increases in population, their activities and settlement patterns have the potential to place increased pressure on biodiversity, water quality, landscape, cultural heritage and air. In particular, increased pressure on water quality arising from pollution can have a significant impact on human health. Individual and cumulative changes in the quality of the natural and built environment at local, regional and national level has the potential to impact to varying degrees on human health and wellbeing. High levels of radon in buildings and road safety have also been highlighted as significant issues.
Soil	Certain forms of development and activities including, urban and rural development, windfarms, waste disposal, afforestation, recreation and agricultural activities can place a significant pressure in soils. Changes in precipitation arising from global warming could have significant impacts on slope stability and could impact on soil and water quality.
Water	Development and activities can often impact on water quality including groundwater, drinking water and bathing water. Urban and rural development including wastewater and surface water disposal, landfills, quarries, contaminated lands, illegal dumping, agricultural activity, water recreational activities and afforestation can have significant impacts on water quality. Excessive inputs of nutrients, namely phosphorous and nitrogen present one of the most significant risks to water quality.
Air and Noise	Currently no significant impacts have been identified in respect to air quality or noise levels. Impacts arising from air pollution are primarily associated with transport and industrial emissions.
Coast/Marine resource	Inappropriate development near /on the coast Dynamic needs of the coast (coastal squeeze) Flood risk and coastal defences Tourism impacts and sustainable management e.g. Sensitive dune systems and beach access points Litter disposal and public services (e.g. toilets)

Topic	Environmental Issue/Pressures
	<p>Activities in the water</p> <p>Coastal /Marine spatial planning</p>
Climatic factors	<p>Increased greenhouse gas emissions have been linked with climate change resulting in increases in the intensity and frequency of flooding.</p> <p>Of particular concern is the high dependency on the use of the car arising from a dispersed rural settlement pattern and lack of adequate public transport system.</p>
Renewable energy	<p>Onshore and offshore opportunities and implications</p> <p>Onshore – scenic amenity access roads loss of biodiversity</p> <p>Offshore – impact on birds & marine mammals deployment issues grid connection locations</p>
Material Assets	<p>Material assets include a wide range of natural and man made assets. These can include infrastructural services and facilities and other items such as cultural heritage, agricultural lands quarries and coastal and water resources. Developments and activities can often impact on these assets, some of which have been referred to herein. It has been highlighted that there is a high level of residential and commercial vacancy within the Plan area. These properties represent an underutilized resource and if left idle, they can over time deteriorate and detract from the character of urban areas.</p>
Cultural heritage, including Architectural and Archaeological	<p>Pressures can arise from certain developments and activities on or near sites of heritage value. The visual amenities and character of urban and rural areas and items of architectural, archaeological and historical importance, including shipwrecks, may be placed under pressure by such works. It is acknowledged that development works can often have a positive impact on our cultural heritage.</p>
Landscape	<p>Developments and activities can impact on visually sensitive areas including designated landscape and seascapes.</p>
Interrelationship between the above topics	<p>Cumulative impacts and interaction of above mentioned items can give rise to increased pressure on the environment. The impacts and interactions will obviously vary in extent and nature. In particular, issues in respect to water quality, climate change and the issue of one-off housing in the countryside crosses a number of environmental topic areas. Population increase and changes in people's activities and settlement patterns can impact on a wide range of the topics mentioned above.</p>

7 Flood Risk

7.1 Background

Flooding is a natural occurrence which can never be entirely prevented. It is caused by a variety of factors (e.g. rainfall, river, tidal/coastal, groundwater) often in combination and can occur in a range of locations. Humans can further increase flood risk by such actions as building developments in flood risk locations, reducing floodplain storage capacity or increasing surface water runoff through overuse of hard surfaces.

The timing and extent of flooding is often difficult to predict due to the complex interplay of atmospheric and geographical conditions which give rise to flooding (e.g. rainfall intensity and duration, catchment size, soil, gradient, geology, surface water runoff, tidal conditions etc). Furthermore it is predicted that flood events will become more frequent and severe as a result of climate change.

Donegal is vulnerable to flooding from a number of different sources including intensive rainfall and combined fluvial/tidal events. In recent years the county has suffered a number of flooding events which have caused significant socio-economic damage e.g. Letterkenny General Hospital (2013 and 2014), Bunbeg (2009) and Raphoe (2008). Recent heavy rainfall in September 2017 caused severe flooding on the Inishowen Peninsula including the village of Bridgend, Carndonagh and the surrounding area. A survey to assess the impact of the flooding on the 1,500 kilometre road network in Inishowen is underway and extensive damage has been revealed.

7.2 Legislation and Guidance

In 2007 the EU Floods Directive (2007/60/EC) became operational. This directive aimed to reduce the adverse consequences of flooding on human health, the environment, cultural heritage and economic activity. The directive required Member States to map the flood extent and assets and humans at risk in these areas and to take adequate and coordinated measures to reduce this risk. Subsequent to this the following were published and these inform the policy for flood risk assessment in Ireland.

- Planning System and Flood Risk Management-Guidelines for Planning Authorities (DoEHLG, 2009); and
- National Catchment-Based Flood Risk Assessment and Management (CFRAMS) programme (OPW).

The guidelines and CFRAMS programme adopt a precautionary approach to flooding and set out a sequential approach for the management of development in areas at risk from flooding and the preparation of Strategic Flood Risk Assessments (SFRA) to; identify Flood Risk areas, assess existing flood infrastructure, and identify possible flood defence measures. It is also a requirement to identify Flood Risk Areas and categories of Vulnerable Development through which to apply the Sequential Test.

The Office of Public Works (OPW) has been designated as the lead agency for flood risk management in Ireland and the competent authority for the implementation of the Floods Directive. Commencing in 2011 the OPW has undertaken a National Catchment-based Flood Risk Assessment and Management (CFRAM) Programme which aimed to: identify and map existing flood hazard and flood risk in certain Areas for Further Assessment (AFA), set out viable options for the effective and sustainable management of flood risk in said AFAs, and prepare Flood Risk Management Plans (FRMP's) including strategies and actions for the cost effective and sustainable management of existing and future flood risk in the AFAs.

The national CFRAM programme has divided the Country into a number of River Basin Districts (RBD) which in turn are divided into Units of Management (UoM); identified Areas for Further Assessment

through a Preliminary Flood Risk Assessment (PFRA); produced Flood Hazard Mapping for the AFA areas; and published Draft FRMP's for the 3 UoM's identified within Donegal. These Draft FRMP's set out flood management objectives, and identify flood risk management measures including both general measures for the overall UoM's (e.g. application of the Guidelines on the Planning System and Flood Risk Management) and specific measures for each AFA (e.g. infrastructural works).

7.3 Strategic and Policy Framework within the Local Area Plan

The Draft County Development Plan 2018-2024 (the Draft CDP) considers that the Draft Flood Risk Management Plans for UoM 1,35 and 36 and the associated Flood Hazard Mapping collectively constitute a strategic flood risk management plan for the County representing the best information currently available for the future management of development in Donegal vis-à-vis flood risk. In this regard the Draft LAP has utilised Flood Risk Management Plans and Flood Hazard Mapping as a strategic framework to inform zoning designations to guide the location of new development and infrastructure.

The Draft LAP sets out an overall strategy for the proper planning and sustainable development of the seven towns in the context of the Draft CDP. The general development management policies and standards of the Draft CDP are applicable to the Draft LAP. Chapter 3 of the Draft LAP deals with the issue of flooding generally for the seven towns and the rationale and policy framework contained in the Flooding Section of the Draft CDP will be applied. In this regard, management of Flood Risk in the Draft LAP is subject to the aims, objectives and policies set out in the Draft Plan.

In identifying settlement boundaries for the Draft LAP, the Planning Authority has had due regard to the CFRAMS study as the best available evidence regarding flood risk in each of the seven towns, as described below:

An Clochán Liath (Dungloe)

An Clochán Liath has not been identified as an Area of Further Assessment (AFA) in the CFRAMS study.

Ballybofey-Stranorlar

Ballybofey-Stranorlar was identified as an Area for Further Assessment (AFA) in the CFRAMS study and the preferred measure arising from the assessment was the progression of the Ballybofey & Stranorlar Flood Relief Scheme: Option 3, comprising hard defences and improvement of channel conveyance, to project-level development and assessment for refinement and preparation for planning/exhibition and, as appropriate, implementation. Similarly, the Planning Authority will have due regard to the CFRAMS Ballybofey-Stranorlar Flood Extents mapping where necessary in the assessment of planning applications during the life of the LAP. Figure 7.1 sourced from OPW CFRAMS study shows the probability of flood extents within the town centre in Ballybofey-Stranorlar and further mapping for the outer areas of the town can be viewed at www.maps.opw.ie/floodplans.

Ballyshannon

Ballyshannon has not been identified as an Area of Further Assessment (AFA) in the CFRAMS study.

Bridgend

Bridgend has not been identified as an Area of Further Assessment (AFA) in the CFRAMS study.

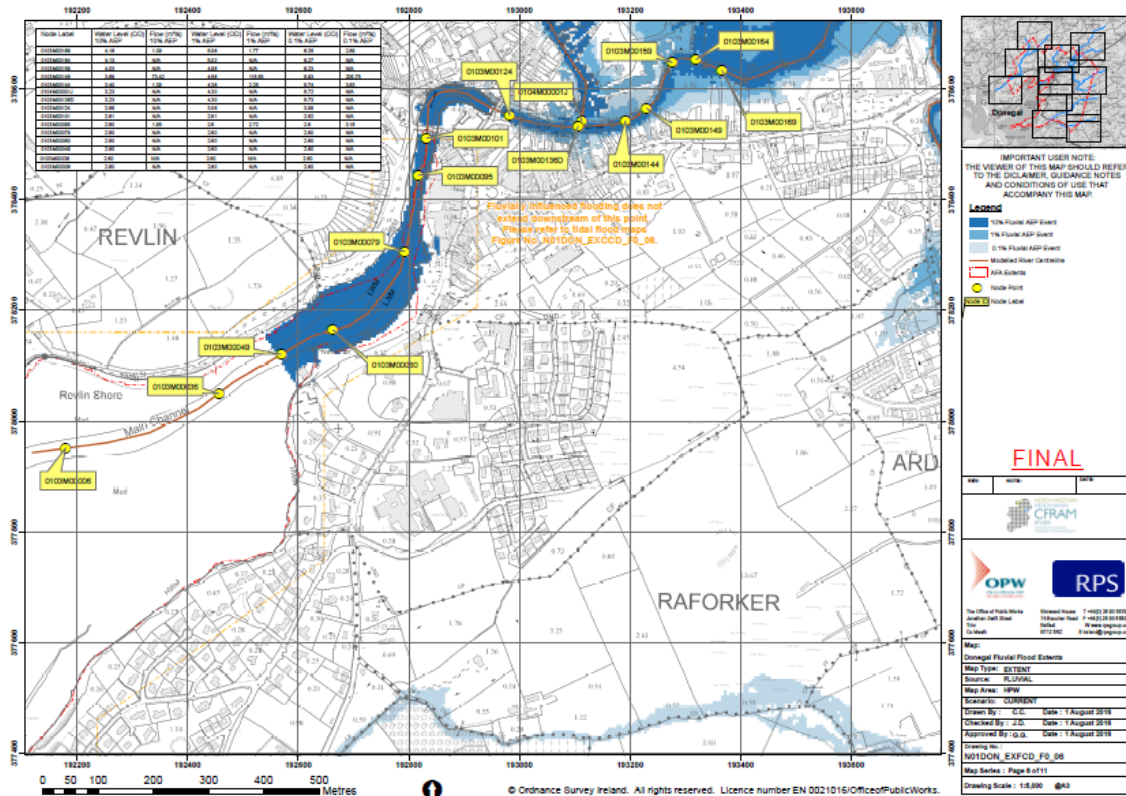
Carndonagh

Carndonagh was identified as an Area for Further Assessment (AFA) in the CFRAMS study and the preferred measure arising from the assessment was the progression of the Carndonagh Flood Relief Scheme Option 1, comprising storage, hard defences and improvement of channel conveyance, to project-level development and assessment for refinement and preparation for planning/exhibition and, as appropriate, implementation. Similarly, the Planning Authority will have due regard to the CFRAMS Carndonagh Flood Extents mapping where necessary in the assessment of planning applications during the life of the LAP. Figure 7.2 sourced from OPW CFRAMS study shows the probability of flood extents within the town centre in Carndonagh and further mapping for the outer areas of the town can be viewed at www.maps.opw.ie/floodplans.

Donegal Town

Donegal Town was identified as an Area for Further Assessment (AFA) in the CFRAMS study and the preferred measure arising from the assessment was the progression of the Donegal Flood Relief Scheme Option 1, comprising hard defences and storage to project-level development and assessment for refinement and preparation for planning/exhibition and, as appropriate, implementation. Similarly, the Planning Authority will have due regard to the CFRAMS Donegal Town Flood Extents mapping where necessary in the assessment of planning applications during the life of the LAP. Figure 7.3 sourced from OPW CFRAMS study show the probability of flood extents within the town centre in Donegal Town and further mapping for the outer areas of the town can be viewed at www.maps.opw.ie/floodplans.

Figure 7.3: Donegal Town Centre Fluvial Flood Extents

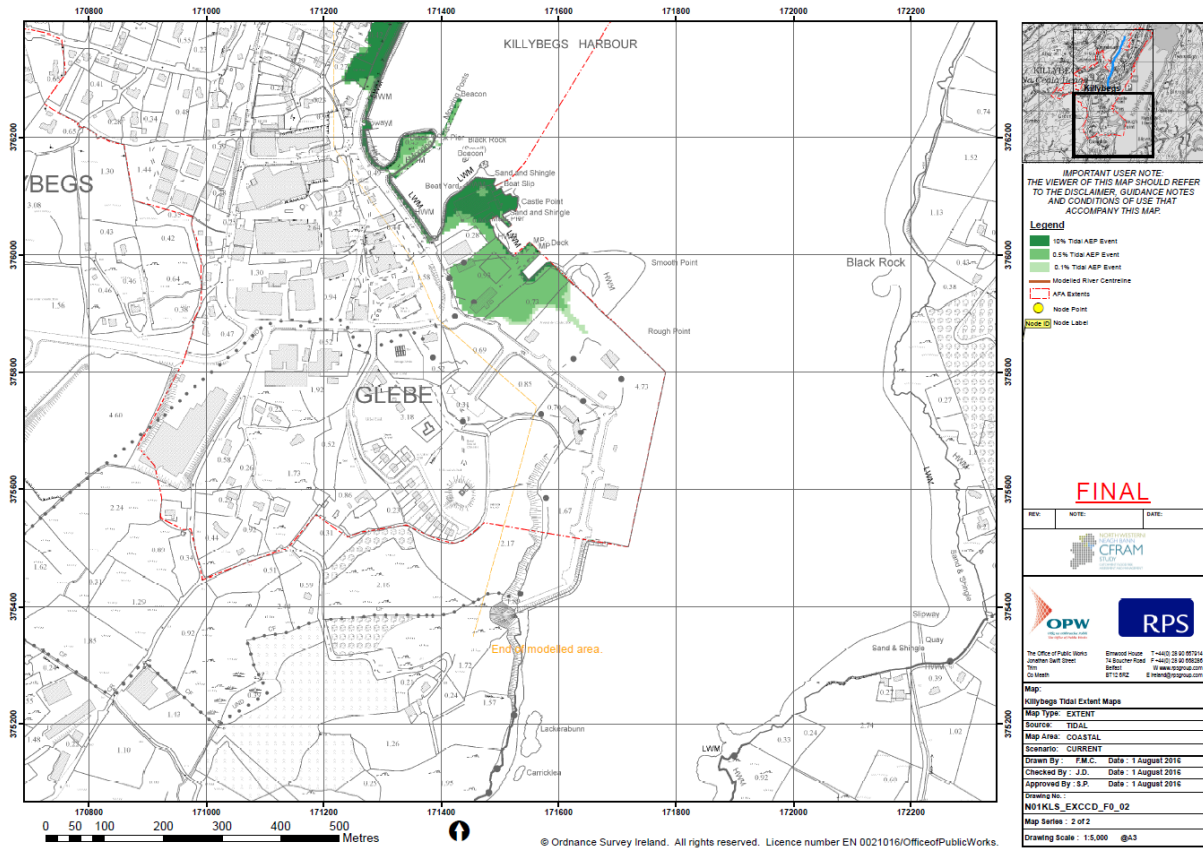


Source: OPW CFRAM study

Killybegs

Killybegs was identified as an Area for Further Assessment (AFA) in the CFRAMS study and the preferred measure arising from the assessment was the progression of the Killybegs Flood Relief Scheme Option 1, comprising hard defences, to project-level development and assessment for refinement and preparation for planning/exhibition and, as appropriate, implementation. Similarly, the Planning Authority will have due regard to the CFRAMS Killybegs Flood Extents mapping where necessary in the assessment of planning applications during the life of the LAP. Figures 7.4 sourced from OPW CFRAMS study show the probability of flood extents within Killybegs and further mapping for the outer areas of the town can be viewed at www.maps.opw.ie/floodplans.

Figure 7.4: Killybegs Centre Fluvial Flood Extents



Source: OPW CFRAM study

7.4 Likely Environmental Effects of Flood Related Policies and Objectives of The Plan

Overall it is considered that the flood related policies and objectives within the Draft CDP will reduce the adverse consequences of flooding on human health, the environment and heritage by:

- Implementing the precautionary principle and sequential approach detailed in the publication 'The Planning System and Flood Risk Management - Guidelines for Planning Authorities' (DoEHLG 2009 including; avoiding development in flood risk areas, substituting less vulnerable for more vulnerable developments, justifying new development at strategic locations where avoidance and substitution are not possible and mitigating the impact of flooding through the design and layout of new developments.
- Within the seven towns in the LAP the zoning designations for new development and infrastructure have been informed by evidence based assessments in the form of the flood risk hazard mapping prepared as part of the CFRAMS study and other appropriate flooding datasets.

8 Likely Evolution of the Environment in the Absence of the Implementation of the Local Area Plan

The Draft Seven Strategic Towns Local Area Plan 2018-2024 (the Draft LAP) for the towns of An Clochán Liath (Dungloe), Ballybofey-Stranorlar, Ballyshannon, Bridgend, Carndonagh, Donegal Town and Killybegs sets out an overall strategy for the proper planning and sustainable development of the seven towns in the context of the Draft County Donegal Development Plan 2018-2024 (the Draft CDP) and the Border Regional Authority's Regional Planning Guidelines 2010-2022 (RPGs).

The Draft CDP and the Draft LAP should be read in tandem when interpreting the specific policies and objectives for the seven strategic towns. Where conflicting policies and objectives arise between the Draft CDP and the Draft LAP, the policies and objectives of the Draft CDP shall take precedence.

The Draft LAP is a spatially based strategic framework which seeks to manage and co-ordinate change in land use in the Plan area. This change must be managed in a way that considers its affect (both positive and negative) on the various components of the natural, built and cultural environment and its people.

Environmental consideration is fundamental to the LAP insofar that potential land use change must be planned for in a sustainable way which causes the least damage to the receiving environment. This environmental consideration is evidenced through the interrelationships between the Plan, the SEA and the AA that are identified throughout this Report. Ensuring the development of the Plan area in the absence of a robust strategic land use plan, which considers the development of the Plan area in the context of environmental integration, is the primary focus of the SEA process.

Section 4 of this Report examines two Alternative approaches to the Plan in order to consider the distribution of projected population growth across the Plan area. The two Alternative approaches are:

- Alternative 1: Business as usual,
- Alternative 2: Effective Urban-Rural Development

The 'do-nothing scenario', Alternative 1: Business as usual, sets out how the Plan area would be likely to development in the absence of the LAP, and the following outcomes and potential impacts have been identified:

- Weaken towns and villages and lack of regeneration and revitalisation.
- Pressure of limited resources to make required investments in wastewater and water infrastructure.
- Demand for the uneconomic extension of community services and facilities.
- Pressure on rural areas immediately outside urban areas.
- Further proliferation of individual wastewater treatment systems.
- Provision of higher cost services and facilities in an unplanned way- developer driven and occurring as the need arises.
- Contradictions in identifying investment priorities and delivery of key infrastructural projects.
- Lack of clarity for economic and employment investors in terms of preferred locations for new economic development, and provision of the factors of competitiveness.
- Increase risk of non-compliance with environmental legislation, with damage to environmentally sensitive areas.

These potential impacts on the environment as a result of the do-nothing scenario demonstrate that to proceed in the absence of a Local Area Plan would have detrimental impacts on the environment and be contrary to the proper planning and development of the area.

8.1 Monitoring, Environmental Objectives, Indicators and Targets

Given the strategic nature of the SEA assessment of the Plan, it is not possible for the baseline to be described (and assessed) in as much detail as could be down for a project based environmental impact assessment. Consequently, SEA uses a system of objectives, targets and indicators to set a framework for assessment of the Plan (see Table 8.1). In order to streamline the assessment process, this Report has used broad themes, based on environmental topics listed in the SEA Directive, to group large data sets, e.g. biodiversity, flora and fauna, water, human health, cultural heritage and air and climate.

The measures outlined in Table 8.1 have been set out as part of the SEA to monitor the significant environmental effects of the implementation of the Plan and any gaps identified in the Environmental Report to help identify issues that need addressing or arise during the lifetime of the Plan. Monitoring shall be based on the environmental objectives, targets and indicators set out below.

Table 8.1: Environmental Protection Objectives, Indicators and Targets

Biodiversity, Fauna and Flora		
Environmental Objectives	Indicators	Targets
BIO1: Ensure compliance with the Habitats Directive by protecting all Natura 2000 sites and habitats of species (SACs and SPAs) within the Plan area.	Number and nature of developments permitted in or within the 15km Buffer of the Natura 2000 site.	Maintenance of favourable conservation status of the Qualifying Interests of all Natura 2000 sites. Control of inappropriate development in and within 15km of Natura 2000 sites or likely to impact upon the Quality Interests of Natura 2000 sites.
BIO2: Conserve and enhance the diversity of habitats and protected species and promote the sustainable management of these areas.	Conservation status of habitats and species as reported by NPWS.	Maintenance of favourable conservation status of all Natura 2000 habitats of species and sites. Compliance with Catchment Plans for Freshwater Pearl Mussel. Compliance with the relevant River Basin Management Plan.
BIO3: Protect the marine environment, and promote integrated coastal zone management strategies.	Quality of shellfish Growing Areas as reported by DEHLG. Number of Blue Flag Beaches.	Incorporate the Pollution Reduction Programmes for Shellfish Waters.
BIO4: Protect macro-corridors and contiguous areas of habitat.	Hedgerow and riverside length.	Maintenance of contiguous hedgerows, planted areas and waterways and their associated habitats.
Population		
Environmental Objectives	Indicators	Targets
POP1: Facilitate a good quality of life based on high-quality residential, working and recreational environments.	Provision of employment. Provision of services. Provision of amenities.	Increase in employment opportunities. Increase and improvement of services. Increase and improvement of amenities.
POP2: Facilitate more sustainable travel patterns	Provision of sustainable travel modes.	Increase and improvement of sustainable travel in the County.

Human Health		
Environmental Objectives	Indicators	Targets
HH1: Minimise noise, vibration and emissions from traffic, industrial processes and extractive industry.	Occurrence of spatially concentrated incidences of deterioration in human health (EPA, Local Reports).	No spatially occurring incidences.
Soil (including minerals)		
Environmental Objectives	Indicators	Targets
SL1: Protect and maintain the quality of soils.	EPA/Teagasc National Soils Mapping Project.	Conservation of soil.
SL2: Protect and conserve geological sites.	Number and area of geological heritage sites as mapped by GSI	Retain/increase the number of geological heritage sites in the Plan area.
SL3: Give preference to the re-use of brownfield lands, rather than developing greenfield lands.	Location and area of brownfield sites developed and permitted for development over the plan period.	Develop as many brownfield sites as appropriate and possible.
SL4: Minimise the consumption of non-renewable sand, gravel and rock deposits		
SL5: Minimise the amount of waste to landfill	Amount and nature of waste to landfill and location of landfill.	Reduce amount of waste to landfill.
Water		
Environmental Objectives	Indicators	Targets
<p>WR1: Protect and enhance the status of aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystems, in accordance with the relevant River Basin Management Plan.</p> <p>Protect the quality of surface and drinking water quality as sources of drinking water, assets for amenity, and recreation and ecosystem purposes.</p>	<p>Water quality monitoring results by the EPA and County Lab, for:</p> <ul style="list-style-type: none"> ▪ Surface water ecological and chemical status ▪ Status of Estuarine and Coastal Waters ▪ Bathing Water Quality ▪ Groundwater Quality ▪ Drinking Water quality <p>Number of Public Water Supplies on EPA Remedial Action list.</p> <p>Relevant EPA data in relation to Urban Wastewater Treatment.</p> <p>Agglomerations over 500 in the Plan area without Secondary Treatment.</p> <p>Proportion of discharge licenses granted by the EPA that are compliant.</p>	<p>Protect and restore areas identified in the relevant River Basin Management Plan (RBMP) and achieve 'good' status in accordance with the RBMP objectives.</p> <p>Improvements in levels of compliance with drinking water quality standards and promotion to above national average compliance rate.</p> <p>Commission secondary treatment plants in areas with low assimilative capacity for waste water or where primary treatment is adequate.</p>

WR2: Promote sustainable water use based on a long-term protection of available water resources.	Water meter readings.	Improve Water Conservation
WR3: Reduce progressively discharges of polluting substances to waters.	Water quality monitoring results by the EPA and County Lab, for: <ul style="list-style-type: none"> ▪ Surface water ecological and chemical status ▪ Status of Estuarine and Coastal Waters ▪ Bathing Water Quality ▪ Groundwater Quality ▪ Drinking Water quality. 	Protect and restore areas identified in the relevant River Basin Management Plan (RBMP) and achieve 'good' status in accordance with the RBMP objectives. Improvements in levels of compliance with drinking water quality standards and promotion to above national average compliance rate. Commission secondary treatment plants in areas with low assimilative capacity for waste water or where primary treatment is adequate.
WR4: Manage the risk of coastal, estuarine and fluvial flooding. Manage the risk of droughts.	Number of housing developments permitted on flood plains or lands likely to flood.	Improved flood risk management in areas prone to flooding. Reduction in incidents of flood damage to properties.
COAST/Marine Resource		
Environmental Objectives	Indicators	Targets
CM1: Avoid coastal erosion and promote coastal protection. Manage the coastal zone as an environmental and tourist resource.		Conserve and enhance the coastal resource as an environment, amenity and resource.
Air/Climatic Factors		
Environmental Objectives	Indicators	Targets
AC1: Support implementation of National climate change targets, objectives and policies. Reduce all forms of air pollution	National level of carbon emissions. Local Air quality monitoring results.	20% reduction in greenhouse gas emissions from 1990 levels by 2020. Full delivery of Climate Change strategies and Preparation of County Climate Change Strategies.
AC2: Promote and support a shift from fossil fuel dependent energy to more sustainable energy. Promote and support a shift from fossil fuel dependant vehicles to more sustainable modes of travel.	I-Plan results of numbers of developments permitted with renewable energies. Average daily motor vehicle flows. Proportion of travel by mode. Investment in public transport.	Reduce road traffic in line with Smarter Travel, A Sustainable Transport Future. Increased investment in cycle paths and footpaths. Consider recommendations of OREDP in Off shore wind energy developments.

Material Assets		
Environmental Objectives	Indicators	Targets
MA1: Maintain and improve the availability and quality of community related infrastructure, services and facilities and ensure the prudent management of environmental resources.	Availability and quality of community related infrastructure, services and facilities and status of environmental resources.	
MA2: Avoid flood risk and/or coastal erosion in selecting sites for development.	Number of community related developments on vulnerable coastal sites/sites prone to flooding.	Improved flood risk management in areas prone to flooding. Reduction in incidents of flood damage to premises.
Cultural Heritage		
Environmental Objectives	Indicators	Targets
CH1: Promote the protection and conservation of the cultural, including architectural and archaeological, heritage	<p>Number of structures on RPS in relation to Ministerial Recommendations arising from NIAH County inventory.</p> <p>Number of ACAs</p> <p>Number of Monuments on the RMP and areas of archaeological potential which have been recorded or subject to exploration as a result of development.</p> <p>Number of protected structures or archaeological monuments damaged due to development.</p>	<p>To increase the number of protected structures in line with ministerial recommendations arising from NIAH surveys.</p> <p>To increase the number and range of ACAs in the County to conserve both townscapes and demesne landscapes.</p> <p>To maintain and increase the number of archaeological features recorded and protected.</p> <p>No damage occurring to structures or monuments due to development.</p>
Landscape		
Environmental Objectives	Indicators	Targets
LD1: Conserve and enhance valued natural and historic landscapes and features within them and avoid adverse impacts.	<p>Landscape classification as outlined in the 'Scenic Amenity' Mapping in the Draft CDP 2018-2024.</p> <p>Landscape characterisation of the Plan area as outlined in the Council's 'Landscape Character Assessment' for Donegal.</p>	<p>Conserve and enhance the Plan area's most valued scenic landscapes.</p> <p>Appropriate Heritage Appraisal and Landscape Capacity Assessment to inform any future development of uplands, waterway corridors, demesne and coastal landscapes.</p>

8.2 Assessment of Objectives, Policies and Settlement Frameworks

This section assesses the potential effects of implementing the Local Area Plan on the environment. This is achieved through the examination of each objective and policy proposed in the Plan under headings that indicate whether the implementation of the Plan is likely to improve, conflict or have a neutral effect on the environment (Table 8.2 below). These are set against Strategic Environmental Objectives (SEOs) that have been derived from National and International policy documents, strategies and Guidelines, and based on emerging environmental conditions within the County (Table 8.3 below).

In addition to the assessment matrix set out in Table 8.4 of this Report, the environmental issues and Strategic Environmental Objectives were considered in detail throughout the entire Plan review process in development of the objectives, policies and settlement frameworks of the Plan. Some of the specific policy references that contain reference to environmental measures are contained within Table 10.1 at the end of this report, whilst other considerations would have resulted in amendments to objectives and policies, additional objectives and policies and also deletion of objectives and policies during the SEA process.

Table 8.2: Categories for Assessment

Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No interaction with status of SEOs	Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
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*An acceptable level means where the conflict with the status of the SEO would be rendered benign or reduce through mitigation measures and thereby become acceptable in terms of well established principles of proper planning and sustainable development.

Table 8.3: Strategic Environmental Objectives

Environmental Component	SEO code:	Strategic Environmental Objective
Biodiversity, Fauna and Flora	BIO1	Ensure compliance with the Habitats Directive by protecting all Natura 2000 sites and habitats of species (SACs and SPAs) within the Plan area, including Freshwater Pearl Mussel catchment areas.
Biodiversity, Fauna and Flora	BIO2	Conserve and enhance the diversity of habitats and protected species and promote the sustainable management of these areas.
Biodiversity, Fauna and Flora	BIO3	Protect the marine environment, and promote integrated coastal zone management strategies.
Biodiversity, Fauna and Flora	BIO4	Protect macro-corridors and contiguous areas of habitat.
Population	POP1	Facilitate a good quality of life based on high-quality residential, working and recreational environments.
Population	POP2	Facilitate more sustainable travel patterns.
Human Health	HH1	Minimise noise, vibration and emissions from traffic, industrial processes and extractive industry.
Soil (Including Minerals)	SL1	Protect and maintain the quality of soils.
Soil (Including Minerals)	SL2	Protect and conserve geological sites.
Soil (Including Minerals)	SL3	Give preference to the re-use of brownfield lands, rather than developing greenfield lands.
Soil (Including Minerals)	SL4	Minimise the amount of waste to landfill

Water	WR1	Protect and enhance the status of aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystems, in accordance with the relevant River Basin Management Plan.
Water	WR2	Protect the quality of surface and drinking water quality as sources of drinking water, assets for amenity, and recreation and ecosystem purposes.
Water	WR3	Promote sustainable water use based on a long-term protection of available water resources.
Water	WR4	Reduce progressively discharges of polluting substances to waters.
Water	WR5	Manage the risk of coastal, estuarine and fluvial flooding. Manage the risk of droughts.
Coast/Marine Resource	CM1	Avoid coastal erosion and promote coastal protection. Manage the coastal zone as an environmental and tourist resource.
Coast/Marine Resource	CM2	Protect Designated Shellfish Waters.
Air/Climatic Factors	AC1	Support implementation of National climate change targets, objectives and policies.
Air/Climatic Factors	AC2	Reduce all forms of air pollution
Air/Climatic Factors	AC3	Promote and support a shift from fossil fuel dependent energy to more sustainable energy. Promote and support a shift from fossil fuel dependant vehicles to more sustainable modes of travel.
Material Assets	MA1	Maintain and improve the availability and quality of community related infrastructure, services and facilities and ensure the prudent management of environmental resources.
Material Assets	MA2	Avoid flood risk and/or coastal erosion in selecting sites for development
Cultural Heritage	CH1	Promote the protection and conservation of the cultural, including architectural and archaeological, heritage
Landscape	LD1	Conserve and enhance valued natural, historic and cultural landscapes and features within them and avoid adverse impacts.

8.3 Conclusion

The assessment of objectives and policies contained within Table 8.4 indicate the following:

- The implementation of the Local Area Plan will have an overall positive effect on the environmental status of the Plan area;
- Whilst a number of objectives and policies would have an overall positive impact, there may be certain elements of them that could also contain potential for conflict; where this arises the objectives and policies should be mitigated to an acceptable level*;
- The impact of some objectives and policies may be uncertain;
- The Implementation of the Plan will not give rise to probable environmental conflicts that are unlikely to be mitigated to an acceptable level*.

*An acceptable level means where the conflict with the status of the SEO would be rendered benign or reduce through mitigation measures and thereby become acceptable in terms of well established principles of proper planning and sustainable development.

Table 8.4: Assessment of Strategic Policy Objectives,

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
CHAPTER 2	POLICY CONTEXT					
Section 2.1	Compliance with Core Strategy					
Section 2.1.6	The Strategic Objectives of the Plan					
S01				BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4	BIO1, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	
S02				BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4	BIO1, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	
S03				BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4	BIO1, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1	
S04				BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4	BIO1, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	
S05				BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4	BIO1, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	
S06				BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4	BIO1, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	
S07			BIO1, BIO2, BIO3, HH1, WR1, CM1, CM2,		BIO4, POP1, POP2, SL1, SL2, SL3, SL4,	

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
					WR2, WR3, WR4, WR5, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
CHAPTER 3	GENERAL OBJECTIVES AND POLICIES OF THE PLAN					
SECTION 3.2	Land Use Zoning Objectives					
Established Development			BIO1, BIO2, BIO3, BIO4, HH1, SL1, WR1, WR2, AC1, AC2,	SL4, WR3, WR4, WR5, CM1, CM2, ac3,	SL2,	POP1, POP2, SL3, MA1, MA2, CH1, LD1
Established Economic Development			BIO1, BIO2, BIO3, BIO4, SL1, SL2, WR1, WR2,	SL4, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2,		POP1, POP2, HH1, SL3, CH1, LD1
Economic Development			BIO1, BIO2, BIO3, BIO4, SL1, SL2, WR1, WR2,	SL4, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2,		POP1, POP2, HH1, SL3, CH1, LD1
Strategic Economic Development Opportunity Site			BIO1, BIO2, BIO3, BIO4, SL1, SL2, WR1, WR2,	SL4, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2,		POP1, POP2, HH1, SL3, CH1, LD1
Opportunity Site			BIO1, BIO2, BIO3, BIO4, HH1, SL1, WR1, WR2, AC1, AC2,	SL4, WR3, WR4, WR5, CM1, CM2, AC3,	SL2,	POP1, POP2, SL3, MA1, MA2, CH1, LD1
Town Centre			BIO1, BIO2, BIO3, BIO4, HH1, SL1, SL2, AC1, AC2, AC3,	SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2,		POP1, POP2, SL3, MA1, MA2, CH1, LD1,
Port / Harbour Related		BIO1, BIO2, BIO3, WR1, WR4, WR5, MA2,	BIO4, HH1, WR2, WR3, CM1, AC1, AC2, CH1, LD1	POP1, POP2, SL1, SL2, SL3, SL4, CM2, AC3, MA1,		
Local			BIO1, BIO2, BIO3, BIO4, HH1, SL1, WR1,	SL4, WR3, WR4, WR5,	SL2,	POP1, POP2, SL3, MA1,

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
Environment			WR2, AC1, AC2,	CM1, CM2,		MA1, MA2, CH1, LD1
Recreation and Amenity			BIO1, BIO2, BIO3, BIO4,	POP2, HH1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1,		POP1, SL1, MA1, LD1,
Community			BIO1, BIO2, BIO3, BIO4,	POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1,		POP1, MA1,
Primarily Residential (1st Phase)			BIO1, BIO2, BIO3, BIO4, HH1, SL1, WR1, WR2, AC1, AC2,	SL4, WR3, WR4, WR5, CM1, CM2, AC3,	SL2,	POP1, POP2, SL3, MA1, MA2, CH1, LD1
Strategic Residential Reserve			BIO1, BIO2, BIO3, BIO4, HH1, SL1, WR1, WR2, AC1, AC2,	SL4, WR3, WR4, WR5, CM1, CM2, AC3,	SL2,	POP1, POP2, SL3, MA1, MA2, CH1, LD1
Visually Vulnerable				BIO1, BIO2, BIO3, BIO4, POP1, HH1, SL3, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2		POP1, SL1, SL2, MA1, CH1, LD1,
SECTION 3.3	Town Centre					
SECTION 3.3.3	General Town Centre Objectives					
GEN-TC-1		BIO4			BIO1, BIO2, BIO3, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	POP1, POP2, HH1, SL3, MA1
GEN-TC-2		BIO4			BIO1, BIO2, BIO3, SL1,	POP1, POP2, HH1, SL3,

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
					SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	MA1
SECTION 3.3.3	General Town Centre Policies					
GEN-TC-1					BIO1, BIO2, BIO3, BIO4, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	POP1, POP2, SL3, MA1
GEN-TC-2					BIO1, BIO2, BIO3, BIO4, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3	POP1, POP2, HH1, SL3, MA1, MA2, CH1, LD1
SECTION 3.4	Economic Development					
SECTION 3.4.2	General Economic Development Objectives					
GEN-ED-1			SL3		BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL4, WR4, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	BIO1
SECTION 3.4.2	General Economic Development Policies					
GEN-ED-1		SL3	HH1, SL1, SL4, WR4		BIO2, BIO3, BIO4, SL2, WR1, WR2, WR3, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	BIO1, POP1, POP2,

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
GEN-ED-2			HH1, SL1, SL4		BIO2, BIO3, BIO4, SL2, WR1, WR2, WR3, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1, WR4	BIO1, POP1, POP2, SL3
GEN-ED-3			HH1, SL1, SL4, POP2, POP1		BIO2, BIO3, BIO4, SL2, WR1, WR2, WR3, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1, WR4	BIO1, MA1
GEN-ED-4			HH1, SL1, SL4		BIO2, BIO3, BIO4, SL2, WR1, WR2, WR3, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1, WR4	BIO1, POP1, POP2, SL3
GEN-ED-5				SL3, SL4	POP2, CM1, CM2, AC1, AC3, MA1	BIO1, BIO2, BIO3, BIO4, POP1, HH1, SL1, SL2, WR1, WR2, WR3, WR4, WR5, AC2, MA2, CH1, LD1
SECTION 3.5						
SECTION 3.5.2	General Housing Objectives					
GEN-H-1				BIO3, HH1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, CH1, LD1,		BIO1, BIO2, BIO4, POP1, POP2, SL1, SL3, MA1, MA2,
SECTION 3.5.3	General Housing Policies					
GEN-H-1				BIO3, HH1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1,		BIO1, BIO2, BIO4, POP1, POP2, SL1, SL3, MA1, MA2,

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
				AC2, AC3, CH1, LD1,		
GEN-H-2				BIO3, HH1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, CH1, LD1,		BIO1, BIO2, BIO4, POP1, POP2, SL1, SL3, MA1, MA2,
GEN-H-3				BIO3, HH1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, CH1, LD1,		BIO1, BIO2, BIO4, POP1, POP2, SL1, SL3, MA1, MA2,
GEN-H-4			BIO1, BIO2, BIO4,	BIO3, HH1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, CH1, LD1,		POP1, POP2, SL1, SL3, MA1, MA2,
GEN-H-5			BIO1, BIO2, BIO4,	BIO3, HH1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3,		POP1, POP2, SL1, SL3, MA1, MA2, CH1, LD1,
GEN-H-6			BIO1, BIO2, BIO4,	BIO3, HH1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, CH1, LD1,		POP1, POP2, SL1, SL3, MA1, MA2,
GEN-H-7		POP2, SL3,	BIO1, BIO2, BIO4, CH1, LD1,	BIO3, HH1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3,		POP1, SL1, MA1, MA2,
GEN-H-8			BIO1, BIO2, BIO4,	BIO3, HH1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, CH1, LD1,		POP1, POP2, SL1, SL3, MA1, MA2,
GEN-H-9			BIO1, BIO2, BIO4,	BIO3, HH1, SL2, SL4, WR1, WR2, WR3, WR4,		POP1, POP2, SL1, SL3, MA1, MA2,

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
				WR5, CM1, CM2, AC1, AC2, AC3, CH1, LD1,		
GEN-H-10				BIO3, HH1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, CH1, LD1,	BIO1, BIO2, BIO4,	POP1, POP2, SL1, SL3, MA1, MA2,
SECTION 3.7	Environment and Heritage					
SECTION 3.7.2	Environment and Heritage Objectives					
GEN-EH-1		BIO, SL3			BIO1, BIO2, BIO3, , POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	POP1
GEN-EH-2					BIO3, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR2, WR3, WR4, WR5, CM1, AC1, AC2, AC3, MA2, CH1, LD1	BIO1, BIO2, BIO4, WR1, CM2, MA1
GEN-EH-3					POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR2, WR3, WR4, WR5, CM1, AC1, AC2, AC3, MA2, CH1	BIO1, BIO2, BIO3, BIO4, WR1, CM2, MA1, LD1
GEN-EH-4					POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR2, WR3, WR4, WR5, CM1, AC1, AC2, AC3, MA1, MA2, CH1	BIO1, BIO2, BIO3, BIO4, WR1, CM2, LD1
GEN-EH-5		BIO4			BIO1, BIO2, BIO3, POP2, HH1, SL1, SL2,	POP1, SL3, MA1, CH1, LD1

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
					SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2	
GEN-EH-6		BIO4			BIO1, BIO2, BIO3, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, LD1	POP1, POP2, MA1, CH1
SECTION 3.7.3	Environment and Heritage Policies					
GEN-EH-1		BIO4, SL3			BIO1, BIO2, BIO3, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	POP1, MA1
GEN-EH-2					POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR2, WR3, WR4, WR5, CM1, AC1, AC2, AC3, MA2, CH1	BIO1, BIO2, BIO3, BIO4, WR1, CM2, MA1, LD1
GEN-EH-3					POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR2, WR3, WR4, WR5, CM1, AC1, AC2, AC3, MA1, MA2, CH1	BIO1, BIO2, BIO3, BIO4, WR1, CM2, LD1
GEN-EH-4					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, LD1	POP1, MA1, CH1,

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
GEN-EH-5					BIO1, BIO2, BIO3 BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, LD1	POP1, MA1, CH1,
GEN-EH-6					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	POP1, SL3, MA1
SECTION 3.8	Community/Education/Sports Infrastructure					
SECTION 3.8.2	Community/Education/Sport Infrastructure Objectives					
GEN-CES-1					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	POP1, MA1
SECTION 3.8.3	Community/Education/Sport Infrastructure Policies					
GEN-CES-1					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	POP1, MA1
GEN-CES-2					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1,	POP1, MA1, SL3

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
					CM2, AC1, AC2, AC3, MA2, CH1, LD1	
CHAPTER 4	AN CLOCHÁN LIATH (DUNGLOE)					
Section 4.4	Town Centre					
Section 4.4.3	Town Centre Objectives					
CL-TC-1					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, LD1	POP1, MA1, CH1
CL-TC-2					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, LD1	POP1, MA1, CH1
CL-TC-3					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM2, AC1, AC2, AC3, MA2, CH1, LD1	POP1, CM1, MA1
Section 4.4.4	Town Centre Policies					
CL-TC-1					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM2, AC1, AC2, AC3, MA2, CH1,	POP1, CM1, MA1, LD1

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
CL-TC-2					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM2, AC1, AC2, AC3, MA2, CH1	POP1, CM1, MA1, LD1
CL-TC-3					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, CM2, AC1, AC2, AC3, CH1	POP1, CM1, MA1, MA2, WR5, MA2, LD1
CL-TC-4					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, LD1	POP1, MA1, CH1
CL-TC-5					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, LD1	POP1, MA1, CH1
Section 4.5	Economic Development					
Section 4.5.3	Economic Development Objectives					
CL-ED-1					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1, POP1,	

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
					MA1	
Section 4.5.4	Economic Development Policies					
CL-ED-1			SL3		BIO1, BIO2, BIO3, BIO4, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1, MA1	POP1, POP2
CL-ED-2		SL3			BIO1, BIO2, BIO3, BIO4, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1, MA1, POP1, POP2	
Section 4.6	Housing					
Section 4.6.3	Housing Objectives					
CL-H-1			BIO1, BIO2, BIO4,	BIO3, HH1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, CH1, LD1,		POP1, POP2, SL1, SL3, MA1, MA2,
Section 4.7	Infrastructure and Services					
Section 4.7.2	Infrastructure and Services Objectives					
CL-IS-1		BIO1, BIO2, BIO4,	SL1, SL2, SL3, SL4, WR1, WR2, WR4, WR5, CM1, CM2, MA1, MA2, CH1, LD1,	BIO3, WR3,		POP1, POP2, HH1, AC1, AC2, AC3,

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
CL-IS-2				BIO1, BIO2, BIO3, BIO4, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1		POP1, POP2
Section 4.7.3	Infrastructure and Services Policies					
CL-IS-1		BIO1, BIO2, BIO4, HH1, AC3,	POP1, POP2, SL1, SL2, SL3, SL4, WR1, WR4, CM2, AC1, AC2, MA1, MA2, CH1, LD1,	BIO3, WR2, WR3, WR5, CM1,		
CL-IS-2			BIO4, MA2, CH1, LD1,	BIO1, BIO2, BIO3, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3,		POP1, MA1,
CL-IS-3			SL2, SL3, SL4, AC1, AC2, MA2, CH1, LD1,	BIO3, WR1, WR2, WR3, WR4, WR5, CM1, CM2,	BIO1, BIO2,	BIO4, POP1, POP2, HH1, SL1, AC3, MA1,
Section 4.8	Environment and Heritage					
Section 4.8.2	Environment and Heritage Objectives					
CL-EH-1					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM2, AC1, AC2, AC3, MA2, CH1, LD1	POP1, CM1, MA1
Section 4.8.3	Environment and Heritage Policies					
CL-EH-1					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1,	POP1, MA1

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
					SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	
Section 4.9	Tourism, Marine and Recreation					
Section 4.9.2	Tourism, Marine and Recreation Objectives					
CL-TMR-1			BIO3, POP1, POP2, HH1, WR1, WR2, WR3, CM1, CM2,		BIO1, BIO2, BIO4, SL1, SL2, SL3, SL4, WR4, WR5, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
CL-TMR-2			BIO4		BIO1, BIO2, BIO3, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	MA1
CL-TMR-3					BIO1, BIO2, BIO3, BIO4, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	MA1, POP1, POP2
Section 4.9.3	Tourism, Marine and Recreation Policies					
CL-TMR-1					BIO2, BIO3, BIO4, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	BIO1, MA1, POP1, POP2
CL-TMR-2		WR1	BIO2, BIO3		BIO4, POP2, HH1, SL1,SL2, SL3, SL4,	BIO1, POP1

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
					WR2, WR3,	
CL-TMR-3		SL3			BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL4WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	POP1, MA1
CHAPTER 5	BALLYBOFEY-STRANORLAR					
Section 5.4	Town Centre					
Section 5.4.3	Town Centre Objectives					
BS-TC-1					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	POP1, SL3, MA1,
BS-TC-2					BIO1, BIO2, BIO3, BIO4, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	POP1, POP2, MA1
Section 5.4.4	Town Centre Policies					
BS-TC-1		BIO4			BIO1, BIO2, BIO3, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, CM1, CM2, AC1, AC2, AC3, CH1, LD1	POP1, SL3, WR5, MA1, MA2
BS-TC-2		BIO4, SL3			BIO1, BIO2, BIO3, HH1, SL1, SL2, SL4,	POP1, POP2, MA1,

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
					WR1, WR2, WR3, WR4, WR5, CM1, CM2, MA2, AC1, AC2, AC3, CH1, LD1	
BS-TC-3		BIO4, SL3			BIO1, BIO2, BIO3, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, MA2, AC1, AC2, AC3, CH1, LD1	POP1, POP2, MA1,
BS-TC-4		BIO4, SL3			BIO1, BIO2, BIO3, , HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, MA2, AC1, AC2, AC3, CH1, LD1	POP1, POP2, MA 1,
BS-TC-5					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, MA1, MA2, AC1, AC2, AC3, CH1, LD1	SL3
Section 5.5	Economic Development					
Section 5.5.2	Economic Development Objectives					
BS-ED-1			WR3, WR4		BIO1, BIO2, BIO3, BIO4, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1, MA1, , POP2	POP1

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
BS-ED-2			WR3, WR4		BIO1, BIO2, BIO3, BIO4, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1, MA1, , POP2	POP1
BS-ED-3			WR3, WR4		BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	POP1
Section 5.5.2	Economic Development Policies					
BS-ED-1			WR3, WR4		BIO1, BIO2, BIO3, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1, , POP2	POP1, MA1
BS-ED-2			WR3, WR4		BIO1, BIO2, BIO3, BIO4, POP2, SL1, SL2, SL3, SL4, WR1, WR2, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	POP1, HH1, AM1
Section 5.6	Housing					
Section 5.6.3	Housing Objectives					
BS-H-1			BIO1, BIO2, BIO4,	BIO3, HH1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, CH1, LD1,		POP1, POP2, SL1, SL3, MA1, MA2

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
Section 5.6.4	Housing Policies					
BS-H-1				BIO1, BIO2, BIO3, BIO4, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1,		POP1, POP2, MA1,
Section 5.7	Infrastructure and Services					
Section 5.7.2	Infrastructure and Services Objectives					
BS-IS-1		HH1, AC3,		BIO1, BIO2, BIO3, BIO4, POP1, POP2, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, MA1, MA2, CH1, LD1,		
BS-IS-2				BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR2, WR3, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,		POP1, WR1, WR4,
BS-IS-3				BIO1, BIO2, BIO3, BIO4, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,		POP1, POP2, SL3,
BS-IS-4				BIO1, BIO2, BIO3, BIO4, HH1, SL1, SL2, SL4, WR1, WR2, WR3,		POP1, POP2, SL3,

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
				WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,		
BS-IS-5				BIO1, BIO2, BIO3, BIO4, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,		POP1, POP2, SL3,
BS-IS-6				BIO1, BIO2, BIO3, BIO4, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,		POP1, POP2, SL3,
Section 5.7.3	Infrastructure and Services Policies					
BS-IS-1				BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,		
BS-IS-2				BIO1, BIO2, BIO3, BIO4, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,		POP1, POP2, SL3,
BS-IS-3				BIO1, BIO2, BIO3, BIO4, HH1, SL1, SL2, SL4, WR1, WR2, WR3,		POP1, POP2, SL3,

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
				WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,		
BS-IS-4				BIO1, BIO2, BIO3, BIO4, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,		POP1, POP2, SL3,
BS-IS-5			BIO1, BIO2, BIO4,	BIO3, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,		POP1, POP2, SL3,
Section 5.8	Tourism and Recreation					
Section 5.8.2	Tourism and Recreation Objectives					
BS-TR-1		BIO1, BIO2, BIO3, BIO4, WR1, WR2, WR4, CH1, LD1	HH1, SL1, SL2	AC2, AC3	POP1, SL3, SL4, WR3, WR5, CM1, CM2, AC1, MA2	POP2, MA1
BS-TR-2					BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	BIO1, POP1, MA1
Section 5.8.3	Tourism and Recreation Policies					
BS-TR-1					BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2,	

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
					CH1, LD1, BIO1, POP1, MA1	
BS-TR-2					BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1, BIO1, POP1, MA1	
BS-TR-3		WR5, MA2			BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, WR1, WR2, WR3, WR4, CM1, CM2, AC1, AC2, AC3, CH1, LD1, BIO1	POP1, MA1
BS-TR-4					BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, WR1, WR2, WR3, WR4, CM1, CM2, AC1, AC2, AC3, CH1, LD1, BIO1, WR5, MA2	POP1, MA1
CHAPTER 6	BALLYSHANNON					
Section 6.4	Town Centre					
Section 6.4.4	Town Centre Objectives					
BY-TC-1					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, LD1	CH1

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
BY-TC-2					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	SL3
BY-TC-3					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, LD1	CH1, POP1
BY-TC-4					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	POP1, MA1
Section 6.4.5	Town Centre Policies					
BY-TC-1					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	SL3
BY-TC-2					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2,	POP1

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
					AC3, MA1, MA2, CH1, LD1	
BY-TC-3					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, LD1	CH1, POP1
BY-TC-4					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
BY-TC-5					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, LD1	POP1, CH1
BY-TC-6					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, LD1	POP1, CH1
BY-TC-7					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1,	CH1

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
					MA2, LD1	
BY-TC-8			HH1		BIO1, BIO2, BIO3, BIO4, POP2, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	POP1
Section 6.5	Economic Development					
Section 6.5.3	Economic Development Objectives					
BY-ED-1					BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1, BIO1, POP1, MA1	
Section 6.5.4	Economic Development Policies					
BY-ED-1					BIO2, BIO3, BIO4, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1, MA1,SL3	BIO1, POP1, POP2
BY-ED-2					BIO2, BIO3, BIO4, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1, MA1,SL3	BIO1, POP1, POP2
BY-ED-3					BIO2, BIO3, BIO4, HH1, SL1, SL2, SL4,	BIO1, POP1, POP2, CH1

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
					WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, LD1, MA1,SL3	
BY-ED-4					BIO2, BIO3, BIO4, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, LD1, MA1,SL3, POP1, POP2	BIO1, CH1
BY-ED-5					BIO2, BIO3, BIO4, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, LD1, MA1,SL3, POP2	BIO1, CH1, POP1
BY-ED-6					BIO2, BIO3, BIO4, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, LD1, MA1,SL3, POP2	BIO1, CH1, POP1
Section 6.6	Housing					
Section 6.6.3	Housing Objectives					
BY-H-1			BIO1, BIO2, BIO4,	BIO3, HH1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, CH1, LD1,		POP1, POP2, SL1, SL3, MA1, MA2,
Section 6.6.4	Housing Policies					
BY-H-1				BIO1, BIO2, BIO3,		

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
				BIO4, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1,		
BY-H-2				BIO3, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2,		
Section 6.7	Infrastructure and Services					
Section 6.7.2	Infrastructure and Services Objectives					
BY-IS-1			BIO4, HH1, SL1, SL2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,	BIO1, BIO2, BIO3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2,		POP1, POP2, SL3,
BY-IS-2			BIO3, POP1, AC1, AC2, AC3, MA2, CH1,	SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2,		BIO1, BIO2, BIO4, POP2, HH1, MA1, LD1,
BY-IS-3				BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,		
BY-IS-4				BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1,		

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
				MA2, CH1, LD1,		
Section 6.7.3	Infrastructure and Services Policies					
BY-IS-1			AC1, AC2, AC3,	BIO1, BIO2, BIO3, BIO4, POP1, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, MA1, MA2, CH1, LD1,		SL3, POP2,
BY-IS-2				BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,		
BY-IS-3				BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,		
BY-IS-4				BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,		
BY-IS-5			BIO3, POP1, AC1, AC2, AC3, MA2, CH1,	SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4,		BIO1, BIO2, BIO4, POP2, HH1, MA1, LD1,

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
				WR5, CM1, CM2,		
6.8	Tourism, Marine and Recreation					
6.8.2	Tourism, Marine and Recreation Objectives					
BY-TMR-1					BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	BIO1, POP1, MA1
BY-TMR-2					BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	BIO1, POP1, MA1
BY-TMR-3					BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	BIO1, POP1, MA1
BY-TMR-4					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	POP1, MA1
BY-TMR-5					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, WR1, WR2, WR3, WR4, WR5, CM1,	POP1

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
					CM2, AC1, AC2, AC3, MA2, CH1, LD1, MA1	
Section 6.8.3	Tourism, Marine and Recreation Policies					
BY-TMR-1					BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	BIO1, POP1
BY-TMR-2					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
BY-TMR-3					BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	BIO1, MA1
BY-TMR-4					BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	BIO1, POP1
BY-TMR-5					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, WR1, WR2, WR3, WR4, WR5, CM1,	CH1, LD1

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
					CM2, AC1, AC2, AC3, MA1, MA2	
Section 6.9	Environment and Heritage					
Section 6.9.2	Environment and Heritage Objectives					
BY-EH-1				POP2, HH1, SL1, SL2, SL3, SL4, AC1, AC2, AC3, MA1, MA2, CH1		BIO1, BIO2, BIO3, BIO4, POP1, WR1, WR2, WR3, WR4, WR5, CM1, CM2, LD1
BY-EH-2				BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1		POP1, SL3, CH1, LD1
BY-EH-3				BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1		POP1, SL3, CH1, LD1
BY-EH-4				BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1		POP1, SL3, CH1, LD1
Section 6.9.3	Environment and Heritage Policies					
BY-EH-1				POP2, HH1, SL1, SL2, SL3, SL4, AC1, AC2, AC3, MA1, MA2, CH1		BIO1, BIO2, BIO3, BIO4, POP1, WR1, WR2, WR3, WR4, WR5, CM1, CM2, LD1

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
BY-EH-2				BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2,CH1, LD1		POP1, SL3, CH1, LD1
CHAPTER 7	BRIDGEND					
Section 7.4	Town/Village Centre and N13 Corridor					
Section 7.4.2	Town/Village Centre Objectives and Action					
BE-TC-1					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	POP1
BE-TC-2					BIO1, BIO2, BIO3, BIO4, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	POP1, POP2, MA1
ACTION 1					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	POP1, MA1
Section 7.4.3	Town/Village Centre Policies					
BE-TC-1					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1,	POP1

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
					SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
BE-TC-2					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	POP1
BE-TC-3					BIO1, BIO2, BIO3, BIO4, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	POP1, POP2, MA1
Section 7.5	Economic Development					
Section 7.5.2	Economic Development Objectives					
BE-ED-1		SL3, WR1, WR2, WR4, WR5, CM2, MA2	BIO1, BIO3, HH1		BIO2, BIO4, POP2, SL1, SL2, WR3, CM1, AC1, AC2, AC3, MA1, CH1, LD1	
Section 7.5.3	Economic Development Policies					
BE-ED-1		SL3, WR1, WR2, WR4, WR5, CM2, MA2	BIO1, BIO3, HH1		BIO2, BIO4, POP2, SL1, SL2, WR3, CM1, AC1, AC2, AC3, MA1, CH1, LD1	
Section 7.6	Opportunity Sites					

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
Section 7.6.2	Opportunity Sites Objectives					
BE-OPP-1					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
Section 7.6.3	Opportunity Sites Policies					
BE-OPP-1		MA2, WR5, WR4			BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, CM1, CM2, AC1, AC2, AC3, MA1, CH1, LD1	
BE-OPP-2		MA2, WR5, WR4, SL3			BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, CM1, CM2, AC1, AC2, AC3, MA1, CH1, LD1	
BE-OPP-3		WR4, SL3			BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
BE-OPP-4		SL3, WR4			BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR5,	

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
					CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
Section 7.8	Infrastructure and Services					
Section 7.8.2	Infrastructure and Services Objectives					
BE-IS-1			BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL2, SL3, SL4, WR1, WR2, WR3, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,			POP1, WR4, SL1,
BE-IS-2			BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,			
BE-IS-3			HH1,	BIO1, BIO2, BIO3, BIO4, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,		POP1, POP2,
Section 7.8.3	Infrastructure and Services Policies					
BE-IS-1			HH1, AC1, AC2, AC3,	BIO1, BIO2, BIO3, BIO4, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, MA1, MA2, CH1, LD1,		POP1, POP2,

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
Section 7.10	Tourism and Recreation					
Section 7.10.3	Tourism and Recreation Objectives					
BE-TR-1			BIO4		BIO1, BIO2, BIO3, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	MA1
BE-TR-2					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	MA1, POP1
Section 7.10.4	Tourism and Recreation Policies					
BE-TR-1					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	MA1, POP1
BE-TR-2					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	MA1, POP1
CHAPTER 8	CARNDONAGH					
Section 8.4	Town Centre					
Section 8.4.4	Town Centre Objectives					

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
CN-TC-1					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
CN-TC-2					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	POP1
CN-TC-3					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
Section 8.4.5	Town Centre Policies					
CN-TC-1					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
CN-TC-2					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1,	POP1

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
					WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
Section 8.5	Economic Development					
Section 8.5.2	Economic Development Objectives					
CN-ED-1					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1, MA1, POP1	
Section 8.5.3	Economic Development Policies					
CN-ED-1					BIO2, BIO3, BIO4, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1, MA1,SL3	BIO1, POP1, POP2
Section 8.6	Opportunity Sites					
Section 8.6.3	Objectives Relating to Development on Identified Opportunity Sites					
CN-OPP-1			BIO4	BIO1, BIO2	BIO3, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	POP1, SL3, MA1
Section 8.6.4	Policies Relating to Development on Identified Opportunity Sites					
CN-OPP-1		SL3, WR5, CM2, MA2,	BIO1, BIO2, BIO4	BIO3, POP1, POP2, HH1, SL1, SL2, SL4,		MA1,

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
		CH1,		WR1, WR2, WR3, WR4, CM1, AC1, AC2, AC3, LD1		
CN-OPP-2		SL3, WR5, CM2, MA2, CH1,	BIO1, BIO2, BIO4	BIO3, POP1, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, CM1, AC1, AC2, AC3, LD1		MA1
CN-OPP-3		SL3, WR5, CM2, MA2, CH1,	BIO1, BIO2, BIO4	BIO3, POP1, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, CM1, AC1, AC2, AC3, LD1		MA1
CN-OPP-4		SL3, WR5, CM2, MA2, CH1,	BIO1, BIO2, BIO4	BIO3, POP1, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, CM1, AC1, AC2, AC3, LD1		MA1
CN-OPP-5		SL3, WR5, CM2, MA2, CH1	BIO1, BIO2, BIO4	BIO3, POP1, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, CM1, AC1, AC2, AC3, LD1		MA1
CN-OPP-6		SL3, WR5, CM2, MA2, CH1	BIO1, BIO2, BIO4	BIO3, POP1, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, CM1, AC1, AC2, AC3, LD1		MA1
CN-OPP-7		SL3, WR5, CM2, MA2, CH1	BIO1, BIO2, BIO4	BIO3, POP1, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, CM1, AC1, AC2, AC3,		MA1

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
				LD1		
Section 8.6.5	Barrack Hill Masterplan Policies					
CN-MP-1		HH1, SL3, WR5, MA2			BIO1, BIO2, BIO3, BIO4, POP1, POP2, SL1, SL2, SL4, WR1, WR2, WR3, WR4, CM1, CM2, AC1, AC2, AC3, MA1, CH1, LD1	
CN-MP-2					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	WR5
CN-MP-3					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
CN-MP-4					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, CM1, CM2, AC1, AC2, AC3, MA1, CH1, LD1	WR5, MA2
CN-MP-5					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3,	

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
					SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
Section 8.7	Housing					
Section 8.7.3	Housing Objectives					
CN-H-1			BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,			POP1
Section 8.8	Infrastructure and Services					
Section 8.8.3	Infrastructure and Services Objectives					
CN-IS-1		AC3,	BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, MA1, MA2, CH1, LD1,			
CN-IS-2			BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, CM1, CM2, AC1, AC2, AC3, MA1, CH1, LD1,			WR5, MA2,
CN-IS-3			BIO3, POP1, POP2, HH1, SL1, SL2, SL3,			BIO1, BIO2, BIO4,

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
			SL4, WR1, WR2, WR3, WR4, CM1, CM2, AC1, AC2, AC3, MA1, CH1, LD1,			WR5, MA2,
Section 8.8.4	Infrastructure and Services Policies					
CN-IS-1		AC3,	BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, MA1, MA2, CH1, LD1,			
CN-IS-2		AC3,	BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, MA1, MA2, CH1, LD1,			
CN-IS-3			BIO1, BIO2, BIO3, BIO4, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,			POP1, POP2,
CN-IS-4			BIO1, BIO2, BIO3, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, LD1,			POP1, POP2, BIO4, CH1,
CN-IS-5			BIO1, BIO2, BIO3,			WR5, MA2,

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
			BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, CM1, CM2, AC1, AC2, AC3, MA1, CH1, LD1,			
Section 8.9	Environment and Heritage					
Section 8.9.3	Environment and Heritage Objectives					
CN-EH-1					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2,	CH1, LD1
CN-EH-2					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1,SL1, SL2, SL3, SL4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	WR1, WR2, WR3, WR4,
Section 8.9.4	Environment and Heritage Policies					
CN-EH-1					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1,SL1, SL2, SL3, SL4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	WR1, WR2, WR3, WR4
CN-EH-2					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1,SL1, SL2, SL3,	WR1, WR2, WR3, WR4

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
					SL4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
CN-EH-3					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	WR1, WR2, WR3, WR4
CHAPTER 9	DONEGAL TOWN					
Section 9.4	Town Centre					
Section 9.4.6	Objectives for Town Centre					
DT-TC-1		SL3	HH1		BIO1, BIO2, BIO3, BIO4, POP1, POP2, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
DT-TC-2					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	POP1
DT-TC-3					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2,	POP1

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
					AC3, MA1, MA2, CH1, LD1	
DT-TC-4					BIO1, BIO2, BIO3, BIO4, POP1, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	POP2
Section 9.4.7	Policies for Town Centre					
DT-TC-1					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	POP1
DT-TC-2					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	POP1
DT-TC-3					BIO2, BIO3, BIO4, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	BIO1, WR5, POP1, POP2, SL3
DT-TC-4					BIO2, BIO3, BIO4, HH1, SL1, SL2, SL4,	BIO1, WR5, POP1, POP2, SL3

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
					WR1, WR2, WR3, WR4, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
DT-TC-5					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	POP1
DT-TC-6					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	POP1, MA1
Section 9.5	Economic Development					
Section 9.5.3	Economic Development Objectives					
DT-ED-1					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
Section 9.5.4	Economic Development Policies					
DT-ED-1		SL3		POP2	BIO2, BIO3, BIO4, POP1, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2,	BIO1

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
					AC1, AC2, AC3, MA1, MA2, CH1, LD1	
DT-ED-2				POP2	BIO2, BIO3, BIO4, POP1, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	BIO1
DT-ED-3		WR5, MA2			BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, CM1, CM2, AC1, AC2, AC3, MA1, CH1, LD1	BIO1
Section 9.6	Housing					
Section 9.6.3	Housing Objectives					
DT-H-1			BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1			POP1
Section 9.6.4	Housing Policies					
DT-H-1			BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,			POP1,

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
DT-H-2			BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,			POP1,
Section 9.7	Infrastructure and Services					
Section 9.7.2	Infrastructure and Services Objectives					
DT-IS-1			POP2, HH1, SL1, WR5,	BIO1, BIO2, BIO3, BIO4, SL2, SL3, SL4, WR1, WR2, WR3, WR4, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,		POP1,
DT-IS-2			BIO4,HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,	BIO1, BIO2, BIO3,		POP1, POP2,
DT-IS-3			BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,			POP1,
DT-IS-4				BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2,		

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
				AC1, AC2, AC3, MA1, MA2, CH1, LD1,		
Section 9.7.3	Infrastructure and Services Policies					
DT-IS-1			BIO4, POP1, POP2, HH1, SL1, SL2, SL4, AC3, MA1, MA2, CH1, LD1,	BIO1, BIO2, BIO3, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2,		SL3,
DT-IS-2			BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,			
DT-IS-3			BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,			
DT-IS-4			BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,			POP1,
Section 9.8	Tourism, Marine and Recreation					
Section 9.8.2	Tourism, Marine and Recreation Objectives					

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
DT-TMR-1					BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	BIO1, MA1, POP1
DT-TMR-2					BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1, MA1, POP1	BIO1
DT-TMR-3					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, MA1, POP1	CH1, LD1
Section 9.8.3	Tourism, Marine and Recreation Policies					
DT-TMR-1					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	MA1, POP1
DT-TMR-2					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
DT-TMR-3					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, MA1, POP1	CH1, LD1
Section 9.9	Environment and Heritage					
Section 9.9.2	Environment and Heritage Objectives					
DT-EH-1				POP2, HH1, SL1, SL2, SL3, SL4, AC1, AC2, AC3, MA1, MA2, CH1		BIO1, BIO2, BIO3, BIO4, POP1, WR1, WR2, WR3, WR4, WR5, CM1, CM2, LD1
DT-EH-2				BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1		POP1, SL3, CH1, LD1
Section 9.9.3	Environment and Heritage Policies					
DT-EH-1				POP2, HH1, SL1, SL2, SL3, SL4, AC1, AC2, AC3, MA1, MA2, CH1		BIO1, BIO2, BIO3, BIO4, POP1, WR1, WR2, WR3, WR4, WR5, CM1, CM2, LD1
DT-EH-2				BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1		POP1, SL3, CH1, LD1
CHAPTER 10	KILLYBEGS					

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
Section 10.4	Town Centre					
Section 10.4.5	Town Centre Objectives					
KB-TC-1					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	POP1, MA1
KB-TC-2					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	
KB-TC-3					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
Section 10.4.6	Town Centre Actions					
KB-A-1					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA2, CH1, LD1	POP1, MA1
Section 10.4.7	Town Centre Policies					
KB-TC-1					BIO1, BIO2, BIO3, BIO4, POP1, POP2,	

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
					HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
KB-TC-2					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
KB-TC-3					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, LD1	CH1
KB-TC-4					BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	POP1
Section 10.5	Economic Development					
Section 10.5.3	Economic Development Objectives					
KB-ED-1					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4,	

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
					WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
Section 10.5.4	Economic Development Policies					
KB-ED-1		SL3	HH1, SL1, SL4, WR4		BIO1, BIO2, BIO3, BIO4, SL2, WR1, WR2, WR3, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	POP1, POP2,
KB-ED-2			BIO3, HH1, WR4		BIO1, BIO2, BIO4, POP1, POP2, SL1, SL2, SL4, WR1, WR2, WR3, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
KB-ED-3		BIO3	HH1		BIO1, BIO2, BIO4, POP1, POP2, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
KB-ED-4		SL3			BIO1, BIO2, BIO3, BIO4, POP1, HH1, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	POP2
KB-ED-5					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2,	

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
					AC1, AC2, AC3, MA1, MA2, CH1, LD1	
KB-ED-6		SL3	HH1		BIO1, BIO2, BIO3, BIO4, POP1, POP2, SL1, SL2, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
Section 10.6	Housing					
Section 10.6.3	Housing Objectives					
KB-H-1				BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,		
Section 10.6.4	Housing Policies					
KB-H-1			BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,			
KB-H-2				BIO1, BIO2, BIO3, BIO4, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2,		

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
				AC3, MA1, MA2, CH1, LD1,		
KB-H-3				BIO1, BIO2, BIO3, BIO4, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,		
Section 10.7	Infrastructure and Services					
Section 10.7.3	Infrastructure and Services Objectives					
KB-IS-1				BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,		
KB-IS-2				BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,		
Section 10.7.4	Infrastructure and Services Policies					
KB-IS-1		BIO1, BIO2, BIO4,	BIO3, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,			

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
KB-IS-2				BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,		
KB-IS-3				BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,		
KB-IS-4				BIO1, BIO2, BIO3, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,		BIO4, POP1, POP2,
KB-IS-5				BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1,		
KB-IS-6				BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1,		

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
				MA2, CH1, LD1,		
Section 10.8	Tourism, Marine and Recreation					
Section 10.8.2	Tourism, Marine and Recreation Objectives					
KB-TMR-1					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
Section 10.8.3	Tourism, Marine and Recreation Policies					
KB-TMR-1					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
KB-TMR-2					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	
KB-TMR-3					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1,	

Objectives and Policies	Probable Conflict with status of SEOs-unlikely to be mitigated to an *acceptable level	Potential Conflict with status of SEOs – likely to be mitigated to an *acceptable level	Uncertain interaction with status of SEOs	Neutral interaction with status of SEOs	No Likely interaction with status of SEOs	Likely to Improve the status of the SEOs
					MA2, CH1, LD1	
KB-TMR-4					BIO1, BIO2, BIO3, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2, CH1, LD1	POP1, BIO4
Section 10.9	Environment and Heritage					
Section 10.9.2	Environment and Heritage Objectives					
KB-EH-1					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2,	CH1, LD1
Section 10.9.3	Environment and Heritage Policies					
KB-EH-1					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2,	CH1, LD1
KB-EH-2					BIO1, BIO2, BIO3, BIO4, POP1, POP2, HH1, SL1, SL2, SL3, SL4, WR1, WR2, WR3, WR4, WR5, CM1, CM2, AC1, AC2, AC3, MA1, MA2,	CH1, LD1

9 Mitigation Measures and Incorporating Environmental Issues into the Draft Plan

It is a requirement of the Planning and Development (SEA) Regulations 2004 (Schedule 2B) to set out measures to offset any potential negative impact on the environment as a result of implementing the policies and objectives of the Draft Plan.

The SEA of the Draft LAP was carried out in-house within the wider Plan drafting team; as such environmental vulnerabilities, issues and constraints were considered in the first instance through the plan writing process and in this regard the Plan was formulated with the explicit intention of protecting the environment and avoiding potentially adverse environmental impacts. As such, the Plan writing process and the incorporation of environmental issues has been carried out as an iterative process. The 'Assessment' proper as outlined in Table 8.4 of this document assessed each aim, objective and policy individually.

Within Table 8.4 there are objectives and policies identified as being potentially in conflict with the Strategic Environmental Objectives (SEOs) or otherwise as having an uncertain interaction with the SEOs. The assessment concludes that the potential conflicts identified can be mitigated to an acceptable level through further detailed assessment and mitigation at implementation stage through best practice in the development management process and implementation of the Plan. In addition, this will be assisted and guided through the mitigation provided for in the general objectives and policies of Chapter 3 of the Draft LAP as well as the relevant objectives and policies of the Draft CDP. Furthermore, certain individual applications for developments within the Plan area may be subject to individual Environmental Impact Assessments and Appropriate Assessments.

The mitigation measures referred to above will act to prevent, reduce and as fully as possible offset any significant effects of implementing the Seven Strategic Towns Local Area Plan 2018-2024.

